Gender Equality Issues in the Medical Education Experience of Final Year Medical Students in Israel and the Implications for Educational Managers

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At the University of Leicester

By

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Abstract

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By: Ruth Abramovitz

Although women are half of the medical students’ population, they may have different values than men and may be faced with organizational constraints in their medical schools and barriers to their career once they graduate. The general aim of this study is to highlight the question of gender equality in the educational process and the implications for educational managers arising from this issue. The specific objectives of the study are to identify male and female medical students personal values, experiences with regard to the curriculum, career’s preparation, mentoring and abuse during the medical education and gender effect after graduation. The research tries to suggest ways in which educational managers can address possible gender inequality.

The research is carried out in two phases. The first phase is a survey of a sample of final-year medical students from three out of four medical schools in Israel. In the second phase, a case study of one of the medical schools is carried out. Interviews with students and faculty members provide data to triangulate and illuminate the findings of the survey. Documentary analysis of the school’s official prospectus enables further triangulation.

Based on the findings, the conclusions are that although women and men medical students tend to differ in their career goals, they are similar in other values. Yet, women medical students are discriminated against to some extend with regard to school experiences such as career’s preparation, and student abuse. Surprisingly more men students than women complain on discrimination. Other gender differences are apparent with regard to career choices and opportunities. It appears that a culture of ‘gender blindness’ is prevalent at medical faculties. The recommendations are that just to wait for the ‘critical mass’ effect is not enough and educational managers should try to address barriers faced by female students.
Contents

ABSTRACT ............................................................................................................................................. 3

CHAPTER 1: INTRODUCTION ............................................................................................................... 13

THE LAYOUT OF THIS CHAPTER ........................................................................................................... 13

INTRODUCTORY STATEMENT OF PURPOSES .................................................................................. 13

GENERAL CONTEXT OF THE STUDY ................................................................................................. 14

Gender equality issues ............................................................................................................................... 14
Women’s entrance into higher education ................................................................................................. 15
Women’s entrance into the medical profession ......................................................................................... 16
Medical education ..................................................................................................................................... 19

NATIONAL CONTEXT OF THE STUDY ................................................................................................. 20

Gender equality in Israel ............................................................................................................................ 20
Gender equality in medicine in Israel ......................................................................................................... 21
Medical education in Israel ......................................................................................................................... 23

INSTITUTIONAL CONTEXT ..................................................................................................................... 26

CONCEPTUAL BACKGROUND ............................................................................................................. 29

FEMINIST THEORIES ............................................................................................................................ 29
Definition of gender equality in medical education ................................................................................... 30
Gender inequality in medicine .................................................................................................................. 34
Personal and values constraints ................................................................................................................ 35
Organisational and school constraints ..................................................................................................... 36
Wider cultural and social factors ............................................................................................................... 37

RATIONALE OF THE STUDY .................................................................................................................... 38

Importance and relevance of gender equity issues .................................................................................... 38
Importance and relevance of gender equality issues in medicine ............................................................... 38
Importance of the study in its national context ......................................................................................... 40

EXPECTED OUTCOMES OF THE STUDY .............................................................................................. 41

PURPOSE OF THE STUDY ....................................................................................................................... 42

ISSUES ARISING FROM BACKGROUND OF THE STUDY .................................................................... 42
OBJECTIVES OF THE STUDY .................................................................................................................... 43
RESEARCH QUESTIONS ............................................................................................................................ 44

OUTLINE OF THE FOLLOWING CHAPTERS .......................................................................................... 45

CHAPTER 2: LITERATURE REVIEW ....................................................................................................... 46

INTRODUCTION ........................................................................................................................................ 46

APPROACHES TO EXPLAIN BARRIERS TO GENDER EQUALITY ......................................................... 46

PERSON-CENTRED APPROACHES ......................................................................................................... 46
Claimed gender differences in self-esteem ............................................................................................... 47
Claimed gender differences in career goals and motivation for leadership .............................................. 48
Claimed gender differences in perceptions of combining work and family life .................................... 49
Gender differences in career planning and career breaks ........................................................................ 50

ORGANIZATIONAL STRUCTURE BARRIERS ......................................................................................... 52
Claimed gender discrimination in the access to and promotion within the workplace ............................... 52
Claimed resistance to women in positions of power ............................................................................... 54
GENDER DIFFERENCES IN SCHOOL-RELATED EXPERIENCES

A SUMMARY OF THE DIFFERENT POINTS OF VIEWS ON SCHOOL ADVICE, ETHOS, PRIORITIES AND MENTORING RELATIONS

GENDER DISCRIMINATION AND SEXUAL HARASSMENT DURING THE MEDICAL TRAINING

DOCUMENTARY ANALYSIS OF THE OFFICIAL POLICY OF THE UNIVERSITY WITH REGARD TO GENDER DISCRIMINATION AND HARASSMENT

MEDICAL STUDENTS PERCEPTIONS REGARDING THE DEFINITION AND OCCURRENCE OF SEXUAL HARASSMENT

STUDENTS' VIEWS ON GENERAL STUDENT ABUSE IN MEDICAL SCHOOL

SUMMARY OF THE EXPERIENCES OF STUDENT ABUSE REPORTED BY STUDENTS

FACTOR MEMBERS' VIEWS WITH REGARD TO GENDER DISCRIMINATION AND HARASSMENT

GENDER DIFFERENCES IN PERCEPTIONS OF GENDER EFFECT ON FUTURE CAREER OPPORTUNITIES

GENDER DIFFERENCES IN FUTURE CAREER OPPORTUNITIES ACCORDING TO THE INTERVIEWS WITH THE MEDICAL STUDENTS

VIEWS OF THE FACULTY MEMBERS ON THE QUESTION OF GENDER DIFFERENCES IN FUTURE CAREER OPPORTUNITIES

SEX ROLE SEGREGATION AMONG CLINICAL FACULTY MEMBERS

IMPLICATIONS OF THE GENDER ISSUES FOR EDUCATIONAL MANAGERS

MEDICAL STUDENTS' VIEWS ON THE IMPLICATIONS OF GENDER DIFFERENCES AND EQUALITY ISSUES FOR EDUCATIONAL MANAGERS

FACTOR MEMBERS' VIEWS ON THE IMPLICATIONS OF GENDER DIFFERENCES FOR EDUCATIONAL MANAGERS

SUMMARY

CHAPTER 6: ANALYSIS

INTRODUCTION

THE STRUCTURE OF THIS CHAPTER

RESEARCH QUESTIONS

GENDER DIFFERENCES IN PERSON-CENTRED VALUES OF THE MEDICAL STUDENTS

GENDER DIFFERENCES CONCERNING SELF-ESTEEM AND MOTIVATION FOR LEADERSHIP

Significant findings concerning gender differences in self-esteem and motivation for leadership

Implications of these findings for the current theory regarding self-esteem of the medical students

Discrepancy between the literature and the findings regarding gender differences in motivation for leadership

GENDER DIFFERENCES IN CAREER GOALS

Findings concerning gender differences in career goals

Implications of the findings for the current theory regarding gender differences in career goals

GENDER DIFFERENCES IN PERCEPTIONS OF COMBINING CAREER AND FAMILY RESPONSIBILITIES

An overview of the significant findings of gender differences in perceptions on combining career and family obligations

Implication of the findings of this study for the current theory regarding barriers to career plans and perceptions of combining career and family life

Discrepancy between the literature and the findings regarding combining career and family responsibilities

GENDER DIFFERENCES IN SCHOOL-RELATED EXPERIENCES
| Gender Differences in Learning Styles, Curricular Contents and Preferred Assessment System | 320 |
| Findings concerning gender differences in pedagogical issues | 320 |
| Implications of the findings with regard to gender differences in pedagogical issues | 321 |
| Discrepancy between the literature and the findings regarding gender differences in pedagogical issues | 321 |
| Gender Differences in School Preparation and Advice | 325 |
| Significant findings concerning gender differences in school preparation and advice | 325 |
| Implication of the findings of this study for the current theory regarding school advice | 327 |
| Discrepancy between the literature and the findings concerning gender differences in school preparation | 328 |
| Gender Differences in Mentoring Experiences | 329 |
| An overview of the research findings regarding gender differences in mentoring experiences | 329 |
| Implications of the findings of this study with regard to the current theory on gender differences in mentoring relations | 330 |
| Discrepancy between the literature and the findings concerning gender differences in mentoring experiences | 332 |
| Gender Differences in the Extent of General Abuse of Students | 333 |
| An overview of the research findings with regard to general abuse of students | 333 |
| Implications of the findings of this study with regard to the theory of gender discrimination and harassment | 336 |
| Discrepancy between the literature and the findings concerning gender differences in general abuse of students | 340 |
| Gender Differences in Future Career Opportunities, Career Choices and Gender Segregation by Speciality | 346 |
| An overview of the significant findings concerning gender differences in future career opportunities and speciality choices | 346 |
| Implications of the findings on gender differences in future career opportunities and gender segregation by speciality | 349 |
| Gender differences in career planning | 349 |
| Career breaks | 349 |
| Sex-role segregation | 350 |
| The role of school experiences in promoting gender segregation | 352 |
| Attitudes towards feminism and political power | 353 |
| Discrepancies between the literature and the findings regarding gender differences in gender influence | 355 |
| Implications of Gender Differences for Educational Managers | 358 |
| An overview of the significant findings concerning the implications of gender issues for educational managers | 358 |
| Implications of gender differences for educational managers and the literature on programmes for gender equality in the medical education | 360 |
| Discrepancy between the literature and the findings regarding the implications of gender difference issues for management improvement | 364 |
| Summary | 365 |
| A Predictive Model of Student Satisfaction with Their Medical Education | 365 |
| Summary of the Findings According to the Research Questions | 368 |
| Chapter 7: Conclusion | 371 |
| Introduction | 371 |
| Conclusions of This Study | 371 |
| No Evidence for Gender Differences in Self Esteem and Motivation for Leadership | 371 |
| Gender Differences in Career Goals and Motivation for Leadership | 372 |
| Gender Resemblances in Perceptions of Combining a Career with a Family Life | 373 |
STUDENT

APPENDIX 6: EXTRACT FROM AN INTERVIEW TRANSCRIPT WITH ONE

APPENDIX 4: SUMMARY OF SURVEY ANALYSES

APPENDIX 2: THE STUDENT'S INTERVIEW SCHEDULE

APPENDIX 3: THE QUESTIONNAIRE COVER LETTER

APPENDIX 1: THE SURVEY QUESTIONNAIRE

APPENDIX 4: SUMMARY OF SURVEY ANALYSES

APPENDIX 5: EXTRACT FROM AN INTERVIEW TRANSCRIPT WITH ONE

APPENDIX 6: EXTRACT FROM AN INTERVIEW TRANSCRIPT WITH ONE

REFERENCES
Tables

Table 1.1 Percentage of women training to be doctors in various specialities of medicine. .......................................................... 17
Table 1.2 Stages in the career hierarchy in Israel and proportion of women at each stage. ......................................................... 26
Table 3.1 A comparison between the quantitative and qualitative paradigms. 151
Table 3.2 Comparison of this research to qualitative and quantitative paradigm’s components. ........................................... 156
Table 3.3 Compatibility of Some Principles of Feminist researches to the Principles of this Research ............................................ 166
Table 3.4 The compatibility of this research with the survey approach. ............. 168
Table 3.5 The questionnaire’s items divided into the research dependent variables. ................................................................. 174
Table 4.1 Response rate to the questionnaire, by school and gender. ............... 203
Table 4.2 Means and Frequencies of Demographic Characteristics of the Survey Participants (n=120), by Gender and School ................. 205
Table 4.3 Component Matrix of the Closed Items of the Questionnaire, after Varimax Rotation (n=120). .................................................. 208
Table 4.4 Means and Standard Deviations of the Factor Score ‘Self esteem and motivation for leadership’ controlled by Age, Gender and School (n=120) 210
Table 4.5 Frequencies and percentage of students, by gender, schools and goals’ types (n=111). .......................................................... 214
Table 4.6 Means and Standard Deviations of ‘self esteem and motivation for leadership’, by goals types (n=111). ................................. 215
Table 4.7 Frequencies of the Factors of Barriers to Career goals, by Gender, School and Factor (n=100). .................................................. 218
Table 4.8 Means and Standard Deviations of the factor ‘A choice to combine a Career with a Family/Personal life’. controlled by Age, by Gender and by School (n=120). .......................................................... 219
Table 4.9 Means and Standard Deviation of Students ‘Preferences in Curriculum related matters’, by Gender and School (n=120). ............... 223
Table 4.10 Frequencies of types of preferred teaching methods, by gender, school and method (n=113). ................................................. 225
Table 4.11 Means and Standard Deviation of ‘Students Preferences in Curriculum related matters’, by ‘Innovation’ Group (n=113). ............... 226
Table 4.12 Means and Standard Deviations of Students’ views on the School’s Influence on Choice of career in Surgery’, by Gender and School (n=120) ....................................................................................... 227
Table 4.13 Means and Standard Deviation of Students Views on the Extent of ‘Mentoring Experiences and satisfaction with school’, by gender and school (n=120) ................................................................. 232
Table 4.14 Means and Standard Deviation of Students’ views on ‘General Discrimination’ and ‘Gender Harassment’, by Gender and School (n=120) ... 234
Table 4.15 Frequencies of Students Thinking that there is a Gender Discrimination, by gender and school (n=101) ............................................. 236
Table 4.16 Means and Standard Deviation of Students’ views on ‘Gender Differences in Future Career Opportunities, by Gender and School (n=120) ... 241
Table 4.17 Frequencies of students thinking that Gender has an Effect on Career Choices, by gender and school (n=101) ............................................. 242
Table 4.18 Multiple Stepwise Regression Analysis of Overall Satisfaction with the Medical Education on School of Study, The Extend of Gender Harassment, The Extend of Gender Discrimination and School Influence on Career Choice

Table 5.1 Main Demographic characteristics of participating students (n=10)

Table 5.2 Main characteristics of the interviewed faculty members (n=7)

Table 5.3 Faculty Members Views on Gender Differences in Career Choice, by type of Faculty Member and Gender (n=7)

Table 5.4 Characteristics of the 2000/2001 Curriculum of the first 3 years (pre-clinical years) of “A” medical school, by Year of study, Courses and Mode of teaching

Table 5.5 Characteristics of the 2000/2001 Curriculum of the last 3 years (clinical years) of “A” Medical school, by Year of study, Courses and Mode of teaching

Table 5.6 The different sources of perspectives on curriculum preferences and school experiences’ problems

Table 5.7 Medical Students Views on the Effect of Gender on Women’s future career (n=10)

Table 5.8 Frequencies of female clinical faculty members at school “A” in the different clinical teaching departments by descending order

Table 5.9 Students’ views on educational management application (n=10)

Table 5.10 Faculty Members’ Views on the Implication of Gender Differences for Educational Managers

Table A.1 Means and Standard Deviation for Individual Items of the Closed Questionnaire, by Gender

Figures and graphs

Graph 4.1 The Comparisons of Means of the factor ‘Wish to combine career and personal life and career’ According to ‘Gender’ and ‘Personal status’

Figure 4.1 The Comparisons of Means of ‘Wish to combine career and personal life and career’ According to ‘Perceived career barriers’

Graph 5.1 Frequencies of the main Reasons mentioned by the students for Choosing of Speciality, by Students’ Genders (n=30)

Graph 5.2 Frequencies of all the reports of six different types of mistreatments at medical school as reported by students, by gender (n=33 reports)
Chapter 1: Introduction

The layout of this chapter

This chapter starts with a short introductory statement. It then describes the general context and the conceptual background of this study. The national context of Israel and the specific organizational context are referred to in separate subsections. This introductory chapter fully describes the rationale for this research as well as the possible importance and expected contributions of this study including implications for educational management. The chapter ends with an outline of the following chapters of the thesis.

Introductory statement of purposes

The general aim of this study is to provide insights on gender equality issues in the higher educational process and identify the implications of gender issues for educational managers. The study focuses on the questions of gender equality during the process of education and training of students for the medical profession in Israel. Specifically, the study tries to examine how medical schools in Israel prepare students for their career. The study also considers the probability that the schools have implicit expectations as to the limitations in the ability of women to perform well in some medical fields. The objectives are to provide insights on gender differences in students’ self esteem and motivations for leadership, career expectations, values, preferences in teaching and evaluation methods, experiences with regard to school advice and mentoring processes, gender discrimination and harassment in medical schools. The study
also explores possible differences in the prospects of men and women graduates from medical schools for entry into the medical careers of their choice and abilities. In addition to surveying medical students, senior faculty members of one medical school were also interviewed.

An explicit purpose of the study is to inform educational managers with regard to gender equality issues and provide the basis for improved educational management practice aimed at reducing or eliminating gender inequality and discrimination. An outcome of the study is likely to be recommended management solutions to enable women to equally share in leadership positions of medical schools and may involve implications for leadership and institutional culture.

**General context of the study**

**Gender equality issues**

The increased participation of women in the workforce since the 1960s has been one of the dominant social trends over the past 40 years (Vinnicombe and Sturges, 1995, p. 1). Today, in many western countries, women make up nearly half of the paid labour market. As a result, the question of gender equality becomes legitimate (Crompton, 1997, p. 124).

However, occupational differences still exist between genders. The labour market is divided into ‘men’s jobs’ and ‘women’s jobs’ (Lorber, 1994, pp. 194-6), a phenomenon known as ‘occupational segregation’ (Crompton, 1997, p. 41-
Another persistent difference, the relative hierarchy of men and women in which men occupy the most powerful positions in work and women are subordinate, has not yet changed (Crompton, 1997, p. 125). Men predominate in the upper managerial levels of many occupations while career women are still faced with the phenomenon of the "glass ceiling" - subtle and transparent yet strong barriers that prevent women from moving up in the management hierarchy (Morrison and von Glinow, 1990, p. 200). Nevertheless, since the 1970s, the proportion of women at the lower and middle management levels has dramatically increased (Powell, 2000, p. 237).

Women’s entrance into higher education

Since the 1980s, there is marked trend of increased access of women into higher education in many countries. Currently, more women than men enter into higher education institutes but male graduates are more likely than female graduates to be accepted into professional or managerial positions while female graduates are more likely to have secretarial or clerical occupations (Morley, 2001, p. 134). In the US, women attain 54 per cent of first, 52 per cent of second and 40 per cent of third degrees (BLS, 2002). In Israel, the percentage of women attaining academic degrees rises every year and currently (2000) up to 57 per cent of all first, 56 per cent of all second and just over half of all third-degree students are women (CBS, 2002). In the UK half the students are women (The Times, 2002). Yet, although teaching is seen as women’s forte (Acker, 1994, p. 125), women are underrepresented as faculty members, representing only 30 per cent in the US (BLS, 2002). Furthermore, women are concentrated at the lower levels of the academia and comprise only 17 per cent of all full professors in the US.
(BLS, 2002). The UK with twelve per cent (the Times, 2002) and Israel with eleven per cent of all full professors (CBS, 2002), lag behind.

Women's entrance into the medical profession

Although in ancient times, women were identified with medicine and acted as goddesses and healers and in the Middle Ages as saints and witches (Wynn, 2000, p. 668), women had difficulty entering into medicine when it became a profession in the modern sense in the mid-19th century (Pringle, 1998, p. 24). Medicine has thus been a male-dominated profession and the enrolment of women in medical faculties has been low. Only after a long struggle did the medical profession in the US allow women to enter (NIH, 1999). By the mid-19th century women had secured the right to be admitted to medical schools in other western countries (Shye, 1991, p. 1169). Although there were few women who trained to be doctors in the UK in the 1860s, they were faced with much opposition and, by 1900 there were only 200 female doctors in the UK (RCGP, 1998). In Belgium and Russia, women were allowed access to medical schools only at the end of the 19th century and in Germany, Italy and Spain they were admitted as students only after 1910 (Miqueo, 2000, p. 565).

The drive to reclaim a place in medicine during the 19th century began with the efforts of a few enterprising women, who managed to gain the right to enter medical schools (Pringle, 1998, p. 26). The first phase of the battle for women to enter into the medical profession was also related to the rise of feminism and the suffrage movement. Many women chose medicine because they regarded independent, self-supporting careers as a positive alternative to marriage. In
1911, 80 per cent of women doctors were unmarried. Some of the married women also hoped that medicine would offer more flexibility and permit them to combine a family and career and offer the chance to earn financial independence (Ibid. p. 27).

**TABLE 1.1**  
Percentage of women training to be doctors in various specialities of medicine

<table>
<thead>
<tr>
<th>Speciality</th>
<th>USA*</th>
<th>U.K.**</th>
<th>Israel***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Medicine</td>
<td>39</td>
<td>34</td>
<td>29</td>
</tr>
<tr>
<td>Paediatrics</td>
<td>64</td>
<td>43</td>
<td>36</td>
</tr>
<tr>
<td>Family Medicine</td>
<td>46</td>
<td>47</td>
<td>44</td>
</tr>
<tr>
<td>Obstetrics and Gynaecology</td>
<td>64</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>47</td>
<td>48</td>
<td>46</td>
</tr>
<tr>
<td>Surgery</td>
<td>21</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>34</td>
<td>37</td>
</tr>
</tbody>
</table>

* Based on Nonnemaker, 2000  
** Based on McManus and Sproston, 2000  
*** Based on Ministry of Health, 2000

The participation of women in the medical profession remained nominal until the mid-20th century. Since the mid-1970s the number of women entering medical schools and graduating has risen rapidly in most western countries (Pringle, 1998, p. 38). In the United States, the percentage of women entering medical school rose from 23 per cent in 1979 to over 40 per cent in 1997 (Nonnemaker, 2000, p. 399). The trend in other western countries has been similar. In England, 54 per cent of the medical graduates are women as are 32 per cent of practicing doctors (Davidson *et al.*, 1998, p. 1427; McManus and Sproston, 2000, p. 11). In Israel, nearly 40 per cent of the practicing doctors are women (Ministry of Health, 2000).
Access to the profession is only part of the picture. Women doctors concentrate in certain specialties. As a rule, they are clustered in the less prestigious, lower paid specialties, and it is claimed that they are less interested in academic careers and leadership than men (Kvarner et al. 1999, p.91). In the United States, most women in resident programmes are found in paediatrics and gynaecology, where they are the majority. About an equal number of women are in family medicine, psychiatry and pathology. Significantly, they are a distinct minority in surgery (Table 1.1). This is true for other western countries except that in gynaecology, a speciality that until recently was regarded as a metaphor for global patriarchy (Daly. 1990, p. 227), women have not yet become a majority in Europe (Table 1.1). In countries with a variety of practice arrangements, such as the United States, men are more likely to be in private practice, while women tend to be salaried employees. In countries where health care is mainly publicly financed and most doctors are salaried, e.g., Britain and Israel, women tend to work in a less prestigious setting (Shye. 1991, p. 1169). Medicine has yet failed to adapt to the presence of women by making adaptations in the medical training process and providing part-time training programmes and career opportunities or positively encouraging women to enter the profession (Crompton. 1997, pp. 119-120; Pringle. 1998, p. 2).

The under-representation of women in medicine is very prominent in the leadership ranks. The statistics on women in positions of leadership and influence in medicine are very similar to women’s near absence in leadership positions typical in other professions (Coleman, 1998, p. 126). Although there has been a dramatic increase in number of women in the faculties of medical
schools, this is not the case in the senior ranks of the schools (Benz et al. 1998, p. 460) or in non-academic medicine (Kvarner et al. 1999, p. 91). Prominent women doctors discuss the hierarchical system of medicine and the existence of subtle and overt resistance to women’s authority (Showalter. 1999, p. 72). An American cohort study, comparing men and women faculty members, have found that women remain substantially less likely than men to be promoted to senior ranks (Bickel and Clark, 2000, p. 671). In Britain, women doctors do not reach senior posts as easily as men doctors (Trowell. 1999). A very recent study from the UK gives evidence of cases of disproportionate promotion among men and women (McManus and Sproston. 2000, p. 10). The stereotypical view still exists that men are better leaders in medicine (Dobson, 1997, p. 75). Even in Norway, where there is an affirmative action policy to increase the proportion of women in academic posts in medicine, women doctors have not achieved a large proportion of leadership positions (Kvarner et al. 1999, p. 92). Although, in some areas in Norway, there is evidence that women are advancing toward full gender balance (Gjerberg, 2000, p. 342), the question remains as to whether or not they will have an impact on medical leadership (Riska. 2000, p. 186).

**Medical education**

Medical education in most countries is divided into two parts: premedical and pre-clinical sciences, taught by university staff who are rarely medically qualified, and clinical training mostly carried out in academic hospital wards (Lowry, 1993, p. 2). There is a claim that something is wrong with traditional medical education. The pre-clinical medical curriculum is overcrowded with
factual information, discipline based and taught in traditional teacher centred lectures. The clinical training suffers from being too hospital based, following a standard programme. The most prominent innovations in recent years in the medical curriculum are to student centred teaching, problem-based learning, an integrated curriculum, community clinical training and electives (Harden et al. 1984, p. 296; McGuire, 1989, p. 227).

National context of the study

Gender equality in Israel

Israeli society is, in many respects, socially and culturally similar to other industrialised societies in Europe and the United States. However, it is more family-oriented and has a lower divorce rate. For women, the choice between children and career is still relatively foreign in the Israeli context (Izraeli, 1994, p. 72). Studies show that Israeli women hold traditional values regarding family life and the gendered division of labour. Consequently, Israeli women, more so than women in many Western societies, are quite dependent on men. Furthermore, Israeli women may tend to tolerate chauvinistic views influenced by the central part that serving in the army plays in Israeli culture (Moore and Gobi, 1995, P. 270).

Gender inequality at work is greater in Israel than most other Western societies. The women-to-men wage ratio is lower in Israel than in many other Western societies, and occupational segregation is stronger (Moore, 1999, p. 49). Never the less, women now make up of 44 per cent of the workforce in Israel and there
has been a continuing increase in the percentage of Israeli working women, in contrast to a constant decrease in the percentage of workingmen. Workingwomen are more educated than men. Currently, of women who have 16 years or more of education, 78 per cent are in the workforce compared with 73 per cent of men with the same education level (CBS, 2002).

Occupational segregation to 'female' and 'male' occupations is prominent in Israel. Women make up 76 per cent of the workers in education, 75 per cent in health and welfare, 60 per cent in banking and 43 per cent in administration but less than 30 per cent in agriculture and manufacturing. Women are not equally represented in powerful positions. They are a minority in management and only 22 per cent of all managers are women (CBS, 2002). The relatively low status of women’s occupations is reflected in their average income, which is 80 per cent of that of men. The average pay in sectors where women are the majority (education and health) is about 20 per cent less than the average pay in sectors where men are the majority (CBS, 2002).

Gender equality in medicine in Israel

In the past medicine was regarded as a male profession in Israel and the rate of enrolment of women into medical schools has been low. However, since the 1980s, there has been a revolutionary increase of enrolment of women as medical students (Notzer and Levy, 1991, p. 639; Notzer and Brown, 1995a, p. 449). Since 1998, about equal numbers of male and female students have entered medical school and in 2001, women accounted for about half of the graduating classes. Currently, women constitute almost 40 per cent of doctors in Israel. a
relatively high percentage compared with other western countries. The reason for this is that in addition to the increase of the proportions of women among medical students, there is a flux in immigrant doctors from the former U.S.S.R., where women comprise the majority of doctors (Notzer and Brown, 1995b, p. 378).

Women doctors in Israel tend to concentrate in certain specialities. The majority of women residents train in paediatrics, family medicine and psychiatry (Ministry of Health, 2000). As elsewhere in the western world, Israeli female doctors are a minority in surgery. In gynaecology, Israeli female residents are still under-represented, as is the case in all other Western countries, with the exception of the United States (Table 1.1). This fact may indicate that the criteria for admitting residents into residency programmes in Israel may still be affected by subjectivity, hidden discrimination and the dominance of men in the profession (Notzer and Brown. 1995a, p. 450).

Women are under-represented in the leadership of the medical profession in Israel. Women doctors hold positions of high status and power far less often than men and rarely reach senior administrative positions in either the health-care system or academia. Although there has been an increase in the number of women in the medical academic world, they remain a significant minority and seem to be concentrated at the lower levels of the academic career ladder. Today, approximately one-fifth of the faculty members of Israeli medical faculties are women, but 65 per cent of them are at the lowest academic ranks.
Of full professors in the medical schools in Israel, only nine per cent are women (CBS, 2002).

*Medical education in Israel*

Israel has four medical schools each located in a different region of the country. Each medical school is a faculty or unit in a major higher educational institute. Faculty members who teach basic and pre-clinical sciences at the medical schools are staff members of the universities. The clinical faculty members are practising doctors at teaching hospitals affiliated with the medical schools. Most of them have part time positions as faculty members. Their salaries are largely provided from hospital operating budgets with limited supplementation from university funds (Mirvis, 1993, p. 6).

A dean, who is elected by the faculty members, heads the medical schools for a term of two to five years. The position is a part-time one. The dean may simultaneously be a chief of a service or head of an affiliated teaching ward in hospital. The position has some authority over faculty members and other affiliated hospital department heads, although faculty members retain considerable autonomy and power. Clinical training for medical students in Israel is highly decentralised, located in a number of different hospitals and provided by doctors employed by the affiliated hospitals. Some are even without formal tenure or university appointment (Mirvis, 1993, p. 5-8).
The medical schools in Israel are relatively small, with 50 to 90 students admitted each year. Applicants must take matriculation examinations in science and general studies as well as a required national psychometric examination for entering universities in Israel. Students enter medical school after completing high school and usually after their army service, which is a two to three years in length. They are usually over the age of 20 and, as a result of the army service, have extensive real-life experience in leadership and responsibility. Admission into medical school is highly competitive, with the ratio of applicants to enrollees of about four to one. The total number of medical students is determined on a national level by the Council of Higher Education. The enrolment quotas may be adjusted to meet national goals. Only the very top achievers are accepted (Mirvis. 1993. p.13-17). Apart from attaining top scores in their matriculation examinations and in the national entrance examination to university, all Israeli medical schools require personal interviews for admission and medical students need to prove that they have a suitable character and personality.

The ratio of applicants to positions in medical schools in Israel is higher than in other countries and is relatively stable. Students usually apply to all four schools in order to increase their chances of admission. If they can choose, they usually select schools based on geographical considerations rather than its particular academic orientation. No national effort is directed at achieving equity of opportunities for minorities and the less socio-economic advantaged population of Israel. Only two to three per cent of the medical students are from ethnic minority groups, such as Arabs, Druz or Bedouin, who together constitute 20 per cent of the Israeli population.
The training period for doctors in Israel is a very long and costly process. It takes seven years of medical school - six years of formal medical education and a year of mandatory rotating internship in hospitals followed by four to six years of residency, after which the doctor has to pass very demanding examinations. The first three years of medical school are dedicated to basic sciences and pre-clinical studies although, recently, a tendency has developed to include as much clinical exposure as possible and teach the relevance of basic sciences to the medical knowledge in these first years. Still, most of the students complain that they are taught irrelevant scientific knowledge. Students spend the next three years on clinical studies in hospitals and clinics, where they rotate through clinical wards of internal medicine, family practice, obstetrics and gynaecology, paediatrics, psychiatry and surgery, working with patients under the guidance and supervision of experienced doctors.

Internship is supervised by a committee of the deans of the four medical schools and financed by the Ministry of Health. The internship year is spent in rotating rounds in hospitals. These studies entitle the graduates of the Israeli medical schools to an M.D. degree without further need for any licensing examinations. However, almost all graduates enter speciality programmes, generally in a medical centre in Israel and then take the qualifying speciality examinations (table 1.2).
The table shows the stages in the career hierarchy in Israel and the proportion of women at each stage.

<table>
<thead>
<tr>
<th>The stage</th>
<th>Percentage of women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>50</td>
</tr>
<tr>
<td>Interns</td>
<td>43</td>
</tr>
<tr>
<td>Residents</td>
<td>40</td>
</tr>
<tr>
<td>Specialists</td>
<td>32</td>
</tr>
</tbody>
</table>

The institutional context

Research for this study was conducted in two phases. The first survey phase of the research involved questionnaires that were distributed by mail among final year students from three of the four medical schools in Israel, which will be identified as medical schools “A”, “B” and “C”. The students from the forth school, school “D”, were not included because ten students of this population were used for piloting the survey questionnaire, which was then redrafted. The total population involved 202 students. In the second phase of this research, a case study was carried out in one of the medical schools, school “A”, with a population of 80 final year students.

Medical school “C” is the oldest and the largest of the Israeli medical schools and was founded at the time of the foundation of the state of Israel. This school is considered traditional and places an emphasis on scientific excellence and is based at a major medical centre. Medical School “A” was founded, as a faculty
of a big city university, to answer regional needs of the its area and add to the status of that University (Shuval, 1980, p. 50). It is the second oldest medical school in Israel and claims to provide a high level of medical education with scientific, technological and hospital-base emphases. This school is also based on traditional medical teaching methods but in the last three years has undergone many curricular changes in an effort to introduce teaching method innovations and new contents. The success of these innovations has not yet been established.

Medical School “B” is the newest of Israel’s medical schools. This school is located in a part of Israel which has a major need for primary medical care for a widely dispersed rural population and the major rationale of the foundation of this medical school is to help meet this need. This medical school is known for its innovative spirit and school ethos, which emphasizes community service. The school puts special emphasis on community-oriented primary care and on serving the population of its area of which one third are Bedouin, a half nomadic ethnic minority group suffering the worst living standards in Israel (Prywes, 1987, p. 952). Medical school “D”, not used for this study, emphasizes traditional principles similar to those of school “A” and “C”.

At Medical Schools “A” and “C” and “D”, faculty members select the dean for a four-year term. At school “B”, the faculty members select their dean with the help of a committee, representing the university, the major teaching hospital and the General Sick Fund (a health care system mainly for outpatient services). This dean also serves as a regional director of all health care services of the region (Mirvis, 1993, p. 5). There are three deputy deans and various chairpersons of the main committees at schools “A” “C” and “D” and two deputy deans plus
various heads of committees at school “B”, who make up the basic administrative positions at these schools.

School “C” is the largest with regard to faculty members having approximately 600 basic sciences and 1500 clinical faculty members. At school “A”, there are approximately 200 basic-science faculty members and approximately 1400 clinical faculty members with university appointments who are employees of 15 affiliated hospitals. School “B” is the smallest among all schools and there are approximately 550 faculty members including clinical faculty members who are employees of the three affiliated hospitals.

Since their establishment Medical Schools “A” “C” and “D” have followed a similar biomedical curriculum, emphasizing excellence in science and hospital-based training (Shuval, 1980, p. 40). Recently, there has been a shift in the schools’ curricula toward being more community based and employing more innovative teaching methods. The curriculum of the newest medical school “B”, is recognised as pioneering mainly in placing special emphasis on primary care education, community based training and humanistic medicine values (Prywes, 1987, p. 946).

It is likely that all medical schools candidates are similar as it is usual in Israel to apply to all four medical schools of the country to increase chances of admission (Shuval, 1980, p. 55). However, medical school “B” has a different approach to admissions and emphasises, over and above of intellectual ability and scholastic achievements, some personal characteristics, such as emotional stability.
empathy and a sense of social responsibility in addition to the traditional personality requirements of doctors (Glick, 1994, p. 268). In all three schools that participated in this study, the enrolment rate of women over the last five years has been around 50 per cent. With regard to faculty members, women are a minority at their schools. There is also a similar tendency at the three schools to find women faculty members mainly in the lower academic ranks (CBS, 2002). There is little difference in the selection of specialities among the graduates of the different schools (Mirvis, 1993, p. 24), except that the graduates of school “B” select primary medicine residencies more often than graduates from the other medical schools of Israel (Prywes, 1987, p. 947).

**Conceptual background**

*Feminist theories*

Feminist theories try to offer explanations and solutions to the barriers faced by women, mainly by making the voices of the women heard. Feminist theories either offer tactical solutions that focus on practical steps like gaining more education, specialized training for women and gaining equal opportunities within organizations with the aid of mentoring and networks (Dunlap, 1995, pp. 432-3), or calling for radical social revolution. The liberal ‘equal opportunities’ approach tries to remedy the individual and organizational barriers. It can be a doable solution when exploring mainly the institutional structure rather than the wider social context. Alternative feminist views are offered by the radical, strategic or wild feminism (Blackmore, 1999, pp. 215-218). These alternative
approaches work to change society calling for a macro level change (Coleman, 1994, p. 193). Such approaches may not be suitable to the present research, which relates more to the institutional context than to the social context.

Definition of gender equality in medical education

Gender Equality is the key issue considered in this study and the implications of this concept to the medical education are briefly considered. Identifying which one of the feminist perspectives has the most impact on education opens a debate (Skelton, 1997, p. 315). The perspective most frequently referred to in discussions on gender in medical education may most suit the language of liberal feminism and the practical stance of equal opportunities, which is still the most widely accepted point of view held by feminist researchers in medical education. The essential aspects of equal opportunities in education relate to the fact that women may be denied access into some professional training, that women’s education is regarded as problematic at least in certain areas and that education is geared towards white middle class males (ibid, p. 316).

However, the issue of equal opportunities in medical education does not relate to access, as access to medical schools in most western countries is no longer a problem for women (Nonnemaker, 2000, p. 399; Pringle, 1998, p. 38; Notzer and Brown, 1995a, p. 449). Despite this, the medical profession has yet failed to adapt to the increased number of women entering medical schools by actively encouraging women into the profession (Pringle, 1998, p. 2). This failure may be apparent in two main ways (Morahan and Bickel, 2002, p. 111):
1) Women are still under represented within medical leadership.

2) Medical schools may provide women with a less supportive environment than men.

Ensuring women’s motivation for leadership within the medical profession is regarded as a strategy to achieve gender equality. Medical education literature emphasizes the importance of having women as leaders in the medical schools (AAMC, 1996, p. 801). Attention is drawn to the prevalence of double standards toward women as leaders because they seem to fail to comply with the stereotypical feminine traits and to the hostility caused by women who manage to pose a competitive threat to men (Yedidia and Bickel, 2001, p. 459). Practical ways to promote women's motivation for leadership include promotion of special leadership-development seminars for women (Bickel and Clark, 2000, p. 670).

The medical education literature deals specifically with three aspects of learning experience at medical schools, to provide women medical students with a more supportive learning atmosphere:

1. Providing women-friendly pedagogical systems
2. Providing women with more advice and mentoring during school years.
3. An overall elimination of sexism
Several methods are suggested how to provide a more women-friendly pedagogical environment. The teaching in most medical schools is mainly based on an atmosphere of competition and those who claim more attention at lectures as well as during small groups studying sessions, are considered as better students (Guilbert, 1998, p. 68). Strategies suggested by medical education literature to promote equal opportunities within medical education include:

- Taking care to consciously provide men and women medical students with the same educational benefits by medical faculty managers (Schwartz et al, 1999, p. 676).
- Taking care not to belittle female students (Allen, 1994, p.66).
- A desired atmosphere may be created if attention is paid to new methods of teaching such as problem learning and if summative evaluations at medical schools would be based on less competitive methods other than multiple choice examinations (Hoffman et al, 1999, p. 1054).
- Curricular contents and emphasis at most medical schools tend to be gender-blind and this may impede equal opportunities. Women's health issues are yet a neglected topic in most of the medical schools (Hoffman et al, p. 1055). The typical curriculum of medical school pays little attention to teaching humanistic values and the centrality of family and community medicine, which are identified as female topics (Schwartz et al, 1999, p. 675).

Another aspect to promote a women friendly atmosphere in school is by insurance of a proper supportive system for advising and mentoring for students (Reed and Buddenberg-Fischer, 2001, p. 143). One of the problems with regard
to schools’ advice is that although some medical schools' ethos may emphasize feminine values, the actual emphasis at school is on academic achievements and factual knowledge (Caelleigh, 2001, p. 1174).

Within the basically equal opportunities framework, it is recognized in medical education literature that a more radical stance is also valid and that male monopolization of culture and knowledge, male power and male sexism are severe problems within medical education (Bickel and Ruffin, 1995, p. 559). It is well documented that sexual harassment and other forms of discrimination, are still prevalent in medical school experience (Field and Lennox, 1996, p. 249). The impact of these behaviours in spoiling the learning environment for women and influencing them to change their future career goals are not ignored (Baldwin and Daugherty, 2001, p. s6). An anti-sexist stance is therefore widely recommended by the literature to apply for medical education. One way suggested to reduce male monopolization of knowledge and sexism is having many women in higher positions of the medical schools’ management (Morahan and Bickel, 2002, p. 111). An additional way recommended to promote anti-sexism is to hold faculty members' education seminars to raise awareness of sexist language and ways of thinking. The educational management of medical schools should send clear messages about the unacceptability of sexism and harassment and work towards the elimination of sexist stereotypes against women within the school (Bickel and Ruffin, 1995, p. 559).
Gender inequality in medicine

Women enter medical schools with qualifications equal to those of men and do as well on the tests during the medical education (McDonough et al., 2000, p. 32). Yet later in their careers, women are under-represented in the upper echelons of the medical profession in every country as well as in the medical schools’ leadership (McManus and Sproston, 2000, p. 12). The research literature offers several theories to explain this phenomenon. The conceptual model, adapted in this research, offers a classification of the different arguments, which may serve as barriers to women’s progress in medical education. It is following models offered by educational management researchers (Schmuck, 1986, p. 176; Parker and Fagenson, 1994, pp. 17-20; Van-Eck et al., 1996, p. 406), as well as medical education researchers (Lorber, 1984, pp. 2-3). The arguments for women’s inequality are classified in this study into three types of constraints:

1. Constraints derived mainly from psychological values of the medical students and values existing prior to entrance to medical school including attitudes toward combining family responsibilities and work
2. Constraints derived from the organization of the educational process in the medical school.
3. Constraints derived from wider social and cultural factors
Personal and values constraints

The traditional and most pervasive explanation of the failure of women to reach a successful career and especially attain management positions in their professions is a lack of suitable qualities and motivation. Another conventional explanation for women’s lesser professional status in medicine has been that their lesser motivation to achieve high status is combined with their commitment to family responsibilities (Lorber, 1984, p. 2). It implies that, because of this, women have limitations in certain professions especially in higher status professions and leadership positions. It further implies that it is women’s self-choice and therefore they are ‘to blame’ for not progressing to leadership positions.

Historically there were even claims about the inherent incompatibility of medicine with female biological and personality traits. In the modern version of these claims, the focus is on psychology and behaviour rather than biology. It is claimed that women are passive, emotional and dependent or concerned with the private realm of home and family and therefore not suited to enter medicine let alone have positions of power and influence in medicine (Shye, 1991, p. 1169). On the other hand, there is a recent claim, especially in the US, that women are better suited than men to be doctors in today’s conditions of health care and certainly better suited for general practice medicine and leadership positions (AAMC, 1996, p. 802; Morahan and Bickel, 2002, p. 111).
In addition, the stereotypical identification of women and housework, family and child care (Crompton, 1997, p. 139), further limits women’s career in medicine. Women are supposed to suffer from a work-personal life conflict, which has a negative impact on women’s careers but not on men’s careers. As medical students, female students limit their future career goals because of family responsibilities (Hays, 1993, p. 255). Yet, a woman’s choice to devote her energies to her family, rather than to her work, may be the result of a wider social and cultural context rather than the cause of women’s barriers. Interactive cultural processes and stereotypes prevalent in society, not personal characteristics and self-choice, may still keep women in their supposed appropriate place according to the male norm of society (Morahan and Bickel, 2002, p. 111).

Organisational and school constraints
Organisational constraints are barriers that derive from the organisational structure and culture of workplaces and factors that are connected with the educational process in medical schools such as the number of women in leadership positions, teachers’ stereotypes, ethos or networks resulting in different experience for many women students. As in workplaces, these kinds of constraints can be explained by the dominance of men in key leadership positions in the educational institutions. According to educational and organizational literature, there are processes of “winnowing out” of women at every level of their career development because of an unsupportive organizational culture in the workplace (Schmuck, 1986, p. 178; Parker and Fagenson, 1994, p. 17). In medical educational institutions, barriers to women
connected to the organizational culture may include insensitivity to gender issues in the medical curriculum, inadequate preparation and mentoring processes for women, neglect to acknowledge possible gender differences in pedagogical issues as well as gender discrimination and even sexual harassment (Hays, 1993. p. 255; Jacobs et al. 2000. p. 464). This results in indecision and decreased productivity and motivation for women regarding their future career opportunities (Jacobs et al. 2000. p. 463).

Although equal opportunity legislation to overcome the general overt organizational gender discrimination and bias is common in most European countries, covert organisational discrimination still persists. This may suggest limitations of the power of such factors to explain women’s status (Schmuck, 1986. p. 179).

Wider cultural and social factors

Wider social barriers to the progress of women include the lack of career opportunities and barriers to achieve career goals. Once they finish medical school, women medical students, together with other professional women, are faced with social and cultural barriers of the male dominated society (Radford, 1998. p. 185; Kvarner et al. 1999. p. 93). Although formal barriers to their advancement have fallen, women are still tracked into lower or middle level careers (Rosener, 1990. p. 119). In medicine, they are tracked to only certain specialities according to stereotyped values and suffer from less influential status with less prestige, pay and political power. Thus, women are not given the
opportunities to accumulate the resources that build up careers (Showalter, 1999, p. 72).

Rationale of the study

Importance and relevance of the study

Importance and relevance of gender equity issues

The rationale for choosing the subject of this study is the belief that equal opportunity is a basic right in Western society. In many countries, laws protect this right (Bush, 1998, p. 8). Even at the beginning of the 3rd millennium, the world of work is still divided into those who have full employment and good pay and those who are underemployed and underpaid (Bush, 1998, p. 4). Women are often found in the underemployed/underpaid category (Lorber, 1994, p. 292). Issues of gender equality are particularly relevant to educational management. It is claimed that good education is by definition anti-sexist (Davies, 1998, p. 31).

Importance and relevance of gender equality issues in medicine

This study focuses on gender equality in medical education. Since the early 1990s, gender equality issues in medicine have become much-discussed topics in the medical educational research literature, which recognised gender inequality as a major problem. The initiatives for this research have come from medical institutions that are making conscious efforts to increase the number of women in leadership positions. For example, at a 1993 conference of the American Association of Medical Colleges (AAMC), one of the major discussion groups
considered the role of gender in medical education. The group identified the importance of gender in the area of professional education and socialisation of doctors-to-be (AAMC, 1993, p. 617). Later, the AAMC declared its commitment to gender equality by establishing a committee to increase women in leadership roles in medicine (AAMC, 1996, p. 801). Another American program, ELAM (Executive Leadership in Academic Medicine) focuses on preparing women faculty members for senior leadership positions.

Several reasons for supporting a commitment to gender equality in medicine have been raised in the literature. Successful health care calls for the diversification of leadership capabilities and management styles that will enrich the ability to respond to the needs of all the groups within the population. This will require a change in medical care and education. There is a firm belief that more women in senior leadership roles will bring more rapid curricular, climate and policy changes in health centres and medical schools (ELAM, 1999).

Pragmatic arguments have also forced academic medical and health centres to ensure the quality of their organisations in order to survive in the market-driven medical care system of today. To ensure high quality, the workforce in medicine, and especially the chief administrators, must have versatile talents and skills. This target can only be met if those in charge of the medical workforce discontinue traditional recruitment procedures from a limited reservoir of people, which does not reflect the diversity of the medical constituents and general population. They have to recruit the best talent available, including women. Increasing the number of women in prominent positions as role models
for other women would add diversity and balance to the leadership of medical institutions.

Female medical students and doctors-to-be have been found to have qualities better suited for the needs of medical care in the future. They tend to be ethically more socially responsible, less cynical and more sensitive to the emotion of others (AAMC, 1996, p. 802). Primary care medicine is foreseen to be more and more important as a medical speciality and women seem to be choosing this specialisation at a higher rate than men. Having women in higher positions and in the leadership of medical schools and institutions can ensure an educational and work environment that is hospitable to all (AAMC, 1996, p. 802; Morahan and Bickel, 2002, p. 111).

Another rationale for the commitment to equal opportunities for women in medicine is based on principle. Medicine should have a special responsibility for social justice. Health care professionals have an ethical duty to ensure that personal bias and gender stereotypes do not interfere with their responsibilities to patients and students. The value of equity should always be visible in the way faculty members are evaluated and promoted (AAMC, 1996, p. 802).

Importance of the study in its national context

As elsewhere, medicine in Israel faces increasing challenges because of the changing needs of managed health care (Mirvis, 1993, p. 37). Now that half of the enrolling medical students in Israel are women, not to support the advancement of women in medicine is risking the loss of available talent for
leadership. Additionally, research on gender issues in Israel is very limited and is nearly absent in the case of medical schools. Studies on gender equality issues in the Israeli educational context are needed in all fields, particularly in the field of medical education.

**Expected outcomes of the study**

The expectation may be that, as there are now equal numbers of women students entering medical schools and an increasing number of faculty members are or will be women, gender equity problems in medicine would solve themselves. However, this may not be the case. Women may still not make equal advances to academic leadership positions. Their full potential in medicine cannot be realised without continuing educational management efforts to improve the environments in which they are educated and trained. Far-reaching systematic initiatives and a comprehensive approach are necessary to create equal opportunities and to improve the academic climate. The outcomes of this study are meant to broaden this.

There are several possible outcomes of this study. The recognition of gender equality issues and continuing research about them in work-related fields is a major step toward bringing about change in an unjust situation. This study may aid in understanding the reasons for possible inequality faced by women at work in general, in the higher education and specifically, recognising possible gender inequality in the process of educating medical students for their career. The study of gender equality in medicine can provide the means for the
empowerment of women in higher education in general. The implications of gender inequality will be discussed in terms of a number of parameters other than that of equity. These include anticipated demographic changes of medical schools, empowering women faculty members, possible changes in school curriculum and policy, making cultural changes at the medical schools and offer alternatives to all graduated students.

Purpose of the study

Issues arising from background of the study

Judging from the conceptual and statistical context, women may face, from the beginning of their professional education and training, prejudice, unfavourable social values, harassment and other barriers. They may have limited prospects for the development of their careers and for becoming leaders in medical education and academia. By the end of their educational process, as they move from training into practice, female medical students may not be equal to their male counterparts with regard to their career options (AAMC, 1996, pp. 804-805). The educational process of the medical students has much to do with the persistence of this inequality.

The general aim of this study is to provide insights into the general question of gender equality in the educational process of the medical professions and the implications of gender issues for educational managers. It is important for
educational management to understand this process and to identify ways in which managers may be able to improve the educational process.

Objectives of the study

The objectives of this study are to:

1. Compare male and female medical students’ perceptions concerning their personal qualities, values, interests, future career goals and motivations.
2. Provide some organizational insights during the educational process with regard to the medical curriculum, the preparation and advice and mentoring of students entering into medical careers in Israel.
3. Identify possible areas of concerns with regard to student abuse during the medical education including gender discrimination and sexual harassment.
4. Identify possible work-related concern and barriers to future career opportunities facing female students.
5. Suggest ways in which the educational managers can address possible problems of gender inequality.
Research questions

1. Are there gender differences in personal qualities and values among medical students:

1.1. Are there any gender differences in self-esteem?

1.2. Are there any gender differences in career goals and motivation for leadership?

1.3. Are there any gender differences in perceptions of combining a medical career with a family life?

2. Are there any gender differences in the school’s experiences of the students:

2.1. Are there any gender differences with regard to learning styles, curricular contents preferences and preferred evaluation systems?

2.2. Are there any gender differences in the preparation and advice given to medical students?

2.3. Are there any gender differences with regard to the mentoring processes experienced during the medical education?

2.4. Are there any gender differences in the nature and extent of gender discrimination, harassment or other student abuses in medical school?

3. Are there gender differences in the effect of gender on speciality choices and career opportunities in medicine?

4. What are the implications for educational managers of the issues raised in the previous questions?
Outline of the following chapters

The next chapter, the literature review, develops the themes related to the study’s research questions by reviewing the relevant existing research evidence and theories related to these themes. Then, the methodology chapter fully describes the planning and design of the research and how this study was conducted. This chapter also fully explains the reasons beyond the specific methodology chosen for this research. The findings of this research are described in chapters four and five of this thesis, followed by an analysis chapter and finally the conclusion.
Chapter 2: Literature review

Introduction

The medical education literature on gender equality issues, as well as the implications of those issues to educational managers, is the most relevant source for this chapter. Literature on women in higher education, especially women students, is also relevant. Yet, social, psychological and literature from management shed light on approaches to understand gender equality issues. Gender equality in an educational process can be seen as part of the general question of equity in education. Yet, this review is limited to gender issues only and does not include the literature on race and minority equity issues.

This chapter consists of four main sections: general approaches to understand the barriers to gender equality in general, organizational, social and theoretical solutions to improve possible gender inequalities, gender equality issues specific to higher education and the specific case of gender equality issues as experienced by medical students in medical schools. These sections are arranged according to the main objectives and the research questions of this study.

Approaches to explain barriers to gender equality

The research (Schmuck, 1986, p. 176; Parker and Fagenson, 1994, pp. 17-20), offers several theories to explain possible gender inequality. These theories can be divided into three broad types of approaches: these related to personal values,
to the organizational structure of workplaces and educational institutes and to the wider social and cultural context.

*Person-centred approaches*

Person-centred approaches were popular among researchers to understand barriers to gender equality in the 1970s but are still used in very recent studies. In this study, those barriers include issues concerned with gender differences in individual attributes such as personal characteristics, self-image, work motivation as well as attitudes toward family and work, which are individual but may derive from the wider social context.

The basic assumption of these approaches is that, due to biological roots or socialization, there is a gender difference in individual preferences, motivations, abilities and skills (Parker and Fagenson, 1994, pp. 17-18). One variation of this approach, the ‘deficiency model’, explains women’s failure to achieve equality in terms of women’s lack of appropriate characteristics and skills (Wild, 1994, p. 85) or career’s motivation (Hakim, 1995, p. 448). Another variation, the assumption that women are different, yet better skilled for management than men, helps in advancing women’s status (Schmuck, 1986, p. 182; Rosner, 1990, p. 122).

*Claimed gender differences in self-esteem*

Women’s lower status at top administrative positions is claimed to be the result of gender differences in personal attributes, skills and cultures (Burk and

Women rarely believe they have a chance of being appointed to a management position and question their competence for leadership by asking “Who, me?” (Shakeshaft, 1993, p. 51; Van Eck et al, 1996, p. 407). Other researchers believe it is not a problem once women have achieved a certain level (Gupton and Slick, 1996, p. X). When women believe that it is possible for them to be hired as school administrators, they are as likely as men to aspire to such positions (Shakeshaft, 1993, p. 51).

Claimed gender differences in career goals and motivation for leadership

Another old argument to explain the personal barrier to gender equality is that women’s relatively disadvantaged position at work mainly reflects their attitude to work. This assertion was put to the test in the research literature of the 1980s and proven to be wrong (Wilson, 1997, p. 22). Yet, such an argument has been persistently reclaimed, bringing in new terms like women’s ‘preferences’, or ‘self-choice’. There is a theory that some women choose to be home-centred and for them work is a secondary activity while some women choose to be career centred with domestic activities a secondary consideration (Hakim, 1995, p. 448; White, 2000a, p. 173). This claim is disputed in other research (Crompton and Harris, 1998, p. 119; Williams, 2000, p. 257). Nevertheless, professionally trained women tend to adopt family friendly strategies, which enable them to
continue in professional practice and care for their families as well (Crompton and Harris, 1998, p. 125).

It is further claimed that women lack the motivation to enter certain occupational fields or leadership positions (Wilson, 1997, p. 214). The many personal reasons that women may not apply for authority positions are summed up (Scott and Creighton, 1998, pp. 112-113) as follows:

1. They have been socialized not to desire such jobs.
2. They think that they would not perform well in such positions.
3. They perceive themselves as not having the necessary qualities.
4. They believe that they would suffer discrimination in that position.
5. They believe that their application would not be treated fairly by the recruiter.

Another claimed difference is different career goals. It is claimed that men tend to emphasize status and independence while women emphasize connectedness and caring for others (Cooper and Lewis 1995, p. 29; Morgan et al, 2001, p. 304). Women report of getting more satisfaction with the performance of tasks of work while men get their satisfaction mainly from earning, job security and office politics (Davidson and Cooper, 1992, p. 117).

Claimed gender differences in perceptions of combining work and family life

The possible gender differences in attitudes toward work and family is a related issue to the difference in values toward work, although this issue is part of the social context’s barriers. Some workplaces have traditionally made high
demands on their workers. The highest demand is that work should come before personal and family life. This is a challenge for many individuals including men but is particularly a challenge and sometime an impossible demand for women (Parker and Fagenson, 1994, p.20; Lewis, 1996, p. 2). Many studies comment on the stress on women when attempting to manage their multiple roles as well as achieving a balanced family life (Ouston, 1993, p. 10). It is claimed that for many women in Europe, the choice to have a management position means not to have a family as well (Ruijs, 1993, p. 554). Furthermore, one of the explanations to women’s disparity among managers is that women try to avoid potential role-conflict stress (Al Khalifa, 1992, p. 96).

Gender differences in career planning and career breaks

Another much discussed difference with regard to attitude to work is career planning. Many studies investigate the marked gender difference in career pattern. It is claimed that women lack strategies for career planning (Hite and McDonald, 1995, p. 8). In the educational context, it is found that while men describe their career pattern as planned, women mostly describe their career as luck and drift. In education, men tend to enter teaching with career plans, which will eventually make them school leaders. Women usually enter teaching without a career map and initially focus on becoming good teachers. They are ‘drifted’ into leadership by chance (Gold, 1996, p. 424). The overwhelming majority of women in educational management feel that they have achieved their positions more by good luck than good management (Adler et al. 1993, p. 29). Typically, women work hard and are loyal to their organization. Yet, they do not initiate career changes (Ouston, 1993, p. 7) or they develop career plans only as
their career progresses (Coleman, 1996b, p. 321). Also, women only make ad
hoc arrangements to attain their career goals (Ouston, 1993, p. 8). Lack of career
planning is found to be typical even of successful women (Davidson and

Many more women than men take career breaks as well as part time jobs
throughout their professional development (Ouston, 1993 p. 8). Career breaks
can be taken for many reasons, but for women it is associated mainly with
maternity leave and child-care (Coleman, 1997, p. 131). Career breaks for family
reasons can be considered to be the “mommy track” by some researchers but
“have it all” attitudes by others (Parker and Fagenson, 1994, p. 21). Making the
status of women at work a “special case”, which is a by-product of maternity
leave initiatives to better the condition of women at work, may have a negative
side effect. Evidence indicates that this may reinforce negative male attitudes
toward female workers (Gale and Cartright, 1995, p. 6). Based on men’s life
style, career breaks to care for family members indicate a lack of commitment
(Izraeli and Adler, 1994, p. 12). Therefore, career breaks for childbirth and
child-care are detrimental to the career development of women (Coleman,
1996b, p. 321). Successful women head teachers interviewed in the UK took
only minimal maternity leave in order to minimize disruption to their career
(Hall, 1996, p.58; Coleman, 1996b, p. 321). Although women cannot be overtly
discriminated against for taking maternity leave, its length and timing could be
critical in terms of career progression and opportunity. It is claimed that the
majority of employers penalize women for taking career breaks. This is in
contrast to career breaks taken by men, which tend to be much more accepted (Davidson and Cooper, 1992, p. 129; Coleman, 1996b, p. 321).

Organizational structure barriers

Organizational barriers include constraints that operate within work and educational organizations.

Claimed gender discrimination in the access to and promotion within the workplace

The phenomenon of ‘winnowing’ (women being excluded by men ‘gatekeepers’) can be found in access into the workplace (Schmuck, 1986, p. 179; Bell and Chase 1994, p. 147). Men employers and ‘gatekeepers’ may see men as having more right of access because they are the ‘bread winners’ in the family (Thompson, 1992, p. 259; Alimo-Metcalf, 1995, p 92). Even when the laws prohibit it, there have been cases found of appointment committees discriminating against women (Coleman, 1996b, p. 320). Several organizational filters may screen the advancement of women into high administrative positions (Shakeshaft, 1993, pp. 49-50):

- Recruiting men only
- Asking biased interview questions of women, particularly about family responsibilities
- Offering women lower salaries than men
- Interviewing men by quota and not qualifications
- Using criteria not related to performance which screens out women
- Counting as relevant experience typically male activities
- Having only men as interviewers

Many studies have reported the far slower rates of promotion of women than men and a 'winnowing' process of women within the same organizations even when women are better qualified. Promotional procedures seem to be in the hands of male 'gatekeepers' (Alimo-Metcalf, 1994, p. 97) so women are not getting 'high opportunity' jobs (Schmuck, 1986, p. 181) and are not encouraged to ask for promotion (Wild, 1994, p. 87). Studies indicate that women are less likely than men to be given the opportunity to take on informal leadership positions within the workplace. These opportunities give men better visibility when it comes to being hired for formal leadership positions. Women are less likely to chair committees or represent their schools (Shakeshaft, 1993, p. 52; Drake and Owen, 1998a, p. 4). In evaluating job performance for promotion, the criteria of judgment may not be how well the person works but whether or not the person is a trustworthy and loyal colleague. Here, gender makes a lot of difference to perceptions (Lorber, 1984, p 8). Male gatekeepers may not believe that women are trustworthy colleagues either because of their supposed characteristics, not being as competent as their male colleagues or possessing the attributes commonly associated with effective management, or because of their competing family roles (Alimo-Metcalf, 1995, p. 106). The literature on assessment techniques in the US, asserts that while organizations attempt to increase the fairness and objectivity of their assessment process by adopting more sophisticated forms of assessment, they may be increasing the effect of sex
bias in the promotion process. As the techniques become more complex, the sources of gender bias are becoming far less obvious and therefore less likely to be challenged (Alimo-Metcalf, 1995, p. 107).

Women teachers, in a UK study, claimed that they were not encouraged to think about promotion by the head teacher (Al-Khalifa, 1992, p. 99). Furthermore, women may not be their own best advocates. They tend to be doing more self-evaluation and are therefore more selective about their career moves than men teachers (Ibid, p. 96). Although interested in advancement, women are more likely to believe that reward and recognition will come from doing their best work rather than from self-promotion (Hite and McDonald, 1995, p. 8). Male teachers, on the other hand, are given encouragement and extra responsibilities and get more chances to reach management (Coleman, 1994, p. 185). Male superintendents, according to studies in the US, prefer hiring men over women in key and close positions because they believe that this will prevent sexual tension. They explain that they prefer to work with men rather than women on committees and in small groups (Shakeshaft, 1995, p. xiii).

Claimed resistance to women in positions of power

Several researchers claim that men show a high resistance to change and support a strong impenetrable organizational culture. This culture holds male norms of behaviour and model of good management, which exclude most women as outsiders and makes men as insiders (Ramsay, 1995, p. 175). It is claimed that the reason for the limited number of women managers is that male managers do not want the competition. Women do not reach top managerial posts because
male managers have the power and the authority, while lower level managers do not have such authority (Izraeli and Adler, 1994 p. 14; Parker and Fagenson, 1994, p. 19).

Furthermore, men may find it hard to cope with working women as equals and especially hard to accept a women boss (Davidson and Cooper, 1992, p. 106; Riehl and Lee, 1996, p. 892). When a woman has achieved a position of power and responsibility, she is considered exceptional and is therefore being tested to prove her worth (Schmuck, 1986, p. 181). Another aspect is that while men leaders are accepted as representing the interests of the general public, both, men and women, women leaders are seen as representing only women’s interests (Lorber, 1994, p. 226).

Women’s attitudes to other women

The expectation that women, belonging to a discriminated group, will show special consideration for other women and help them overcome discrimination is not always fulfilled (Gupton and Slick, 1996, p. ix). It is a common belief that women are their own worst enemies. There is a strong and persistent view in the literature that it is the other women who keep women from advancing (Maddock and Parkin, 1994, p. 37; Shakeshaft, 1995, p. xii). Several reasons are given for this phenomenon. Women who achieve high positions may exemplify male attitudes and do not like to be identified with other women. In other cases women who have reached the top by hard work, may resent making it easy for younger women, or they may not have the strength to undertake an additional struggle to help others (Mann, 1995, p. 14). Successful women managers may
also be against identifying themselves as disadvantaged because of their gender (Hall 1997a, p. 321; 1997b, p. 72; Grace, 1995, p. 189; Gupton and Slick, 1996, p. IX). Women principals interviewed in the US appear to adopt the prevailing norms of the administrative culture, which ignores issues of gender equity (Schmuck and Schubert, 1995, p. 285).

Other women managers in the US see themselves as having an obligation to address sex inequalities (Schmuck, 1996, p. 353). A study in the US investigated women administrators’ commitment to gender equity issues in schools and found four orientations among women toward gender equity: isolationists, individuals, activists and advocates. The ‘activists’ and ‘advocates’ support gender equality and use their power to achieve it. The ‘isolationists’ and ‘individualists’ are not concerned with women’s issues and strive to model themselves after men (Matthews, 1995, p. 262).

**Token positions**

One of the problems, which derive from the under-representation of women in some workplace organizations, is the mechanism of a ‘token position’ (Kanter, 1977, pp. 208-209; Van Eck *et al.* 1996, p. 408). According to this organizational theory, there are ‘dominant’ and ‘token’ groups in organizations according to their relative numbers. ‘Token’ are in less powerful status and are treated as representatives and symbols of their category (Kanter, 1977, pp. 208-209). Many women in management positions are in danger of being ‘token’. As token, they are extra visible and are subject to gossip and scrutiny of how they dress, how they spend their leisure time and with whom they speak. As a symbol
for their group their behaviour is considered to represent other women (Kanter, 1977, pp. 212-216). Tokenism helps to explain the dynamics associated with being women in a senior position. Those dynamics includes increased pressures on women and reduction of their prospects for success (Izraeli and Adler, 1994 p. 10). Yet, although being a female ‘token’ is often problematic to women, being a male ‘token’ often works to a man’s advantage (Ibid, p. 11).

A perplexing finding is that token-women, who have faced overt bias and discrimination, refuse to call it by name. The research has identified a phenomenon of ‘denial of personal discrimination’ among token women. It is one of ways women learn to cope with discrimination. This phenomenon indicates that individual women tend to see themselves as being justly treated even though they recognize that women in general are not (Colwill, 1995b, p. 55). Women who deny that they have been discriminated against often see themselves as exception. As they dissociate themselves from their female identity, they remain self-oriented and tend not to identify with other women but rather with those who are the gatekeepers of the profession. Often, they do not support other women, ignore issues of gender equity and perpetuate the status quo (Mathews, 1995, p.259; Gupton and Slick, 1996, p. IX).

**Gender and sexual harassment and discrimination**

Gender and sexual harassments are pervasive phenomena at workplaces (Bowes and Tata, 1999, p. 280). Gender harassment defined as the general level of sexual harassment (Gelfand et al, 1995, p. 164) causes persistence of subtle and blatant forms of discrimination. These range from not giving help in finding
work opportunities, ignoring during the preparation for work and education to blatantly sexist attitudes and overt discrimination. It also includes questioning the ability of women to be leaders, doubting whether women can assert the authority needed for the job and acceptance of women leaders by the surrounding (Bell and Chase, 1994, p. 150). Sexual harassment is different from gender harassment by aiming specifically to individual person as a sex object. The legal and most prevalent definition of sexual harassment it that it includes both hostile attitudes without direct initiation of sexual cooperation (‘hostile environment’ in legal terms) and explicitly or implicitly linking sexual cooperation to career related outcomes (‘quid pro quo’ in legal terms). Sexist slurs and jokes are also part of sexual harassment. Although it applies to men as well, women are found to experience much more sexual harassment (Gale and Cartright, 1995, p. 6). Women, who are harassed, often experience psychological distress and low self-esteem (Cooper and Lewis, 1995, p. 30; Vinnicombe and Sturges 1995, p.11). They are also in the danger of being treated as ‘hypersensitive’ or ‘whiners’ if they complain on sexual harassment (Bowes and Tata, 1999, pp. 274-275). The literature of sexual harassment has often been criticized for consisting of anecdotal accounts (McDonald and Lees-Haley, 1995, p. 54).

*Social context barriers*

Social barriers refer to the wider social and cultural gender issues. It includes sex-role stereotypes, the patriarchal cultural context, gender inequality in domestic responsibilities and childhood education.
Sex-role stereotyping and sex-role segregation

The literature noted that in the past it was common to hold stereotyped perceptions of women such as: dependent, passive, non-competitive, illogical, less competent and less objective. It is claimed that some men, influenced by such stereotypical assumptions, still see women as weaker and less able to stand up to the rigours of the world of work (Cooper and Lewis, 1995, p.30). Gender stereotypic images of occupation are found to correspond with the sex segregation of employment (Cejka and Eagle, 1999, p. 421). It is found that the common perceptions of a successful manager, is a person with characteristics more commonly ascribed to men in general than to women in general (Schein, 1994, p.47). While the overt legal requirement is for equitable treatment, it is inevitable that many of the assumptions about the occupational roles of men and women, which are embedded in our culture, will take time to be replaced (Scott and Creighton, 1998, p. 105).

Thus, women have to manage gender as well as do their job at work (Maddock and Parkin, 1994, p. 29). They have to deal with gender cultures such as ‘gentleman’s club’, ‘locker room’, ‘barrack yard’, ‘gender blind’ or ‘smart macho’ (Ibid, p. 30). In an American study among 27 women aspirants to the superintendency in America, one of the main findings is that these women are regarded as women first and school administrators latter. Although their skills as professional educators and as functioning well in their administrative work are acknowledged, they are found to suffer from the tension of the gender perceptions of their male colleagues (Grogan, 1996, p. 107). An additional
problematic issue is that because stereotypical conceptions of women, some men are reluctant to criticize or confront women. Most women feel patronized and frustrated by paternalistic behaviour, which put them on an unequal footing with men (Wild 1994, p. 84; Cooper and Lewis 1995, p. 30). In educational management context in the USA, it is found that females tend to receive less constructive criticism than males in carrying out their work and therefore are less able to deal with negative comments (Shakeshaft, 1993, p.54).

The patriarchal and androcentric nature of society

Patriarchy is claimed to be a key social problem, which has not yet been overcome, despite current social modifications (Crompton, 1998, p. 129). It is defined as “gender relations or a system of social structures in which men dominate, oppress and exploit women or at least, women are subordinate to men” (Crompton, 1998, p. 131). The capacity of patriarchal culture and structures to endure in changing conditions had been noted in the specific context of educational management. Although a trend of feminisation of educational leadership position is taking place in both elementary and secondary schools, the real political structural power continues to be male dominated (Goldring and Chen, 1994, p. 175).

The concept of ‘androcentrism’ describes a perception, which sees the world from the point of view of men. In the study’s context it will be used not as a social structure, which describe the domination of men over women (patriarchy), but with regard to organizational cultures, which result in a more subtle discrimination against women. Such culture in the context of educational
management tends to view male values as more significant than female values and experiences (Coleman, 1994, p. 187).

Claimed gender differences in domestic responsibilities

Although women have increased their rate in the labour market, not all men substantially increase their activity in the domestic work. Women are likely to be the partners in their family with the prime responsibility for domestic and household duties (Ruijs, 1993, p. 546). Most working married women are in a situation termed "dual career family" which means that both partners in a marriage are having both professional careers. Women rarely enjoy the opposite situation, termed as 'two persons single career' enjoyed by many working men (Evetts, 1994, p. 50). In dual career family situation, it is still more common that the women's career interests are subordinate to those of the men. More women than men tend to change their place of work and even their profession as a result of their partners' move for career sake (Coleman, 1994, p. 184). Thus, marriage may pose distinctive barriers to the career of women. The effect of marriage on women is a difficulty in working long hours and a need to work locally (Davidson and Cooper 1992, p. 140; Ouston, 1993, p. 11). In addition, some organizations may pose a double standard toward marriage. Although they prefer their male employers to be married, they regard married female employees as a risk and as likely to neglect their work because of family obligations (Vinnicombe and Sturges, 1995, p.7). It is found that women managers in Europe are much more likely to be either single, divorced or separated, have no children, or have one child after they are thirty, in comparison either to male
managers or to other women who are not managers (Ouston, 1993, p. 10; Vinnicombe and Sturges, 1995, p.7; Coleman 1998, p.32)

The difficulties of managing a domestic role with a career are greatly increased when working couples have children. This situation is termed as the ‘triple shift’ (Acker, 1994, p.119). The data suggest that unlike their male counterparts, the responsibility of family is very often either the sole responsibility of the women or when being more jointly handled, still mainly women’s business. Such a situation creates pressure on women unfelt by men. Evidence of the tensions felt by women regarding taking care of children and homemaking are echoed in the issues raised by 27 women aspiring for superintendency in USA, which included fear of failing as mothers, responsibility for the maintenance of relationship in the family and coping with household labour and the intense preoccupation with time management as a result of it (Grogan, 1996, p. 134). One strategy to cope is to postpone having children until women are well established in their career and have only one child (Ouston, 1993, p. 11). Personal accounts by women of their careers suggest that becoming a parent is a critical stage of a women’s professional development and for many women it creates role conflict (Ouston, 1993, p. 11). Female university faculty members are found to acknowledge that they spend less time on their careers and more time on household and child-care responsibilities than their husbands (Day and Colwill, 1995, p. 37). Studies of women managers are increasingly drawing attention to the differences in their working lives with or without children (Ibid, p. 10).
In addition, the reality of increased longevity of people leave many women in a situation that is termed the ‘sandwich generation’. They face a dual challenge of caring both for their children and their parents while simultaneously developing their careers (Day and Colwill, 1995, p. 35). Caring for elders is a potential stressor associated with many women who have to give up their social life. Evidence for it was found among single managers in the UK (Davidson and Cooper, 1992, p. 139).

Yet there is some controversial evidence as well. This is not so in the case of the five head teachers interviewed in the UK, where a role reversal was noted at least in one case (Coleman, 1996b, p. 327). There is an acknowledgement of the importance of women in the work arena as well as men’s place in playing a more equal share in family responsibilities (Lewis and Cooper, 1999, p. 382-383; Morgan et al. 2001, p. 304).

**Gender differences in childhood education and upbringing**

Many gender inequalities are rooted in childhood experiences. There are marked differences between the ways in which people talk to girls and boys and in what each sex is permitted to say or do. Boys tend to play games, which have winners and losers in large hierarchical groups. They learn to interact in terms of status. Girls tend to play in pairs or small groups and are not encouraged to boast. Giving orders is accepted from boys but regarded as “bossy” from girls (Cooper and Lewis, 1995, p. 29; Drake and Owen, 1998b, p. 136).
A common explanation for the failure of women to achieve high status is to blame parents, schools and other socialization agents (Wild, 1994, p. 97). These socialization agents do not encourage women to aspire to strive for achievements and to enter traditionally male fields. Although some women who have made it, report high expectations for them at home and school (Coleman, 1996b, p. 329), research reports that women indicate that they have not been encouraged at home and at school to develop careers (Acker, 1992, p. 138). Other research challenges this assertion. There is a considerable literature on parental influence on career choice and adult lifestyles. Analysing the literature on parent-child relationships of successful women reveals (Hall, 1996, p. 42):

1. Parental behaviour to promote achievement striving and independence in female children includes: warmth, moderate permissiveness, encouragement for and reinforcement of achievement-related efforts.
2. It is more common for fathers to train their daughters in traditional femininity, showing greater concern to the affective and interpersonal development of their daughter than with achievement related behaviour.
3. Senior women managers report happy childhoods with close and warm relationship with their parents.
4. The typical family relations of successful women in educational management, is a special relationship with their father.
5. Although the mothers of those women also encouraged them, it is typical for them not to have so prominent relationship with their mothers.
In the study of six successful heads in the UK, it was found that they had a choice whether or not to work and which aspects of each of their parent’s behaviour to accept as part of their own identity. Parental influences, particularly their fathers, were significant influences on their early independence, self-sufficiency and desire to succeed (Hall, 1996, p. 43). Another study in the UK, found that, overall, there was no uniform parental influence acting directly on leaders of schools choice of career (Ouston, 1997, p. 174). With regard to school’s effects on women’s career, a clear pattern of school’s influence emerges from a study of head teachers in the UK, who testify they enjoyed their secondary schools, which were selective and had traditional academic values (Ouston, 1997, p. 175).

Responses to gender inequalities

Feminist theories

Some researchers define a feminist theories’ orientation as an opposite orientation to androcentric orientation. According to feminist theories, gender type identification as ‘men’ and ‘women’, which is the construction of the social and cultural context, is argued to have a very strong influence on behaviour and work choices of people (Shakeshaft, 1993, p. 52; Cartwright and Gale 1995, p. 13; Hall, 1996, p. 197).

The main claim of the feminist theories is that men control the knowledge and set the rules, imposing their conceptualisation of the world on women. Women’s
experience does not count and is not considered valid, scientific and convincing
(Acker, 1994, p. 130). Feminists, therefore, should be committed to creating
conditions in which women take the responsibility for planning and development
in their work organizations (Ozga and Walker, 1995, p. 40). Feminists write
about women’s culture, the unique way of looking at the world through the
experiences of women because of physiological conditions or place and role in
society. Feminists are trying to offer a different point of view in researching
women’s status in the educational management context (Ozga and Walker, 1995,
p. 35; Wild 1994, p. 92; Schmuck 1996, p. 345; Blackmore, 1999, p. 221). They
claim that without a women’s point of view, the existing knowledge about the
world is highly partial and creates a distorted picture of women (Acker, 1994, p.
131).

One of the most controversial aspects of the feminist theories is
sameness/difference gender debate (Williams, 2000, p. 275). There are cases of
women in powerful positions who reject the label of feminism and hold negative
stereotypes about women generally (Schmuck and Schubert, 1995, p. 283).
Many may deny any gender differences and hold gender blindness views
(Maddock and Parkin, 1994, p. 34; Riehl and Lee, 1996, p. 876). Some
feminists, in response, accept gender differences and acknowledge gender
differences can be problematic to women (deficiency model). They address it as
an organizational problem that women can make up for by fighting for changing
organizational standards or helping women to become more like men in order to
succeed (Al Khalifa, 1992, p. 101). There are other feminists who argue that,
indeed, males and female are different but women’s values, style, interaction and
leadership qualities may be better, especially for leadership (Marshall, 1994, p. 4). Women are different but are better, certainly with regard to educational management (Rosner, 1990, p. 121; Blackmore, 1999, p. 207).

Feminist theories can be divided into several broad perspectives such as: liberal feminism, radical feminism, socialist (Marxist) feminism, psychoanalytic feminism, black (anti-racial) feminism, separatist (essentialist) feminism and post-modern and post-structural feminism (Adler et al., 1993, pp. 55-56; Acker, 1994, pp. 137-144; Weiner, 1994, pp. 51-73; Skelton, 1997, p. 316; Morley, 1999, p.9; pp. 101-102).

Liberal feminism

Liberal feminism may be seen as the most widely acceptable stream of feminism in Euro-American world of academic scholarship today (Usher, 1996, p. 121). Although the liberal feminists aim is to change women’s status, they accept the existing social framework of the world. They put the emphasis on removing barriers that prevent women from attaining their potential. It could be argued that liberal feminism is specifically appropriate for research related to an institutional context (Morley, 1999, p. 9). The main arguments of liberal feminism are (Acker, 1994, pp. 137-144):

- The blame for the status of women is on parents, schools and other socialization organizations because they did not encourage women from early childhood to compete in the traditional male fields.
• Women are powerless against social expectations. In the family-career conflict, they put family first and are unable to compete effectively as they are held back by overload, time problems, guilt and demands of husband’s career. The solutions may be part-time posts, childcare facilities and changing age restrictions on career.

• Sex discrimination cannot be dealt with by legal solutions only, due to indirect discriminatory forces, especially in more subtle forms.

• Women should be regarded as different but equal.

• Society should invest in educating women.

• The solution of the liberal feminism is based on doable strategies. One of liberal strategies is to try harder as women and rely on educational efforts. Yet, it is also recognizes that without organizational changes, many women can’t succeed.

Radical feminism

Other feminists attack liberal feminism. They claim that the liberal consensus bases the solution to women’s status on a deficit model and the assumption that male leadership is desirable and acceptable. In addition, they claim that the liberal feminists’ point of view only explains how social arrangements work against women but not why it is so (Acker, 1994, p. 141). It is further claimed that women do not fit the liberal definition because the liberal definition of self is based on masculine values of separation and autonomy (Blackmore, 1996, p. 1003; Usher, 1996, p. 122). Liberal feminism is also questioned for its effectiveness (Morley, 1999, p. 48).
In comparison with liberal feminism, radical feminists are concerned with the underlying causes for women’s status at work. Several assumptions are typical of radical feminism (Weiner, 1994, pp. 54-56):

- The operation of patriarchy is the main reason for women’s status. Patriarchy explains the structure and process of women’s subordination and exploitation, which is rooted in the history of mankind.
- A related assumption is that the oppression of women is universal.
- Women have to undergo consciousness-raising and share information about the female experience by establishing a knowledge base on women. This need results in a feminist scholarship and establishment of women's studies courses (ibid. p. 55).
- One of the distinctions of radical feminism is the analysis of power relations within society. Radical feminists recognize that interpersonal relationships can be a context where processes of patriarchal power are enacted and challenged (Morley, 1999, p. 3).
- Radical feminists are concerned with issues such as sexuality, women's health, male violence and sexual harassment. Radical feminist research has highlighted two major concerns: the male monopolization of culture and knowledge and the sexually violent politics of everyday life where male power is connected with sexual violence (Skelton, 1997, p. 317).
educational research. Radical feminism has helped to put the issues of sexuality on the agenda of schools (Acker, 1994, p. 143).

- Radical feminist researchers tend to deny the validity of the research methods that compare women to men (Lorber, 1994, p. 4).

Socialist and Marxist feminism

In the end of the 1970s, women within Marxist and socialist organizations began to develop a feminist position within these organizations that demanded changes in four main areas (Weiner, 1994, p. 57):

- Women's place in the labour market.
- Sexual divisions within the family.
- The views of women as primarily sexual being and sex objects.
- The ways in which the young are reared and educated.

The socialist feminists focus on the interrelationship between capitalism and patriarchy and the complex interplay between gender, culture and society. An important emphasis is on the impact of class on gender (ibid, p. 58; Segal, 1987, pp. 54-55). They emphasize that women are found in less secure, more manual work, less prestigious jobs than men and do not benefit from their level of education (Acker, 1994, p. 142).

Socialist feminism of western European countries may carry a different meaning in the Israeli social context, as class distinctions and class mobility are different (Moore, 1987, p. 135). To some extent, this kind of feminism may be seen as
less relevant to the particular context of medical education in Israel, where the vast majority of both the male and female medical student population is from the middle class established population (Mirvis, 1993, p. 17).

**Psychoanalytic feminism**

This particular form of feminism is connected both to radical and Marxist feminism but it also has its own agenda and knowledge base. Its main concern is to place greater emphasis on how the oppression of women affects their emotions and sexuality. It argues that the roots of women's oppression are imbedded within women's own values and beliefs. Women should challenge their own oppression (Weiner, 1994, p. 61).

This point of view is widely criticized as avoiding seeing the major social structural influences (Weiner, 1994, p. 62).

**Black (anti racist) feminism**

Black feminists claim that the problem of the white women's movement is that it glosses over economic and social differences between women in its attempt to promote an authentic overarching female experience. It is also argued that the concept of patriarchy may carry different meaning to different races (Weiner, 1994, p. 58).

In educational research, black feminists criticise the fact that the majority of studies on gender and on education in the US and UK have failed to address the race problem and that approaches developed to tackle gender inequalities in
education largely ignore the issue of race and concentrate on gender only (Skelton, 1997, p. 316).

Anti-racial issues cannot be seen as having much impact in the context of higher education in Israel, especially with regard to the population involved in medical education. This population is very homogenous with regard to race. Although 20 per cent of the total population of Israel belongs to ethnic minority groups, only two to three per cent are represented in the medical schools. As a result of the poor representation of minority groups in this population, their voice does not come across in the research undertaken for this thesis.

**Separatist feminist movements**

There are several particular divisions to radical feminism. Spiritual (essentialist) feminism stance is that men are evil, death-loving as well as parasitical. Women are good and life loving. Women need to withdraw from men in order to create “a new, women-centred universe with a new philosophy, religion, and language” (Weiner, 1994, p. 60).

Lesbian feminists argue that lesbianism should not be stigmatised and be made more visible within the women's movement. Political lesbianism is committed to an autonomous women-centred society (Weiner, 1994, p. 60). This stance may be legitimate in any movement, which seeks to redress the power balances between sexes and the question of heterosexual hegemony (Morley, 1999, p. 69). Nevertheless, the question of sexuality in relation to the management of
education does not appear to be considered in medical education literature and therefore is not raised in this study.

Post modern and post- structural feminism

A complex area of feminism, that of post-modernism and post structuralism, has emerged as a result of both the disappointment with equal opportunities beliefs and the optimistic confidence in the continuing progress and imminent triumph of enlightenment and reason (Weiner, 1994, p. 62).

Post-modern feminists claims are as follows (Adler et al., 1993, pp. 57-62; Weiner, 1994, pp. 62-63; Morley, 1999, p. 133):

- Absolutism should be questioned.
- They criticize the claims to objectivity and rationality of male western scholarship
- They reject the epistemological categories such as the female-male dualism.
- The flaws of other feminist movements are the attempt to define an essential female nature, the failure to recognize the historical and cultural background or the replacement of current masculine epistemology with a similarly flawed feminine epistemology.

Post-structural feminism has placed more emphasis on the creation of new ways of seeing or knowing. Its main contributions include (Weiner, p. 64; Morley, 1999, pp. 102-103):
• Feminine identity changes as a consequence of changes in culture and history:
• Individual women are offered a space to fix their identity.
• It enables the production of new resistant discourses.

Such sophisticated feminist stances could still be seen as largely inapplicable in the Israeli medical education context. Although many welfare laws are achieved as well as laws to protect gender equality at work, the more complex issues relating to feminism and even to gender equality are still not generally publicly debated.

Recent evolution in conceptualisation of gender and links between work and family

New conceptualisation of gender and workplace

The conceptualisation of gender has shifted dramatically during the 20th century and is still undergoing a process of rapid evolution as we enter the new millennium. Gender is recognized as an important concept in the workplace and gender-related processes continually affect the life of every working person. It is recognized that as a result of gender processes, individuals are often judged in terms of inaccurate negative stereotypes and are subjected to prejudice and discrimination in the form of sexist and gender bias (Korabic, 1999, p. 16). Traditional assumptions are being challenged in the contemporary workplace context (Cooper and Lewis, 1999, p. 46; Williams, 2000, pp. 1-3):
• The traditional male model of work that men are the main bread provider of
  the family. full time work
• The ideal of continuous full time career from the end of education to
  retirement
• The notion that work and family should be separated

As a result of these changes, more employers look for flexible workers with
women-like career patterns and more feminine styles of management (Cooper
and Lewis. 1999, p. 46). Researchers have suggested a more pluralistic view of
work and career, based. among others, on the following four principles (Raabe,

1. Presence and time involved in work are inadequate indicators of
  accomplishment.
2. Reduced work time is compatible with high productivity.
3. Non-work activities can contribute to work productivity.
4. Work standards can be redesigned. Variety and flexibility in work-
   arrangements are compatible with work productivity.

It was claimed that despite women’s achievements in the workplace and men’s
greater involvement in family life, organizational culture still reflects
predominantly male values, while women remain with the major responsibility
for home and family. It is argued that men still retain the greatest authority in
most organizations and that they are unlikely to relinquish this or the power it
gives them in their homes as well, without a struggle. Processes that contribute
to the reproduction of gender inequality are quite resistant to fundamental changes (Cooper and Lewis, 1999, p. 45).

**Evolution of links between work and family**

Following the influx of women into the labour force and the fact that many men in the Western society could no longer expect the support of a full time housewife, the male model at work is challenged and the question of the linkages between the world of work and the world of family arise. The focus of the literature on this subject changed a lot over the years. In the 1970s this was regarded mainly as individual problem for women and the focus was primarily on role-conflicts and identity problems for women. In the 1980s, it was acknowledged that men as well as women are engaged in multiple roles at work and family. The work/family conflict came to be recognized as organizational problem as well. It resulted in a call to work-organization to change as well, emphasizing the need for flexibility at work and greater permeability of work-family boundaries. In the 1990s the call for workplace to change, intensified. Family-friendly employment policies became a political need and were supported in Europe as well as in the US. It also became clear that women's skills are essential for the success of work-organizations and women who were mothers of young children should be supported. The current research agenda looks at the possibilities for work/family integration and the impact of new forms of work and state regulations (such as parental leave entitlements) for men as well as women (Lewis and Cooper, 1999, pp. 382-383).
Such research has also potential implications to educational institutes and can come up with solutions on how to deal with gender equality issues before entering the labour market. The literature of this issue is related to the literature on support for women, which is dealt in the following section.

**Sources of support for the development of women**

Women at work are not alone in the struggle for equal opportunities. To gain equality, women can rely on support from individual, organizational and state related sources.

**Individual relationship and family support**

The literature argues that a husband/partner support is one of the main sources of support for women aspiring for promotion in her career. A supportive partner is one who is prepared to share family and household responsibilities with his wife and not feel threatened by successful wife who may earn more than him and be more successful than him (Vinnicombe and Sturges, 1995, p. 8; Hall, 1996, p. 58). There is plenty of empirical research evidence on how the support of a partner or a family is central to women’s career success. Women head teachers in the UK comment on the importance of a husband’s support to carry on in their position (Coleman, 1996b, p. 324; Hall, 1996, p. 58). Women head teachers made joint decisions with their husbands about career moves like taking career moves in turns (Coleman, 1996b, p. 328). In another study among secondary head teachers in the UK, similar approach, defined as ‘balancing strategy’ is noted (Evetts, 1994, p. 58).
Recently, there is a tendency among educated men in Europe to take a more even share of the child-care responsibilities. Typically, though, men are likely to be involved in the more pleasurable aspect of child-care, taking their children to the cinema or theatre (Vinnicombe and Sturges, 1995, p. 8). A ‘role reversal’ was noted at least in one case of five head teachers interviewed in the UK (Coleman, 1996b, p. 327). Nevertheless, social attitudes make it difficult for men to get support in a role reversal situation. Male partners have their own career to consider which may take priority (Wild, 1994, p. 92).

Family friendly organizations

Introducing family-friendly policies such as reduced working hours or entitlement of career breaks and encouraging men as well as women to take advantage of these policies without fear of jeopardizing their career, can ensure equal opportunity and equal earning (Cooper and Lewis, 1995, p. 30; Lewis and Lewis, 1996, p. 161). In order to respond to the increased concerns of employees who are trying to balance work and family, employers have tried to implement diverse array of ‘family responsive’ programmes (Day and Colwill, 1995 p. 43). One of the major changes in Britain has been the number of company initiatives regarding family issues such as flexible working arrangement, childcare benefits and provision for dual careers. Nevertheless, the number of “family friendly” organizations in the UK remains small. The majority of leading British companies consider childcare to be mostly a matter for parents to organize for themselves (Hammond and Holton, 1994, p. 234).
It is still early to qualify or define these initiatives as few companies collect and keep records that would allow researchers to evaluate and cost-benefit analyse these programmes. Yet, it is found (Day and Colwill, 1995, p. 44) that those programmes contribute to:

- Less work-family stress among employees.
- A decrease in rates of absenteeism.
- A decrease in turnover rates after implementation of a day care centre.
- A belief among employees that sensitivity and flexibility is more important than organizational policies

Organizational support – women pedagogy, women only courses, career-counselling, mentoring, role models and networks

The literature notes that women’s progression is held back by a lack of career counselling at all stages in their career and due to a lack of management development for women (Hite and McDonald, 1995, p. 8; Veale and Gold, 1998, p. 25). Many management development programmes assume that there is a need for an efficient and technical management style. This is reflected in the pedagogy of these programmes. Thus, these programmes exclude many women who have not felt powerful enough to engage or challenge this way of learning and teaching (Hite and McDonald, 1995, p.9; Gold, 1996, p. 425).

Other women friendly management development programmes, may offer several advantages to women learners. They may encourage women to participate by being less dominated by teachers and make learner more
important so that he/she can feel more powerful. These programmes validate the experiences of the participants and encourage their self-confidence. Time is given for asking questions, to think and for discussions with others, in order to frame possible solutions. Furthermore, such programmes model successful educational management by showing that there are different solutions to problems, which can be negotiated by team, paying sufficient attention to the people and stakeholders involved and to the basic aims of the organization (Gold, 1996 p. 432).

Some of the reviews of training-programmes that aim specifically at women, claimed that single-sex training programmes for women might have a tremendous potential for empowering and encourage women to be confident about the validity of their experiences and ideas concerning their needs and approaches to management. The teaching styles and contents of such programmes frequently draw on strategies of experiential learning, group study, problem solving and co-counselling of participants’ concerns. In particular, development work, sets out to address women’s position in teaching, is able to integrate management with the specific features of women’s work-experience (Strachan, 1995, p. 79). Furthermore, those courses contribute to women’s self-confidence, build up support networks and all-women management groups that are less threatening to women and enable women not to be dominated by men (Davidson and Cooper, 1992, p. 51; Gold, 1993, p. 93).

On the other hand, it is argued that some of the women-only courses, which offer to teach women certain skills like assertiveness, may exert a bad influence
by doing so. A rationale of gender rather than individual needs may operate gender bias. Such courses can further reinforce stereotypes that women lack sufficient assertiveness (Hite and McDonald, 1995, p. 9). Although single-sex training is claimed to provide opportunities for networking, it is also claimed to be “not an adequate solution to the problems and barriers impeding women’s access to management” (Al-Khalifa, 1992, p. 104). In a study of six women heads of departments in further education context in the UK, the attitudes of the participants toward ‘women only training’ varied. Those in favour felt that it was necessary to avoid male dominance of courses, raise consciousness about covert discrimination and increase confidence and ability in management skills. Others thought men being around are necessary to exercise management skills building (Wild, 1994, p. 92).

Support for women within organizations also includes mentors, role models and networks. The definition of mentor as a person, who guides, trains and supports his mentee or protégé is exemplified in teacher-students relationship or doctor-residents relationship (Daws, 1995, p. 446; Hill and Ragland, 1995, p. 72). The research literature stresses that although mentoring enhances the development for both genders (Bush et al., 1996, p.121), it is especially important for women. Women’s careers are often interrupted so that women may start their career later in life. Therefore, women often lack a sense of how people receive advancement in their organisations. Mentors become invaluable in explaining the real essentials for advancement and explaining hidden power structures (Cullen and Luna, 1993, p. 134; Hill and Ragland, 1995, p. 76; Pence, 1995, p.126).
Mentoring relationship can be formal or informal. Informal mentoring takes place in most work organisation in the form of retreats, professional activities or team meetings (Hill and Ragland, 1995, p. 79). A mentor may develop his/her ‘mentee’ by providing support both in career and psychological functions (Kram, 1983, p. 623). On the other hand, it is noted that there are limitations of informal mentoring (Bush et al. 1996, p. 139). One of the problems is that mentors may not get any formal training and, therefore, there is a lack of clarity about their role (Ibid, p. 142). It is argued that men teachers may benefit more from an informal level of mentoring than their female colleagues (Coleman, 1996b, p. 323).

One of the important factors in mentoring relationship for women is the gender of the mentor. Male mentors tend to sponsor male protégés (Ehrich 1994, p. 11). Cross-gender mentoring may create problems of sexuality and intimacy and be awkward or too risky and threatening to men mentors (Hill and Ragland, 1995, p. 77; Hurley and Fagenson-Eland, 1996, p. 42). Female mentoring other females can establish opportunities to pass along the heritage of women’s struggle. Yet it can also create a negative syndrome of “queen bee” when the lone female resents and is threatened by other women moving through leadership ranks. Nevertheless, an American study of exemplary women leaders in education, found that such “queen bee” syndrome is less evident (Hill and Ragland, 1995, p. 78).

Role models, at work and education, demonstrate the possibility of reaching certain positions and a way of doing the position, once it has been achieved.
Research identified the importance of the existence of positive role models for women in further education in the UK (Wild, 1994, p.86). There are also limitations of the help of role models. Women head-teachers in the UK describe the role models as only professional, associated with how to behave at work whether as a teacher or manager (Hall, 1996, p.57).

One explanation for women's disproportional under-representation in management and leadership positions is the absence of role models for women, thereby limiting their aspiration (Hall, 1996, p.55). In their absence, women have to model themselves on men and by implication become like men. Yet, successful women heads claim that they have not sought to imitate men's behaviour in order to progress, at any stage of their careers (Ibid). In some cases, they claim that they find anti-models, men or women who represented behaviours, which they choose not to emulate (Ibid, p. 57). Establishing supportive networks is also an essential connection for personal and professional development. Networking involves flexible structures of information sharing with a variety of people (Hill and Ragland, 1995, p. 87). Like mentoring it generates relationships, information and understandings, but it creates larger circles. Networking is especially beneficial in helping women develop self-reliance and less dependency. It is essential to pass along collective wisdom and supports increased confidence in leadership abilities (Ibid, p. 88). In a study describing unique female school culture, it is recognized how supportive relationship and networks of female colleagues are important to women workers (Valentine, 1995, p. 354).
Programmes for the elimination of stereotypical views and discrimination

Different kinds of programmes for employers are offered to eliminate gender discrimination. These programmes include gender awareness training for the employers and training for appraisal and selection. The programmes are based on the claim that role stereotypes may be diminished by increased awareness and action on the part of organizations (Coleman, 1997, p. 134). Some of the UK companies have introduced gender-awareness training to help the staff explore their beliefs about gender differences in traits and values and overcome any cultural gap and communication difficulties between men and women at work (Cooper and Lewis, 1995, p. 31). Programmes for appraisal and selection are another example of supportive programmes. Awareness training for appraisers is an important factor in avoiding stereotypes in the appraisal process of women (Thompson, 1992, p. 259).

Educational programmes

Government policy trends could be called to amend the continuing under-representation of women as leaders in educational system centres. Yet, federal education policy may replace the attention given to equity by a focus on excellence in official documents and reports (Bell and Chase, 1994, p. 151). As a result, it is claimed that a kind of double talk may be evident at the American school system: girls are told that they can become doctors or astronauts but in fact they encounter at their school barriers and lack of support.

Conventional liberal solutions are claimed to have failed in the elimination of gender inequality because, at school, the informal curriculum prevails and
ambiguous policy is ambiguously implemented (Marshall, 1994, p.3). It is problematic when gender reform policy, like in the case of Australia, are only theoretical and do not challenge the underlying relationships and attitudes (Blackmore et al, 1994, p. 199). This gender reform is claimed:

“...to addressed the more explicit aspects in terms of content of curriculum – but the hidden curriculum is perhaps more powerful than the explicit one in matters of sexual politics” (Ibid, p. 200).

State legislation

Most countries have introduced laws to help promoting the participation of women, particularly young mothers in the workforce. Such laws include laws to protect pregnant women from being fired, parental or at least maternal breaks, equal employment opportunities, equal pay for equal work laws and laws that prohibit any discrimination on the basis of gender including sexual harassment. The principle of laws for non-discrimination in employment on the ground of gender dates back to the 1950s. Nevertheless, there are variations among different countries with regard to such legislation (Lewis, 1996, p. 34). Some of the national legislations have attempted to oblige employers to introduce equality measures by recording the progression of women at work and taking care to deal with any sign of inequality (Vinnicombe and Sturges, 1995, p. 12).

Maternity leave is becoming quite a standard social benefit for working mothers and most of the working women in many countries enjoy it (Vinnicombe and Sturges, 1995, p. 9). Yet, there are some limitations of such legislation aimed at
an effort to ease the barriers to women’s work. First, in some professions it does not apply (Ruijs, 1993, p. 538). Some women lose their jobs (Vinnicombe and Sturges, 1995, p. 10). Furthermore, women in some countries may not have a guarantee to have their old job back (Ruijs, 1993, p. 538; Vinnicombe and Sturges, 1995, p. 10). The main problem with maternity leave is the fact that if only women can benefit from a leave when they have children, it may work against working mothers who, may be regarded as a risk to their place of work. State legislations can also be seen as mostly lip pay to the movements of women advancement. In reality employers may ignore the law with impunity (Izraeli and Adler, 1994, p. 16). In Israel it has been noted that anti-discrimination legislation has not been very effective in increasing gender equality (Izraeli, 1988, p. 30). The situation in other countries may be similar. Several countries try to solve the problem of gender inequality and promote increased men’s involvement in children’s upbringing. Parental leaves are considered one of the ways to remove the social barriers to women at work (Adler et al., 1993, p. 128) but they are not standard. Although maternity leave is given in most countries, not every country, including Britain and Israel, offer a choice for paternity leaves. The Scandinavian countries have traditionally led Europe with regard to parental benefits and fully guarantee such benefits (Ruijs, 1993, p. 541; Vinnicombe and Sturges, 1995, p. 9; Coleman, 1997, p. 132).

Another way to remove social barriers to women at work is the provision of good childcare services by the state. Only relatively few European countries, like in the Scandinavian countries, substantially provide for such services by the public (Ruijs, 1993, p. 542; Vinnicombe and Sturges, 1995, p. 11). In many
other countries, there are only part-time arrangements for very young children, which are also affordable, accessible and of high quality. Thus, it puts limits on the ability of many mothers to work full time (Ruijs, 1993, p. 542). As a result of it, mothers of pre-school age children are the least likely to be fully active economically. However, the proportion of women in this group who are fully active economically has dramatically increased over the last three decades. The number of women employed during pregnancy who then return to work less than a year after giving birth has also increased in the US and Israel (BLS, 2000; CBS, 2000).

Gender equality issues in the higher education

Access of women students into higher education

The research literature portrays a rather encouraging picture of women’s situation with regard to the access into the higher education and women’s achievement of an overall parity. The literature also provides evidence for the prominence of women students. It is a recent phenomenon, though, representing a marked change from earlier periods, mainly as a result of revolutionary changes that have taken place in higher education since the 1980s (Holdstock, 1998, p. 70). This trend has been noted in many countries including the US (Jacobs, 1996, p. 154), the UK (Acker, 1994, p. 143; Morley, 1999, p. 32; Holdstock, 1998, p. 70) and Israel (Toren, 1999, p. 79; Watzman, 1999, p. a77).
Nevertheless, the research provides evidence for distinctions with regard to women’s access into higher education. The main distinction is that women are underrepresented in the high-prestige programmes. Women tend to be overrepresented in lower-status universities with higher-acceptance rates, lower faculty members/student-ratios, lower-fees universities and in part-time programmes (Caplan, 1994, p. 175; Morley, 1994, p. 194; Jacobs, 1996, p. 158).

*Women as faculty members and leaders in higher education*


Belonging to a minority group, women in the academia face problems typical of a minority or token status at the work-context. This is more of a problem in the male dominated fields. Yet, even in ‘women’s fields’, women may be a minority or even token status as a result of being administered by men. Women in the academia are in danger of being both invisible as a minority (Acker, 1994, p. 128), and extra visible because of their status as token (Ibid, p. 129).

The barriers to gender equality are claimed to be highly rooted in the structure of higher education and based on the norm and values of such organizations. In
order to change it, individuals have to risk their own job chances and become martyrs. Many researchers are critical of the prevailing knowledge on female subordination and oppression (Acker, 1994, p. 133, Morley and Walsh, 1996, p. 3). Women are being subjects to a masculine culture as scientists. The evidence for masculine cultures and stereotypes of women as scientists is prominently reported by the literature. It is found that female faculty members are not part of the inner circles in which scientific information is exchanged. As well, academic culture is produced and sustained by male bonding, support and promotion of one another, is excluding women from participating (Etzkowitz et al, 1994, p. 52; Valian, 1998, p. 21). Other barriers to academic women include lack of mentoring, family and mobility restrictions and the fact that female faculty members do not know the rules and not ‘read the map’ that enables to advance as scientists (Long et al, 1993, p. 720). Feminist studies on women faculty members report that beginning female faculty members are frequently not part of the professional and social circles, where newcomers learn the non-academic aspects of being a professor (Bensimon and Marshall, 1997, p. 14).

In Israel, there is evidence that male scientist see female colleagues, in comparison to men, as less committed to work, less loyal and more concerned about their children and home than about their scientific work. Women are punished for their assumed partial commitment. There is evidence that some male professors are reluctant to serve as mentors to women Ph.D. candidates because they think they are unstable workers, likely to get pregnant and leave. Women in academia are similarly not welcomed in informal information networks and academic men prefer to collaborate with male colleagues. The
evidence even indicate that women in the academia hold stereotypical and anti-women ideas about their status themselves. Successful women in the academia may have a tendency to detach themselves from less successful women and deny the possibility of discrimination against them in the course of their career. They may see themselves “like men” and blame other women for not advancing as they should due to taking part-time jobs, child-care breaks and not totally devote themselves to work (Toren, 1999, p. 80). Nevertheless, the empirical research provides evidence that women spend the same amount of energy and effort as men in their scientific work. A study in a very prestigious research institute in Israel, indicated that women did not use all the period allocated for maternity leave (Three months in Israel) and hurried back to work after two or three weeks (Kyvic, 1990, p. 159). Israeli women scientists with children are found to be more productive in scientific publications than childless women (Toren, 1991, p. 665).

Many researchers have examined the problem of gender inequality in the academia with respect to hiring patterns, promotion rates, publication rates, turnover and salaries. It was found that women have been disadvantaged at every stage of the academic career progress and especially at the higher echelons of the university administration, in higher ranks and higher status institutions (Jacobs, 1996, p. 167). In higher education institutions in the UK it is found that although many institutions had gender equal-opportunity policies, only one third of higher education institutions with equal opportunities policies had plans directed toward its achievement (Morley, 2000, p. 93).
According to the feminist literature, men impose their conceptualisation of the world on women. Women academics have to identify the distortions of knowledge in their fields made by men and offer alternative conceptualisation. In the academic world, it is still acceptable to make generalizations based on research using men as subjects. Courses in the university on women are not the mainstream or incorporated in the curriculum but are optional extras (Morley, 1999, p. 162). The distortion of the male conceptualisation is evident in the deficit model of women, which consists of two components. The first part is ‘blaming the victim’ which means blaming women for their disadvantaged position in the work area. The second part is ‘male as the norm bias’ which means comparing men and women by using male criteria and advantages or by asking why women fail to ask for promotion instead of looking for the conditions that exclude women from the work organization (Acker, 1994, p. 126-127; Bensimon and Marshall, 1997, p. 16). Women in the academia, like women in other male-dominated professions are debating whether they should perform their job like men do or whether, they should be given the opportunity to be different and exercise a different style in performing their role. This debate is valid even in science, which is considered detached from any personal characteristics. Some claim that there is a feminine research style in science and many female scientists feel that they differ from their male colleagues in conducting their research, attitudes to students or choice of research topics. On the whole, women manifest a more liberal style and try not to emulate male models (Toren, 1999, p. 86). The women scientists also sense that their style is not accepted (Barinaga, 1993, pp. 385-389).
Women academics that follow women culture, are in the danger of being alienated and find it difficult to move away from concepts that are taken for granted (Acker, 1994, p. 132). Isolation is a widely recognized problem for women faculty members in academic science. The isolation causes stigma, depletion of self-confidence and exclusion from access to informal sources of professional information. Isolated individuals not only lack social psychological support but also the social capital underlying success. It was found that the discrimination of female faculty members produces isolation even when their numbers reach a critical mass. This was termed the as a ‘paradox of critical mass’ typical for women in science (Etzkowitz et al, 1994, p.52).

In higher education reality, role-conflict between career and family for women who want children, is more of a problem of timing family and career cycle. More than in other areas, the conflict between a family and a career in an academic work-environment, where timing is a main issue of the game, is suggested to be acute and time pressing. The problem is that both the tasks of childcare/domestic work and academic work are very time and emotion demanding and are never really done. Furthermore, if a woman postpones having children until completing her higher education, she is faced with a problem of having young children when she is expected to make an impact in her field, especially in the science fields. Making an impact in science is claimed to involve a 50 hours week in the UK and probably more in the US as academic success rests on research and publishing productivity measured against age. In addition to publications, it is crucial to spend time on committee-work and image-enhancing departmental activities (Acker, 1994, p. 126). In addition to
coping with career and childcare, women in the academia, who are typically married to husband with an academic career, are often faced with the problems of double-career families. In a traditional double career family, it is common to find that the woman has to adjust to her husband’s career and not the opposite (Ibid. p. 127).

**Gender equality issues in higher education experience**

The main topic of this research is gender equality issues as experienced by students during their education. Gender equality issues in the higher education experience include gender pedagogy and evaluation, the curriculum, the hidden curriculum, the problem of students and faculty members’ interaction as well as discrimination and sexual harassment issues.

**Pedagogy and assessment issues**

There is a growing body of literature, mainly addressing the higher education that deals with the question of gender differences in pedagogy and preferred learning styles of men and women. Many women feel that teaching and learning strategies within traditional higher education do not fit their learning styles (Wisker, 1996, p. 11). The predominant pedagogy at universities, mainly based on lectures and debate in a competitive environment, is found not to be suitable for many female students who prefer small group discussions and role-plays (Massin, 1992, p. 31; Hite and McDonald, 1995, p. 6). It is claimed that women understand better through collaborative discussions rather than argumentative debates (Massin, 1992, p. 31; Luke, 1997, p. 197). It is found that women learn
best in an atmosphere that fosters discussion over debate, both between teachers and students and among the students themselves (Hite and McDonald, 1995, p. 10; Wisker, 1996, p. 11). Therefore, there could be bias against women in classes where the teachers hold tightly to their expert power, encourage approved responses only, urge students to win over their classmates and put the focus on themselves (Hite and McDonald, 1995, p. 10-11). It is suggested that the methods of teaching suitable for women include experiential learning or mutual problem solving in an atmosphere of praise and encouragement. Yet, faculty members rarely consider whether their strategies of teaching and methods of evaluation are compatible with women's preferred style of learning. This may cause a bias against female students (Hite and McDonald, 1995, p. 6-7). Researchers have suggested several ways to eliminate gender inequities and feelings of alienation present in many educational environments with regard to pedagogy. In order to do so the educational system should emphasize interactive pedagogy, which is found to be more suitable for women. It is suggested that new and alternative methods of teaching should be incorporated in the classroom. These methods include collaborative discussions, co-operative learning exercises, experiential learning, journal clubs or mutual problem solving (Massin, 1992, p. 31; Gallos, 1993, p.25; Hite and McDonald, 1995, p. 10-11; Wisker, 1996, p. 30). To eliminate gender bias, it might be important to encourage an atmosphere of praise and encouragement in the classroom rather than an atmosphere that encourages competition (Hite and McDonald, 1995, p. 10-11). Even changing the classroom seating arrangements, in order to encourage female students to speak, is advisable (Gallos, 1993, p.25; Fassinger, 1995, p. 94).
Gender discrimination via the curriculum and the hidden curriculum

Gender inequity and potential gender bias are found in the college formal curriculum, which is claimed to favour the white male experience (Tisdell, 1993, p. 223) and serve the interests of some groups better than the others (Connell et al. 1991, p. 24; Wisker, 1996, p. 22).

It is found that men control and do most of the academic research, are the subjects of the research, develop the theories, control the access to academic institutes and set the values and politics in colleges (Gallos, 1993, p. 13; Tharenou et al., 1994, p. 928). Many women become less involved and connected with the learning process because it is built on research done solely by men on men and focuses primarily on male experience, (Hite and McDonald, 1995, p. 9). Yet, there are some changes that are already taking place in the higher education curriculum, in the direction of more gender equality and more interest in women's experience. In addition, women's studies are gaining ground mainly in the US and also in the UK (Acker, 1994, p. 144; Morley, 1999, p.7).

The stated intended and formal curriculum may be different from the set of influences and organizational structure and culture, which consist of the hidden curriculum. It is mainly the hidden curriculum that forms the students' experience and becomes the basis of their thinking. In an institution with male-dominated ethos such as in the academy, discrimination and domination of women are taken for granted (Morley, 1999, p. 83). A great deal of indirect type of discrimination works at colleges by way of a hidden curriculum. Gender bias in textbooks is found to be a recurring theme in college classrooms.
Furthermore, textbooks are still in danger of reinforcing the myth of men in upper leadership and women in helper positions (Hite and McDonald, 1995, p. 10).

Faculty members and students interactions

Many researchers point out that the learning environment in higher education discriminates against women and that the college classroom is characterized by a male-dominated culture, which creates a cold learning environment for many women. Findings indicate gender differences in classroom interaction, informal counselling of students and the social scene (Tisdell, 1993, p. 223; Hite and McDonald, 1995, p. 6, Morley, 1999, p. 147). Men are more likely to be called on in class than women and typically talk longer than women, while women are more likely than men to be interrupted. Furthermore, men receive more elaborate, verbal and non-verbal feedback. The lack of feedback can have two effects on women. First, it can lead to less effort to correct deficiencies in performance or to expand cognitive thought processes. Secondly, it can lead to women feeling overlooked, discounted or outsiders (Tisdell, 1993, p. 220; Hite and McDonald, 1995, p.6, p. 10). It is found that student’s gender is a significant component in class participation. Men are more likely to ask questions while women respond to a positive emotional climate and encouragement (Fassinger, 1995, p. 94). On the other hand, a recent study, studying a large sample of U.S. students, has found that women students as a group do not seem to be experiencing a “chilly classroom climate” in higher education and in fact report enjoying experiences and gains from college equivalent to or in many cases exceeding those of men (Drew and Work, 1998, p. 554). Nevertheless, the same
study concludes that there are some areas of concern because female students do not report informal interactions with faculty members nor on research projects as often as male students (Ibid, p. 552).

A very relevant issue with regard to women’s experience in faculty members and students interaction is the issue of same-sex interaction. The effect of female faculty members on female students and their contribution to the equality environment in higher education is debatable. Some researchers argue that there is a strong association between the proportion of female faculty members in the university with high achievement, numbers and well being of female students. It is found that female students who have female advisers are more likely to continue their education after college. On the other hand, evidence of satisfaction level in a situation of same sex advisor, mentor or lecturer is found not to be conclusive (Jacobs, 1996, p. 169). This issue is related to cross- gender mentoring problems of sexuality and intimacy, which are awkward or too risky for men mentors (Hurley and Fagenson-Eland, 1996, p. 42). In a study among female students in a life science department, it is found that the presence of female faculty members changed the attitudes of how male students react to women into taking women more seriously. Whenever senior female faculty members are present, overt male behaviour toward women improves and sexual joking and stereotyping decline. Furthermore, the absence of women faculty members in the health science department is perceived as a problem for female students who say they would prefer women advisers (Etzkowitz et al, 1994, p.52). On the other hand, in another study it is found that the gender of faculty members has no significant impact on class interaction (Fassinger, 1995, p. 94).
Gender discrimination and sexual harassment

The larger question of whether a higher education environment is equitable to women also includes the particular aspect of gender discrimination and sexual harassment. Many researchers pointed out that, in the light of paucity of women faculty members, there is a danger that the patriarchal environment and the power men hold over women, can lead to sexual harassment. Research literature in the US suggests widespread sexual harassment in the higher education. It is claimed that women students are sexually harassed by professors via numerous methods including sexist comments and jokes in the classroom, unwanted touching, or suggestions of sex in return for a good grade. In acknowledgement of this problem, many higher education institutions have developed policies against sexual harassment, which repeat state legislation against sexual harassment (Williams et al, 1992, p. 63; Caplan, 1994, pp. 187-196; Jacobs, 1996, p. 169).

Post-university outcomes

Gender typing in fields of study

Post-university outcomes are related to the students’ field of study. A distinct characteristic of the different experiences of men and women in higher education is the evidence that, normally, men and women pursue different fields of study in college. Sex typing of fields of study is a worldwide phenomenon, yet the specific fields can be different in different countries (Moore 1987, p. 122; Holdstock, 1998 p. 63). It is evident that in spite of the achievement in
overall parity in the total number of graduates and the fact that more than half of the students are women, sex segregation in some fields remains high and persistent, as is evident in experiences in the US and the UK (Holdstock, 1998, p. 80).

Nevertheless, in the 1990s, women reached numerical equality in many more fields than in the past like life science and business. Women-friendly sub-fields have emerged in the life sciences and computer science. Those fields attract women and the academic departments of those fields have managed to change. The presence of women creates an effect of critical mass in some academic departments and makes the culture of those departments more amenable to the presence of women than before. However, attainment of critical mass only partly resolved the dilemma of women in academic departments (Morley, 1999, p. 75). Organizational structures within the departments continue to isolate women students (Etzkowitz et al, 1994, p. 52). The main importance of gender typing in fields of study is its influence on career opportunities and earning for women.

Differences in political power and earning

Most of gender equality problems are currently evident in the post university education outcome. Inequality for women with university degrees is evident mainly in two areas: political power and earning gap.

Higher education is supposed to be highly related to political power. It is argued that education level is strongly associated with support of feminism.
Furthermore, education raises women’s expectations and creates a sense of deprivation. Yet it is not always the case. Researchers are sceptical that additional education for women leads to greater political power (Jacobs, 1996, p. 172). So it is with regard to earning. There is evidence that gender difference persists despite the equal education level attained by women. Women earn less than men even with the same level of education. One way to explain this is that a significant portion of the gender gap in earning can be attributed to gender segregation in the fields of study, or to the job training and informal experience (Jacobs, 1996, p. 171).

**Gender equality issues specific to the medical education**

**Introduction**

Recent medical education literature confirms that male and female medical students are equally capable and competent in medicine. In fact, women may be even more academically advanced (Field and Lennox, 1996, p. 246; McDonough *et al*, 2000, p. 32). Women have strong motivation to work after graduation. Research has clearly shown that medical education is not wasted once women get married and become mothers. After registration and licensure, most women continue working in medicine, successfully combining work commitments with family and domestic responsibilities (Shye, 1991, p. 1177; Field and Lennox, 1996, p. 246). It is found that women’s dropout rate is little different from that of men (Allen, 1988b, p. 26).
In light of such evidence, it is puzzling that once they finish the medical school, women students seem to be limited in reaching their career goals and have poor chances to enter some specialities especially achieving leadership positions in medical schools, hospitals and in the academia. In effect, the question is do barriers to the progress of women medical students still exist?

The same theories that explain barriers to women career in general are applied in the medical education literature. Social constraints are frequently mentioned in the medical literature to explain why the proportion of women in leadership roles remains static, when women have entered medicine in increasing numbers. Another general model that attempts to explain the status of women in medicine and in the medical education is that of organisational constraints. It includes: barriers to the access, progress, and advancement of women in the medical professions, lack of students career preparation, lack of both role models and mentoring, gender discrimination and sexual harassment. Additional theories revolve around personal values. These personal values include gender differences in relevant characteristics, interests, career goals and motivations as well as perceptions of combining a family life with a medical career.
Theories of potential gender differences in values

Evidence of gender differences in personal characteristics

Part of the reasons for the opposition to women entering the medical profession in the past were connected to the gender ideology of the 19th century, whereby men and women were viewed as being inherently different. Women were said to have characteristics unsuitable for medicine, such as emotiveness, sensitivity, inferior physical strength (Miqueo, 2000, p. s65), frailness, being delicate, and less rational than men (Adams, 1998, p.30).

The recent research literature does not provide conclusive evidence to support gender difference in traits related to medical careers. Yet, concerns that female doctors lack the physical and mental capacities to practise medicine continue (Wynn, 2000, p. 669). Research among medical students and recent graduates seems to suggest some personal characteristics differences between men and women. A survey conducted in 1993 among graduates from the UK medical schools, suggests that women feel better equipped with interpersonal skills whereas men feel more confident with the technical and scientific aspects of medicine. Men rated themselves higher in self-confidence, autonomy, leadership, and curiosity. These findings may indicate some gender difference in personality characteristics and traits (Clack and Head, 1999, p. 103). A commentary on gender issues in the medical education presents many studies that have found some gender differences in medical skills and values (Elks, 1996, p. 1281). Women students show more positive attitudes toward patient-doctor communication (Kaufman et al, 2001, p. 188). Nevertheless, a national
survey of medical students in the U.S, concludes that men and women medical students are probably much more alike than they are different due to their being a highly selected group and due to the process of socialisation in the medical education (Bickel and Ruffin, 1995, p. 558). Nevertheless, women are found to be more sensitive to emotions of other people, more reflective about their own reactions to situations and better able to deal with ambiguous situations than men (Ibid, p. 557). A US study of the psychological profiles of medical students, found no difference in qualities such as self-esteem and external locus of control (Hojat et al. 1999, p. 346).

Women students and doctors are likely to experience a double bind, which stems from social expectations that as women, they will show stereotypic feminine traits. Such traits are incongruent with those expected and valued in doctors. If women show doctor-appropriate male traits, they may face disapproval and resentment for posing a competitive threat to male colleagues (Shye, 1991, p. 1177). Yet, in some studies there is evidence that in spite of the disapproving environment and social stereotypes, women doctors manage to balance a family with a career (Carnes, 1996, p. 618; Yedidia and Bickel, 2001, p. 459).

Potential gender differences in career success, interest in academic career and motivation for leadership

Many studies indicate gender differences in work orientation and motivation for leaderships among recent graduates from medical schools and doctors who are faculty members. A survey conducted recently in the US, has found that female faculty members differ from their male counterparts in attitudes toward career
success and recognition. Female faculty members are more likely than men to value local recognition, and less likely to value being in leadership positions (Buckley et al., 2000, p. 286). Results of an earlier study among paediatric faculty members at several teaching centres in the US were similar. In addition, it was found that female faculty members were less interested in research than their male peers (Kaplan et al., 1996, p. 1288). In a study of recent graduates from medical schools, leading others was more important for men than for women (Leonard and Ellsbury, 1996, p. 503). As well, clinical department chairs in the U.S. interviewed about the scarcity of women in leadership positions were of the opinion that women were less inclined than men to aspire to leadership positions (Yedidia and Bickel, 2001, p. 454). Women who had succeeded in leadership testified to the difficult choices they had to confront to surmount traditional gender roles such as not getting married and not having children (Ibid, p. 457).

Gender differences in values and attitudes related to work have also been found. A research among residents in the US reveals gender differences concerning seeking national recognition and stress (Leonard and Ellsbury, 1996, p. 503). Of additional interest is that female and male students agree regarding the disadvantages of an academic medical career, which include bureaucracy, inadequate emphasis on clinical care, insufficient leisure time and interference in personal life (Osborn et al., 1992, p. 60). There is overall agreement that the academic medical career is extremely demanding. Aside from having duties in hospitals, clinical faculty members have to teach with all that teaching implies and are expected to participate in various committees, in other administrative duties and in leadership roles of the medical faculty. As well, promotions are
heavily based on research productivity. However, faculty membership appointments provide a great deal of prestige. Women doctors, who decide to pursue academic careers and have children, choose to have very conflicting commitments. Time pressures of research, teaching, patient care, academic work coupled with promotion and tenure deadlines, compete with their biologic imperative of productive years (Levinson et al, 1989, p. 1511). It has even been suggested that women doctors, more than men, find their fundamental identity in primary relationships, such as marital and parental ones and not in work and are less motivated to achieve career success (Barnett et al, 1998, p. 180).

Previous research is unclear as to whether or not women are interested in having an academic career. It has been observed that female medical students are not interested in entering the academic world at the rate predicted by their numbers in medical training. In one study, 31 per cent of the women medical students were very interested in academic medicine compared with 43 per cent of men. This difference was not significant. Yet, when asked in an open question in the same study, what kind of medical career they envisioned for themselves in the future, women were significantly less likely than men to consider the academic medical career. Only 32 per cent of women students compared with 54 per cent of men envisioned this as a possibility (Osborn et al, 1992, p.60). However, it was found that among first year residents, as many as 60 per cent of female residents and only 36 per cent of male, anticipated academic careers. The proportion was reversed among third year residents – 23 per cent of women and 46 per cent of men anticipated academic careers (Leonard and Ellsbury, 1996, p. 503).
Evidence of gender differences in career goals

The literature indicates differences in career goals between men and women medical students. In a national American survey, women medical students were found to have more altruistic career goals than men. They tended to be interested in patient education, community service, and the psychological aspects of patient care. Men tended to place higher emphasis on high-income prospects, decision-making under pressure and employing manual dexterity skills (Bickel and Ruffin, 1995, p. 556). Another survey among American medical students and residents also found that women were more interested in careers involving patient care and less interested in research than their male colleagues (Froom and Bickel, 1996, p. 95). Women doctors qualifiers of U.K. medical schools testified at the end of their schooling, that they were more likely to opt for general practice than men because general practice involved more contact with people (Allen, 1994, p.83) and because hospital medicine was seen by them as career only for ‘brilliant’ doctors (Ibid, p. 274).

Evidence of gender differences in career planning

Career planning and career breaks are related to the issue of gender differences in career goals. Gender differences in career planning in medicine are similar to those in other professionals. The literature suggests that women in medicine are less likely to plan years ahead and do not look for management posts. Women students in the US were found less likely than men to plan their years of residency and predict significant involvement in research. They also plan to train in different specialities than men (Bickel and Ruffin, 1995, p. 558). It seems that women receive the message at an early phase in their medical education that
only certain specialities are open to them and that they should not expect a built-in support system to fulfil their plans (Showalter, 1999, p.72). In a study among medical faculty members in the US, men reported significantly fewer career delays, more commitment to their career paths and greater satisfaction with the progress of their career than women (Kaplan et al, 1996, p. 1285).

The medical education literature rarely deals with career breaks in medicine, perhaps because career breaks are not as common as in other professions. Women doctors are found to be worried about their prospects for maternity leave as health providing institutes make only moderate changes, to accommodate the needs of doctor-parent by providing proper maternity leave. Furthermore, some men and women even think there is no need to help women stay in employment while they have young children (Potee et al, 1999, p. 919). Doctors in the UK, who qualified in the 1980s, report that career breaks have become less acceptable over the years because of the competition for jobs (Allen, 1988b, p. 35). They report that they cannot afford to change their minds about their speciality, to gain experience abroad, or to take time out for any reason (Ibid, p. 56). Yet, a survey among doctors in Canada reveals that many more women than men have taken a break during their postgraduate training or practice. The most pronounced differences are found in breaks for parenthood reasons only, which practically no men took (Bryant et al, 1991, p. 484).

Potential gender differences in role conflict

There have been a number of studies that have examined how marriage and family responsibilities affect the career of female students and doctors.
Balancing a family and a career is more of an issue for women than men (Carnes, 1996, p. 618). A survey of work environment in one American medical school, found that meetings outside regular hours were concerns for both men and women, but work-family conflicts were a greater concern for women (Foster et al., 2000, p. 657).

Marriage of a female medical student or doctor to another doctor (a ‘dual-doctor family’) may have unique characteristics in comparison with other married doctors. Medicine is a demanding field of study and career, which requires single-minded dedication and full time backup from the other spouse. This problem has disproportionally more effect on women. Surprisingly, not much has been written about how marriage to another doctors affects doctors. A survey among 2000 doctors graduating in the 1980s from two medical schools in the US (n=1208), found that 26 per cent were married to another doctor (Sobecks et al., 1999, p. 314). This survey compared female to male doctors as well as dual-doctors families to other dual-career families and confirmed the importance of gender in medicine. Substantial differences between young male and female doctors in many aspects of professional and family life were found. Female doctors were significantly more likely than males to be in a dual-doctor relationship, work less, earn less, and predominantly borne more responsibilities for child-care. Of the female doctors in dual-doctor families, 33 per cent complained that having a family is a limitation, something that was rarely reported by male doctors. Many differences between dual-doctors families and the other dual-career families have also been found. Doctors in dual-doctors families worked more hours and had a total higher income. They seemed to
share more and fewer reported that their career was more important than that of their spouse. However, female doctors in dual-doctors families more often reported substantial limitations in their professional life because of family reasons (Ibid, pp. 315-316). An earlier study in the US which compared dual-doctor families to dual-career families found that dual-doctor families appeared to enjoy a more egalitarian division of labour in child-rearing and other domestic responsibilities, than other dual-career families (Tesch et al, 1992, p. 543). Nevertheless, doctors in dual-doctor families did not differ significantly from other doctors of the same sex in others respects. Most of the doctors thought they achieved their career goals as well as their goals for their children’s welfare. Also, all reported enjoyment, satisfaction and gain in career advancement (Sobecks et al, 1999, p. 315).

The effects of career interruptions due to childbearing and child rearing are particularly significant. Most women, who decide to have academic careers in medicine, have some conflict as to when to become pregnant. They consider that there are biological advantages to having children early but there are strong career pressures encouraging women to delay their childbearing in order to progress in medical school, residency and fellowship (Levinson et al, 1989, p. 1515). Studies agree that female students and doctors may have to choose between family responsibilities and progress in their careers (Shye, 1991, p. 1176; Fried et al, 1996, p. 898; Froom and Bickel, 1996, p. 96; Carr et al, 1998, p. 535; Potee et al, 1999, p. 918; Morahan and Richman, 2001, p. 97; Reed and Buddeberg-Fischer, 2001, p. 141). A recent study systematically examined the relationship between family responsibilities and aspects of an academic career
Among faculty members in the US. Women with children were found to publish less, had slower self-perceived career progress, and were less satisfied with their careers than men with children. Among faculty members without children no such gender difference was seen (Carr et al, 1998, p. 535). Female doctors who have children think that being a mother interferes with their careers. They tend to take shorter maternity leaves and have less opportunity of part-time jobs (Potee et al, 1999, pp. 916-919). For women doctors, marriage and child rearing are strongly associated with reductions in hours worked and with lower earnings in the US (Tesch et al. 1992, p. 542), the UK (Allen, 1994, p. 20; Trowell, 1999, p. 2) and in Israel (Izraeli, 1994, p. 77). Generally, North American women doctors report that they have changed their career plans because of marriage or family responsibilities (Bryant et al, 1991, p.484). Data from Israel indicate that women doctors will minimise role conflict by lowering their professional sights and choose primary care specialities rather than hospital specialities to enjoy shorter and more predictable hours (Shye, 1991, p. 1177).

Yet other studies have suggested that family responsibilities do not account for gender differences in academic career (Levinson et al, 1989, p. 1516; Kaplan et al, 1996, p. 1288). These studies might be problematic for generalization because they were limited to one area of specialisation or one medical school. However, a recent American study found that trends of motherhood have been changing among female doctors. Female doctors now are as likely to have children as other American women. Also the number of women giving birth during their medical studies has been steadily increasing since 1970. Nearly half of those who have children do so during their medical training. Some American
medical schools (e.g., the medical school at Yale University) try to make it easier for women to decide to do so by having a “parent track” (Potee et al., 1999, pp. 916-919).

**Perceptions of medical students on combining a family life and a medical career**

There is some conflicting evidence regarding the difference between the attitudes of men and women medical students and graduates toward work or home responsibilities. A study among medical students in the US found that both genders have strong commitment toward work and family. As well, both genders are found to feel positive about feminism. Yet, women medical students are found to be significantly more concerned than men about the barriers of family commitments to academic careers (Hartung and Rogers, 2000, p. 270). Among junior medical faculty members, women report foreseeing more difficulties than men in balancing family or home and work responsibilities (Bellini et al., 2001, p. 562). As well, British medical students foresee the necessity to do so (Field and Lennox, 1996, p. 250). Fifth-year female students are aware that they will need to reconsider their optimal career choices because of barriers created by domestic responsibilities (Ibid, p. 248). This study noted that current career requirements in medicine in hospital and in academia make it difficult to sustain a ‘dual career’ and this has more effect on women than on men (Ibid, p. 247).

Nevertheless, in the same study among medical students from the U.K., mentioned above (Field and Lennox, 1996), it is found that time for family commitment is of equal importance to men and women (Field and Lennox, 1996, p. 248). Other studies observed no difference between men and women in
the consideration of family responsibilities when choosing their career. It is found that most women students (80 per cent) intend to have a family but the same is true for male students (Osborn et al, 1992, p.60).

Potential gender differences in medical school experience

Potential gender differences with regard to pedagogy

According to the literature, the traditional medical curriculum depends on lectures, laboratory classes and major end of the year examination (Guilbert, 1998, p. 68). Most of the programmes taught in medical schools are teacher-centred and include mainly lectures. Clinical contacts, which require deep and self-learning or group learning, are traditionally delayed to a later phase. The main problems of such a curriculum have been identified as inadequate self directed learning skills among the students, inadequate opportunities to develop such skills, teaching that does not meet the needs of students who have different abilities and learning styles and failure to prepare the medical students with respect to professional attitudes and communication skills (Lowry, 1993, p. 3; Curry, 1999, p. 411; Schwartz et al, 1999, p. 675). New curricula that include case-based and problem-based learning, communication skills training, ethical learning and small groups sessions, are increasingly being introduced into medical schools in the US and the UK, but far less in Israel (Mirvis, 1993, p. 18).

Similar to students of other fields, it seems likely that male and female medical students may bring different qualities and aptitudes to different learning
situation. Female students are claimed to have a higher preference for people directed content and require a close and helping relationship with people. They are presumed to be better in independent learning skills such as problem solving, analysis and conceptualisation and applying knowledge to unfamiliar situation. As well, women are found to have better oral and written communication skills, work planning and teamwork (Peplow, 1998, p. 353). A recent article claimed that women's achievement is negatively correlated with a competitive teaching style. All too often clinical medical teaching styles are public, critical and hierarchical all of which might be expected to selectively disadvantage women students. It is claimed that gender differences should be taken into account when designing clinical environments to support learning (Chaput de Saintonge and Dunn, 2001, p. 1030). On the other hand, there are some contradictory findings from a study carried out at the United Arab Emirates University where female medical students preferred more teacher-oriented, well organized practical learning while male students preferred to work in groups and learn from each other (Paul et al, 1994, p. 184). It is possible that cultural values are important factor with that regard.

Assessment methods are another factor of success in medical school and explain the variation in learning outcomes and behaviours. Attention has been put to change the assessment system to decrease competition among the students for grades and encourage peer study (Robins et al, 1997, p. 135; Guilbert, 1998, p. 67; McManus et al, 1998, p. 346). Many testing situations in medical education, particularly in the early years, include multiple choice questions examinations (MCQ). Such examinations are universally accepted in medical licensing and
certifying examinations, after being adopted by the American national board of medical examiners. Yet, there is a lot of criticism on the heavy use of MCQ format tests in medical schools because the nature of such tests limits the range of content that can be covered by the tests, reinforcing the examination of detailed factual content and ignore professional attitudes and communication skills. This may work to disadvantage women students (Schwartz et al, 1999 p. 676).

Potential gender differences in the preparation and advice for students at the medical school and school ethos

The nature of the existing student preparation and advice during medical school, as reported in some studies, might show stereotypical views among faculty members and discrimination against women students in certain areas. One study found that, students’ speciality choices were influenced by favourable faculty members’ evaluations and advice during their third year clerkships. These influences were gender-specific and eventually caused gender segregation in speciality selections made at graduation. The study suggested that favourable scores might be in stereotypical directions. For example, many more women were influenced to choose paediatrics as their speciality because of better scores and in surgery the opposite was true (Pamies et al, 1992, p. 128). In a recent study, an increase of gender-based segregation was found during medical education (Boulis et al, 2001, p. s67). It is argued to be an alarming indication that so many career decisions of doctors of both genders are taken based on medical school experiences of unpleasant encounters with faculty members and negative experiences in certain specialities (Allen, 1994, p. 66).
Offering career counselling and advice early in medical school is claimed to be the answer to the increased trend toward gender-based segregation, recently noted in U.S. medical school graduates (Boulis et al., 2001, p. s67). Most of the studies that deal with students' preparation and advice in medical school, report that students' preparation is very poor, inadequate and insensitive in many medical schools (Allen, 1988a, p 73; 1994, p. 66; Bickel and Ruffin, 1995, p. 557; Field and Lennox, 1996, p. 251). There is almost universal acknowledgement among recent graduates from U.K. medical schools of the importance of career advice but only the minority of them report that they have received useful advice during medical school. More women than men felt inadequately prepared for some clinical tasks and more women than men said they had not received useful career advice (Lambert et al., 2000, p. 354). When advice is given, it is informal, unsystematic and unconstructive. Women get less career advice than men (Allen, 1988a, p. 59; 1994, p. 66). The general lack of career guidance and the poor quality of it is considered as one of the major obstacles especially to women's success as students and in later career (Allen, 1994, p. 66). The issue of preparing medical students for their career as doctors is central in the experiences of medical students (Lowry, 1993, p. 3). In a predictive model for medical student satisfaction with the learning environment in medical school, students' perceptions of the priority faculty members place on students' education are prominent predictors of student satisfaction (Robins et al., 1997, p. 139).
A related issue to students’ preparation and advice is the medical school’s culture or ethos, which is an important factor of the school-learning environment. If a medical school wish to develop medical students with ethics of caring, commitment to service and working for the good of mankind, it should develop an ethos with similar values and invest in an education of both the intellectual and character sides of the medical students (Caelleigh, 2001, p. 1174). Many medical schools claim to have such an ethos. The association of North American medical schools calls for four major attributes of medical students by the time they should be graduate: altruistic, knowledgeable skilful and dutiful (Swick, 2000, p. 614). Such attributes seem to exemplify well what are considered women’s values (Elks, 1996, p. 1281).

In light of this ethos, many medical schools perceive a need to change medical education and have begun to develop new coursework and clerkship experiences. The problem is that most of what is learned in medical school takes place not within a formal course offering but within the hidden curriculum (Hafferty, 1998, p. 403). The official policy of many schools may call to educate graduates for compassionate professionalism, dedication to service, and ethical principles that can also guarantee gender equality. Yet in the learning environment, conflicting business oriented values contradicting that ethos are emphasized through evaluation, resource allocation and institutional slang that recognize male values as more important (Ibid, p. 405). This may cause a more materialistic culture or lack of ethos of the medical school.
Potential gender differences with regard to the mentoring processes

There is an abundance of literature, mainly from the US but also from the UK regarding the importance of mentoring and networks in the medical education context. Having mentors is increasingly being seen as an important element in the professional development of doctors (Haapanen et al, 1996, p. 794; Bligh, 1999, p. 2) as well as for medical students (Mann, 1992, p. 314). Mentors may help junior faculty members and students to define career aspirations and assist them in achieving these goals through career sponsorship and psychosocial support. Possible assistance of a mentor may include help in setting goals, providing constructive feedback about performance, building confidence, helping with introductions to influential people, writing letters of recommendation, submitting names for awards and helping in grants and manuscript preparation (Palepu et al, 1998, p. 318).

The literature confirms that mentoring and networks are essential for the advancement of women in medicine. A US study on programme to advance women in academic medicine, has noted that access to senior mentors is crucial to the advancement of women faculty members in a career track. It enables them to understand important aspects of academic medicine culture (Benz et al, 1998, p. 461). A national survey in the US among 3013 junior medical faculty members in which 54 per cent are women, demonstrates the importance of mentors in the academic world. Similar percentages of women and men faculty members had mentors. Over half of the respondents (61 per cent) had a recent mentoring relationship. Those who had mentors rated the adequacy of
professional support from their institutions for teaching, research and administrative activities significantly higher than faculty members without mentors. They also rated their research preparation and skills higher and reported higher career satisfaction (Palepu et al, 1998 p. 321).

A recent survey among one school of medicine in the U.S., found no gender difference in mentoring activities and a similar academic climate (Bellini et al, 2001, p. s64). In an earlier study in the US (Tesch et al, 1995, p. 1024), similar percentages of men and women faculty members also reported having mentors. Yet, other articles suggest that inadequate mentoring during medical training is still a problem for women. Even in the US, where the awareness of the importance of mentoring has lead to actual mentoring programmes for junior faculty members, there are still not enough mentors for women and female mentors. (Foster et al, 2000, p. 657).

It should be further noted that mentoring might not be always effective. A recent survey at one medical school in the US, suggested that having a mentor is not always enough to ease the effect of institutional structures that lead to isolation, stress, strained collegial relationship and work-family conflicts. It is noted that even when women have mentors, they may still suffer from inequality because the mentors may not be as friendly with them as with men and do not have their preferred qualities (Foster et al, 2000, p. 657). In the UK, only a few descriptions of good practising of mentoring in medical education are available so there is only little evidence of its effectiveness (Bligh, 1999, p. 2).
The mentor's gender is of importance. Mentors in the US were found to be predominantly white males although there were a higher correlation of women faculty members having female mentors. However, 80 per cent of the women reported that it was not important to have a mentor of the same gender (Tesch et al. 1995, p. 320). This was puzzling in light of another study from the US, which found that many women medical students preferred a woman as a mentor (Haapanen et al, 1996, p. 794). It should be noted that the number of women in senior positions available to mentor remains comparatively limited. Compared with men, women anticipate greater risks in becoming mentors. They have less time to mentor and more often believe they lack the qualification to be a mentor (Bickel and Clark, 2000, p. 671). These results may reflect, as concluded by the authors, the realism about the paucity of women faculty members in senior positions who could act as mentors (Palepu et al, 1998, p. 321). The same survey also found no gender difference in the perceived quality of mentoring with respect to invitations to sit on journal editorial boards or to chair conferences, finding research collaboration and co-authoring papers. Both women and men also had similar levels of psychosocial support from their mentors. The differences that were found between genders are characteristic of what was found in mentoring relations in other areas. Significantly more men than women reported more than five invitations to informal sporting events. Such interactions may provide increased opportunity for networking and informal sharing of information, and would imply that women are not receiving the same opportunities as men. As well, significantly more women believe that inadequate mentoring has impeded their career growth (Ibid, p. 320).
Nevertheless, the women with mentors felt that their mentors had performed this role effectively (Ibid, p. 321).

There are gender differences with regards to what makes a good mentor. In a survey of first and second year students at one medical school in the US (n=247), the characteristics of an ideal mentor were rated. The attitudes of men and women were compared using two-tailed t-test. They also were asked if they had a mentor. It is found that 71 per cent of male students compared with 62 per cent of female students report that they have had one. This difference was significant. As well, men rated higher than women characteristics such as being like a parent. Women placed more importance than men on such collegial characteristics as kindness and approachability. They also place more importance on being of the same gender as the students and treating students with respect (Haapanen et al, 1996, p. 794).

The lack of role models, a related issue to mentoring, for women in medicine and the influence this has on their career decisions, productivity at work and career satisfaction, is a major gender equality issue. The lack of role models might be one reason that women students refrain from choosing surgery specialities. In contrast to men, many women students from Californian medical schools, report that they did not find role models in procedure-oriented fields and as a result felt unwelcome or anxious in considering such specialities (Mutha et al, 1997, p. 639). Personal accounts of successful women in medicine, notes that as they climb up the career ladder, there are fewer and fewer female colleagues or role models. This makes it lonely and tiring for these women.
In a survey among faculty members at one medical school in the US, it is found that women report equal access to and similar experiences with mentoring compared with their male peers. However, this is less likely to exist in an informal network that excluded faculty members on the basis of gender. As well, the women are less satisfied with many aspects of the working climate. They felt less welcomed by the scientific community and less than equal participants in informal decision-making (Foster et al., 2000, p. 657).

Potential gender differences with regard to discrimination and harassment

Most of the studies that deal with gender issues in medical education, acknowledge gender discrimination against women. The research literature on the history of medicine supports theories of discrimination against women in medical schools. Even after some women managed to be admitted to the medical profession, they were faced with much opposition and difficulty in obtaining medical education and licences. Historical studies of the early experiences of women in the medical profession suggested that female medical students experienced discrimination, hostility and marginality in medical schools. Wynn (2000, p. 668) found out that the prevailing historic view among US medical faculty members was that women were unsuited for the medical profession. In the UK there were various obstacles to women entering the medical schools, including hostility of male medical students and a persistent refusal by medical staff to admit women on the committees of medical schools and examining bodies. Until the 20th century, most medical schools were closed to women and special medical schools for women had to be established (Pringle, 1998, p. 26).
The literature on current medical education still notes a high prevalence of perceived gender discrimination and sexual harassment among students and faculty members in recent years. Such incidences, occurring in many different aspects of a woman's career, are likely to lead to cumulative disadvantages and impediments to their medical career. In a study conducted in 1990, in one US medical school, women faculty members report a high prevalence of gender-based career obstacles. Most of these obstacles are informal and subtle and fit the definition of gender discrimination. The obstacles include “behaviours, actions, policies, procedure or interactions that affect women’s work due to disparate treatment or the creation of a hostile or intimidating work or learning environment” (Fried et al, 1996, p. 900). A recent study examines gender-based discrimination in the wider context of the total work experience of full-time medical school faculty members in the US. Many more female faculty members than males perceive gender bias in the academic environment. More than half of the women but only nine per cent of men suspected or feel clearly that they have experienced gender bias in professional advancement (Carr et al, 2000, p. 892).

A study in the UK, based on face-to-face interviews with a large number of doctors, documented a range of gender bias and discrimination at the UK universities. This includes discouragement both at school and university, poor career advice and inflexible training regimes. An abundance of evidence has been found of women in training being ignored by older doctors. These doctors thought that women were only in medicine for a hobby and could not be taken seriously (Allen, 1988a, p. 59). Women medical students in the UK report that they felt they had been actively discriminated against or had at least not been encouraged to enter certain specialities (Field and Lannox, 1996, p. 249). A
survey of students and faculty members at one medical school in Israel found many incidents of student abuse but this study did not compare men’s and women perceptions (Lebenthal et al, 1996, p. 231).

Complaints of gender bias are sometimes discounted and attributed to over sensitivity, weakness of character, rationalisation for a poor performance, or feminism. Gender bias seems to work in opposite direction too. As more women advance in academic medicine, men may also encounter gender bias. Some male students felt that women residents dealt more severely with male than with female students and made assignments based on gender (Elnicki et al, 1999, p. s100). Male residents, working in a team of female doctors, describe similar feelings of being alienated. Women supervisors of residency programmes involving both genders may not be aware of the potential of gender insensitive behaviours and repeat the bias behaviours made by their male predecessors. A male resident, assigned to a clinical rotation on which he was the only male doctor, perceived his status to be the lowest on the team because of his gender (Tinsley, 1998, p. 1130). In the study of the UK doctors, both genders report the humiliation they had encountered in medical school. They experienced intimidation from teaching staff at the hospital where they trained, coming from surgeons and gynaecologists in particular toward both men and women students (Allen, 1988b, p. 14).

It is questionable whether the question of sexual harassment is a distinct type of gender-based offence separated from gender discrimination. Sexual harassment of medical students by superiors has been recently extensively reported in the
literature (Nora, 1996, p. s118; Kassebaum and Cutler, 1998, p. 1151; Jacobs et al, 2000, p. 468; White, 2000b, p. 983; Baldwin et al, 1996, p. s27; Baldwin and Daugherty, 1997, p. s53; 2001, p. S6). A very recent survey carried out in the US among 3577 American residents concluded that a distinction should be made between the two concepts. According to that study, gender discrimination includes denied opportunities, favouritism, increased workload, malicious gossip and poor evaluation. Sexual harassment consists of physical touching, sexist slurs, sexual advances and rewards offered by sexual favours which are clearly and specifically sexual in intent and form. Three elements are usually found in cases of true sexual harassment according to that definition. It is unwanted, gender related and occurs within the context of power imbalances (Baldwin and Daugherty, 2001, p. s6). According to other studies, sexual harassment may be defined as: “asking to exchange sexual favours for grades or other awards, offensive sexist remarks or names directed at the student personally or unwanted sexual advances by school personnel” (Jacobs et al, 2000, p. 464). Thus, sexual harassment can be physical and include offensive body language, unwanted physical advances and sexual bribery or non-physical including offensive comments, unwanted attention, unwelcome verbal advances, unwanted invitations, unwelcome propositions and offensive displays (White, 2000b, p. 980).

The problem of sexual harassment in the medical school is claimed to be deeply rooted and affecting medical students, residents, staff and faculty members. A multi-institutional research in the US conducted during clinical clerkships found cases of sexual harassment performed by male house staff, residents, as well as
patients (Elnicki et al., 1999, p. s99). Proportionally more women than men are reporting of sexual harassment (White, 2000b, p. 984). In a national survey in the US during 1992-1996, significantly more women than men claim they encounter at least one incident of sexual harassment during medical school (Kassebaum and Cutler, 1998, p. 1151). This is also true in another American survey among students from one school (Lubitz and Nguyen, 1996 p. 414). Sexual harassment in the US is also prevalent among female residents during their medical training (Cook, 1996, p. 1664). A recent study found that more than half of the female faculty compared with five per cent of the male faculty members reported having been sexually harassed by a superior or colleague (Carr et al., 2000, p. 892).

Effect of gender on career opportunities and speciality choices in medicine

The articles surveyed below portray a clear picture: women are making progress in entering the medical profession but they have a tendency to prefer primary care specialities and only few women opt for surgery. Gender in-balance in different specialities seems to be continuing. Studies in medicine have suggested that gender has an impact on medical students’ career opportunities. A study in the UK reports that female doctors think they have few opportunities and that it is hard for them reach the top (Allen, 1988b, p. 35). As well, in the UK, female and male medical students agree that females have a disadvantage with regard to the possibility of achieving career goals (Field and Lennox, 1996, p. 251). Contrary to male students, most female students feel their gender have an effect on their career choice (Ibid, p. 249). These facts weaken the potential of women
to enter educational medical management positions and thus weaken their potential to be viewed as equal in the medical world. The next sections will deal with the barriers women still face in this world.

Establishment of medicine as a masculine profession

It has been suggested that a general masculine culture is typical of the medical profession. Feminist sociologists have argued that medicine “celebrates and sustains a masculinity vision” (Davies, 1996, p. 669). Women medical students recognize the ‘macho environment’ in medical schools (Maddock and Parkin, 1994, p. 36). As a result, women medical students continue to make career choices, which are mainly “family friendly”, thus leaving little space for challenges to male professional hegemony in medicine (Crompton, 1997, p. 10).

In the past, even when entry to university and medical schools became less of a problem, medical qualifications did not guarantee them equal opportunity at work. It was very difficult for women to get appointments in the large teaching hospitals even if they graduated near the top of their year (Pringle, 1998, p. 28). It has been suggested that the main reason to exclude women from the medical profession in the past, is the attempt of men to secure the status and privileges of the medical profession (Adams, 1998, p. 30). Some members of the profession in North America reasoned that to maintain the high status of the profession they should recruit high status people; meaning well educated men from wealthy high status families. Women, as well as lower class or non-Anglo-Saxons could undermine the status of the profession (Ibid, p. 31). Another reason to exclude women was the fact that traditionally women were identified with the health
needs of their families. In the ancient time they practised domestic medicine and were involved in health care and childbirth. The elimination of the involvement of women in medicine was a strategy pursued by the medical profession, in order to establish its professionalism (Ibid, p. 33). An example of this was the opposition of medicine to the practise of midwifery, by claiming that the care doctors offer was far superior to anything relatively uneducated midwife could provide (Ibid, p. 30).

The fact that women faced discrimination in the medical profession made their experiences in the profession substantially different from these of men. Women might always be regarded as women first and professional second. Women seemed to have sought and have been encouraged to seek practise options on the margins of the medical profession. They tended to practise in low-profile areas of specialisation and, in particular, in the treatment of women and children. Many of the first female doctors in the US and Canada practised in remote areas where few men were interested in practising (Adams, 1998, p. 35).

An important result of the history of a male-dominant profession is the work conditions at that profession. It has been noted that the medical profession, as well as other male-dominated professions, have been structured to suit the needs of men only (Adams, 1998, p.22). The medical career structure and the working practises in medicine are created by men and fit the male lifestyle only. In the UK, the medical career structure has remained much the same as it was 50 years ago (Allen, 1996, p. 2). A large-scale research study, among faculty members from 24 randomly selected medical schools in the US, found gender differences
in concerns about career structure and work arrangement. Compared with men, after-hours meetings, lack of child-care, lack of parental and other family leave policies, and lack of part-time tenure were significantly more burdensome for women than men (Carr et al., 1998, p. 535).

Androcentrism of the medical profession may have also caused gender bias in the body of knowledge and practise of medicine and many feminists have been profoundly suspicious of the medical profession seeing it as serving the interest of patriarchy (Pringle, 1999, p. 1). Examples of this androcentrism include consideration of feminine anatomy and physiology as a variant of those of men, using metaphors in scientific descriptions loaded with sexist symbols and underestimating the importance to medicine of feminine attributes, such as imagination and sensitivity and other feminine essences (Miqueo, 2000, p. s66).

Now, women are generally freely accepted as medical students on an equal basis with men and increasingly, have moved into residency and faculty membership positions. Yet, differential standards based on gender may still occur (Gartner, 1996, p. 476). In some countries, women become prominent in the field of primary health care, such as is the case in the former Soviet Union (Kapadia, 1996, p.1073). This is typical of Western countries as well (Pringle, 1998, p. 4). Women are also prominent in new specialities and in research (Miqueo, 2000, p. s65). These patterns can have a tremendous effect of the future of women in medicine. It also has implications for the role women will play in the future in medical school leadership. Normative social pressures, such as stereotypes and expectations from family, colleagues and superiors, seem to cause professional
compromises for women. Male senior doctors may impede the acceptance of women into male-dominated, hospital-oriented specialities. Stereotyped views that question the suitability of some medical specialities for women and the expectation that conflicting demands on them would result in their primary commitment to family rather than professional obligations still exists. Such views may affect the behaviour of senior doctors in recruiting and promoting women medical graduates. Such attitudes are prevalent in Israel (Shye, 1991, p. 1177) as well as elsewhere (Barnett et al, 1998, p. 180).

Gender differences in access, appointments and selections

The importance of gender differences in access, selection and appointments in residency programmes and medical careers has been established in the literature. It has been noted that selection and appointment procedures in residency programmes or in medical careers and in academic medical careers, seems to favour male and male-associated traits in doctors. In an American study, residency directors across the main specialities indicated they were seeking applicants who were “people like us”. There were marked differences among the directors of the different specialities to what were the desired traits in a resident. Surgery residency directors viewed competitiveness as a favourable trait while those of other specialities generally viewed being a team player as favourable (Villanueva et al, 1995, p. 265). A report in the UK suggests the absence of an equal opportunity principle in selection procedures. The selection criteria are secret. It helps to have friends “in high places”. Doctors report occurrences of discrimination at job interviews. Women are asked very personal questions about their private life, as well as child-rearing plans (Allen, 1988a, pp. 39-41).
Another UK study stresses that women are actively being excluded from certain male-dominated specialities (Pringle, 1998, p. 220). Recently, a study of women in hospital medicine in the UK concludes that women are being dissuaded or prevented from entering some hospital specialities (McManus and Sproston, 2000, p. 14).

Gender differences in leadership opportunities

Many studies have been concerned with the status of women’s leadership in medicine and stress the subordinate position they have in the profession. Questions have been raised as to what is the leadership of a medical faculty, who are the women who become leaders and why have only a few women become leaders in medicine (AAMC, 1993, p. 618; Bickel and Clark, 2000, p. 672). The reality of medical leadership is that only very few women reach top management positions. This is a truism everywhere: in the US (Nonnemaker, 2000, p. 399), in the UK (Trowell, 1999, p. 1) and in Israel (Notzer and Brown, 1995a, p. 450). Furthermore, it is still claimed that women lack leadership qualifications as well as leadership ambition (Kvarner, 1999, p. 93). As well, stereotypes that view men as better leader still exist and are even held by women (Dobson, 1997, p. 75).

Part of the research literature on women in academic medical leadership suggests that the reasons for the paucity of women in leadership are the standards for leadership. The traditional gold standard for advancement into academic medicine’s upper echelon has been first-rate research training, followed by many years of grants, and combined with being a clinician and
teacher. The combination of being an excellent researcher, clinician and teacher at the same time becomes harder and harder to achieve even by men, let alone by women who also have more competing needs from family, and for most junior clinical faculty, are now caught between conflicting demands (AAMC project, 2000, p. 7). Yet, today when many academic medical centres are fighting for their financial life and existence, this combination no longer assures effective leadership in medical school. The mission of medical teaching centres is too complex and demands co-operation with other institutions and constant change. Credentials for leadership in medical faculties deserve reconsideration and expansion in light of the needs of medical teaching centres to make optimal use of resources and to forge unprecedented linkages within and outside their communities. The main characteristics needed today for medical schools are to be service oriented, to inspire commitment to service, to build successful teams, to understand and motivate people, and to facilitate change. There is also a need to humanise the educational and work environments and improve patient care (AAMC, 1996, p. 801). Qualities like authority, tough talking, and control orientation, are less likely to contribute to improvement of medical education. In a recent study in the US, it is found that young female doctors are less likely to value being in leadership positions compared with men (Buckley et al, 2000, p. 286). It is recognised that the characteristics of a good leader should be re-examined and that leaders should be faculty members who can lead collaborative or team efforts and bring about institutional changes (Ibid, p. 287).

It is claimed that the present model of leaders in academic medicine demands that there are sacrifices inherent in the leadership of academic institutions in
general. According to this model, leaders in medical faculties, such as deans and committee chairs, are supposed to be overworked, make extraordinary sacrifices, attend useless and endless meetings and completely give up family life. These conditions result in burnout and turnover in leadership positions. Others may not want to follow this pattern. Such a model can attract only few women. On the other hand, the literature stresses that the ideal leader in academic medicine should be wise, strong, act as a role model, be satisfied in his job and tireless. Leaders should be helped and be encouraged to have doable jobs (Linzer, 1998, p. 341). As seen in the general educational management literature (Gosetti and Rusch, 1995, p. 21), such a model suits women better. The vision for the future from the president of the American Association of Medical Colleges (AAMC) is that in the future the leadership will be diverse and reflect the population of the students. Such reflection can be seen if women will be both deans and other key leaders in American medical schools (Cohen, 1996, p. 121).

Potential gender segregation in speciality choices of medical students

The increase in the number of women entering into the medical profession does not necessarily improve their career prospects or guarantee them equal access to leadership positions (Weilepp, 1992, p. 739). Yet, the change in the gender profile of doctors may alter the distribution of doctors among the various specialities of medicine. It is assumed that women prefer specialities, which emphasise the psychosocial aspects of care, favour greater contact with patients and permit the sharing of responsibility with them and with their relatives. It is also suggested that they prefer work in public systems, salaried employment,
less involvement in emergency care, home visits, or administrative work (Castro Figueiredo et al., 1997, p. 68).

Much of the literature on the relation between gender and speciality choice, focuses on the relationship of gender and two specialities in particular: surgical and primary care. Surgical specialities are regarded as being very prestigious, highly paid and very demanding in time resources (Bickel and Ruffin, 1995, p. 558; Jones, 2000, p. 670). However, there are many stereotypes and misconceptions with regard to women entering surgical fields. Research conducted in the North America has established that there is a negative relation between being a woman and choosing surgical specialities. Women surgeons in the US report that they are not encouraged entering surgery and do not have enough mentors (Jones, 2000, p. 670). One study analysed the reports on US graduates published annually by the American Medical Association in orthopaedics, a sub-speciality of surgery. Although there have been modest gains in the number of women in orthopaedic surgery training programmes in the US, orthopaedic careers remain an unattractive choice for women medical students compared with their male counterparts (Biermann, 1998, p. 709). Another American study found gender differences among doctors in cardio thoracic surgery, with regard to family life, salary, experiences of discrimination harassment and promotion (Dresler et al., 1996, p. 1133). A more recent survey on work environment among medical school faculty members in the US found that female faculty members in surgery had many more concerns compared with male faculty, regarding lack of inclusion in informal networks (Foster et al., 2000, p. 657). A similar situation of paucity of women in surgery is the case in
other Western countries as well. In the UK, studies report of the paucity of women in surgical specialities (Lambert et al, 1996, p. 23). In a UK study on career preferences of doctors in 1983 and 1993, surgery was found to be unpopular among young women in spite of programmes designed to attract them (Allen, 1996, p. 2). A Norwegian study found that women doctors are encouraged less than their male peers and have less opportunities to perform surgical procedures, assist in operations and be involved in the running surgical service (Falck and Brattebo, 1996, p. 944). In Israel, surgical specialities are identified with men because it carries high prestige, instrumental dimension of interests, and use of advanced technologies (Meir and Engel, 1986, p. 529).

The tendency of “selecting out” certain specialities may already start while in medical school. For example, final-year female medical students at the University of Toronto were found less likely to choose surgical electives than their male peers (Baxter et al, 1996, p. 376). Women medical students were exposed to gender discrimination and sexual harassment while on surgery rotations and this had an impact on their choices of residency programmes (Nora et al, 1996, p. s21). Fifth year students from Leicester University Medical faculty were asked about the effect of their clinical rotations on their career choice. The experiences in the rotation in surgery were mentioned, as negatively affecting their career choice, by 30 per cent of the men and 40 per cent of the women. The reason was that surgery looks like “a perfect opportunity to work yourself to death” as one male student put it (Field and Lennox, 1996, p. 251).
Compared with surgery, primary care specialities are characterised by a high level of patient contact (Villanueva et al, 1995, p. 263), less prestige, low monetary rewards, and a less demanding time schedule (Bickel and Ruffin, 1995, p. 558; Bland et al, 1995, p. 636). Skills that are relevant to primary care specialities, such as good communication, co-operation, balancing multiple issues and hygiene orientation, are commonly associated with women but are not valued in medical schools (Elks, 1996, p. 1281). However, the increase in the number of primary care doctors is one of the recommendations of many national health care reforms and medical schools in the Western world (Hojat et al, 1995, p. s17). The reasons for choosing primary care specialities are not yet clear (Tekian and Foley, 1997, p. 95). Nevertheless, given the available data, it is argued that attention should be given to those factors known to attract both men and women to primary care medicine. A study conducted among American medical students during their family medicine clerkship found that men and women students are exposed to the same number of patients and performed mostly similar tasks. However, it was also found that men performed more male gender-specific procedures, such as testicular examination and women performed more female-specific procedures, such as breast and pelvic examination (Louis et al, 1996, p. s20). A widely held belief is that increasing the number of women students is the key to increasing the number of primary care doctors.

Data indicate a relationship between being a female student and choosing primary care specialities and generalist careers. Several studies carried out in
American medical schools, between 1985-1987, found that women, as well as under-represented ethnic minorities, were more likely to choose primary care specialities compared with other students (Hojat et al, 1995, p. 308; Barnhart et al, 1996, p. 294). Another study carried out in the 1980s, found that a greater proportion of women than men selected a generalist career within internal medicine (Carr et al, 1993, p. 222). A meta-analysis of studies carried out in the US during 1987 to 1993, find an association between being female and the choice of a primary care career (Bland et al, 1995, p.636). A study analysing the reports of students graduating from all the medical schools in US in 1995, found that the intentions of those graduates to pursue a generalist speciality were significantly associated with female gender (Kasselbaum et al, 1996, p. 197). An American study examined factors affecting the decision to enter primary care specialities found them to indeed be gender associated. Women were more influenced by family and personal factors whereas men were more influenced by the early role model factor (Xu et al, 1995, p. 401). The relationship between women and the selection of primary care specialities is found in other countries as well. A British study (Allen, 1996, p. 2) compared career preferences of doctors in the UK in 1983 and 1993. Only 26 per cent of the 1993 graduates wanted to enter general practice compared with 45 per cent of the 1983 graduates. The decline in interest among the men (from 40 per cent to 17 per cent) was greater than among the women (52 per cent to 34 per cent). Israeli women doctors tend to choose primary care and family practise specialities (Shye, 1991, p. 1177).
There is a controversy in the US literature as to whether or not the relationships still hold in the 1990s. Some recent studies did not show this association. Data from one medical school in the US indicates that even though the proportion of women students enrolled in this school increased over the previous five years, the proportion of women choosing primary care residencies in the same time period did not increase. After five years of study it was found that the increase in the number of women in primary care was offset by the increase in the number of men entering primary care; thus the proportions of each gender entering the field remains stable. It is important to note that the authors suggest that the factors that might influence men to enter primary care at increasing rates do not have the same impact on the women. These findings could have very important implications for medical school policy makers (Litzelman and Marriott, 1996, p. s13). Additionally, in a study of the graduate population of another medical school in the US from 1990 to 1995, no relation between choosing primary care specialities and underrepresented minorities was found (Tekian and Foley, 1997, p. 94). An even more recent US study analysing the databases of the association of the American medical colleges found that in the 1990s, medical students who are women or from under-represented minorities, are no longer proportionally more likely to become primary care doctors (Basco et al, 1999, p. 922).
Strategies for educational managers to address gender equality

Multiple approaches to encourage the advancement of women in medicine

It is clear that multiple approaches are needed to encourage the advancement of women in medicine. Such approaches include providing women with opportunities for leadership skill building (Bickel and Clark, 2000, p. 670). Multiple approaches are suggested as needed to encourage the advancement of women in general and in medicine. The American Association of Medical Colleges (AAMC, 1996, pp. 807-809) has made a number of recommendations to support gender equality issues in medical education in North America:

1. Formal mentoring programmes that aid women in making the best use of mentors but avoid problems. These problems include paternalistic attitudes of male mentors, different standards for female or mentor’s use of work to advance his career.

2. Improving pathways to leadership through the discovery of new ideas for improvements and better representation of women on policy-making committees and boards.

3. Fostering readiness to change by encouraging medical organizations to evaluate their own organizational culture and practices.

Other articles also call for programmes for women advancement in medicine, which include:
1. Providing women with opportunities for leadership skill building (Bickel and Clark, 2000, p. 670),

2. Leading discussions and workshops among faculty members to address specific gender-based problems, appointing a task force of women academics and appointing development specialist to analyse problems experienced by women faculty members (Fried et al, 1996, p. 901).

3. Medical educators should be committed to ensuring that women enjoy the same access as men to skill development and speciality choice opportunities (Bickel and Ruffin, 1995, p. 558).

4. Increase the proportion of women training and on staff as there are identifiable advantages to hiring women (Reed and Buddeberg-Fischer, 2001, p. 142).

5. There are calls for changes in the curriculum of medical schools to promote women. These changes should include stressing the value and importance in curriculum of skills, such as communication and patient orientation (Elks, 1996, p. 1282), changing traditional teaching and assessment methods because they have negative influence on women students and integration of women health issues into the curriculum of the medical school (Hoffman et al, 1999, p. 1054).

6. Articles call to amend the disparity between women students and doctors in certain areas and certain specialities. To do so it is suggested that educational management will attend to the lack of female role models, lack of mentoring for women and lack of special awareness and programmes to promote women (Weilepp, 1992, p. 267).
7. It is recommended that the educational management of medical schools send clear messages about the unacceptability of sexism and harassment, the elimination of sexist stereotypes and improvement of the medical school environment for women (Bickel and Ruffin, 1995, p. 559).

The promotion of medical schools' managements of after-school programmes to ease women's career path can also contribute to gender equality issue at school. There are two types of targeted programmes. One type of programmes aims to achieve women's leadership development and include mentoring programmes and network building among women (Weilepp, 1992, p. 267; Fried et al. 1996, p. 900; Reed and Buddeberg-Fischer, 2001, p. 143). Other type of programmes aims at work-life support and includes part-time and flexible working hours, child-care provisions, etc (Reed and Buddeberg-Fischer, 2001, p. 143). Part time residency programmes can be very helpful. Studies from the US report very promising results from such a programmes after some years of experience (Carling et al, 1999, p. 283). Such programmes are also available in the UK (Goldberg and Buckley, 1998, p. 114). On the other hand, some of the younger women doctors distance themselves from this development, fearing that it would create second rate jobs and entrench women in subordinate positions within the hospital (Pringle, 1998, p. 39).

It has also been reported in the US that interventions by medical schools to increase the number of female associate professors were very successful (Fried et al, 1996, p. 903). Such interventions included leading discussions and workshops among faculty members to address specific gender-based problems, appointing task force of women academics and appointing development
specialist to analyse problems experienced by women faculty members. It also included a monthly colloquium for women faculty to develop career knowledge and skills (Ibid, p. 901).

The influence of gender issues on the medical school curriculum

Research literature in medicine has raised questions if and how the rapidly increasing number of women in the medical professions will have implications for medical education. It has been noted that the change in the demographic composition of the health workforce occurs parallel with other ongoing transformations of the health care-system. This situation calls for an investigation of the strengths and weaknesses of the medical education curriculum, perceived professional problems and trends in the interests and activities of men and women in the medical workforce. It is claimed that women tend to choose primary care specialities, such as internal medicine, paediatrics, and family medicine. If this trend continues, more women will be practising primary care at a time when the national policy in many countries is calling for such an increase. Medical educators need to understand current resources to better cope with anticipated changes and to better prepare for challenges regarding future practise alternatives in medicine (Hojat et al. 1995, p. 306). An American commentary called for changes in the curriculum of medical schools due to the national need for more primary care doctors and a tendency over the past several years, of decreased interest among medical students in general practice. The required changes in the curriculum should include stressing the value and importance of skills, such as communication and patient orientation (Elks, 1996, p. 1282).
It has been suggested that student experiences in medical school and medical training cause differences between men and women. In effect, women students might not be given the same attention as male students in all areas (Bickel and Ruffin, 1995, p. 557). Hojat et al. (1995, p. 308) explored gender differences in young doctors' evaluations in the US of selected areas of the medical school curriculum. The importance of teaching interpersonal skills, health promotion and disease prevention, medical ethics, social factors, psychological factor and nutrition were rated significantly higher by women than men. This suggests that women have a more positive regard for psychosocial-cultural aspects of health. These differences could also suggest that women are more likely than men to utilise the bio-psychosocial rather than the biomedical paradigm in patient care. Because of the differences in attitudes toward women in comparison to men, women and men may be on different tracks, which may lead them to have different careers in medicine (Hays, 1993, p. 255).

One of the most required reforms to improve gender equality is curricular reform. Many medical schools are now undergoing curriculum reform as well as reform in their teaching methods and assessment procedures. Considering the negative influence of traditional teaching and assessment methods on female students progress and its mismatch with female learning styles, such reforms will probably have positive influence on gender equality. Another reform that is now being introduced into the medical curriculum is the integration of women health issue into the curriculum of the medical school (Hoffman et al., 1999, p. 1054).
Mentoring programmes to promote women in medical education

One of the explanations of why a disparity exists between women students and doctors in certain areas and certain specialities and their absence in authority positions is the lack of female role models, lack of mentoring for women and lack of special awareness and programmes to promote women (Weilepp, 1992, p. 267). Comprehensive approaches to improve women’s advancement in academic medicine are needed. Such approaches include the need to emphasise leadership skill-building opportunities, to improve the academic climate, and to increase mentoring opportunities. There are also calls to form networks promoting career development for women doctors (Bickel and Clark, 2000, p. 671).

In the US, there are attempts to carry out these programmes. For example, Johns Hopkins University medical school undertook interventions to correct gender-based obstacles reported by women faculty members by improving faculty members’ development and mentoring, and reducing isolation and structural career impediments (Fried et al, 1996, p. 900). Another programme for women, the Executive Leadership in Academic Medicine (ELAM) programme, offers 35 fellows each year, an in-depth curriculum to support their advancement to leadership positions within academic medicine. A high proportion of fellows have achieved promotions to important administrative positions (ELAM, 2000).
Part-time residency programmes

Another way to ease the entrance of women into medicine may be a part-time residency programme. The number of programmes of shared and part-time residency offered is increasing in the US. One study reports very promising results from such a programme in internal medicine after ten years of experience. Both the participants themselves, and their peers, who are full time residents, support the part-time track and report no adverse effects. Faculty members who evaluated the part-time participants found them to be better in clinical and humanistic skills and similarly good compared with the other residents in teaching and leadership skills. The study concluded that a part-time residency curriculum provides a highly useful track for those who need it (Carling et al, 1999, p. 283). There are such programmes in the UK as well and there is a call to increase the flexibility of training programmes and working possibilities for women all over European Union countries (Goldberg and Buckley, 1998, p. 114). No such programmes are yet available in Israel. Some of the younger women doctors distance themselves from this development, fearing that it would create second rate jobs and entrench women in subordinate positions within the hospital (Pringle, 1998, p. 39).

Summary

The wider context of this study is gender equality in society and in the labour market but especially in educational context. The literature review points out that the contemporary workforce has changed and is now more diverse not only in gender, ethnicity and race but also in work home situations. Yet, theory and research findings point out that despite all of these changes, women’s acceptance
into the work market has not reached equality. This is true in educational and professional careers training context as well. There are several reasons why barriers to gender equality persist:

- The traditional male breadwinner model at work persists. Women bear the major responsibility for domestic duties and child-care.
- Women are still in subordinate status to men at home and work.
- Work and home division is still common and results in a conflict, mainly for women.
- Organizational culture still encompassed traditional concepts that exclude women.
- The gatekeepers in many work places are male.
- Arrangements of work still make it difficult for the majority of women, who want to ‘have it all’.

These themes appear to be common across countries as well as across professions. Yet the slight variation among different countries and different professions, as found in the research, may indicate that there is room for comparative change and improvement.

This is true in the higher education context both for faculty members and students. The review of the literature specific to higher education reveals that despite the massive access of women into the higher education arena, mainly as students at this level, gender equality is far from being reached.
The specific literature review of the medical education points out that there is a wide discrepancy between equality in access into the medical education and the inequality in the outcomes of this education. According to the medical education literature, the question of whether women are not competent enough to practice medicine with regard to personality traits and motivation is still a legitimate question. Other factors of concern with regard to gender equality in the medical education raised by this literature include problems of inequality within the medical school curriculum, gender differences in teaching and assessment methods preferences, gender inequality as a result of medical school ethos and culture, gender differences in mentoring processes, gender discrimination and harassment and gender differences in career opportunities.

Yet, the literature review also points out several ways to improve the current status of women graduates from medical schools. These suggestions may serve as recommendations for the educational managers in medical schools how to practice educational management, aimed at achieving gender equality and eliminating gender discrimination and bias.

The topics raised by the literature review relate to the research questions of this study, which cover nine issues:

- Gender differences in the self-esteem of medical students.
- Gender differences in career goals and motivation for leadership.
- Gender differences in perceptions of combining a medical career with a family.
- Gender differences in preferences of pedagogical issues.
- Gender differences in preparations and career advice given to students at medical schools.
- Gender differences in mentoring processes experienced during medical education.
- Gender differences in the nature and extent of gender discrimination and harassment.
- Gender differences regarding future career opportunities of the students.
- The implications of the above areas to educational managers.
Chapter 3: Methodology

Introduction

The overall plan of the methodology chapter

A test question to any academic discussion, which claims to be based on research findings, is whether the research design justifies the conclusions. For this reason it is important to describe in detail the conceptual framework used to inform the analysis of the data collected and how the research is conducted (Hall, 1996, p. 17). This chapter describes in details the research paradigm, its approach and how the research is conducted including the construction of the research instruments. The methods of sampling, data collecting and analysis are reviewed critically to show their appropriateness for the topic. The chapter also describes how problems like reliability, validity, triangulation, ethics and access are confronted. This introduction section describes the overall plan of the methodology chapter. This includes the design of the study and the research questions

The design of the study

This study was carried out in two phases. The first phase was a survey of medical students in Israel. The second phase was a case study of one medical school, school “A”. The survey was carried out in order to obtain reliable and precise data. The case study is a complementary design intended to deepen the
data derived from the survey and clarify some of the unsettled questions arising from it.

In the first phase of the research, questionnaires were administered by mail during June-July, 2001, to sixth year medical students from three out of four medical schools in Israel. The fourth school’s students were excluded from the survey because ten students from that school participated in a pilot study of the questionnaire. A short covering letter (appendix 3) accompanied the questionnaires to inform students about the research’s objectives, conveyed the importance of the survey and included reassurance of confidentiality and encouragement to reply (Cohen and Manion, 1994, p.97). Stamped envelopes were enclosed to ensure a high response rate and quick return. In the questionnaires administered at school “A”, the respondents were requested to participate in an interview on the subject. After initial analysis of the survey’s data, the second phase was carried out with a sample of students from school “A”, which gave their consent to be interviewed. This was followed by interviews with the faculty members from the same school and documentary analysis of the official documents of school “A”.

The research questions of this study

To examine gender differences in personal values of medical students, three questions are asked:

1. Are there any gender differences in self-esteem?
2. Are there any gender differences in career goals and motivation for leadership?

3. Are there any gender differences in perceptions of combining a medical career with a family life?

To examine if the school experiences of male and female students are different, additional four questions are asked:

4. Are there any gender differences with regard to learning styles, curricular content preferences and preferred evaluation systems?

5. Are there any gender differences in the preparation and advice given to medical students?

6. Are there any gender differences with regard to the mentoring processes experienced by men and women during medical education?

7. Are there any gender differences with regard to the nature and extent of gender discriminations and harassment or other student abuses in medical school?

To find the effect of gender on future career opportunities for the medical students, one question is asked

8. Are there any gender differences in the effect of gender on speciality choices and career opportunities in medicine?

The ninth research question covers the fourth issue of the research:

9. What are the implications for educational managers of the issues raised in the previous questions?
Review and selection of research philosophy

A comparison of quantitative and qualitative research paradigms

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<thead>
<tr>
<th>Criterion of comparison</th>
<th>Quantitative paradigm</th>
<th>Qualitative paradigm</th>
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<tbody>
<tr>
<td>Management of hypotheses</td>
<td>Testing</td>
<td>Generating</td>
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<td>Aims</td>
<td>Generalization</td>
<td>Description</td>
</tr>
<tr>
<td>Purpose</td>
<td>Confirmation,</td>
<td>Discover</td>
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<tr>
<td></td>
<td>Verification</td>
<td>To make truth</td>
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<td></td>
<td>Determine causality</td>
<td>emerge</td>
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<tr>
<td>Source of theory</td>
<td>A priori</td>
<td>Grounded</td>
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<td>Research strategy</td>
<td>Structured</td>
<td>Unstructured</td>
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<tr>
<td>Orientation</td>
<td>Prediction</td>
<td>Understanding</td>
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<td>Main methods</td>
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<td>Observations</td>
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<td></td>
<td>Experiments</td>
<td>In depth interviews</td>
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<td>Case studies</td>
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<tr>
<td>Approach</td>
<td>Top down</td>
<td>Bottom up</td>
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<tr>
<td>Description</td>
<td>Numerical</td>
<td>Narrative</td>
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<tr>
<td>Emphasis</td>
<td>Objective reality</td>
<td>Subjective reality</td>
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<tr>
<td>Implementation of method</td>
<td>Decided a priori</td>
<td>Decided in field</td>
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<tr>
<td>Values</td>
<td>Value free</td>
<td>Value bound</td>
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<tr>
<td>Researcher’s stance</td>
<td>Outsider</td>
<td>Insider</td>
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</table>
In order to fit the purpose of this study, a decision has to be made in which paradigm to locate the research. Within social sciences, there are two broadly defined research paradigms: quantitative and qualitative (Easterby-Smith et al., 1994a, p. 76). Oakley (2000, pp 26-27) compares those two paradigms by using 24 attributes. The above table (table 3.1) compares the two methodological paradigms based on similar attributes.

<table>
<thead>
<tr>
<th>Criterion of comparison</th>
<th>Quantitative paradigm</th>
<th>Qualitative paradigm</th>
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<tr>
<td>Researcher status</td>
<td>Independent</td>
<td>Interactive</td>
</tr>
<tr>
<td>Setting</td>
<td>Laboratory</td>
<td>Field, nature</td>
</tr>
<tr>
<td>Sample size</td>
<td>Large</td>
<td>Small</td>
</tr>
<tr>
<td>Data's qualities</td>
<td>Reliable, replicable</td>
<td>Rich, valid</td>
</tr>
<tr>
<td>Instrument</td>
<td>Physical device</td>
<td>The researcher</td>
</tr>
<tr>
<td>Data types</td>
<td>Actions, attitudes</td>
<td>Feelings, behaviours</td>
</tr>
<tr>
<td>Analytic units</td>
<td>Predefined variables</td>
<td>Patterns</td>
</tr>
<tr>
<td>Quality criterion</td>
<td>Statistical significance</td>
<td>Relevance</td>
</tr>
<tr>
<td>Nature of truth</td>
<td>Context free</td>
<td>Context bound</td>
</tr>
<tr>
<td>Reality</td>
<td>Objective</td>
<td>Socially constructed</td>
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<td></td>
<td>External</td>
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<tr>
<td></td>
<td>Fragmentary</td>
<td>Holistic</td>
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<tr>
<td>Audience</td>
<td>Scholarly community</td>
<td>User community</td>
</tr>
</tbody>
</table>
The findings of quantitative social researches are said to be banal and trivial and have little consequences (Cohen and Manion, 1994, p. 25). It is claimed that the researcher should study how people construct a situation and not how they react to it. The qualitative view of social reality stresses the importance of the subjective experience of individuals in the creation of the social world (Cohen and Manion, 1994, p. 8). The main criticism of the qualitative studies, are that they are not reliable and replicable and have little credibility or scientific rigor (Oakley, 2000, p. 29). As well, qualitative studies are said to take long time to complete. The fact that qualitative studies seem to lack structure and end goals in the research design, may make researchers feel anxious and reluctant to use such studies (Johnson, 1994b, p. 183).

*The paradigm used in this research*

Although there is very distinct difference between the different research ideologies, this difference may be more theoretical than actual (Cooper and Bosco, 1999, p. 480) and in reality a methodology is a combination of best available choices. Even self-confessed extremists do not hold consistently to one paradigm (Strauss and Corbin, 1990, p. 18; Easterby-Smith *et al*, 1994a, p. 77). The tendency to stick to one paradigm and ignore the other is criticised in the methodology literature. It is claimed that quantitative researchers tend to imagine that statistical techniques will guarantee the value of their research. On the other hand, qualitative researchers tend to substitute narrative for analysis (Brown and Dowling, 1998, pp. 82-83).
This study follows social scientists who have thus come to abandon the spurious choice between qualitative and quantitative data to try to combine both by making use of the most valuable features of each (Cohen and Manion, 1994, p. 40). The study uses the most suitable components for its purposes and thus uses components from both the quantitative and qualitative paradigms. The adoption of a dual approach can help overcome the weaknesses in both the qualitative and quantitative approaches and is claimed to be the best option (Brown and Dowling, 1998, p. 83).

In this study the same questions are first examined through a large number of participants using a standardized questionnaire and then through open-ended interviews with the subset group of these participants to derive a richer understanding of the research questions. First, the research questions are studied among Israeli medical students in the sixth year via a survey. Then, a case study approach is adapted. Ten out of the eighty medical students in one of the medical schools are interviewed. A sample of seven faculty members out of the 150 faculty members of this school who stood in certain criteria, serves as another sample in the phase. Additional source of data in the case study is documentary analysis.

The reasons for using both qualitative and quantitative components are as follows:
1) The nature of the research questions that compares two groups of medical students can be easily adapted to statistical tests and universal hypotheses of existing differences between these groups.

2) On the other hand, because the topic of the research is gender, which is a controversial subject, it requires the depth and sensitivity to variations in opinions of men and women, situated within a specific context and determined by local practices. Such conditions are more suited for a qualitative approach.

3) Another reason to combine qualitative components in the paradigm of this research is because this study shares a lot of common principles with the feminist research and relies on the context of a feminist theory. Qualitative methods are generally seen as more suited to feminist research (Chandler, 1990, p. 121; Wild, 1994, p. 89).

The following (table 3.2) sums up the principle of this study compared with the principles of quantitative, qualitative and quantitative and qualitative paradigms together.
### Table 3.2

*Comparison of this research to qualitative and quantitative paradigm’s components*

<table>
<thead>
<tr>
<th>Criterion of comparison</th>
<th>This research</th>
<th>The paradigm</th>
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<tbody>
<tr>
<td>Management of hypotheses</td>
<td>Testing</td>
<td>Quantitative</td>
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<tr>
<td>Aims</td>
<td>Generalization and description</td>
<td>Quantitative and qualitative</td>
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<tr>
<td>Purpose</td>
<td>Confirmation, and verification</td>
<td>Quantitative</td>
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<tr>
<td></td>
<td>Implication</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Orientation</td>
<td>Understanding</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Main methods</td>
<td>Survey and case study</td>
<td>Quantitative and qualitative</td>
</tr>
<tr>
<td>Description</td>
<td>Numerical and narrative</td>
<td>Quantitative and qualitative</td>
</tr>
<tr>
<td>Emphasis</td>
<td>Objective and subjective reality</td>
<td>Quantitative and qualitative</td>
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<tr>
<td>Implementation of method</td>
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<td>Values</td>
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<td>Researcher’s stance</td>
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<tr>
<td>Setting</td>
<td>Field, nature</td>
<td>Qualitative</td>
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<tr>
<td>Sample size</td>
<td>Large and small</td>
<td>Quantitative and qualitative</td>
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<tr>
<td>Data’s qualities</td>
<td>Reliable and rich</td>
<td>Quantitative and qualitative</td>
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<tr>
<td>Instrument</td>
<td>Physical device and the researcher</td>
<td>Quantitative and qualitative</td>
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Table 3.2 cont’d

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<tr>
<th>Criterion of comparison</th>
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<th>The paradigm</th>
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<tbody>
<tr>
<td>Data types</td>
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<tr>
<td>Analytic units</td>
<td>Predefined variables and patterns</td>
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<tr>
<td>Quality criterion</td>
<td>Statistical significance</td>
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<tr>
<td>Nature of truth</td>
<td>Context bound</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Reality</td>
<td>Variations in opinions</td>
<td>Quantitative and qualitative</td>
</tr>
<tr>
<td>Audience</td>
<td>User community</td>
<td>Quantitative</td>
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<td></td>
<td>Academics</td>
<td>Quantitative and qualitative</td>
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</table>

**Feminist research paradigm**

The idea of a feminist approach to methodology is problematic. It is claimed that there may be many different approaches to feminist methodology and that it cannot be prescribed what must be feminist methods (Ramazanoglu and Holland, 2002, pp. 2-3). In seeking knowledge of gender through social research, different feminists make different decisions about how to produce and justify their knowledge. Some feminist researchers say that some ways are more suitable for feminist research (Mies, 1993, p. 68; Oakley, 2000, p. 33). Others stress that there is more than one way of connecting feminist ideas with
women's experiences and with their particular conceptions of reality (Ramazanoglu and Holland, 2002, pp. 2-3).

Despite this divergence, feminist research is claimed to be distinctive from other kinds of social researches since all feminist researchers share a common moral and political position about the position of women in relation to men and about male domination of social-life (ibid). Thus it can be argued that feminism is both diverse and inclusive. Feminism is exclusionary to the extent that any definition of feminism excludes non-feminism (ibid, p. 7). The distinctiveness of feminist research comes from the relations between epistemology and politics in the feminist research.

1) Feminist studies are claimed to hold other core assumptions to some degree:

2) A feminist perspective and acknowledgement of the pervasive influence of gender as a category of analysis and organization (Usher, 1996, p. 134).

3) They share the feminist movement values and emphasise the centrality of gender issues in all aspects of human existence (Purvis, 1985, p. 180; Acker, 1994, p. 57; Weiner, 1994, pp. 71-72; Hall, 1996, p2; Cooper and Bosko, 1999, p. 479).

4) An awareness that women suffer from injustice because of their sex (Acker, 1994, p. 57).

5) They include a political stance (Adler et al, 1993, p. 57; Acker, 1994, p. 57; Wild, 1994, p. 90).
6) The purpose of the research is to improve women's lives (Adler et al, 1993, p. 57-62; Acker, 1994, p. 57; Wild, 1994, p. 90)

7) The feminist researcher prefers to enter into the same space as their subjects (Acker, 1994, p. 57). The stance of the researcher is 'below' and 'alongside' rather than taking up a powerful or detached or 'above' position (Strachan, 1993, p. 75; Mies, 1993, p. 68).

8) Including a conscious subjectivity or partiality (Purvis, 1985, p. 183; Adler et al, 1993, p. 63; Wild, 1994, p. 90). Some feminist researchers stress the personal involvement aspect of their feminist researches (Strachan, 1993, p. 74). Other researchers claim that only women can be feminist researchers (Cooper and Bosco, 1999, p. 479) and it is argued that sharing the female gender automatically brings greater rapport (Wild, 1994, p. 89).

9) An acknowledgement of feelings, emotions and intuitions is also typical part of the feminist research (Wild, 1994, p. 90; Morley, 1999, p. 82; Ramazanoglu and Holland, 2002, pp. 50-51).

10) Some feminist researchers hold a belief that existing knowledge and techniques are deficient and need revision and replacing (Acker, 1994, p.54; Usher, 1996, p. 134; Oakley, 2000, p. 33).

11) Multiple and interdisciplinary research methods can validate feminist research (Acker, 1994, p.54).

Some views of feminist research are that it should only follow few guidelines (Hammersley, 1992, pp. 187-191; Adler et al, 1993, pp. 57-62; Mies, 1993, pp. 68-73):
1. Identification - to replace value free research with conscious partiality, which means partial identification with the research objects.

2. In the relationship between the researcher and the research object to replace 'from above' view with 'from below' view.

3. Involvement - to replace the goal of uninvolved spectator knowledge with active participation.

4. A change of the status quo is used as a starting point for scientific quest.

5. The research process should become a conscience process both for the social scientist and women.

6. The methodology must be accompanied by the study of women's individual history.

It is questionable as to whether feminist research has to follow any rules and assumptions. Some researchers claim that any study, which addresses women’s life and experiences, lends itself to a feminist perspective (Hall, 1996, p. 33; Bhalalusea, 1998, p. 24). In their recent book about feminist methodology, Ramazanoglu and Holland (2002, pp. 15-16) summarise four assumptions of this methodology:

1. Feminist methodology is not distinguished by being studied by female researchers.

2. There is no research technique that is distinctively feminist.

3. There is no ontological or epistemological position that is distinctively feminist.
4. Feminist methodology is distinctive only to the extent that it is shaped by feminist theory, politics and ethics and grounded in women's experience.

Similarly, according to Acker's view (1994, p. 69), if a researcher brings a feminist framework to the analysis, this is feminist research. Acker's research on graduate students did not include a critique of injustice to women, gave no centrality to gender divisions or women's experience and had limited intent to improve the conditions for women. Nevertheless, the researcher was exposed to feminist ideas (ibid, p. 69).

One of the debates within feminist research is whether or not it should use only a qualitative paradigm. Some researchers advocate it should (Chandler, 1990, p. 121; Wild, 1994, p. 89) and tend to reject the positive paradigm. Feminist researchers claim that the positivist approach is part of patriarchal dominance (Atkinson et al, 1993, p. 25; Oakley, 2000, p. 38) and that objectivity is equated with masculinity (Oakley, 2000, p. 34). Using qualitative methods is seen as part of the war between the powerful groups (men) and powerless groups, which include women, ethnic minorities and the like (Oakley, 2000, p. 33). The qualitative approach is also claimed to provide a powerful lens to investigate the life choice of individuals. Hall (1996, p. 33) states that only in-depth qualitative study could have explored feminist issues as they are described in her study of six women in educational context in the UK. Grogan claims that a qualitative approach allows for greater diversity of views and provides the foundation for a possibility of multiple discourses existing side by side instead of hierarchically arranged (Grogan, 1996, p. 35). Other feminist researchers try to reconcile the
difference between positivism and interpretive methods and take the best from each paradigm (Silverman, 1985, p. 17; Porter, 1994, p. 69; Cooper and Bosco, 1999, p. 479).

One of the main problems of research that tries to serve the interest of women is that although it is important to describe and analyse women's lives in terms of the interests of women, it may be a problem to fully apply it. It is not always clear what are the true interests of the women researched and the women researched do not speak with one voice (Chandler, 1990, p. 138; Morley, 1994, p. 198). There are also limits to the friendship and empathy a researcher can feel toward the respondents. The importance of the claim that only women should interview women is also questionable (Chandler, 1990, p. 128). More of a problem of the feminist research is that some of the academic decision-makers are likely to consider research on gender as unfit for scholarship (Acker, 1994, p. 60; Morley, 1997, p.109; 1999, p. 155). Feminist research has been criticized as being biased and value laden. Purvis tries to defy the argument that commitment to a feminist perspective is a hindrance to genuine scholarship (1985, p. 199) and argues that any research in social studies is selective to some extend. She claims that the questions that feminist research poses about the in-built sexist assumption within “male” stream academic disciplines, is an existing challenge that must be welcomed (Ibid, p. 200).

Some specific methodological problems are claimed to be present in researches that focus on gender differences. Gender difference researches do not enable a truly experimental situation, as the researchers can’t manipulate sex. Other
variables in the research are in danger of being masked when comparing differences. Gender differences do not explain the different organizational and social circumstances of men and women. For example, it is found that women managers may not be good leaders because they are placed in dead end or token positions in which they have no real power enabling them to be strong leaders (Colwill, 1995a, p. 21). Other feminist researchers also deny the validity of the research methods that compare women to men (Adler et al, 1993, p. 62; Lorber, 1994, p. 4).

**Extent to which the findings of this research may fit into a feminist paradigm**

Clarification is needed as to how the possible empirical findings of this research may fit into a feminist paradigm. The following methodological stance of this research is described to examine the compatibility of this research with the assumptions of other feminist researches:

1. This research is shaped by feminist theory. The research questions of this research emerge from the particular nature of the feminist literature on medical education. The feminist medical education research is mainly using the liberal feminist discourse and language. In general education, the main questions asked by liberal feminists relate to the ability of women to achieve equal opportunities after graduation from school, gender segregation of the different discipline and stereotypical beliefs held against women (Weiner, 1994, p. 67). This research considers similar questions within the experience of medical students in Israel. Although largely based on the liberal stance in
feminism, this study is not avoiding the questions of women’s oppression by men, the male dominance of knowledge, power relations based on sexuality and the relations between sexual harassment and the oppression of women. Other feminist researchers who hold a radical feminist stance ask similar questions (Weiner, 1994, p. 67). The questions of this research raise issues of sexual violence, discrimination against women based on their sexuality and sexual harassment.

2. This research compares women’s experience to that of men. Other feminist researches deny the validity of the research methods that compare women to men (Lorber, 1994, p. 4). The reason behind this comparison is not to present women as the 'deviant other' (Adler et al, 1993, p. 62) but to understand better the whole body of medical students' experiences, which has not been investigated before.

3. The aim of this research is political. It is meant to improve the life of women medical students by informing the educational medical management of the existence of differences between men’s and women's experiences as students during their medical education and possible discrimination against women. It is common for feminist researches to have a political stance (Adler et al, 1993, p. 57).

4. As in many other feminist studies, the author of this research is a woman (Cooper and Bosco, 1999, p. 479) and the research questions relate to gender (Hall, 1996, p. 2). Nevertheless, in order to secure open mind, the findings of this research will also derive from the male students' and faculty members' point of view and will describe male students' experiences as well as that of women students.
5. In the distinction between those who are taking positivist and realist positions and base their research assumptions on outside 'true' reality and those who take empiricist naturalistic paradigms of knowledge and base their research's assumptions on field findings, this study is inclined toward the positivist stance. Yet, some of the assumptions and categories to analyze the data derive from the understanding of the data by inductive methods.

6. Although some feminist researchers consider quantitative methods not part of the mainstream feminist paradigm (Chandler, 1990, p. 121; Adler et al., 1993, p. 62; Hammersley, 1995, p. 50; Hall, 1996, p. 33; Oakley, 2000, p. 38), this research encompasses both quantitative and qualitative methods to achieve better understanding of women's experience. This research follows the assumption that there is no research technique that is distinctively feminist (Ramazanoglu and Holland, 2002, p. 15). The empirical findings of this research are derived from two different research approaches: a survey and a case study as well as diverse methods both quantitative and qualitative such as questionnaires, interviews and documentary analysis as it may not be assumed. It follows other feminist researchers who include surveys in their data-gathering methods and claim that quantitative research methods can add strength and power to the research and that quantitative methods can prevent the tendency to regard feminist researches as anecdotal (Silverman, 1985, p. 17; Porter, 1994, p. 69; Cooper and Bosco, 1999, p. 479).

In the following table (table 3.3) principles of the feminist research are compared with the principles of this research to examine its compatibility with other feminist researches and the justification to call this study a feminist study.
Table 3.3
Compatibility of Some Principles of Feminist researches to the Principles of this Research

<table>
<thead>
<tr>
<th>Feminist studies' principles</th>
<th>Principles of this research</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feminist theory</td>
<td>The research is based on the liberal feminists assumptions</td>
<td>Large</td>
</tr>
<tr>
<td>Influence of gender and the centrality of gender issues</td>
<td>Influence of gender is part of the research's questions. Gender issues are part of the title of this research</td>
<td>Large</td>
</tr>
<tr>
<td>Political side</td>
<td>The research calls to improve gender equality in medical schools</td>
<td>Large</td>
</tr>
<tr>
<td>Wish to improve women's life</td>
<td>The conclusions of the research can improve the prospects of female medical students</td>
<td>Moderate</td>
</tr>
<tr>
<td>A belief that women suffer from injustice</td>
<td>In order to secure open mind and secure the cooperation of male students, the researcher tried to avoid this belief</td>
<td>Small</td>
</tr>
<tr>
<td>The researcher and subjects on the same space</td>
<td>The researcher works at one of the medical schools and share some inside knowledge of the organizational context</td>
<td>Moderate</td>
</tr>
<tr>
<td>Involvement</td>
<td>The researcher is a women but she is involved only to some degree in female students' life.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Acknowledge of feeling</td>
<td>The in depth interviews represent the feeling of both the students and the faculty members to some degree</td>
<td>Moderate</td>
</tr>
<tr>
<td>The positivist research approach and knowledge need replacement</td>
<td>Existing knowledge serve to form hypotheses for this research. Methodology includes a survey.</td>
<td>Small</td>
</tr>
<tr>
<td>Multiple research methods</td>
<td>The research employs questionnaire, in depth interviews and documentary analysis</td>
<td>Large</td>
</tr>
</tbody>
</table>
Review and selection of research approaches

A survey

This study relies on the survey approach. A survey is the most commonly used descriptive method in educational research. It is defined by the following characteristics:

1. It requires a representative sample of respondents, representing a predefined population.
2. The research questions are fixed
3. The conditions of the survey are replicable.
4. It allows comparison within the individual respondents.

Many researchers choose a survey approach, because it can collect data inexpensively, quickly, and effectively and can provide patterns of perceptions. It allows large scope research and is low cost, enables generalization and provides both descriptions of conditions and explanations of medical students’ motivations and opinions. Yet it has many disadvantages such as the superficial nature of the data derived from the survey and its ambivalent nature (Cohen and Manion, 1998, p. 83). The survey approach is not suitable for the sensitive issues because it does not allow rapport with the respondents.
**Table 3.4**

*The compatibility of this research with the survey approach*

<table>
<thead>
<tr>
<th>The survey’s characteristics</th>
<th>The applications of the principle to this research</th>
<th>Compatibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>A representative and large sample</td>
<td>The sample was the respondents to the questionnaire, from final year students’ population in 3 out of 4 medical schools in Israel. The response rate was 60 per cent.</td>
<td>A bit problematic</td>
</tr>
<tr>
<td>Fixed and replicable questions</td>
<td>The mailed questionnaire secured fixed and replicable conditions.</td>
<td>Good</td>
</tr>
<tr>
<td>Allows comparison within the respondents.</td>
<td>The main research design of this research is to compare two groups of medical students: men and women.</td>
<td>Good</td>
</tr>
<tr>
<td>Reliable information</td>
<td>The reliability is checked statistically by Cronbach’s alpha.</td>
<td>A bit problematic</td>
</tr>
<tr>
<td>Validity and depth</td>
<td>The validity of the questionnaire is checked by several means (Experts’ validity, piloting, factor analysis). The validity of the case study is checked by multiple sources.</td>
<td>A bit problematic</td>
</tr>
<tr>
<td>Feasible and low cost</td>
<td>This research is a single researcher project and is limited in resources.</td>
<td>Good</td>
</tr>
</tbody>
</table>

To sum up the reasons for choosing the survey approach, the above table (table 3.4), examines the compatibility of the main survey’s characteristics to the aims and design of this research.
A case study

A case study has become increasingly popular as a mean of investigating practice in schools, colleges and universities (Cohen and Manion, 1994, p. 107). The research methods literature is not conclusive about the definition of case studies. According to Cohen and Manion, it is a deep and intensive inquiry of a life-cycle of one unit (1994, p. 106). Yin (1994a, p. 138) emphasises the fact that those within the unit of analysis of a case study must be distinguished from those outside it. According to Yin (1989, p. 23), the essence of case study is that it is enquiry in a real-life context as opposed to the contrived context of the survey. He claims that it should fulfil the following criteria:

1. Investigation in real life context
2. The boundaries between the investigated phenomenon and context are not clearly evident
3. It relies on multiple sources of evidence
4. The data collection and analysis is guided by prior theoretical propositions

Stake (1995, p. 2) describes case study as the study of the particularity and complexity of a single case. For him, an important characteristic of the case study is that it has boundaries, yet it can also include an attempt to understand something else (Stake, 1995, pp. 16-17). Bassey (1999, p. 47) agrees that the case study is a study of singularity conducted in depth in natural settings. He adds to the features of a case study the status of theory. A case study can test a hypothesis, which arose during the study (Bassey, 1999, p. 93).
Generalisation from a case study is the most controversial issue in the methodology literature. Cohen and Manion (1994, p. 107), claim that the aim of the case study researcher is to establish generalizations about the wider population to which this case belongs. Many other methodology theorists do not agree. Yin (1994b, pp. 30-31) claims that only analytic generalization from a case study is appropriate and warns against using statistical generalization. Stake (1995, p. 9) speaks of ‘small’ generalization within the study case or ‘naturalistic’ generalization, which is made by the readers in comparison with generalization to the population (1995, p. 86). Bassey (1999, p. 93) brings in an example of a multiple case study, which led to a fuzzy proposition, which is then tested. Simons (1996, p. 237) actually welcomes the paradox between case study and generalization.

A diverse range of techniques is suitable to be employed in a case study in the collection and analysis of data, which can be both qualitative and quantitative. Observation lies “at the heart” of every case study (Cohen and Manion, 1994, p. 107). Yet, the term ‘observation’ is used more as a generic term rather than as a specific method (Ibid, p. 122) and may include indirect observation methods like interviews and questionnaires as well (Ibid, p. 117, p. 121). Another important method used in a case study is documentary analysis (Bassey, 1999, p. 81).

A case study has many advantages. Its data is strong in reality and provide a natural basis to generalization. Case studies recognise the complexity of social truth and can represent the variance or conflicts held by participants. It may form an archive of descriptive material. Case studies begin in the world of action and contribute to it. Its insights may be directly interpreted and put to use and present
research data in a very accessible form and are capable of serving multiple audiences (Cohen and Manion, 1994, p. 123). The disadvantages of case studies are in many ways the results of these advantages. Because case study is strong in reality, it is difficult to organize its data. It is complex and generalization from its data may be problematic. Case studies’ reports should be accessible to many audiences and have a lot of data and therefore they are long to read. As well, there are academic criticisms of case studies such as a lack of rigor or little basis for scientific generalization. It is also difficult to conduct a good case study (Yin, 1994, pp. 9-11).

The case study approach is selected for the second phase of this study as a complementary approach to the survey phase because of its advantages. Specifically, it is chosen because it is compatible with the paradigm of this research. The deep and rich data derived from case studies is more suitable for personal and controversial issues such as gender issues and highlight the variety within men and women (Cooper and Bosco, 1999, p.481). The characteristic of the case study to rely on multiple sources of evidence is a key element for using this approach in this study. The case study of one medical school can confirm and explain the data derived from the survey. Using multiple data sources brings together the point of views of students, faculty members and the policy of the medical school through its documents. The case study is based on interviews with medical students and faculty members as well as a documentary analysis of school’s documents.
Research methods act as filters through which the context is experienced and are never neutral in representing the experience. Reliance on one method may bias the picture of the reality investigated (Cohen and Manion, 1994, p. 233). It is therefore advisable not to rely on the survey approach alone and add a case study to have a different filter to look at the experience of medical students in Israel. It adds to the confidence when different data collecting methods yield the same results. The case study findings supplement the data of the survey. Because the case study is relying on multiple points of views, it is very suitable to answer the research question about the implications of gender equality issues to educational managers of the medical school, which could not be dealt with by the survey. The case study can also improve the validity of the survey results by serving as a basis for a triangulation of students’, faculty members’ perspectives as well as evidence on the official school policy. An important reason for using the case study approach is that the researcher, who works in medical school “A”, can get access to this medical school and has inside knowledge of the context and politics of this school as an inside researcher. Further consideration is that other research approaches such as experimental research are not feasible in the case of this research.

**Review, selection and construction of data-gathering instruments**

*The questionnaire*

A self-completion, questionnaire combining open and closed items, is chosen as the instrument for the survey phase of the research (appendix 1). Questionnaire
is an acknowledged way to add power to a feminist research. Several feminist researchers use postal questionnaire as a preliminary stage of their research (Chandler, 1990, p. 121). A good questionnaire should be unambiguous, uniformly workable, encourage the participants’ co-operation and elicit answers as close as possible to the truth (Cohen and Manion, 1994, p. 92). In wording of the questions of this questionnaire, care was taken not to be too negative and not to lead the respondents to complain of sexism. The aim is to make the questions simple, clear and unambivalent. The content of questions appeared or was suggested by the literature and the working hypotheses derived from the literature survey. The combined questionnaire, asking about the same issues in both close and open question formats, allows getting both reliable and valid data and enables some triangulation and clarification of the data within the survey phase. Open questionnaire items are valid and are easy to construct. Open questions also elicit the perspectives and views of the respondents without bias.

The advantages of closed items are the easy adaptation to attitude-measurement situations and direct and easily checked assessment of attitudes, such as required in this research. Closed items lend themselves well to item analysis procedures. Yet closed items have some disadvantages. It is easy for the respondents to fake their true opinions. Furthermore, it is difficult to construct closed items without any bias of leading the respondents or suggest to respondents that there is more acceptable answer and may thus interfere with the true perceptions of the respondents.
The questionnaire consists of three parts. The first part consists of twelve demographical questions, which evoke data relevant according to the literature. The second part consists of a series of 22 statements and the responding students are asked to indicate the extent to which they agree or disagree with each statement. The respondents have to circle the appropriate degree of agreement for each item on a Likert type scale of five options from 1 = strongly disagree to 5 = strongly agree. The weight assigned to the options for positively worded
item would be strongly disagree =1, disagree =2, neutral =3, agree=4, strongly agree=5. The third part of the questionnaire includes eight open questions that relate to the research questions.

The items in the questionnaire are based on the research variables as were initially defined by the research literature. The above table (table 3.5) shows the initial definitions of the research variables and the closed and open questions that were intended to measure these variables. Yet, these variables were consequently slightly modified based upon factor analysis of the questionnaire responses. The results of the factor analysis are shown in the finding chapter of the research.

Piloting the questionnaire

A pilot of the questionnaire was carried out during the academic year of 2000/2001 with ten medical students in one medical school in Israel, school “D”. The research literature stresses that piloting the questionnaire is needed to evaluate the instructions, the questions and the response system. The draft questionnaire contained 22 closed questions and eight open questions. The administration of the questionnaire was personal so that the respondent can be observed and questioned if necessary, as advised by the literature (Youngman, 1994, pp 262-263).

The results showed that the students found the instructions clear. They found all of the questions clear (except one student who did not understand question number 19: “during my studies I felt at least once as an outsider”). Another
problem noted with the closed items was that in the case of three items all the students choose only the negative side of the scale (One to three) and in the case of five items they only agreed (Chose only four or five). It was decided to rephrase these statements to either less extreme in the case of the too negatively answered items or more extreme in the case of the too positively answered items.

With regard to the open questions, all of the students (except one student who answered the first of these questions ‘no, but I have seen it occur to my female peers’) answered laconically ‘no’ to the following questions. It was decided to rephrase these questions to more general questions.

1) Have you experienced any discrimination because of your gender?
2) Do you feel your gender affects your chances for career?
3) Have you been advised by your teachers to pursue a certain speciality?

*The interviews*

An interview includes the following features (Powney and Watts, 1987, p. vii; Wragg, 1994, p. 268):

- It has a particular focus and purpose
- It is initiated by the researcher
- It is aimed to gather certain information
- It involve also planning, recording the data, analysis and reporting
The advantages of the interview as a data-gathering tool are that it allows valid and rich data and is suitable for case studies. The disadvantages include excessive manpower needed to cover large samples by interviews. It is thus unsuitable for surveys. Another problem is that the interviewees can deceive their interviewer (Oakley, 2000, p. 70). An interview is the most prevalent data collecting method used in feminist research. Strachan (1993, p. 75) used informal interview because she believed her method enabled her to gain a rich and intimate source of material, which was highly effective in exploring the women’s lives. Her interviews took the form of friendly conversations in which there was an interchange of ideas, thoughts and experiences. The women also asked her questions. She had used many skills such as open ended questions, paraphrasing attending skills and the reflection of feelings to ensure that not only did the women feel comfortable about sharing their ideas and experiences but that she had correctly interpreted what they said (Strachan, 1993, p. 75).

Similarly, Grogan used in-depth, 60 to 90 minutes interviews in her study of women aspiring to the superintendency in the US. Her participants also were encouraged to lead her in the discussion and could choose where they would like to go with the interview. She also used clarification methods to check the validity of her interpretations and didn’t take meanings for granted. She too claim that being a woman, is an advantage in building rapport with female respondents and that she gained excellent rapport with the participants although she was an outsider (Grogan, 1996, p. 202).

The interview technique is chosen in this research because of the following considerations:
1) To derive data complementary and supplementary to the questionnaire information of the survey. Interviews can highlight the variety within groups. Men might be very different from one another and so are women.

2) The data of the interviews are more deep and rich than the data from the questionnaire of the survey. Interviews are preferred over direct observations, which might have given similarly rich data and a more objective picture because direct observation demands too much time and presents an access problem in the institutes that prohibit direct observation.

3) Another rationale for using an interview is that it depends on the respondents' consent. It allows the respondents to bring in their point of view in the sensitive and subjective issues of gender and is therefore ethical.

4) Interview data can be used to triangulate the data received from other sources including documents.

5) Interview is the main data gathering method in a feminist research and is widely employed in case studies.

The interview schedules are of two sorts according to the locus of control. The students' interviews are respondent interviews, which are semi constructed, more controlled by the interviewer and aimed to satisfy the researcher's questions. The interviews with the faculty members are closer to informant interviews than the students' interviews and more controlled by the interviewee.

The questions were structured to elicit at the outset the respondents' perspective without bias. The questions were phrased broadly and then followed by more
structured questions to probe the respondents' views and to make sure they are well understood. Care was taken not to lead the respondents in the questions.

The interview schedule with the students (appendix 2) contains, apart from the questions similar to the questionnaire, questions that derive from any contradiction or misunderstanding of the questionnaire data. The interviews with the students were conducted face-to-face in settings convenient for the participants and lasted about one hour. The questions were asked in the same order in each interview. The students were orally assured that the interviews are confidential for research purposes only, the contents of the interviews would not be passed over to the school management and no particulars that could identify them, would be mentioned anywhere. The interviews with the faculty members were conducted in their office and lasted about 45 minutes. They contained one general topic but the faculty members were offered some probe questions to organize their thoughts.

To ensure that the questions of the interview were understood, pilot interviews that were not included in the case study were conducted with two students. After careful consideration, one of the main results of the piloting was to use note taking instead of tape recording. Even though most questions were open-ended, the interview schedule was rather structured and easy for note taking. Tape recording could be experienced as threatening and intrusive to the interviewees. It was felt that more honest answers to the issues and less concerns would be given if note taking were used. This view was strengthened by the fact that one
of the medical students in the pilot had a negative attitude towards tape recording.

Piloting with one very experienced clinical teacher, not involved in the study, resulted in modifying the interview schedule with the faculty members. As the result of the piloting, it was decided to offer the faculty members additional questions in addition to the opportunity to talk broadly about their perceptions of the differences between men and women medical students with regard to the medical education experience. The piloting also served to confirm the use of note taking in the interview session and not tape recording.

*The documentary analysis*

Documentary analysis is a multi purpose research method, in which the content of communication serves as a basis of inference. A very wide range of general documents can be considered such as: letters, newspapers, diaries and minutes meetings, curricula and course outlines or other course documents at educational institutes, administrative record, management information system and examination results (Robson, 1994, p. 239-244). Access to some personal documents may be problematic. On the other hand, very relevant documents are publicly published (Robson, 1994, p. 244).

Document analysis is chosen for this research to supplement the data from the other methods of the case study (Robson, 1994, p. 239). It is chosen because it is additional source of information and provides another point of view on the
gender issue – the point of view of the official school management. Thus, its data can help to ensure the reliability and validity of the case study data. The documentary analysis in this research relied only on the use of available officially printed data (Johnson, 1994a, p. 25).

There are many advantages of using documentary analysis in the case study:

1. It is unobtrusive and non-reactive method and data can collect data without being observed.
2. It enables replication and it is therefore reliable.
3. It may provide a low cost longitudinal analysis when a series of documents of a particular type is available.

The main disadvantage of the document analysis is that the documents already exist and cannot be designed to suit the research purpose and therefore the validity of the data can be problematic. Furthermore, as with other non-experimental approaches it is very difficult to assess if the documents are the causes of the phenomena investigated or reflections of them (Robson, 1994, p. 243). It must also be taken into consideration that what the documents record is not direct picture of the reality (Johnson, 1994a, p. 59).

The document, which is used in the case study, is the yearly student’s information prospectus of medical school “A” (titled “The Yedion”). It is published every academic year and the documentary analysis is based on 2000/2001 edition. This prospectus contains general regulations of the university
as a whole, specific regulations for the medical school, information on each of the teaching departments of the school, a general statement about the curriculum, detailed study programmes of each courses taught this year at the school, short content descriptions of the taught courses, member lists of the school’s committees, full list of all the faculty members arranged alphabetically as well as according to the school’s departments and a list of the administrative staff. This document is authentic, credible and provides very clear evidence.

Problems of sampling in this research

The survey sampling

The survey sample of this study represents the population of the sixth (final) year undergraduate medical students in Israel. The final year medical students were chosen to represent the entire population of medical students in Israel because they are at the end of the undergraduate medical schooling experience and can reflect on their entire experiences as medical students. At that phase they are also likely to have defined plans for their future career.

The total number of the sixth year students in the academic year of 2000/2001 in Israel is 280. The students of school “D” could not be included in the research population because they served to test the pilot version of the questionnaire. The questionnaire was thus sent by mail to 212 of the final year students from the other three medical schools in Israel (80 students from school “A”, 42 students from school “B” and 90 students from school “C”). Ten students could not be
reached by mail, due to incorrect address information. From the remaining 202 students, the 120 responding students (60 per cent response rate) served as a sample of the survey. They adequately represent the entire population with regard to demographic characteristics.

*The sample of the students for the case study*

The case study conducted in medical school “A” included interviews with medical students. The population of sixth year medical students of school “A” consists of 80 students. Out of them 44 (58 per cent) are male and 32 (42 per cent) female. Their ages range between 23-34. About half of them are married and about fifteen per cent have at least one child. The vast majority of them live in central part of Israel in urban centres and nearly all are Israeli born.

The sampling technique used for the interviews is purposive sampling (Cohen and Manion, 1994, p. 89). Small-scale researches and case studies often use non-probability samples although they may be non-representative. It is justified by claiming that the research is being done in order to illuminate one small area of feeling and experience (Wild, 1994, p. 91). The ten students interviewed were sampled among the students who gave their consent to be interviewed in the survey questionnaire. The sampling considerations were to include students whose demographic characteristics are rather similar to those of the whole population of sixth year medical students in Israel. For example, equal numbers of men and women, equal number of married and single students, including
students with children, wide range of ages, permanent address in both urban centres and small settlements and inclusion of a student born abroad.

*The sample of faculty members for the case study*

The population of the faculty members at medical school “A” includes about 150 pre clinical faculty members and as many as 1400 clinical faculty members but only a small per cent of them are full time faculty members. In order to be included in the sample, the following criteria had to be met for choosing the faculty members:

1. Consent to be interviewed.
2. Being an active member in at least one of the teaching related school’s committees and have a good knowledge of the students.
3. To represent both genders.
4. To represent both basic science teachers and clinician faculty members.

Only about 150 faculty members are either members of one of the teaching related committees of the school or are heads of the teaching departments and take a more active part in the teaching process of the school. Not all the suitable faculty members gave their consent or otherwise were available to be interviewed. Out of the about 100 available faculty members, seven faculty members were interviewed. The sampling technique was a snowball sample where some informants identify other informants (Cohen and Manion, 1994, pp.
88-89). This non-probability sampling technique is justified when studying sensitive topics or difficult to reach population like this one (Berg, 2001, p. 33).

**Problems of reliability, validity and triangulation**

*The reliability issue*

Research is considered reliable if the research tools are stable and repeated measurements made under the same condition give the same result. Factors that affect the reliability of a questionnaire or an interview can be the wording of the questions, the physical conditions, when the questionnaire or the interview is being administrated and the respondents’ mood (Moser and Kalton, 1989, p. 353; Schutt, 1999 p. 90). Reliability is divided into internal and external reliability. The external reliability is checked by repeated test under the same condition or by constructing similar tests. The internal reliability in a quantitative research can be checked by split half technique by dividing the same questionnaire into two halves and checking the correlation between the results. Cronbach’s alpha formula is a statistical procedure, which checks the internal reliability by calculating the correlation of all the possible halves and is included in most of the appropriate statistical soft wares.

It is more of a problem to ensure the reliability of qualitative research. The research instruments of such research may include the researcher himself/herself. Furthermore, the conditions in which the research is being conducted are unique to a certain time and context and can never be replicable. To ensure the
reliability of the qualitative research, special care should be given to have a clear rationale, to have clear and unambiguous objectives and to make explicit the methodology and values of the researcher (Yin, 1989, p. 38).

Using the following steps ensured the reliability of this research:

1) Taking care to build the survey questionnaire in such a way that it will meet reliability requirements.

2) Carrying out pilots to check the clarity of the questions of both the questionnaire and the interviews schedules.

3) Checking the statistical reliability (Cronbach’s alpha) of the 8 factors of the closed part of the questionnaire, defined by the factor analysis of the questionnaire (as discussed in a later section).

4) Care is given to have a clear purpose for the case study as well as clear research areas. All the interviews were carried out under the same conditions and in the same setting. The steps taken by the researcher to analyse the data and to interpret it are made explicit. Same person (the researcher) carried out all the interviews.

Validity problem

Validity is the ability of a data-collecting instrument to measure the concept it is meant to measure and is therefore a necessary qualification of any research tool. There are several types of validity. Face validity is the degree to which the instrument seems to measure the appropriate concept. Content validity is a
different aspect of the same question and requires logic to decide if the tool looks as if it is measuring what it is supposed to be measuring. Correlating the result with another valid instrument, which serves as a criterion, can check the predictive or convergent validity of a tool. The construct validity is checked by the statistical procedure of factor analysis and describes the different factors included in the instrument and how much of the total variability those factors explain (Weisberg et al., 1996, pp 94-96).

Both interviews and questionnaires are said to be problematic in relation to validity (Cohen and Manion, 1994, p. 281; Oakley, 2000, p. 70). Perhaps the most practical way of achieving validity is to minimize the bias of the research tool as much as possible. For example, in an interview the bias depends on the characteristics of the interviewer, the respondents or the questions. Careful formulation of the questions, the experience of the interviewer and probability sampling of the respondents have been suggested as means to reduce these biases (Cohen and Manion, 1994, pp. 281-284)

Special care is given in this research to check the validity by applying the following steps:

1. Constructing the questionnaire and the interview schedules based on the literature as much as possible.
2. Consulting with experts when constructing the questionnaire and the interview schedules.
3. Carrying out pilots of both the questionnaire and the interviews schedules to check the content validity and the relevance of the questions.

4. Carrying out factor analysis to check the construct validity of the closed part of the questionnaire.

5. Comparing the data derived from the closed and open questions of the questionnaire to achieve concurrent validity.

6. Ensuring several sources of data in the case study to achieve validation within the case study.

7. Care is taken to think of all possible explanations for the results and ensure that the conclusions would illustrate the complexity of the research topic.

**Triangulation**

Triangulation can be defined as the use of two or more methods of data collection in a study of some aspects of human behaviour (Cohen and Manion, 1994, p. 233; Frankfort-Nachmias and Nachmias, 1996, p. 206). It can also derive from checking different data sources within the same method (Oakley, 2000, p. 67). Triangulation is said to have three sub types: time, space and person (Denzin, 1978, p. 295) and provides the possibility to check the data of the research. The ability to apply diverse techniques to address different aspects of complex research problems is claimed to be a distinction of a sophisticated social researcher (Schutt, 1999, p. 396).

Yet, there are possible problems when using triangulation:
1) It is necessary to ensure that the data from the triangulation methods investigate the same phenomenon.

2) Researchers have to explain how their research might be understood in terms of the context of a larger body of research.

3) It is important to make an informed choice of the research method after considering the research questions in relation to the range of methodological possibilities and then, to carry through the implications of this choice in the research design and process.

4) Even when using triangulation, the weaknesses and strengths of the research must be considered and remember that that final answer to research questions cannot be fully achieved (Schutt, 1999, p. 396).

5) Another problem, raised by Oakley, is how to deal with the common situation when data from different sources or collected using different method, conflict (Oakley, 2000, p. 67).

Triangulation in this study is achieved both within each phase of the survey and the case study and between the case study and the survey. Comparing the results of the open and closed part of the questionnaire secures the triangulation within the survey phase. Comparing the multiple sources of information (medical students, faculty members and school documents) within the case study ensures the triangulation within the case study phase. Comparing the results of the survey to those of the case study ensures the triangulation between the two phases.
Ethics and access problems of this research

Ethical issues

Many researchers in social and educational studies consider now the question of ethics while planning their research design. Ethics in research are said to be the codes of conducts, which may be explicit and general or implicit and personal (Zimbardo, 1992, p. 151). Others define it as a general sensitivity to the rights of the others and putting the respect for human dignity as more important than the truth (Cavan, 1977, p. 810).

One of the most important ethical dilemmas of the researcher is the cost/benefits ratio. The participants in the research may pay in loss of dignity and autonomy but may gain by satisfaction of contributing to the science and gaining new knowledge. The researcher gains in achieving more truth but may lose in harming the participants' rights. He or she has to consider proceeding ethically without threatening the validity of the research (Cohen and Manion, 1994, p. 347). Each researcher has to decide what to do or not to do and what is appropriate and what not (Cohen and Manion, 1994, p. 349).

The present research may raise questions that were indicated in the literature (Ball, 1991, p. 181) how deep and how far to pursue personal questioning. Respondents in an interview situation might find themselves manipulated into saying more then they intended. The respondents of this research, especially
those who are interviewed, are in danger of revealing a very intimate side of their life. The interviews might also touch some of their unpleasant experiences of failures. On the other hand, it is not unusual for the persons interviewed to comment that they may get benefits from the situation, similar to respondents who have found it helpful to their thinking to be required to focus on particular aspects of their life experience (Johnson, 1994b, p. 184). Speaking on research issues may have therapeutic effect for the interviewees who may be eager to speak. The rule that must be applied is confidentiality.

Another important ethical question is whether or not an informed consent has been achieved. An informed consent is the term used for an agreement to participate or not in research after being informed of the facts that are likely to influence these decisions. This means that only those, who are capable of making decisions, voluntarily, given the chance to refuse, should give the consent. Thus, a researcher may be faced with the problem that it is impossible to inform participants on everything. The obligation to obtain informed consent becomes more serious when the risk to research participants becomes greater. In some research methods like observation or experiments, it is impossible to get informed consent. Alternatively a reasonable informed consent is required, which is a fair explanation of the research procedures, a disclosure of appropriate alternative procedure, an offer to answer any questions and an instruction that the participant is free to withdraw consent any time (Oakley, 2000, p. 286).
Like most issues in feminist research, this research has personal and emotional elements. Several ethical problems connected with a feminist research are raised by the literature:

1. It is claimed that women interviewing women on sensitive topics can turn into a counsellor and counselled situation as it places the interviewer in a situation of judging other women’s lives (Chandler, 1990, p. 131).

2. There is a danger of exploitation of other women in the name of feminist philanthropy. Humanistic arguments are central to an ethical position but are not a substitute for an honest appraisal of the events of the interview or the role of the researcher within it (Chandler, 1990, p. 132).

To ensure the informed consent of the respondents the following issue were considered:

1. There seemed to be no problem in assuming that the respondents of this research are capable of giving consent because they are intelligent adults.

2. To ensure voluntarism, the questionnaire was accompanied by a letter informing the students that they were free to chose to take part in the research or refuse (appendix 3). The researcher had no authority over the students and could not harm those who refused to answer. In the case study stage, the participants of the interviews were chosen only from those who were willing to be interviewed. Oral promise of confidentiality was given before the interview sessions.
3. To ensure full information, the introduction letter of the questionnaire (appendix 3) explained the purpose of the research. A description of the benefits reasonably to be expected was also mentioned in this letter.

4. Attempts were made to make the respondents feel good about whatever they said. The respondents were assured that their words would not leak to the administrators of the schools. This was promised both in the accompanying letter to the questionnaire and as an oral promise before the interviews sessions.

Access issues

Several steps were needed to ensure overcoming the access problems involved in this research. Getting permissions, from the deans of the medical schools, for the distribution of the questionnaires within their schools was the first step. In order to secure certain confidentiality it was decided to use code names for the medical schools “A”, “B” and “C” although this didn’t guarantee full anonymity, which was not promised. As well, a preliminary negotiation with the students’ representative ensured achieving recent mailing lists of the students’ addresses for the survey phase of this study. In the second phase of the case study, the access was achieved by getting the consent of students and the faculty members to be interviewed.

Two facts about the researcher are relevant in this respect:
1. The researcher works in the medical school that is chosen for the case study and therefore can be considered as an insider researcher. This helped in getting access but may serve as a limitation in the validity of interpreting the data.

2. The researcher is a woman. This may have helped in getting better rapport with the female respondents but a limitation with male respondents.

**Data analysis**

*Statistical analysis of the closed part of the questionnaire*

The statistical techniques used to analyze the closed part of the questionnaire data of this research, are either analysis of variance (ANOVA) or analysis of covariance (ANCOVA). ANOVA is a technique for assessing how one or several nominal independent variables affect a continuous dependent variable. It is usually employed in comparison involving two or more population means. ANCOVA analysis is used to describe the relationship between a continuous dependent variable (there are eight dependent variables according to the research questions) and one or more nominal independent variables, controlling for the effect of another one or more continuous independent variables. The control of the other continuous variables is done in order to correct the confounding effect of these variables. Thus, this statistical model takes into account, apart from the main effect dependent and independent variables, other interfering continuous factors that are considered related to the dependent variable. ‘Gender’ is the main effect independent variable used in the model of this research. The research
sample is therefore divided into two main nearly equal groups according to gender. Another independent nominal variable is ‘school of study’. The variable of the medical schools of the students may interfere or affect the main dependent variables and therefore should be taken into account in the statistical tests. There are three sub-groups in the research sample according to the three different medical schools. The age of the students may be logically thought as effecting students’ attitudes (the dependent variables). ‘Age’ is used in this research in the ANCOVA models in some of the following statistical procedures as co-variant, because it may be related to some of the dependent variables. It is also found as correlating with ‘marital status’ and ‘army service’ (other independent nominal variables that were excluded from the statistical analysis) and can thus is regarded as confounding variable in this model. A multiple stepwise regression analysis is used to predict the overall satisfaction of the students from their education so far.

**Analysis of the open questions**

Analyzing qualitative data requires processes of familiarization, reflection, conceptualization, coding, linking variables and re-evaluation. One detailed way of analysing the descriptive data is described by Bell (1991, pp. 182-187). Robson (1993, p. 401) describes a similar way for analysing qualitative data. It involves frequencies, patterning, clustering, factoring and building networks to discover regularities. The open questions responses in the survey were analysed using similar unitization and categorization techniques. The data of these questions were analysed both in statistical tests and as qualitative data. In order
to use the data in statistical tests, the students’ comments in the open questions were identified as eight additional nominal variables. The categories in each variable are based on a technique of reducing the open comments of each question into several categories based on both the research literature and the responses themselves. Chi-square tests were used to determine any statistically significant differences \( (p < .05) \) between male and female students according to the different research questions. The categorical variables derived from the open responses were also used in several ANOVA or t-tests to find statistically significant \( (p < .05) \) relations between these categorical variables and the parallel continuous variables derived from the closed part of the questionnaire. This was done to triangulate and validate the data from the closed part based on the open part of the questionnaire. A way to present the data was a process of unitising and categorizing the data and then presenting it in either in tables or in graphs.

Another way the data of the open questions was used is to reduce and categorize it into the different topics covering the issues raised by the research questions. The findings were presented as open quotations, which were selected from across the whole range of responses. These quotations are used to clarify and triangulate the statistical findings with regard to each question and add to the depth of understanding the data. Passages from the transcripts that typify the responses are quoted verbatim in the findings, indicating the gender, medical school and personal status.
Analysis methods of the interviews data

Qualitative data of the interviews can be analysed systematically using known phenomenological/qualitative methods similar to those used for the data of the open questions. The first step of the analysis is to identify themes for coding by an initial overview of the material. The second step is to identify text elements, or ‘meaning units’, including information about the themes covered by the codes. Then, the text elements with the same code were collected. The common message of these text elements expressed in more general terms served as concepts. The essence of the concepts constituted the final categories. Eventually, the concepts and categories are compared with the full texts from which they are derived and adjustments are made (Easterby-Smith et al, 1994b, pp 347-350). These categories were presented in this research using tables, graphs and figures. Another way of presenting the passages from the transcripts used in this research is by quoting them verbatim in the findings, indicating the number of the interviewee and his/her gender.

Summary

This research shares elements from both the quantitative and the qualitative pure paradigms although it relies more on quantitative than on qualitative methods. Nevertheless, this study shares many principles common to other feminist researches mainly by putting gender equality issues on the research agenda and it can be considered as a feminist research.
The above elements enabled a research design using both a survey and case study approach, which were conducted in two phases. This research used three tools of data gathering: a questionnaire, an interview and a documentary analysis. The multiple methods of data collecting secure the validity and enable triangulation of the findings. The ethics and access problems were considered mainly by considering the cost/benefit ratio and getting informed consent from the respondents. Data analysis consisted of using both statistical and qualitative methods. Thus it is hoped that the findings gain both scientific rigor and depth.
Chapter 4: Survey Findings

Introduction

This chapter is divided into several sections: a description of the sample with regard to response rate and demographic characteristics, the empirical definition of the dependent variables by factor analysis and the representation of the findings of the survey according to the following research questions:

1. Are there any gender differences in self-esteem?
2. Are there any gender differences in career goals and motivation for leadership?
3. Are there any gender differences in the perceptions of combining a medical career with a family life?
4. Are there any gender differences with regard to learning styles, curricular contents preferences and preferred evaluation systems?
5. Are there any gender differences in the preparation and advice given to medical students?
6. Are there any gender differences with regard to the mentoring processes experienced during the medical education?
7. Are there any gender differences in the nature and extent of gender discrimination, harassment or other student abuses in medical school?
8. Are there any gender differences in the effect of gender on speciality choices and career opportunities in medicine?
These research questions cover the following three areas:

- Gender differences regarding personal values
- Gender differences regarding medical school’s related experiences
- Gender differences regarding future career opportunities

The survey findings were based on data derived from the study questionnaire. This questionnaire contained both open and closed questions. In order to present the data of the closed-questions part of the questionnaire, analysis of variance (ANOVA) or analysis of covariance tests (ANCOVA) were carried out.

The eight dependent variables for the ANCOVA analysis were redefined after conducting a factor analysis of the data derived of the closed part of the questionnaire. These variables are:

1. Students’ self-esteem and motivation for leadership
2. Students’ choices in combining a career and a family life
3. Students’ preferences of learning styles, curricular contents and evaluation systems
4. Students’ views on school’s influence on career choices
5. Student satisfaction with their studies and mentoring experiences
6. Students’ views on the extent and nature of gender discrimination
7. Students’ views on the extent and nature of gender harassment
8. Students’ attitudes toward gender effect on career opportunities
The first two variables serve to answer the three research questions concerned with the personal values and family constraints of the students:

1. Are there any gender differences in self-esteem?
2. Are there any gender differences in career goals and motivation for leaderships?
3. Are there gender differences in perceptions of combining a medical career with a family life?

The following five variables serve to answer four questions concerning the students’ experiences during their medical training.

4. Are there any gender differences with regard to learning styles, curricular contents preferences and preferred evaluation systems?
5. Are there gender differences in the preparation and advice given to medical students?
6. Are there gender differences with regard to the mentoring processes experienced during the medical education?
7. Are there any gender differences in the nature and extent of gender discrimination, harassment or other student abuses in medical school?

The eighth variable serves to answer the eighth research question:

8. Are there any gender differences in the effect of student’ gender on speciality choices and career opportunities in medicine?

Supplementary ways to answer the research questions are the eight open questions of the questionnaire:
1. What are your career goals?

2. What will affect your probable career choice?

3. What do you perceive as barriers to succeed in your career?

4. Have you been influenced by your school to pursue a certain speciality and which one?

5. What is your preferred learning style?

6. What are the characteristics of an ideal mentor to help you with your career?

7. Have you experienced any abuse at the medical school and which one?

8. Do you think gender has an effect on career opportunities and how?

These questions roughly correlate with the research questions of the survey. The students’ written responses for the open questions were analysed using both statistical techniques and qualitative analysis of the data.

Description of the sample

Response rate

The total number of sixth year students during the academic year of 2000/2001 in Israel is 280. The questionnaire was sent by mail to 212 final year students from three of four medical schools in Israel, which included 80 students from school “A”, 42 students from school “B” and 90 students from school “C” (table 4.1). The students of the fourth school served to test the pilot version of the questionnaire and therefore could not be included in the research population.
Ten questionnaires were returned as wrong addresses. 120 students (60 per cent) mailed back fully completed questionnaires.

**Table 4.1**

*Response rate to the questionnaire, by school and gender*

<table>
<thead>
<tr>
<th>School</th>
<th>N (%) male students</th>
<th>N (%) female students</th>
<th>N* Total</th>
<th>N (%) response rate male students</th>
<th>N (%) response rate female students</th>
<th>N (%) total response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>44 (58%)</td>
<td>32 (42%)</td>
<td>76</td>
<td>28 (64%)</td>
<td>23 (71%)</td>
<td>51 (67%)</td>
</tr>
<tr>
<td>B</td>
<td>20 (50%)</td>
<td>20 (50%)</td>
<td>40</td>
<td>11 (55%)</td>
<td>13 (65%)</td>
<td>24 (60 %)</td>
</tr>
<tr>
<td>C</td>
<td>46 (53%)</td>
<td>40 (47%)</td>
<td>86</td>
<td>22 (48%)</td>
<td>23 (58%)</td>
<td>45 (52 %)</td>
</tr>
<tr>
<td>Total</td>
<td>110 (54%)</td>
<td>92 (46%)</td>
<td>202</td>
<td>61 (55%)</td>
<td>59 (64%)</td>
<td>120 (60%)</td>
</tr>
</tbody>
</table>

*Note. *The number of students does not include those who were mailed questionnaires to wrong addresses.

More than half of the questionnaires were returned within one week while the rest were returned within one month. The trend in the responses of the late responders was similar to that of the early responders, indicating no difference according to response time. As requested both in the questionnaire form and in the cover letter, several responses were accompanied by additional remarks. Most of the remarks, including comments from male students, showed support for the aims of the study.

There are several reasons for regarding the response rate as sufficient and represents well the population. The sample was regarded as representative of the year cohort in term of the proportion of males to female in the study population, which is 54 per cent and 46 per cent accordingly (table 4.1). In total 59 female and 61 male students responded to the survey questionnaire. Although the percentage of the respondent female students out of the entire female student
population is a bit higher than that of male students, the ratio of male to female responding students is about 1:1 which is about the male to female ratio of the population. The sample is also representative of the entire population in term of other demographic characteristics, such as age and country of birth (table 4.2).

In view of the considered adequate response rate and insufficient resources, it was decided not to undertake any follow up either by mail or by phone. It was done so to cut down expenses and time involved for one researcher. Additional reasons for not undertaking follow up are to spare the students time and other ethical reasons.

*The demographic description of the sample*

The demographic characteristics of the data are shown in table 4.2. The general average age of the study sample is 27. The majority of the students have served the mandatory army service in the Israeli army, which is three years for men and about two years for women. Nearly half of the students (45 student, 38 per cent) are married with a similar proportion among the male and female students. Thirteen per cent have at least one child. It is worth noticing that the proportion of male students with family is remarkably higher than that of the female students. In a country where almost 40 per cent of the population are born elsewhere, almost all of the medical students in the sample are Israeli born. Nearly all of them (94 per cent) come from either the central or urban parts of Israel. Judging from their parents’ occupations and the number of siblings, the socio-demographic background of the students seems to be high.
### Table 4.2

**Means and Frequencies of Demographic Characteristics of the Survey Participants (n=120), by Gender and School**

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th>School</th>
<th>N</th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean age</strong></td>
<td>A</td>
<td>51</td>
<td>27.7</td>
<td>26.4</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>28.5</td>
<td>27.00</td>
<td>27.5</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>26.5</td>
<td>26.4</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>27.0</td>
<td>26.0</td>
<td>26.5</td>
</tr>
<tr>
<td><strong>Percentage served in the army</strong></td>
<td>A</td>
<td>51</td>
<td>71%</td>
<td>74%</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>85%</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>69%</td>
<td>74%</td>
<td>71%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>73%</td>
<td>76%</td>
<td>74%</td>
</tr>
<tr>
<td><strong>Percentage of married students</strong></td>
<td>A</td>
<td>51</td>
<td>46%</td>
<td>43%</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>36%</td>
<td>39%</td>
<td>38%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>27%</td>
<td>30%</td>
<td>29%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>38%</td>
<td>37%</td>
<td>38%</td>
</tr>
<tr>
<td><strong>Percentage of married w/ children</strong></td>
<td>A</td>
<td>51</td>
<td>25%</td>
<td>4%</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>30%</td>
<td>6%</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>15%</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>22%</td>
<td>4%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Percentage of Israeli born</strong></td>
<td>A</td>
<td>51</td>
<td>93%</td>
<td>100%</td>
<td>96%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>92%</td>
<td>100%</td>
<td>96%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>95%</td>
<td>96%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>93%</td>
<td>98%</td>
<td>96%</td>
</tr>
<tr>
<td><strong>Live in big cities and central area</strong></td>
<td>A</td>
<td>51</td>
<td>93%</td>
<td>95%</td>
<td>94%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>85%</td>
<td>85%</td>
<td>85%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>95%</td>
<td>94%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>92%</td>
<td>93%</td>
<td>93%</td>
</tr>
<tr>
<td><strong>Mean number of siblings</strong></td>
<td>A</td>
<td>51</td>
<td>1.75</td>
<td>2.23</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>1.90</td>
<td>2.10</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>1.60</td>
<td>1.70</td>
<td>1.65</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>1.75</td>
<td>2.05</td>
<td>1.90</td>
</tr>
<tr>
<td><strong>Father: academic</strong></td>
<td>A</td>
<td>51</td>
<td>60%</td>
<td>57%</td>
<td>59%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>65%</td>
<td>60%</td>
<td>63%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>60%</td>
<td>57%</td>
<td>59%</td>
</tr>
<tr>
<td><strong>Mother: academic</strong></td>
<td>A</td>
<td>51</td>
<td>48%</td>
<td>50%</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>24</td>
<td>40%</td>
<td>50%</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>45</td>
<td>48%</td>
<td>50%</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>120</td>
<td>46%</td>
<td>50%</td>
<td>48%</td>
</tr>
</tbody>
</table>
More than half of the students’ fathers and nearly half of the students’ mothers have academic occupations, compared with only fourteen per cent with academic occupations among the general population. On average, they come from smaller families. The mean number of children in their families is less than three children per family whereas the mean number of children in a family in the entire Jewish Israeli population is three children.

The only deviation is that the small percentage of the medical students who come from ethnic minorities in Israel, were not represented in the research sample. Although this disturbs the representation of the sample for the whole population, in view of the small numbers of ethnic minorities medical students, the impact of their point of view can’t be expected to be noticeably reflected in the general means.

Redefining the variables of the research based on a factor analysis

In order to test the construct validity of the closed part of the questionnaire, a principal-components factor analysis was conducted, based upon students’ responses to the questionnaire. A factor analysis determines how best to combine the scores on specific items of the questionnaire into single overall score that defines the variable under consideration. In addition to a reduction of variables, the factor analysis was conducted to redefine the variable based on empirical data. Only after redefining of the variables, the research variables were agreed upon. The factor analysis was conducted with Varimax Rotation,
which is chosen because it provides an orthogonal solution, optimal for separate issues.

Three items of the questionnaire (item No. 4: “I prefer self study to lecture”, item No. 5: “It is preferable to have a same-sex person as a mentor” and item No. 13: “The ethos of my school include the importance of general practice”) were omitted from the factor analysis. The reasons for omitting these items are that in an initial analysis, including these items, these items failed the criterion of a simple structure. The loadings of these items either failed to reach statistically significant level on any of the factors or were significant on more than one factor. It also became clear from the students’ responses to the open questions that these items were problematic and were either not relevant to students or were ambivalent and evoked numerous interpretations by the students.

The factors construct of the questionnaire is shown on table 4.3. The factor analysis identified eight factors, which were decided arbitrarily as the right solution by the factor analysis procedure, based on the principle of eigenvalue > 1. The eight factors are clear enough and stand in the criteria for factor analysis. The various items have significant loadings on one factor only, it suits the initial number of variables, the criterion of eigenvalue > 1 is kept and the factors make sensible variables. These factors empirically define eight variables, which are only slightly different from the originally theoretically defined variables based on the research literature.
### Table 4.3

Component Matrix of the Closed Items of the Questionnaire, after Varimax Rotation (n=120)

<table>
<thead>
<tr>
<th>No</th>
<th>The Item</th>
<th>F1</th>
<th>F2</th>
<th>F3</th>
<th>F4</th>
<th>F5</th>
<th>F6</th>
<th>F7</th>
<th>F8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Group study is preferred learning style</td>
<td>0.86</td>
<td>0.00</td>
<td>0.11</td>
<td>0.00</td>
<td>0.21</td>
<td>0.00</td>
<td>0.29</td>
<td>0.00</td>
</tr>
<tr>
<td>2</td>
<td>Evaluation system should emphasize communication skills</td>
<td>0.57</td>
<td>0.40</td>
<td>0.00</td>
<td>0.00</td>
<td>0.24</td>
<td>0.32</td>
<td>0.25</td>
<td>0.11</td>
</tr>
<tr>
<td>3</td>
<td>Psychosocial components should be part of school ethos</td>
<td>0.60</td>
<td>0.31</td>
<td>0.17</td>
<td>0.00</td>
<td>0.37</td>
<td>0.00</td>
<td>0.18</td>
<td>0.00</td>
</tr>
<tr>
<td>6</td>
<td>Encounter with role model</td>
<td>0.00</td>
<td>0.19</td>
<td>0.00</td>
<td>0.72</td>
<td>0.16</td>
<td>0.00</td>
<td>0.18</td>
<td>0.00</td>
</tr>
<tr>
<td>7</td>
<td>Encounter with at least one confidant</td>
<td>0.18</td>
<td>0.00</td>
<td>0.40</td>
<td>0.50</td>
<td>0.19</td>
<td>0.00</td>
<td>0.13</td>
<td>0.00</td>
</tr>
<tr>
<td>8</td>
<td>Plan of achieving national recognition</td>
<td>0.17</td>
<td>0.34</td>
<td>0.71</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>9</td>
<td>Already have specific career plans</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>-0.77</td>
<td>0.00</td>
<td>0.14</td>
<td>0.00</td>
</tr>
<tr>
<td>10</td>
<td>Have high self esteem</td>
<td>0.11</td>
<td>0.00</td>
<td>0.90</td>
<td>0.13</td>
<td>0.32</td>
<td>0.00</td>
<td>0.26</td>
<td>0.00</td>
</tr>
<tr>
<td>11</td>
<td>Leading others is important</td>
<td>0.31</td>
<td>0.24</td>
<td>0.47</td>
<td>0.17</td>
<td>0.00</td>
<td>0.39</td>
<td>0.11</td>
<td>0.00</td>
</tr>
<tr>
<td>12</td>
<td>Climate of medical school is very supportive</td>
<td>0.35</td>
<td>0.00</td>
<td>0.14</td>
<td>0.45</td>
<td>0.12</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>14</td>
<td>Male students are more part of the team in surgery</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.19</td>
<td>0.00</td>
<td>0.39</td>
<td>0.11</td>
<td>0.51</td>
</tr>
<tr>
<td>15</td>
<td>Personal life commitments are more important than work</td>
<td>0.27</td>
<td>0.36</td>
<td>0.00</td>
<td>0.00</td>
<td>0.26</td>
<td>0.55</td>
<td>0.26</td>
<td>0.00</td>
</tr>
<tr>
<td>16</td>
<td>Pursue a career that can accommodates family responsibilities</td>
<td>0.00</td>
<td>0.38</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.88</td>
<td>0.25</td>
<td>0.28</td>
</tr>
<tr>
<td>17</td>
<td>Gender differences in career</td>
<td>0.10</td>
<td>0.00</td>
<td>0.11</td>
<td>0.11</td>
<td>0.68</td>
<td>0.19</td>
<td>0.34</td>
<td>0.00</td>
</tr>
<tr>
<td>18</td>
<td>Felt at least once as an outsider</td>
<td>0.00</td>
<td>0.00</td>
<td>0.11</td>
<td>0.00</td>
<td>0.14</td>
<td>0.13</td>
<td>0.70</td>
<td>0.00</td>
</tr>
<tr>
<td>19</td>
<td>Teachers under evaluate skills</td>
<td>0.28</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.25</td>
<td>0.00</td>
<td>0.81</td>
<td>0.00</td>
</tr>
<tr>
<td>20</td>
<td>Encounter sexist remarks</td>
<td>0.10</td>
<td>0.82</td>
<td>0.15</td>
<td>0.00</td>
<td>0.00</td>
<td>0.24</td>
<td>0.00</td>
<td>0.12</td>
</tr>
<tr>
<td>21</td>
<td>Sexual harassment is prevalent</td>
<td>0.00</td>
<td>0.74</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.32</td>
<td>0.24</td>
<td>0.00</td>
</tr>
<tr>
<td>22</td>
<td>Satisfaction with studies so far</td>
<td>0.28</td>
<td>0.31</td>
<td>0.00</td>
<td>0.59</td>
<td>0.15</td>
<td>0.31</td>
<td>0.00</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Eigenvalue</td>
<td>3.19</td>
<td>2.62</td>
<td>2.17</td>
<td>1.77</td>
<td>1.55</td>
<td>1.32</td>
<td>1.14</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>% Of explained variance</td>
<td>12.5</td>
<td>11.6</td>
<td>11.4</td>
<td>9.3</td>
<td>7.92</td>
<td>7.30</td>
<td>6.58</td>
<td>6.58</td>
</tr>
<tr>
<td></td>
<td>Internal consistency (&quot;alpha&quot;)</td>
<td>0.64</td>
<td>0.61</td>
<td>0.69</td>
<td>0.60</td>
<td>0.40</td>
<td>0.64</td>
<td>0.60</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. 1) Only loadings > 0.45 were underlined and were considered significant
2) The eight factors explain 77.80 % of the total variance.
Reliability analysis (Cronbach alpha’s model) was carried out to check the internal consistency within each factor. The reliability of two of the factors proved to be a bit problematic. The reliability coefficient of factor 5 was found as too low and therefore it was decided to construct the variable based only on item 17, which is more meaningful for that variable. Factor 8 consists of only a single item. The validation of the variables derived from these factors is based on the responses to the open questions of the questionnaire.

Based on the results of both the factor analysis and the reliability analysis of the factors, the final defined dependent variables are based on the following questionnaire items:

<table>
<thead>
<tr>
<th>No</th>
<th>Variable description:</th>
<th>Factor</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Students’ high self esteem and motivation for leadership</td>
<td>3</td>
<td>8,10,11</td>
</tr>
<tr>
<td>2</td>
<td>Students’ choices in combine a career and a family life</td>
<td>6</td>
<td>15,16</td>
</tr>
<tr>
<td>3</td>
<td>Students’ learning styles, curricular contents preferences and preferred evaluation systems</td>
<td>1</td>
<td>1,2,3</td>
</tr>
<tr>
<td>4</td>
<td>School’s influence on career choices</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>Student satisfaction with school and mentoring experiences</td>
<td>4</td>
<td>6,7,12,22</td>
</tr>
<tr>
<td>6</td>
<td>Extent of gendered discrimination in medical school</td>
<td>7</td>
<td>18,19</td>
</tr>
<tr>
<td>7</td>
<td>Extent of gender harassment in medical school</td>
<td>2</td>
<td>20,21</td>
</tr>
<tr>
<td>8</td>
<td>Gender effect on career opportunities</td>
<td>5</td>
<td>17</td>
</tr>
</tbody>
</table>
Gender differences in personal values

Gender differences in personal values are based on the factor defined by the factor analysis: 'self-esteem and motivation for leadership'. This variable served as the dependent variable, gender and school as the independent variable in a statistical ANOVA model, shown in table 4.4. It was decided not to use ANCOVA model because age as a co-variant was found as insignificant factor in that relation.

Table 4.4
Means and Standard Deviations of the Factor Score 'Self esteem and motivation for leadership' Controlled by Age, Gender and School (n=120)

<table>
<thead>
<tr>
<th>School</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>A</td>
<td>28</td>
<td>3.29</td>
<td>0.73</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>4.03</td>
<td>0.48</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>3.33</td>
<td>0.54</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>3.44</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Note. The significance of the F values of 'gender' as a source of variance, and the interaction between 'gender' and 'school' is > .05. The significance of the F value of 'school' is < .05.

Table 4.4 shows that the overall mean value of the factor 'self-esteem and motivation for leadership' of all Israeli medical students is rather high. As well, it shows that there is no statistically significant gender difference in 'self-esteem and motivation for leadership' and both male and female students have similar mean value of this variable. School of study makes a difference, as the mean
value of the subgroup of male students from school “B” is significantly higher than the mean values of all other subgroups. Yet the interaction between the two factors ‘gender’ and ‘school’ is not statistically significant.

*Gender differences in future speciality choice at this level*

In the first part of the questionnaire, the students were asked to indicate their likely speciality choice. Of the responding students, 63 per cent (n=76) indicated a speciality choice at this level. About a quarter of all students (26 per cent, n=31) want to specialize in or sub specialities of internal medicine, fourteen per cent (n = 17) choose surgical specialities, eight per cent (n= 10) choose paediatrics, six per cent (n= 7) - family medicine, six per cent (n= 7) - gynaecology, and three per cent (n =4) choose other specialities.

Women were less likely to indicate at this point any choice of speciality. Only 57 per cent out of the female students responded to this question in comparison with 68 per cent of male students. Thirteen per cent (n= 8) out of the total number of female students in this sample indicate a wish to choose surgery or surgical sub-specialities as well as fourteen per cent (n= 9) of the male students in this sample. On the other hand, nearly ten per cent of the male students but none of the female students declare at this level that they intend to choose family medicine as their speciality.
Gender differences in career goals

To clarify their career motivations, the students were asked to respond, in an open question, what are their career goals. The answers to this question included a wide variety of goals, ranging from a wish to help others or work with people to having a glamorous lifestyle or earn prestige and financial rewards. To sum up the open comments to this question, the answers were reduced into three categories of goals:

1. ‘Altruistic goals’ – This category includes goals that are related with the idealistic side of the doctors’ role such as helping others, serve the community, help children (or women), maintain good rapport with human beings, have as much clinical exposure as possible or “just be a good doctor”. A good example for such type of goals is the quotation from the response of one female student (A 49):

   “I wish to help others and feel that I can be useful after so many years of study. I want to work with people and maintain good rapport with them”

2. ‘Intellectual’ goals – This category includes goals that are connected with intellectual fulfilment such as having interesting career, wishing to participate in research, have an intellectual challenge and a wish to have an academic career. The words of one male student (B 7) summarise this type of goals:
"I want to have a career that can be an intellectual challenge for me. I want to fulfil my abilities as a scientific researcher."

3. ‘Materialistic’ goals. Some students, although only few, said their goals are connected with more materialistic rewards or motivation for leaderships. This category of goals includes wishing to become heads of hospital wards, receive a national or international recognition, “have an influence”, achieve leadership positions in medicine, financial rewards, a wish to “be famous”, have a glamorous lifestyle or have a lot of prestige. One male student (C 3) gave such an example:

“'I wish to become a surgeon. It has always been my 'ego trip' to become famous and such a career has a very high prestige'”

It was found that many of the students in this sample didn’t limit their goals to only one and mentioned several goals that could fit into more than into one of these categories. Interestingly, the goals mentioned by students could either fit into a combination of ‘altruistic’ and ‘intellectual’ goals (categories no. 1 and 2) or a combination of ‘intellectual’ and ‘materialistic’ goals (categories 2 and 3). No response could be categorized as a combination of ‘altruistic’ and ‘materialistic’ goals. Based on this, the first two categories of goals (‘altruistic’ and ‘intellectual’ goals) and the combination between these two goals were considered as one goal type while the third category (‘materialistic’ goals) and the combination of the ‘intellectual’ and ‘materialistic’ goals were considered as a second goal type.
The following table (table 4.5) presents the division of the sample according to the two goal types and according to gender. The table shows that the majority of the students have 'type one' goals. Both male and female students were much more likely to say that at least part of their motivation is the wish to help people or work with people and have an intellectual fulfilment than stating more materialistic goals. Yet there is a far stronger tendency among the male students to declare having mainly materialistic goals' type. This tendency was proved as statistically significant in a Chi-square test.

**Table 4.5**

*Frequencies and percentage of students, by gender, schools and goals' types (n=111)*

<table>
<thead>
<tr>
<th>School</th>
<th>Goals' type</th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>I</td>
<td>18 (72%)</td>
<td>18 (82%)</td>
<td>36 (77%)</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>7 (28%)</td>
<td>4 (18%)</td>
<td>11 (23%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>25 (100%)</td>
<td>22 (100%)</td>
<td>47 (100%)</td>
</tr>
<tr>
<td>B</td>
<td>I</td>
<td>8 (80%)</td>
<td>9 (75%)</td>
<td>17 (77%)</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>2 (20%)</td>
<td>3 (25%)</td>
<td>5 (23%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>10 (100%)</td>
<td>11 (100%)</td>
<td>22 (100%)</td>
</tr>
<tr>
<td>C</td>
<td>I</td>
<td>11 (58%)</td>
<td>21 (91%)</td>
<td>32 (76%)</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>8 (42%)</td>
<td>2 (9%)</td>
<td>10 (24%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>19 (100%)</td>
<td>23 (100%)</td>
<td>42 (100%)</td>
</tr>
<tr>
<td>All*</td>
<td>I</td>
<td>31 (57%)</td>
<td>47 (82%)</td>
<td>78 (70%)</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>23 (43%)</td>
<td>10 (18%)</td>
<td>33 (30%)</td>
</tr>
</tbody>
</table>

Note. Type I= 'altruistic' goals, 'intellectual' goals and a combination of these goals, Type II= a combination of 'Intellectual' and 'materialistic' goals or only 'materialistic' goals. * Chi-square value= 8.33, P< 0.05.
Validation of the data from the questionnaire with regard to motivation for leadership

In order to validate and triangulate the data on career goals based on the open and closed parts of the questionnaire, one-way analysis of variance was conducted using the goal type (open question) as an independent variable and the factor ‘self-esteem and motivation for leadership’ (close part) as a dependent variable. The following table (table 4.6) shows the results of this test.

**Table 4.6**

<table>
<thead>
<tr>
<th>Goal type</th>
<th>N</th>
<th>Mean</th>
<th>S.D</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>78</td>
<td>3.16</td>
<td>0.83</td>
<td>1.51</td>
<td>0.187</td>
</tr>
<tr>
<td>II</td>
<td>33</td>
<td>3.46</td>
<td>0.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td>111</td>
<td>3.44</td>
<td>0.76</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Goal type: I= altruistic’, ‘intellectual’ goals and a combination of these goals, Type II=a combination of ‘Intellectual’ and ‘materialistic’ goals or only ‘materialistic’ goals.

It was found (table 4.6) that students with ‘altruistic’ and ‘intellectual’ goals have a lower mean value in the variable ‘self- esteem and motivation for leadership’ than students with more materialistic goals. This difference in the mean value is not significant, though. Thus the findings could not confirm the logical argument that a high value in the variable of ‘self-esteem and motivation for leadership’ is related to the wish to have a powerful and prestigious career or any other relation between these two similar variables from different sources. It may indicate a problematic definition of either of these two variables. It is worth
mentioning that, gender as well was found as insignificant factor in relation to ‘self-esteem and motivation for leadership’ (table 4.4).

*Gender differences in the perceptions of barriers that affect personal career plans*

With regard to future plans, the students were asked in an open question, what are the main factors that are likely to effect their chances of success, or, in other words, what do they perceived as barriers to achieving their career goals. Although most of the students only have rather idealistic future plans, they are very pessimistic about their chance to fulfil their plans and succeed in their career. In their replies, students, male and female alike, stressed how demanding they envision their medical career to be. The following quotation from one male student (B 5), summarises it well:

"The medical organizational system is very competitive and demanding. It takes a lot of time dedication and efforts to succeed in such a system. So, as the results of it, those who want to have a normal life style and some kind of family life can't climb high in such a system. Problems in the possibility of combining a career in medicine with a family could lead me to choose speciality different than my initial preferences".

A qualitative analysis of the data, based on the students’ responses to this question, found three categories of factors, which can be perceived as barriers for future career success:
1. Factors that are related to personal life and family responsibilities. An example for such barrier is the quotation from the response of a male student (C 42) who wrote:

"The medical career is bound to suffer unless you put it way up in top of your priorities, above all personal and family matters. You need to know that it is a one hundred per cent commitment. I want to have time to look after my family and so I realize I can’t fully achieve all my career goals”

2. Factors that are related to organizational constraints in the future workplace and social prejudices. One male student (A 48) wrote:

"The top of the medical management hierarchy in Israel, is blocked with senior and old doctors who serve as a bottle neck in the way of young doctors who wish to climb up in the medical hierarchy. These managers are narrow minded and envy other doctors”

3. Factors related to self-choice. A female student (C 29) wrote:

"The fact that a medical student can’t achieve his/her career goals is not always because of outside barriers nor can it be attribute to gender discrimination. It is a personal choice related to the person’s preference not to fight his way for achieving his career goals”
Table 4.7 presents how these factors are distributed among the different groups according to gender and school. Female students have a significantly higher tendency to perceive domestic responsibilities as the main barriers to their career goals.

<table>
<thead>
<tr>
<th>School</th>
<th>Factor</th>
<th>N (%) Male</th>
<th>Students N (%) Female</th>
<th>N (%) All</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>3 (12%)</td>
<td>9 (47%)</td>
<td>12 (27%)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>16 (64%)</td>
<td>6 (32%)</td>
<td>22 (50%)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>6 (24%)</td>
<td>4 (21%)</td>
<td>10 (23%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>25 (100%)</td>
<td>19 (100%)</td>
<td>44 (100%)</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>4 (40%)</td>
<td>2 (22%)</td>
<td>6 (32%)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4 (40%)</td>
<td>3 (33%)</td>
<td>7 (37%)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2 (20%)</td>
<td>4 (45%)</td>
<td>6 (31%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>10 (100%)</td>
<td>9 (100%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>C</td>
<td>1</td>
<td>2 (11%)</td>
<td>10 (53%)</td>
<td>12 (32%)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>12 (63%)</td>
<td>5 (26%)</td>
<td>17 (45%)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>5 (26%)</td>
<td>4 (21%)</td>
<td>9 (23%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>19 (100%)</td>
<td>19 (100%)</td>
<td>38 (100%)</td>
</tr>
<tr>
<td>All*</td>
<td>1</td>
<td>9 (17%)</td>
<td>21 (45%)</td>
<td>30 (29%)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>32 (59%)</td>
<td>14 (30%)</td>
<td>46 (46%)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>13 (24%)</td>
<td>12 (25%)</td>
<td>25 (25%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>54 (100%)</td>
<td>47 (100%)</td>
<td>101 (100%)</td>
</tr>
</tbody>
</table>

Note. Factor 1 = family responsibilities, factor 2 = organizational factors, factor 3 = lack of motivation. * Chi-square = 7.26, p = .026
progress as opposed to the higher tendency among male students to perceive organizational factors as the main barriers in their career. This difference across gender is significant (p< .05).

Gender differences in students work-family conflict

**Table 4.8**

*Means and Standard Deviations of the factor 'A choice to combine a Career with a Family/Personal life', controlled by Age, by Gender and by School (n=120)*

<table>
<thead>
<tr>
<th>School</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>A</td>
<td>28</td>
<td>3.77</td>
<td>0.84</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>4.14</td>
<td>0.55</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>4.23</td>
<td>0.63</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>4.00</td>
<td>0.75</td>
</tr>
</tbody>
</table>

Note. The significance of the F value of ‘age’ is < .05, but the effect of ‘school’ variance, ‘gender’ variance and the interaction between ‘gender’ and ‘school’ are > .05.

Another way to measure what are the perceptions of students as to the influence of family/personal life on achieving career goals, could be by comparing male with female students with regard to their scores of the variable ‘a choice to combine career and family life’ as defined by the factor analysis of the questionnaire items. The above table (table 4.8) presents the ANCOVA analysis of the students’ scores of this variable. The findings indicate a general high agreement among all students to consider life and family commitments as a pre-condition for pursuing a career in medicine. Gender does not have any significant effect on the students’ views on this issue but students’ age is found as significantly related to this variable.
The relationship between gender and personal status and the wish to combine career with personal life

**Graph 4.1**
The Comparisons of Means of the factor ‘Wish to combine career and personal life and career’ According to ‘Gender’ and ‘Personal status’

A way to validate the scale for the variable ‘A choice to combine a career with a family life’ is by comparing the students’ mean-scores in this variable between married and unmarried students (‘personal status’) in addition to the division according to gender. According to an ANOVA model using ‘gender’ and ‘personal status’ as two independent variables and ‘choice to combine a career with a family life’ as the dependent variable, the married students have significantly higher score in the wish to combine a career and a family life. Gender is found as confounding factor, yet as an insignificant one, in that relation. The difference among the married women students’ in comparison with single women is much more pronounced than that among the men with regard to
this perception. The above graph (graph 4.1) presents the comparison between the four groups.

*The relationship between the wish to combine a career with a family life and perceived career barriers*

As found (table 4.7), according to the open questions, female students have a significantly higher tendency than male students to regard family responsibilities as the main barrier for their success. On the other hand, according to the close questions, the level of agreement of all students to the statements that they wish to combine personal life and family responsibilities with their careers was similarly high in both groups (table 4.8). The two findings may look as contradicting each other. It is, therefore, interesting to compare the findings and see what are the relations between the ‘A choice to combine a career with a family life’ and the type of perceived career barriers. One-way ANOVA was carried out to test any significant differences between three groups of students according to their perceptions of barriers (figure 4.1). The difference between the groups was found significant ($p=.022$). According to the following figure 4.1, it is apparent that the group of students, who thought that family is the main barrier for success, most of them women, has a much higher score on ‘A choice to combine a career with a personal life’ than the other two groups. It indicates that students are quite realistic about the price they would have to pay in order to combine a career with a family life and the two sources of data validate each other.
Figure 4.1
The Comparisons of Means of ‘Wish to combine career and personal life and career’ (q15/16) According to ‘Perceived career barriers’

Gender differences in school related experiences

Gender differences with regard to preferences of pedagogical issues, curriculum contents and assessment methods

The closed part of the questionnaire included items to clarify the perceptions of medical students with regard to pedagogical issues like their preferred learning style, assessments methods and contents, which together, based on the factor analysis, were compromised into one variable of preferences in curriculum related matters. An ANOVA test was carried out to test the differences in this
variable between the subgroups according to gender and school. Table 4.9 shows the result of this test.

Table 4.9
Means and Standard Deviation of Students’ Preferences in Curriculum related matters, by Gender and School (n=120)

<table>
<thead>
<tr>
<th>School</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>A</td>
<td>28</td>
<td>3.76</td>
<td>0.71</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>3.58</td>
<td>0.52</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>3.89</td>
<td>0.44</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>3.78</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Note. The significance of the F values of the effect of ‘school’ variance, ‘gender’ variance and the interaction between ‘gender’ and ‘school’ are > .05

Table 4.9 shows that student’s preferences of pedagogical issues are not related either to gender or to the school of the students and there is no interaction between those two factors. Therefore, according to the sample of this study, there are no statistically significant gender differences among students in all the Israeli medical schools with regard to preferences in the medical curriculum.

Qualitative analysis of the findings concerning preferred learning styles

The students were asked to indicate in the open question what are their preferred learning styles. Medical students in Israel undergo many teaching models at the medical school. The pre clinical years, depends mainly on lectures and laboratory classes. At the end of the year written multiple choice questions format (MCQ) examinations assess the students. At the clinical years, there are
few lectures and the main teaching is through guidance of small groups in clinical rotations (called ‘Clerkships’). Clerkships rely heavily on bedside teaching and clinical cases discussions, where students present real patients cases and get feedbacks on their presentations. Since recent changes of the medical curriculum in the last few years, the medical students have more exposure during the pre-clinical years to courses taught in innovative methods like problem based learning, self-study and small group sessions. New courses that require communication skills have been gradually added to the curriculum.

In their response, the students said they preferred a variety of learning styles for the different phases of their studies. Apart from lectures, seminar sessions, group study and self-study, the students mentioned bedside teaching and problem based learning, in both the pre-clinical and clinical phases of their studies. Based on the literature and on the students’ responses with regard to their pedagogical preferences, the students were divided into two groups, according to their preferred learning styles:

1. The ‘traditionalists’- Those students who basically prefer the teaching method as currently taught in the medical school which is a mix of traditional and untraditional methods and includes combinations of teacher-centred lectures with some group-study, self-study and bed-side teaching.

2. The ‘innovators’ - Those who prefer only new innovative student-centred teaching methods, mainly problem based learning and self-study.
The findings (table 4.10) indicate that more than 60 per cent of the students are 'traditionalists'. The findings also indicate that there is a statistically significant relation between the 'gender' and 'preferred learning style'. Significantly more female than male medical students preferred a mix of conventional learning styles and innovative methods as traditionally taught in medical schools in Israel and proportionally more men students than women preferred only the innovative learning methods.
Validation of the findings regarding learning styles

To validate and triangulate the data from the two sources, open and closed questions of the questionnaire, a one-way ANOVA test was carried out to find any differences in the preferences in the curriculum between the “innovators” and the “mixture” groups of medical students. As can be seen in the following table (table 4.11), no significant differences were found in the mean value of preferences in curriculum according to ‘innovation group’ although there is a tendency of higher value among those who are in the “innovator” group. With regard to preference in learning styles, the findings from the open questions do not support the similar findings of the closed questions.

**Table 4.11**

*Means and Standard Deviation of ‘Students Preferences in Curriculum related matters’, by ‘Innovation’ Group (n=113)*

<table>
<thead>
<tr>
<th>Innovation Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>71</td>
<td>3.75</td>
<td>0.63</td>
<td>1.451</td>
<td>0.229</td>
</tr>
<tr>
<td>2</td>
<td>42</td>
<td>4.00</td>
<td>0.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>113</td>
<td>3.86</td>
<td>0.71</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Method: 1 = a mix of teaching methods, 2 = only innovative teaching methods.

*Gender differences in the students’ views on school influence on career choice*

The data of the closed part of the questionnaire provided some data on students’ views on the extent and nature of the career advice for students as experienced in the medical school. Based on a single item it was found (table 4.12) that,
students’ views on school influence on career choice of surgery differ according to gender. Women tend to think that men are more encouraged to choose surgery as their speciality. Men students tend not to agree with that statement.

**Table 4.12**

*Means and Standard Deviations of Students' views on the School's Influence on Choice of career in Surgery, by Gender and School (n=120)*

<table>
<thead>
<tr>
<th>School</th>
<th>Male N</th>
<th>Mean</th>
<th>SD</th>
<th>Female N</th>
<th>Mean</th>
<th>SD</th>
<th>Total N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>28</td>
<td>2.46</td>
<td>1.14</td>
<td>23</td>
<td>2.87</td>
<td>1.42</td>
<td>51</td>
<td>2.65</td>
<td>1.28</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>2.09</td>
<td>1.22</td>
<td>13</td>
<td>3.31</td>
<td>0.95</td>
<td>24</td>
<td>2.75</td>
<td>1.22</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>2.50</td>
<td>0.96</td>
<td>23</td>
<td>3.00</td>
<td>1.41</td>
<td>45</td>
<td>2.76</td>
<td>1.23</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>2.41</td>
<td>1.09</td>
<td>59</td>
<td>3.02</td>
<td>1.32</td>
<td>120</td>
<td>2.71</td>
<td>1.24</td>
</tr>
</tbody>
</table>

Note. The significance of the F value of the effect of ‘gender’ variance is < .05. The significance of the F values of the effect of ‘school’ variance and the interaction between ‘gender’ and ‘school’ variance are > .05.

**Open responses to the question on the extent of school career advice**

In addition, the students have been asked in an open question in the questionnaire how far they think they have been influenced or advised by their teachers and tutors during school years to pursue a certain speciality and which one. It is of interest to see whether or not faculty members prepare or advise their students to follow a particular career in medicine. This question is also related with the question of patronage and mentoring experiences during medical training. In addition, it is important to establish the relationship, if any, between choice of specialities and medical school ethos of promoting certain medical specialities such as community medicine.
According to the findings, a vast majority (around 90 per cent) of both male and female students, said they have not been advised either way regarding their career, neither were they prepared by any of their teachers to follow certain medical career. The students didn’t think they were channelled into certain specialities by the school ethos or been advised by the school to choose certain speciality. The reasons for not guiding the students either way are varied. Some of the students thought the reason were that the medical school intended to make students aware of many possibilities that were available for doctors and did not want to limit their opportunities. Several students remarked that the range of the different specialities, offered by the school curriculum, was very wide and no gender prejudice was evident. Other students applied in their responses that the lack of guidance of future career essentially meant that the medical school did not care much about the future careers of the students. A lack of any advice with regard to future possibilities in medicine was also considered as a disbelief in the abilities of students as doctors. One female student (C 33) wrote:

"Advising students is not considered as one of the roles or duties of a medical school. School don’t care much about his students’ career”

It was surprising to find that some students thought that the medical school not only offered no advice but in several cases also discouraged or put them off the medical profession altogether. A male student (A 51) wrote:
“The medical school neither prepared me nor advised me with regard to future career. In fact it nearly drove me away from the medical profession”.

Gender differences in responses to the open question with regard to the extent and nature of mentoring experiences in medical school

Medicine was traditionally one of the apprentice professions, taught by a patron teaching a single pupil. Do modern medical students in Israel today enjoy the help of mentors and role models? Who influence and encourage them while in medical school? What is the importance of students’ gender in a relationship between faculty members and students? What are the important qualities of these mentors and role models that? Both qualitative and quantitative data of the questionnaire served to answer these questions.

In the open part of the questionnaire, the students were asked to indicate the characteristics of an ideal mentor, a one that might influence them and help them with their future career. Some of the students gave an example of an actual faculty member who served as their tutor during the clinical rotations and some referred to hypothetical qualities of such ideal mentor. A considerable proportion of the students (37 per cent) did not respond to this question. The qualities that students mentioned with regard to the ideal qualities of a mentor could be divided into two kinds:
1. Political qualities – being skilful in his profession, have a huge professional knowledge, have political power and authoritative personality.

2. Psychosocial qualities- kind, sympathetic, open, keeps good relation with students, interesting and simulating.

Male students were more likely (54 per cent) to mention political qualities such as knowledge and political power. Women, on the other hand, were more likely (56 per cent), to mention the other kind of qualities. One of the main reasons given to picking a faculty member as a mentor or role model is the belief of that person in the student’s professional skills and abilities. More male students (57 Per cent) than female students mentioned this quality in a mentor. On the other hand, personal encouragement is more important to women than men.

Judging from the students’ responses to the open question, it can be concluded that positive influence and encouragement of students often seemed to be based on personalities of the mentors rather than their gender. The students mentioned a charismatic personality as one of their ideal personality quality in a mentor.

One female student (C 23) wrote:

"This person has an impressive personality. He is a natural leader and a perfect doctor and he is such a nice person. He also knows how to ‘read’ the students and has a very good relation with them"
Students were also impressed by their tutors' approach to patients as doctors and admire those who behave well to their patients. One male student (C 25) wrote about certain tutor whom he think was a perfect mentor and role model for him:

"He is wonderful with patients. He seems to care about the patients and to treat them with respect. His behaviour serve me as a model"

The data of the closed questions on gender differences with regard to the experiences of mentoring and support in medical school.

Additional way to answer the question on the nature and extend of mentoring in medical school was by the closed part of the questionnaire. The students were asked to indicate the extent of experiencing mentoring relations in medical school by agreement to statements that they have encountered role models or confidants among the faculty members. These items had high loading on the same factor with high loading of the items on the extent of support of the school and on satisfaction with school. A newly defined variable was constructed based on two aspects: ‘mentoring relations and support of the medical school.’ The following table (Table 4. 13) shows their average score of that variable.

Overall, Israeli medical students, according to the research sample, view rather positively the support and mentoring systems of their medical schools. Both the gender and school of the students are insignificant factors with this regard and neither is the interaction between the two factors. The findings thus indicate that there are no gender differences with regard to mentoring experiences and satisfaction with the school.
TABLE 4.13
Means and Standard Deviation of Students Views on the Extent of ‘Mentoring Experiences and satisfaction with school’, by gender and school (n=120)

<table>
<thead>
<tr>
<th>School</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>A</td>
<td>28</td>
<td>3.48</td>
<td>0.57</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>3.77</td>
<td>0.49</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>3.30</td>
<td>0.79</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>3.47</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Note. The significance of the $F$ values of the effect of ‘school’ variance, ‘gender’ variance and the interaction between ‘gender’ and ‘school’ are > .05

Another item of the questionnaire on mentoring regarding preferences of same-sex person as a mentor was omitted from the factor analysis based on failure to meet the criterion of simple structure. Yet, it was found that an overwhelming majority of both genders disagree with same-sex mentor preference (appendix 4).

Gender differences of views on discrimination and gender harassment experienced in medical school, according to the close questions

The factor analysis of the closed part of the questionnaire identified two factors concerning general discrimination and gender harassment. The first factor, which have been labelled as ‘general discrimination’ factor, is constructed of the following items:

1. Feeling as an outsider
2. Being under evaluated by some of the teachers
The second factor which have been labelled as 'gender harassment' was empirically founded on the following items:

1. The occurrence of sexist remarks in medical school.
2. The prevalence of sexual harassment during the medical education.

There was a sharp difference in the distribution of the responses to the two items, which constructed the gender harassment variable, probably as a result of the different level of severity of the wording and the content of these two statements. While the majority of the students (51 per cent) agree (agreement means choosing 4 or 5 on a scale of agreement from 1 to 5) with the statement that they have encountered at least once sexist remarks during medical education, a vast majority (72 per cent) of the student disagree (disagreement means choosing 1 or 2 on a scale from 1 to 5) to a statement that gender harassment is prevalent in the medical school. The decision to phrase this statement rather severely is based on the pilot results to rephrase this item, which was initially worded much less negatively. Nevertheless, the fact that some students fully agree (choose 5 on a scale of agreement from 1-5) to that statement as well, justify this decision.

The following table (table 4.14) shows the findings of students' perceptions on general discrimination and gender harassment. With regard to general discrimination, it is evident that the students suffer from general bias and mistreatment toward them. It is interesting to note that significantly more men than women students think so. The variant 'School' has no effect on the
students’ views. On the other hand, Israeli medical students think that the problem of gender harassment in medical school is not prominent. Both men and women tend to disagree that gender harassment is a prominent problem in the medical school. Again, the variable ‘school of study’ does not make any difference in that regard.

**Table 4.14**

*Means and Standard Deviation of Students’ views on ‘General Discrimination’ and ‘Gender Harassment’, by Gender and School (n=120)*

<table>
<thead>
<tr>
<th>View</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School</td>
<td>N</td>
<td>Mean</td>
</tr>
<tr>
<td>1</td>
<td>A</td>
<td>28</td>
<td>3.61</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>11</td>
<td>3.50</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>22</td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>61</td>
<td>3.58</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>28</td>
<td>2.59</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>11</td>
<td>2.86</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>22</td>
<td>2.70</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>61</td>
<td>2.68</td>
</tr>
</tbody>
</table>

Note. View: 1= the extent of discrimination, 2 the extent of gender harassment. In the case of discrimination: the significance of the $F$ values of ‘gender’ variance is < .05. The effect the significance of the $F$ values of the effect of ‘school’ variance, and the interaction between ‘gender’ and ‘school’ are > .05. In the case of ‘gender harassment’: the significance of the $F$ values of the effect of ‘school’ variance, ‘gender’ variance and the interaction between ‘gender’ and ‘school’ are > .05.
Data from the open question on students views of gender discriminations

The students were asked in an open question whether or not they have been experiencing or witnessed any gender discrimination during their medical education and how. The distribution of their replies is shown in the following table (table 4.15).

Only 84 per cent of the respondents answer the open question in the questionnaire about discrimination. This may indicates some uneasiness or difficulties of the students in responding to that particular question. The answers to the question could be summarized and coded into dichotomous variable which contains either ‘no’ or ‘yes’ categories as to the existence of gender discrimination during the medical education. Overall, the majority of students say they have not experienced any gender discrimination (Table 4.15). An important point that should be added with regard to that issue is that although some of the students testify that there is evidence of gender discrimination during the medical education, they add in their written comments that they think that the discrimination acts they encounter are not the official policy of the school.

It is interesting to note (see table 4.15) that significantly more female than male students said in the open questions that they do not suffer from any discrimination in medical school because of their gender. Thus, the data from the open questions confirmed the data from the closed questions with regard to students’ discrimination. Apart from the question as to how to define gender
discrimination, this evidence points out a tendency among female students not to identify themselves with the feminist theories. According to their written comments it is evident they regard feminists as 'whiny' which are those who complain about discrimination and call for the promotion of equal opportunity by wishing to change the society yet never blame their abilities in cases of failure.

**Table 4.15**

*Frequencies of Students Thinking that there is a Gender Discrimination, by gender and school (n=101)*

<table>
<thead>
<tr>
<th>School</th>
<th>Discrimination</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N (%)</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>A</td>
<td>No</td>
<td>12 (46%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>14 (54%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>26 (100%)</td>
</tr>
<tr>
<td>B</td>
<td>No</td>
<td>6 (67%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>3 (33%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>9 (100%)</td>
</tr>
<tr>
<td>C</td>
<td>No</td>
<td>11 (52%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>10 (48%)</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>21 (100%)</td>
</tr>
<tr>
<td>All*</td>
<td>No</td>
<td>29 (52%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>27 (48%)</td>
</tr>
</tbody>
</table>

Note. * Chi square = 3.896, p< 0.05
The nature of the different harassment and biases against students

A table of frequencies of those agreeing or not agreeing that discrimination exists, may not give the whole picture of biases against students. The full content of the students’ answers illuminate the nature of these discriminatory acts. Discriminatory acts ranged from differential treatments of women students by faculty members and other medical staff to clear illegal acts of declaring that women students are unworthy of their time. The students’ comments included evidence of hostility, rudeness and discriminatory remarks to students as well as sexist slurs. Small percentage of students (two per cent) report that discriminatory acts in the medical school also include incidents of ‘physical touching’ women students by male faculty staff members. The students do not specify what kind of physical touching is involved but it is clear they make no distinction between ‘general discrimination’ and ‘sexual harassment’. The following quotation from a male student (B 5), who agreed that there is a discrimination against women during the medical education and felt very strong against it, is a good example for the various forms of discrimination against women:

"I think that women are still very far away from reaching equal opportunities in medicine. This is evident during the medical education phase, especially in the clinical setting. I have been a witness to many occasions of sexist remarks, chauvinism and other discriminatory acts against women, which are occurring on an every day basis while we are training at the hospital wards. The discriminatory attitudes toward female
students include belittling and insulting in many instances. There are many occasions that the faculty members at the hospital, other hospitals staff and patients, disregard female students, in contrast to showing respect toward male students. I would like to tell much more but I just don't have enough writing space to say it all.”

Another male student (A 48) agrees that there are incidents of sexist slurs. On the other hand, he disagrees that women are discriminated in medical school. Thus he does not agree that there is any negative effect of sexist remarks on the female student performance. He explained how he does not regard some sexist remarks as discrimination:

“I don’t think there is any discrimination against women during the medical education. It is true that there are some sexist remarks from time to time but it is nothing and only happening in some sporadic cases and I do not think they are meaningful or has any consequences in the school experience of women”.

While claiming that there is no discrimination against women, several female students add that feminism or promoting gender equality issues for women is only harmful. The following quotation from one female student (C 37) is an example for it. This student wrote with regard to promoting gender equality:

“Talking about the need for equal opportunities for women only cause inequality for men. The fact that women are fighting for their rights only
proves that they suffer from inferiority complex. The truth is that women or those who belong to ethnic minorities can achieve any high position in medicine if they have the suitable personal abilities and skills for that position and they do not need any “encouragement” with that regard”

The most prevalent examples of discriminatory acts reported by students were of encountering or hearing about heads of hospital wards that declared that they would never consider accepting women into their wards as residents. Evidently, this kind of discriminatory act could be considered as illegal act under the laws against Sex Discrimination in Israel. It should be added that it was reported more with regard to the surgical specialities than others, mainly in general surgery or orthopaedics. Students reported of hearing some surgeons saying that women were denying men places in surgical residency programmes, or that they would not waste their time on women students because women are going to end up taking care of their children. Similar examples were reported by nearly half of the “yes” responders. It should be noted that both men and women medical students described surgeons to be the most chauvinistic faculty members and many cases reported by students as discriminations or differential treatment were related to experiences during the surgical rotations.

Several male students pointed out that in their opinion, discrimination in medical school does work against men as well. Few male students expressed a belief that not only it is untrue that female students suffer from discrimination but the fact is that some women enjoy a preferential treatment by the faculty members, or
'corrective discrimination' according to their words. They said that women students often get better grades from male faculty members because of their gender. An example for these students is a male student (C 4), who has made a remark, which may hint that his point of view is biased and prejudiced. He wrote:

"Female students don't suffer at all from discrimination. On the contrary, women enjoy 'corrective discrimination' in medical school, especially the good looking female students"

The students' responses added additional aspects to the question of student biases. One female student added a new angle to discrimination by blaming only female faculty members of discrimination of other women. The student (C 35) wrote:

"Some of male faculty members show special inclination to help female students (which is unacceptable of course), but they don't show any hostility against the male students. Yet, many female faculty members favour the male students and are very hostile toward female students. What can be said, only women can really be 'bitches'"

A female student (C 43), who believes that women suffer from discrimination in medical school, added a new angle to gender discrimination in the medical school: inequality of educational experiences. She explains how different
feedbacks to men and women students during a clinical rotation are connected with the quality of clinical experiences and teaching:

"Yes. Women do suffer from discrimination in medical school. For example, at our last clinical rotation, male students got challenging and serious assignments like presenting new articles and seminars. They also received better quality feedbacks on their presentation than women. Female students were only expected to do the easy assignments like presenting some lab results which were very easy to get and present"

Gender differences in future career opportunities and choices

Gender differences in students' perceptions of future career opportunities

**Table 4.16**
Means and Standard Deviation of Students' views on 'Gender Differences in Future Career Opportunities, by Gender and School (n=120)

<table>
<thead>
<tr>
<th>School</th>
<th>Male</th>
<th>Mean</th>
<th>SD</th>
<th>Female</th>
<th>Mean</th>
<th>SD</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>28</td>
<td>3.36</td>
<td>1.25</td>
<td>23</td>
<td>3.35</td>
<td>1.23</td>
<td>51</td>
<td>3.35</td>
<td>1.23</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>2.82</td>
<td>0.98</td>
<td>13</td>
<td>2.38</td>
<td>0.87</td>
<td>24</td>
<td>2.58</td>
<td>0.93</td>
</tr>
<tr>
<td>C</td>
<td>22</td>
<td>3.36</td>
<td>1.18</td>
<td>23</td>
<td>2.87</td>
<td>1.25</td>
<td>45</td>
<td>3.11</td>
<td>1.23</td>
</tr>
</tbody>
</table>

Total 61 3.26 1.18 59 2.95 1.21 120 3.11 1.20

Note. The significance of the F values of the effect of 'school' variance, 'gender' variance and the interaction between 'gender' and 'school' are > .05

In the closed part of the questionnaire the students were asked to indicate their agreement to the statement that there are differences in career opportunities for men and women. The above table presents the results of gender differences
regarding that statement. Table 4.16 shows that, on the whole, the students answer positively to the question whether or not there is gender difference in future career opportunities in medicine. The variants of ‘gender’ as well as ‘school of study’ were not found as significant factors in that regard.

Data from the open question regarding gender influence on future career choices

### Table 4.17

Frequencies of students thinking that Gender has an Effect on Career Choices, by gender and school (n=101)

<table>
<thead>
<tr>
<th>School</th>
<th>No (%)</th>
<th>Yes (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male (N)</td>
<td>Female (N)</td>
<td>All (N)</td>
</tr>
<tr>
<td>A</td>
<td>7 (27%)</td>
<td>5 (28%)</td>
<td>12 (27%)</td>
</tr>
<tr>
<td></td>
<td>19 (73%)</td>
<td>13 (72%)</td>
<td>32 (73%)</td>
</tr>
<tr>
<td>Total</td>
<td>26(100%)</td>
<td>18(100%)</td>
<td>44(100%)</td>
</tr>
<tr>
<td>B</td>
<td>4 (44%)</td>
<td>4 (31%)</td>
<td>8 (36%)</td>
</tr>
<tr>
<td></td>
<td>5 (56%)</td>
<td>9 (69%)</td>
<td>14 (64%)</td>
</tr>
<tr>
<td>Total</td>
<td>9(100%)</td>
<td>13(100%)</td>
<td>22(100%)</td>
</tr>
<tr>
<td>C</td>
<td>7 (33%)</td>
<td>7 (50%)</td>
<td>14 (40%)</td>
</tr>
<tr>
<td></td>
<td>14 (67%)</td>
<td>7 (50%)</td>
<td>21 (21%)</td>
</tr>
<tr>
<td>Total</td>
<td>21(100%)</td>
<td>14(100%)</td>
<td>35(100%)</td>
</tr>
<tr>
<td>All*</td>
<td>No</td>
<td>18 (32%)</td>
<td>16 (36%)</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>38 (68%)</td>
<td>29 (64%)</td>
</tr>
</tbody>
</table>

Note. * Chi square = 0.132, P> .05
The students were asked in the open question if they thought gender had an effect on career choice. Most of the students, both male and female students (67 per cent) agree that gender had an effect on the choice of career in general term (table 4.17). A similar proportion of male and female students acknowledged such gender effect. The reasons the students gave for such gender-effect can shed light on the question of gender differences in career opportunities.

**Explanations of the students to gender effect on career choice**

Students offered several reasons why they felt gender could affect career choice in medicine. The most prevalent reason was the realization that female students give their priority to their family and take a more active part in raising their children than men, as opposed to male students that were not supposed to give family a priority and can concentrate at the prestige of their career. The following quotation from the response of one female student (A 47) represents such reasoning:

"Men tend to give less weight and importance than women to family life when they choose a career. They are expected to give a higher weight to prestige and status of the speciality"

Another reason for a gendered pattern of career choice is that it goes according to stereotypes of feminine and masculine sex roles in medicine. One female student (C 30) observed:
"Yes. There is a relation between gender and speciality choice. Some areas of speciality are considered more feminine and some are considered as more masculine in their nature."

Several students have added in their responses the fact that they don't regard the effect of gender on speciality choice as a sign for gender discrimination during the medical training. An example for it is the words of a male student (C 44):

"Yes. There is a relation between gender and area of speciality. But this is not because gender discrimination during the medical education but because women prefer to give higher priority to family life so they choose only those specialities that enable them to do so."

Several students observed a relation between female gender and a tendency of choosing a specific speciality. For example, one male student (A 46) wrote:

"Women tend not to choose surgery as their speciality. They prefer paediatrics or family medicine."

Other students added another characteristics of the pattern of career choice. A male student (C 5) wrote:

"Female students tend to choose specialities that men are not interested in them."
It is worth mentioning that this observation is not confirmed by the finding of this research, that proportionally the same number of women and men declared their intention to choose surgery for their speciality.

**A predictive model of student satisfaction with the medical education**

**Table 4.18**

*Multiple Stepwise Regression Analysis of Overall Satisfaction with the Medical Education on School of Study, The Extend of Gender Harassment, The Extend of Gender Discrimination and School Influence on Career Choice*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>B</th>
<th>Beta</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>School (&quot;B&quot; School)</td>
<td>.798</td>
<td>.314</td>
<td>3.849</td>
<td>.000</td>
</tr>
<tr>
<td>Extent of harassment</td>
<td>-.283</td>
<td>-.273</td>
<td>3.265</td>
<td>.001</td>
</tr>
<tr>
<td>Extent of discrimination</td>
<td>-.263</td>
<td>-.226</td>
<td>2.757</td>
<td>.007</td>
</tr>
<tr>
<td>Influence on career’s sex-role</td>
<td>-.207</td>
<td>-.251</td>
<td>3.066</td>
<td>.003</td>
</tr>
</tbody>
</table>

*Note. R^2 = 0.247, F(5, 114) = 9.407, p = .000.*

The last closed item in the questionnaire of the survey was the extent of agreement of students with regard to their satisfaction with their medical education so far. In order to explain the variance of that satisfaction, stepwise regressions was carried out of the survey variables together with dummy variables for the effect of ‘gender’ (women and men) and ‘school of study’ (schools “A”, “B” and “C”). The result of that analysis (table 4.18), showed that a subset of four predictors constituted the most adequate model to explain satisfaction with R^2 = .247. The ‘school of study’ (school “B”) had the greatest positive influence to predict students’ satisfaction with their studies so far.
(standard regression beta = .314). Agreement with the extent of harassment, discrimination and school influence on sex role careers (welcoming more men than women in surgical wards) had a negative influence to predict overall satisfaction with the medical school. The model explains about a quarter of the variance of overall satisfaction and the effect size of the predicting variables is significant. It should be noted that gender had no influence on that model, indicating an agreement between men and women students with regard to the most important variables that predict student satisfaction with the medical education.
Chapter 5: Case Study Findings

Introduction

This chapter represents the findings of the case study according to main research areas, which are:

- Gender differences in person-centred values
- Gender differences in medical school’s experiences
- The extent and nature of gender discrimination and sexual harassment during the medical education
- Gender differences with regard to future career opportunities and speciality choice
- The applications of the above areas to the educational management of the medical schools

In order to gain a good insight into these areas, a case study based on interviews with medical students and faculty members as well as a documentary analysis of school “A”, one of the medical schools, which were included in the survey, was undertaken. The case study was also meant to deepen the survey data in several ways. It provided additional points of views of the faculty members and the school policy as well as the views of the students and examined the research question about the implications of gender differences to educational managers of medical schools, which was not dealt by the survey. The case study was also taken to improve the validity of the survey results and to attempt a triangulation
of both sources and methods by investigation of students' and faculty members' perspectives as well as evidence on the official school policy. The data gathering methods of the case study included semi-constructed interviews with ten medical students at school “A”. Those interviews were conducted face-to-face, in settings convenient for the participants and lasted about one hour. The questions were asked in the same order in each interview. Piloting the interview schedule with two students, not included in the case study, resulted in some changes in the interview schedule. It was decided to take notes instead of tape-recording the interviews. Notes were taken during the interview, aiming to get the interviewees’ answers verbatim and as accurately as possible. Immediately afterwards the notes were completed by additional data and reflections dictated on tape. Then a fair copy of the whole interview was made. To ensure confidentiality, the students were promised that the interviews are for research purposes only, the contents of the interviews would not be passed over to the school management and no particulars that could identify them, would be mentioned anywhere else other than in the study report.

The sampling method for the students’ sample was purposive sampling. The students were sampled among students who gave their consent to be interviewed in their survey questionnaire. Care was taken to include an equal number of men and women as well as married and single students and to include a wide range of ages and other background variables as much as possible. All of the respondents seemed to be rather frank and honest in their answers and in general seemed to be ready to disclose negative feelings as well. The following table (5.1) describes the main characteristics of the participating students. As can be seen,
the case study sample of medical students included five male students and five female students. Their age range was 24-34. Out of the ten students, five students are single, three married without children and two (men only) married with children. Seventy per cent of them served the mandatory service in the army. All of them but one live in the well-populated, central part of Israel, which include the big city where the school of medicine “A” is located. All of them but one were born in Israel. Those demographic characteristics are rather similar to the demographic characteristics of the whole population of medical students in medical school “A” although, regrettably, students from ethnic minorities have not agreed to be interviewed. In school “A” there are only two students from ethnic minorities.

**Table 5.1**

Primary Demographic characteristics of participating students (n=10)

<table>
<thead>
<tr>
<th>No.</th>
<th>Sex</th>
<th>Age</th>
<th>Marital status</th>
<th>Army</th>
<th>Live in</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>A 13</td>
<td>M</td>
<td>27</td>
<td>Single</td>
<td>Y</td>
<td>Centre</td>
<td>Born abroad</td>
</tr>
<tr>
<td>A 22</td>
<td>M</td>
<td>28</td>
<td>Single</td>
<td>Y</td>
<td>Big city</td>
<td></td>
</tr>
<tr>
<td>A 27</td>
<td>M</td>
<td>34</td>
<td>Married +2</td>
<td>Y</td>
<td>Centre</td>
<td></td>
</tr>
<tr>
<td>A 28</td>
<td>F</td>
<td>28</td>
<td>Single</td>
<td>Y</td>
<td>Big city</td>
<td></td>
</tr>
<tr>
<td>A 30</td>
<td>F</td>
<td>26</td>
<td>Married</td>
<td>N</td>
<td>Small settlement</td>
<td></td>
</tr>
<tr>
<td>A 33</td>
<td>F</td>
<td>31</td>
<td>Single</td>
<td>Y</td>
<td>Centre</td>
<td></td>
</tr>
<tr>
<td>A 35</td>
<td>F</td>
<td>25</td>
<td>Married</td>
<td>N</td>
<td>Centre</td>
<td></td>
</tr>
<tr>
<td>A 42</td>
<td>M</td>
<td>28</td>
<td>Married +1</td>
<td>Y</td>
<td>Big city</td>
<td></td>
</tr>
<tr>
<td>A 49</td>
<td>F</td>
<td>26</td>
<td>Married</td>
<td>N</td>
<td>Centre</td>
<td></td>
</tr>
<tr>
<td>A 50</td>
<td>M</td>
<td>24</td>
<td>Single</td>
<td>N</td>
<td>Centre</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Sex: M=male, F=female, Army: Y=served in the army, N=did not serve in the army
The interviews with the students included the following five questions:

1. What are your career-goals, work-motivations and what are the factors that will affect your probable speciality choice?

2. Is the way you are taught at the medical school compatible to your learning styles and needs? (Can you give examples with regard to curriculum contents, methods of teaching and the fairness of the assessment methods? Do you feel you can ask questions during lectures? What subjects and skills are given more emphasis in the curriculum and examinations?)

3. Do you think that the medical school’s environment is supportive, unbiased and contributed to your career preparation and future success? (Give examples with regard to the following topics: school ethos, curriculum emphasis like hours and other teaching resources given to certain subjects, school’s advice with regard to future plans, official and unofficial mentoring processes, teachers’ prejudices, gender discrimination, sexual harassment during medical training, your definition of sexual harassment).

4. Based on your school experience, do you think your career opportunities in the future will be affected by your gender and in what way?

5. Do you think there is a problem of gender equality at the medical school? In this regard, do you think that the medical school has to change and why (give example for needed curriculum change, adding content or evaluation methods change)? Do you think that possible gender differences have any other educational management applications?
Another source of data in the case study are interviews with faculty members of school “A”. The basis for choosing the faculty members was their centrality in the teaching process in the school and their consent to be interviewed. Care was taken to represent both genders as well as the different teaching departments. Seven faculty members were interviewed for the case study. The sample of interviewed faculty members turned out to be rather varied in terms of gender, background and teaching experience. The characteristics of the interviewed faculty members are described in table 5.2.

**Table 5.2**

*Main characteristics of the interviewed faculty members (n=7)*

<table>
<thead>
<tr>
<th>No</th>
<th>Sex</th>
<th>Department</th>
<th>Clinician</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM1</td>
<td>M</td>
<td>Behavioural sciences</td>
<td>N</td>
<td>An MD. Coordinator of a patient, doctor and society course (early patients contact program)</td>
</tr>
<tr>
<td>FM2</td>
<td>M</td>
<td>Cell biology</td>
<td>N</td>
<td>PhD. Chairman of the curriculum committee</td>
</tr>
<tr>
<td>FM3</td>
<td>F</td>
<td>Microbiology</td>
<td>N</td>
<td>PhD. Member of the curriculum committee</td>
</tr>
<tr>
<td>FM4</td>
<td>M</td>
<td>Internal medicine</td>
<td>Y</td>
<td>An MD. Chairman of the examination committee and member of the curriculum committee</td>
</tr>
<tr>
<td>FM5</td>
<td>M</td>
<td>Surgery</td>
<td>Y</td>
<td>An MD. Serve as students’ tutor. Member of Examination committee</td>
</tr>
<tr>
<td>FM6</td>
<td>M</td>
<td>Gynaecology</td>
<td>Y</td>
<td>An MD. Serve as students’ tutor at clinical rotation</td>
</tr>
<tr>
<td>FM7</td>
<td>F</td>
<td>Internal medicine</td>
<td>Y</td>
<td>An MD. Head of an hospital ward and member of the curriculum committee</td>
</tr>
</tbody>
</table>
As seen in the above table (table 5.2), all the interviewed faculty members know the students well because of their central positions in the teaching staff of school “A”. Three of them are basic-sciences professors who hold management positions at the school as well as memberships in central committees of the school and are in constant contact with the students as a result of it. The four clinical faculty members work as doctors in the affiliated teaching hospitals of school “A”. They too hold management positions at the faculty as membership in school’s committees or wards’ headship and take an active part in teaching the students in clinical rotations.

As with the students’ interviews, it was decided, after a pilot, to use note taking instead of tape-recording although these interview-schedules were much less structured. The main considerations were that tape-recording could be experienced as threatening and intrusive to the interviewees, that less concerns and more honest answers to the issues would be given if note taking were used. The interviews with the faculty members lasted around 45 minutes and were conducted in their offices. The interview schedules were as open as possible, allowing the faculty members to answer openly and freely and explain their position. The faculty members were asked to talk about their perceptions on the differences between men and women medical students with regard to the medical school issues. Yet, as the result of the piloting the interview schedule with one faculty member, it was decided to help them organize their thoughts and the following questions were offered to them although, no press was made for the answers:
1. What do you think about the gender differences in personal characteristics, career goals, motivation and probable speciality choices of sixth year medical students?

2. What are the preferred learning styles of medical students and do you think there are any gender differences with regard to preferences of curriculum contents, mode of teaching and evaluation systems?

3. Do you think that there are gender differences in the educational experience at medical school with regard to advice, preparation for career, support, biases, encouragement, mentoring relations, gender discrimination and sexual harassment? Do you think the medical school and school’s environment can influence on speciality choice?

4. Do you think there are any gender differences with regard to after-school career opportunities?

5. What could be the implications of gender differences in the above issues to managers of the medical school?

The findings of the case study were presented as open quotations, which were selected from the different interviewees. Another way to present the data was by using unitisation and categorization techniques and then presenting the findings in either in tables, graphs and figures.

An additional source of data for the case study is the documentary analysis of the yearly student information prospectus (titled the “Yedion”) of the medical school “A”. The documentary analysis is based on the 2000/2001 edition of the “Yedion”.

253
Gender differences in personal values and family constraints

Views of the students with regard to career goals and the possible barriers to achieve them

The interviews with the medical students shed further light of the question of what is behind students’ speciality choices, career goals and motivations and on their perceptions of the factors that might contribute to the barriers in achieving career goals.

In their interviews, the students of school “A” mentioned very similar kind of careers goals to those mentioned in the responses to the questionnaire. These career goals are divided into two main types of career goals: 1) ‘Altruistic’ goals - wanting to help others and have a challenging and interesting jobs or 2) ‘Materialistic’ goals- having an intellectually challenging work combined with more materialistic considerations types of goals. Nearly all of the interviewed students (eight of the ten students in the sample) said that at least part of their motivation is altruistic.

The interviewed students also mentioned the same kind of barriers as identified by the survey to achieve career goals. All of them mentioned family considerations, at least among other kinds of considerations. It was revealing to find that married students, both men and women were likely to involve their spouses in their career’s considerations. They said they discussed their future career plans with their partners and relied on their spouse’s help in achieving
their career goals. Women were likely to take into account their partners’ type of occupation as well and have plans accordingly. One female interviewee (A 30) said:

"My husband is a computer worker so he can stay home a lot. Therefore I rely on him to manage having a family and a career in medicine. I have seen others doing it so I believe I can do it as well. Being married to a computer worker is a very popular match among female medical students. Among my female class-mates, there is only one married to another medical student. Women students know that only if their partner stays at home, they can work full time and have children. Otherwise they would have to limit their career’s plans".

The main contribution of the interviews’ data is to deepen the understanding of the process of deciding on speciality choice for residency. It turned out that all of the interviewees have not yet finally made up their mind which specific speciality they were going to try to get into, as residents. Yet, they had a rough idea what area it will be, based both on their pre-schools motivation and their experiences during medical schools. It is interesting to find that one option for the students to decide what to do is actually to decide what they are not going to choose. One student (A 22) summarized such a process of deciding by elimination:
"My speciality choice will probably be determined by elimination mainly. Although I had an idea what subject interest me most, I had to rule out any of my pre-school's plans because of other considerations. There are many considerations like family and money considerations. The exposure to the various specialities during the clinical rotations has also influenced my decisions. This decision is mainly based on my impressions that in some qualifications the doctors are less burned out and more content and satisfied than in other qualifications and not on the importance school give to that area".

Another male interviewee (A 50) said

"It is very problematic for me to choose a speciality and I keep changing my mind. On the one hand I have always intended to specialize in one of the surgical sub-specialities. I also find these areas as the most interesting subjects. On the other hand, after having done the clinical rotation in surgery, I realize the incompatibility of these specialities to personal life and so I tend to choose another speciality"

Another contribution of the interviews' data is the fact that the interviewed students are finger pointing to the importance of the actual school experiences during the clinical rotation period in making up decisions. This can be seen from the above quotation. Other students also were stressing the importance of the experiences during clinical rotations with regard to how to take or rule out certain medical fields for speciality. They commented as to how the atmosphere
in the ward helped them make up their mind. One female interviewee (A 30) said she would probably choose internal medicine because she already knew much about the working-condition of such speciality, having a job in internal medicine ward:

"I already know the working conditions at internal medicine ward and I know I can make it because it is not too competitive. The fact that I know people there will probably help"

The students also considered the quality of teaching during the clinical rotation of a particular speciality, as one of the factors for choosing their speciality. All of them agreed that they would probably choose a medical field in which they experienced high-quality teaching, and that inadequate teaching can put one off following certain careers. Respect and trust from the teachers while at clinical rotation made the students more confident and more willing to take initiatives and responsibility in the work with patients and more willing to choose speciality of this medical area.

A female student (A 28) said, on the other hand, that she would not regard so much the atmosphere in a certain ward as a factor for choosing a speciality because this could change from ward to ward regardless of the fields of speciality. She said she mainly paid attention to working-conditions of the various specialities. For example she said she ruled out surgery as her future career mainly because she had found out it demanded physical strength.
To analyse the data on career considerations’ barriers, the main comments from the interviews with the students on their reasons for choosing a speciality, were clustered into six categories according to the type of reason. The six categories are:

1. Pre-schools motivations.
2. Teaching quality and other learning experiences
3. The emphasis school is giving to the speciality as to the teaching resources and number of hours located for this subject.
4. How competitive and difficult it is going to be to get into this speciality.
5. How compatible is the speciality with personal life and family constraints
6. The working conditions of this type of medical field including quality of life, prospects of earning money and satisfactions.

**Graph 5.1**

*Frequencies of the main Reasons mentioned by the students for Choosing of Speciality, by Students’ Genders (n=30)*

![Graph showing frequencies of reasons](image)

Note. Reason: 1= pre-school motivation 2= positive experiences with regard to teaching quality and teachers’ attitude 3= the emphasis school gives to that subject 4= less competition to achieve it 5= family consideration 6= high quality of life in that career
In the above graph (graph 5.1), frequencies analysis of career's considerations, only three main reasons given by each students for choosing or not choosing a speciality are included, so that each student's views on this subject have the same weight in comparison with other students. Thus 30 reasons are included in the total number of this analysis. Those reasons are divided according to the gender of the students. The results of this frequency analysis are summed up in graph 5.1.

Nearly all the students, both men and women said they would consider family constraints when choosing their speciality. No one but one of the students took into consideration the emphasis school is giving to the subject. Three of the male students as well as three of the female students mentioned the quality of teaching of that subject as a reason for choosing that field. The quality of life in the future career was mentioned by three of the male students but only one of the female students (for her it was a consideration for not choosing a speciality). Three of the male students mentioned pre-school plans for their career, in comparison with one of the female students.

*Faculty members' views with regard to students' career motivation*

Further illumination of the question of student work values can derive from the faculty members’ perspective. The faculty members were asked to evaluate the gender differences in motivation and probable speciality choice of students and the factors that influence the speciality choice of the medical students. The following table (table 5.3) sums up the faculty members views.
TABLE 5.3

Faculty Members Views on Gender Differences in Career Choice, by type of Faculty Member and Gender (n=7)

<table>
<thead>
<tr>
<th>Male</th>
<th>Basic sciences</th>
<th>Male</th>
<th>Clinicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM1</td>
<td>Women do not want leadership positions</td>
<td>FM4</td>
<td>No gender differences</td>
</tr>
<tr>
<td>FM2</td>
<td>Women are more motivated</td>
<td>FM5</td>
<td>Women are in “for the hobby”</td>
</tr>
<tr>
<td>FM6</td>
<td>Women tend to consider family constraints</td>
<td>FM7</td>
<td>Women are not career-minded</td>
</tr>
</tbody>
</table>

An effort to be “politically correct” in answering that question was felt. Yet, some faculty members could not hide a tendency, of treating female students as second-class juniors and evaluate them as less motivated and having more constraints. Four faculty members said that they value the female students’ efficiency and hard working but they do not see them as potential leaders in medicine mainly because of their family constraints. They said that female students should be aware of the potential career constraints facing them due to their family responsibilities and should be better prepared to plan for such constraints. Yet faculty members have not mentioned family responsibilities as constraints for men. Another tendency among the faculty members is the conviction that medical female students tend to choose family medicine as their speciality. One of the faculty members, a family medicine doctor himself yet a non-clinician faculty member added that it was very important speciality that women are more suitable to family medicine because of their special abilities. Another male clinical doctor (FM4) said:
“As a whole, there is no gender-difference in motivation nowadays. I am sometimes quite surprised and impressed by the strong motivation and perseverance that female students exhibit at the clinical rotations”.

On the other hand, his fellow female clinician faculty member (FM 7) was very sceptical of women’s clinical abilities and motivations as students and said:

“All students are very inexperienced in clinical skills. I am afraid that in comparison with men, women students tend to be less mature with regard to clinical skills and their personality are less ready for clinical work especially with regard to perseverance”

Gender differences in school related experiences

Curricular policy of school “A”

The “Yedion”, the official medical students information prospectus of school “A” issued each year, includes a short introduction about the general beliefs and emphasis of the new study programme initiated by the dean of the school, called “medicine 2000”.

According to this document, the aims of this programme are to move away from the paternalistic model of teaching and telling students that teachers know best, to a more student-centred teaching and to put the students at the centre of the learning activity. The programme recognizes the fact that accumulation of
factual knowledge is essential to the future doctors but aims to acquire it through the right thinking and learning habits and skills. Information overload of factual knowledge is recognized as a problem and the programme affirms the need for medical education to move beyond rote learning to deepen understanding. Teaching and assessment should focus on principles with less emphasis given to details. The curriculum should foster independent self-directed learning skills, which include evidence-based medicine. This is a critical view of the medical knowledge available. The principles of content areas introduced into the study programme, are:

1. Integration of basic and clinical knowledge
2. Systematic approach to solve medical problems

The teaching methods are based on the following guidelines:

i. As little as possible frontal and didactic teaching through lectures by “experts”

ii. Increase in small group teaching with the help of non-expert facilitators and tutors.

iii. An emphasis on self-study according to a detailed and well defined specific objectives and previously decided upon syllabi.

iv. Introduction to the model of the right practice of medicine through accompanying practicing clinicians that should serve as role models.
v. Changes in the clinical curricula to reflect the changes in clinical practice in teaching hospital characterized by shorter inpatient stays. An emphasis on ambulatory teaching sites included in the clinical teaching.

vi. An emphasis on the patient-doctor communication.

vii. Establishment of a laboratory for the practice of clinical skills.

viii. Introduction of problem based learning technique.

The clinical instruction at the medical school, according to the school’s document, “is currently given by the top people in the field, including heads of hospital departments and senior doctors”. The innovation in the new curriculum is that the relevance of the basic medical sciences to the practice of medicine is made real to first-year students in the ‘Clinical Correlates’ programme. Doctors bring patients to the classroom to demonstrate the clinical correlates of the material encountered in textbooks and laboratories. There are opportunities to observe operations and diagnostic procedures and to work in hospitals. Three years later, during the clinical rotations (known as: “clerkships”), students are updated on the latest developments in scientific research and their impact on clinical medicine.

Medical school’s curriculum

The following tables, (5.4 and 5.5) describe the entire six years curriculum of school “A” of the academic year of 2000/2001 by year of study and methods of teaching as appear in the “Yedion”. Although new teaching methods were
introduced to the curriculum. the school “A” curriculum in the pre-clinical years is still basically a traditional curriculum, depending mainly on lectures, laboratory classes and major end of the year multiple choice question examination.

Changes initiated in the last two years included the introduction of new courses into the curriculum. A prominent example is the “patient, doctor and society” course in behavioural sciences. This course is designed to address some objectives that are not adequately dealt in the old curriculum, particularly those pertaining to certain professional attitudes and skills. It contains new contents aimed to promote early patient contact, critical appraisal, patient–doctor communication, ethical reasoning, professional development and elective topics in humanities. Frequent clinical tutorials run by practicing clinicians are a key component of this course. The students participate in an early clinical contact programme. Third year courses of the academic year 2000/2001 are still according to the old curriculum but as from the academic year of 2001/2002 they are going to include system integration courses, which intends to apply and demonstrate the relevance of material that is being learned in earlier years. In addition to the introduction of new courses, there is an effort to introduce into the curriculum of the year 2000/2001, new teaching methods like problem based learning, small group sessions and self-learning and decrease frontal teaching through lectures. Yet the process of introduction of changes is still going on very slowly. The new courses introduced into the curriculum in the last two years have no actual effect on the school experiences of the sixth years’ students except the effect of merely getting to know innovative teaching.
<table>
<thead>
<tr>
<th>Year of study</th>
<th>Course’s name</th>
<th>Hours allocated to this course</th>
<th>Method of teaching</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Medicine, patients and society (MPS) A</td>
<td>224</td>
<td>SG</td>
<td>New course of early patient contact run by practicing clinicians</td>
</tr>
<tr>
<td>1</td>
<td>Quantities aspects of research</td>
<td>98</td>
<td>LE</td>
<td>New course</td>
</tr>
<tr>
<td>1</td>
<td>Physics</td>
<td>80</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Anatomy</td>
<td>172</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Chemistry</td>
<td>134</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Genetics</td>
<td>42</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Biology</td>
<td>88</td>
<td>LES</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Introduction to biophysics</td>
<td>80</td>
<td>L</td>
<td>New course</td>
</tr>
<tr>
<td>1</td>
<td>Electives in humanities</td>
<td>84</td>
<td>L</td>
<td>Some with no direct relevance to practice</td>
</tr>
<tr>
<td>2</td>
<td>MPS B</td>
<td>216</td>
<td>SG</td>
<td>New course</td>
</tr>
<tr>
<td>2</td>
<td>Biology and embryology</td>
<td>56</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Quantitative thinking</td>
<td>28</td>
<td>LE</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Cell constructs</td>
<td>88</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Immunology</td>
<td>60</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Physiology</td>
<td>86</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Molecular basis of illnesses</td>
<td>77</td>
<td>PBL</td>
<td>New teaching mode</td>
</tr>
<tr>
<td>2</td>
<td>Introductions to microbiology, pharmacology and pathology</td>
<td>230</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Human microbiology</td>
<td>214</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pathology</td>
<td>238</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pharmacology</td>
<td>116</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Clinical Biochemistry</td>
<td>140</td>
<td>LL</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Clinical correlations sessions</td>
<td>36</td>
<td>3 meetings along the 3 pre-clinical years</td>
<td></td>
</tr>
</tbody>
</table>

Note. 1. Mode of teaching LE= lectures and exercise, LL= lectures and laboratory sessions, LES= lectures and self-study, SG= small group, L= lectures only. PBL= problem based learning 2. The study programme for year 1-2 is according to a new study programme as revised starting from the academic year 1999/2000. The programme of year 3-6 is the old programme.
<table>
<thead>
<tr>
<th>Year of study</th>
<th>The course</th>
<th>Hours allocated to this course</th>
<th>Method of teaching</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Introduction to clinical medicine-lectures</td>
<td>480</td>
<td>L</td>
<td>Including one day a week of clinical experience (96 hours) at hospital wards</td>
</tr>
<tr>
<td>4</td>
<td>Internal medicine</td>
<td>480</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Paediatrics</td>
<td>360</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Introduction to surgery and sub-specialities in surgery</td>
<td>120</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Clerkship in surgery and sub-specialities</td>
<td>480</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Neurology</td>
<td>160</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Orthopaedics</td>
<td>120</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Emergency medicine</td>
<td>40</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Psychiatric</td>
<td>240</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Internal medicine - sub-specialties</td>
<td>160</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Internal medicine</td>
<td>160</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Surgery</td>
<td>120</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Paediatrics</td>
<td>160</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Rehabilitation medicine</td>
<td>80</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Geriatrics</td>
<td>80</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Introduction to Family medicine</td>
<td>40</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Family medicine</td>
<td>120</td>
<td>K</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Introduction to selective specialities</td>
<td>160</td>
<td>L</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Selected specialities</td>
<td>240</td>
<td>K</td>
<td>Otolaryngology, dermatology and ophthalmology</td>
</tr>
<tr>
<td>6</td>
<td>Elective topics</td>
<td>160</td>
<td>K</td>
<td></td>
</tr>
</tbody>
</table>

Note 1. Mode of teaching: L = lectures. K = clinical rotation (clerkship) including bedside teaching, seminars and clinical discussions. 2. The number of hours at the clinical rotation is calculated on the basis of eight hours a day, five days a week.
Medical students curriculum preferences

In light of the school curriculum, the students were asked if it was compatible with their learning styles and preferences. Specifically they have been asked if they were satisfied with the teaching methods at school, if the courses taught fulfilled their expectations and needs with regard to contents and if they thought the assessment methods of students were fair.

The survey identified two kind of learning styles of medical students: 1) The 'traditionalist'- who feel comfortable with the existing school’s mixture of teaching methods and 2) the 'innovator'- who prefer innovative teaching methods only. In the survey it was found, that students not necessarily were innovators. More women than men preferred the current curriculum as it is. This contradicts the spirit of the new curriculum. The question on the compatibility of the curriculum to the students’ learning styles was thus repeated in the interviews with the students to shed more light on this issue and validate the findings of the survey.

The interviews confirmed the survey findings about the differences in the learning style of men and women students. According to the interviews, all the women students said they preferred the traditional teaching methods. They said they were satisfied with the existing traditional curriculum and the teaching methods at the school and did not want a change. They did not think there was a need to introduce new contents into the curriculum and that the assessment
methods of the school are fair. This is illustrated in the following quotation of one of the female students (A 49):

"I am rather satisfied with the curriculum. I feel the school gives me a lot of support and I have no complains. I know they say that to read on your own is the best learning methods but I feel I need guidance and prefer lectures, especially if I know little about a subject. I am not a person who wants to ask a lot of questions during lectures. With regard to contents and assessment methods, I think that school is fair and tries to give you as much as possible."

The female students also pointed out that, in contrast with the perceived image of formal nature of lectures given in big classes by eminent figures in medicine, the typical lectures format of the school “A” is rather informal and it is routine practice to ask questions during the lecture. One female student said (A 28):

"I always feel I can ask questions at lectures because of the informal atmosphere of the lectures. Any student is allowed to ask questions."

The male students were more dissatisfied with schools’ teaching methods, curriculum contents and assessment methods. They said that they would prefer an innovative curriculum. Some of them commented that they were bored and dissatisfied and they feel a change should be done with regard to both the curriculum contents and teaching methods. One male student (A 42) said:
I prefer problem based learning or self learning to lectures. Lectures limit the ability of the students to develop self-learning skills, which are so important in our professions. In addition I think that the quality of the lectures is also very limited in many cases.”

The main contribution of the interviews’ data with regard to teaching methods was the light it shed on the students’ views with regard to self-study. Both men and women students claimed that there were many limitations of self-study. With this regard, many students pointed out that nearly all the textbooks or other reading in medicine is in English, a second language for them. Most of the students said that self-study could not work on its own for them. The students explained that self-learning often failed for them because of lack of guidance what was important to read and what was less so. The students indicate the fact that guidance in self-study is especially important in medicine due to a factual information overload that is required from them to learn as rote learning. They say that they need to be told what is relevant and what is not relevant.

All the students said that while they were at the clinical rotations, they preferred to be given as much as possible guided clinical rounds and be told specifically which patients to see and what was important to note. They criticized the teaching practices in some clinical rotations, to leave clinical skills to the initiatives of the students, asking them to look around in the ward and pick up their own cases among the patients.
Views of faculty members on students learning styles

The faculty members were asked to refer to the preferred learning styles of medical students and to consider if there were any gender differences with regard to preferences of curriculum contents, mode of teaching and evaluation system. All the faculty members admitted that they had never before considered gender differences with regard to students’ learning styles or preferences of assessments methods and contents.

With regard to teaching methods, most of the faculty members hold the opinion that lectures were by far the most preferable methods of teaching among Israeli medical students, both men and women. Furthermore, the interviews with the faculty members intensify the impression got from the students’ interviews, that Israeli medical students rarely use self-study methods as their preferred learning strategy. According to the faculty members, Israeli medical students do not rely on self-study, unless they are specifically and clearly being told what exactly is expected from them in reading. Most of the faculty members were only too ready to point out that Israeli medical students preferred “spoon feeding” teaching, in contrast to self-study. They complained that Israeli students tried to avoid reading altogether. In addition, the clinical faculty members complained that the students didn’t try with regard to accomplishment of clinical skills. One female clinical faculty member (FM 7) said:

“Quite often students who come to my ward are shy and nervous in patient contact and tend to non-initiative in the clinical work at the hospitals”
When referring to the innovative teaching methods like problem-based learning (PBL), which is just now officially introduced into the medical school curriculum of school “A”, there is a sharp difference in the opinions of clinical and basic sciences teaching staff members. The clinical faculty members are on the whole, very much supporters of innovative teaching methods. One male clinician family member (FM 6) said:

“I actually use ‘problem based learning’ kind of teaching or similar methods with my students when they came to my ward, although I do not call it problem based learning. I think that students prefer these methods to conventional methods and understand better the principles of clinical studies that way”.

On the other hand, most of the basic sciences teachers are quite suspicious whether or not this method can work. One male non-clinician faculty member (FM 2) said

“The majority of both the teachers and the students are used to lectures and laboratory sessions and these methods work fine for them. I should mention the fact that PBL teaching, applied to some courses, was forced upon us from above. The Dean of the school wanted to introduce this system as soon as possible. The teachers involved in those courses were suspicious of new methods that were not reconstructed by teachers themselves. It made them develop negative attitudes toward PBL. In general PBL makes me feel uncertain and unwilling either to accept
overseas experience with PBL or to gamble that new methods can work better than old methods. I still don’t trust this method”

As well, all of the faculty members raise the issue of training and complain that they think they do not have the required training to deal with PBL methods in teaching. They said they did not have the required qualifications to use it effectively because they were not given a satisfactory preparation or guidance on how to use it.

Some gender differences were found among the faculty members with regard to new teaching methods. The two female faculty members, were much more open to innovative teaching methods. One female non-clinician faculty member (FM 3) was particularly enthusiastic:

“Sometime students are very anti lectures and become quite militant about the relevancy of basic sciences when they are taught in the old paternal methods of “teachers know best”. I feel sure that all the students prefer innovative methods and will enjoy problem based learning much more”.

The other female faculty member, (FM 7), also said she was willing to try new teaching methods and that she was positive it could work for the students as well.
The female faculty members agreed with the male faculty members with regard to perceptions on gender differences among the students in content preferences in the curriculum. The faculty members in the sample never consider a possibility that women might have advantages in some subjects or have better clinical skills in certain areas such as talking to patients and comforting them and that stressing these areas in the curriculum might be beneficial to the female students. One male clinician faculty member (FM 5) said:

“Although women are sometimes getting better overall scores in clinical evaluations, I am not sure women are doing better in evaluation scores for relationship with patients. I can not say any obvious reason for this discrepancy, yet it exists”.

With regard to the fairness of methods of assessment used at the medical school, some of the faculty members reported that female students were doing just as well with regard to examinations’ scores and clinical evaluations although they were quite dismissive of the women’s abilities in doctor patient communications. An example is the quotation from one of the clinical faculty members who is the chairman of the examinations committee (FM 4). He said:

“The fact is that quite often women students are doing just as well on the multiple choice examinations scores. In some cases women are even doing better in some clinical rotations’ evaluations”.
There was an overall agreement among the faculty members with regard to experiences at the clinical rotations. The clinical faculty members of both genders said that they are sure that female students are given the same opportunities as the male students with regard to inquiring clinical experiences and the same quality and amount of feedback.

Views of the students on school advice, mentoring, school ethos and school’s priorities.

The students were asked to refer in their interviews to the question of school advice and to give examples with regard to how the school supported them in their studies as well as whether or not it provided them with official and unofficial mentoring relations. They were also asked to refer to what they thought of the school ethos and curriculum emphasises manifested in hours or other teaching resources given to certain subjects, what teaching disciplines are given more emphasis in the examinations.

With regard to future career advice for the students during the medical training, it is striking to find, according to the interviewed students, how little this topic is discussed with students. Most of the interviewed students said that they never got any career advice or career preparation whatsoever. Few students mentioned career advice fair day, or advice regarding future careers that were given only on individual basis by some teachers. The advice given included remarks about how competitive it was to get into certain specialities or some stereotypical remarks
of some faculty members, directed toward female students. A good example is the words of the female student (A 33) who said:

"On several occasions I was told by faculty members that certain careers would not be suitable for women but this was only by clinician at the hospital."

Similar discriminating remarks are discussed in the following subsection with regard to school biases against students. All the students said that they did not feel the school had any intention to direct them toward any specific medical profession. Some of the students complained that faculty members do not look beyond their subjects and do not emphasis or offer the students to consider new careers' alternatives of newly developed medical occupations or specialities that are not connected with people. An example of such view is summed up in the word of a male student (A 42):

"There are some medical professions, for example: being epidemiologists, that students don’t think of them as important and interesting because nearly no emphasis in teaching resources are put in them in the medical school. That is why students do not consider choosing these professions as their future career."

The topic of gender differences in advice and preparation for students is related to the question whether or not gender stereotypes are common among faculty members and the question of mentoring. Most of the male students and some of
the female students said that faculty members do not have gender stereotypes. A female student (A 35) said:

"So far, I have not encountered a faculty member, who thinks it is necessary to direct women into certain areas and men into others because those areas are more suitable to them as men or women. The main problem is that they don’t give you any career advice. It is very difficult to establish any mentoring relations with faculty members. I don’t think they care very much about our future career."

On the other hand, several female students reported that during medical training it was not unusual to hear surgeons, heads of hospital wards who say that women were not suited for surgery. The female students thought that women don’t choose surgery as their speciality because of the school’s negative influence and because of the general androcentric culture in the surgical specialities and sub-specialities.

The concept of mentoring relation was not explicitly defined to the students and it was interesting to see how the students themselves defined it. With regard to the question if they developed mentoring relations during their medical education, the interviewed students confirmed more or less the impressions got from the survey data that mentoring relations at school were mainly unofficial and based on personal contact between individual students and few faculty members. One male student (A 13) said:
"On the whole, I feel that I was neither encouraged to seek personal advice from faculty members on issues of career development and personal growth nor given many opportunities to develop mentoring relations with the faculty members".

With regard to school ethos, all of the students said that if there was a school ethos, they were not made aware of it and it was not made known to them on any occasion. According to the students, no ethos of excellence in science is felt. Most of them do not think that the school learning environment is very supportive toward academically outstanding students altogether and that the school is not encouraging students to achieve high scientific standards. A male student (A 22) said:

"I have been top student for two years now. Still I don't think the school promoted me in any special way because of it. Certainly it did not award me financially with any kind of scholarship".

Faculty members' views with regard to school advice and mentoring processes

The faculty members were asked to refer in their interviews to what is formally available for the students by school as careers advice or mentoring support and whether or not they thought that men and women students are being treated differently at medical school with regard to career advice and mentoring processes.
With regard to career advice, several faculty members report that formal availability of career’s fairs, special talks and some written information are available to students. Other faculty members said that careers advice at medical school was mostly informal, highly personal and given only to those who seek advice on individual bases from certain faculty members, with whom they have special relations.

When asked if women needed any special career advice or information at medical school, half of the faculty members, both male and female faculty members, thought that women need special career advice at medical school. The faculty members thought that women’s career was more affected by family life than men’s career. Few faculty members said that women “can’t have the cake and eat it” according to their words, and should be told that married life does not go well together with some of the medical careers. A pre-clinical male faculty member (FM 1) said:

“I think, on the whole, women are more affected than men in their speciality choice by a problem of combining a career with a family and I don’t think women realize it at this stage. I think that women need advice on specialities that are compatible with domestic responsibilities”.

Another male clinical faculty member (FM 6) went a step further in this way of thinking by saying:
"I think that women should be told that some medical specialities are not a suitable career for women. On the whole I think that women are not career minded and put family responsibilities above their medical career".

The other half of faculty members thought that women did not need any special advice at medical school. The types of reasons they gave to support it are as follows:

1. Women should be treated the same way as men. Men too have problems in achieving career goals.
2. Female students are well informed and are very realistic what they can achieve considering the constraints for women career.
3. Special advice for women narrows the options for female students.

Clinical faculty members are more concerned than non-clinicians about the need of more information on the opportunities and prospects regarding the different specialities. They stressed that speciality choice should be made as early as possible. A male clinical faculty member (FM 5) said:

"I think that students should make their speciality choice as early as possible because there is very little latitude to change directions later".

Clinical faculty members also think that guidance should be given to medical students what is involved in training for the various specialities and what are the
duties entailed with the jobs so that they would be realistic with regard to future plans. A female clinical faculty member (FM 7) said:

"Students should be warned that certain specialities are almost not worth the efforts of trying to get into them. It is very important that the medical school will stress the fact that students should know that some specialities are not as glamorous as it is made to believe and the conditions of service are rather poor. When I was a student there was no one to advise me. My own experience is that one of the main problems in achieving career plans are the competition and the blocked bottlenecks in trying to achieve more senior posts in hospital and I try to pass this message to my students".

With regard to mentoring processes, the faculty members relate it to the fact that when student undergo their clinical rotations in small groups (clerkships), they are provided with tutors for small groups who are supposed to coach students with their personal organizational problems as well as their professional personal growth and awareness of values and priorities. Faculty members hold the opinion that the best suited mentors for students should not be themselves or other experienced teachers but the young residents who are about five years ahead of the students and know the current difficulties with regard to career opportunities. The clinical faculty members report that hospital wards’ heads, normally appoint residents for the task of being tutors for the students at the clerkships. All of the faculty members denied any possibilities for disadvantages of women with regard to mentoring because of their gender and dismissed the fact that most tutors are men as totally irrelevant.
A summary of the different points of views on school advice, ethos, priorities and mentoring relations

The case study provides a chance to look at gender issues from various points of view such as male students, female students, the points of views of various groups of faculty members (male/female clinician/non-clinician) and school’s study programme of school “A” (old/new). The following table (table 5.6) sums up the various views and provides a possibility for contrasting preferences and other issues regarding advice, school ethos, school’s culture and mentoring. The possible contrasts in preferences that are compared are:

- Innovative student centred methods (MI) in contrast to traditional teacher centred methods (MT).
- Ambulatory teaching (AT) in contrast to mainly hospital based teaching in the clinical training (HT)
- Early patient-contact (PC) in contrast to late clinical exposure after first three years with only theoretical studies (LC).

The following table also compares between possible problems as seen from the point of view of the deferent sources. The problems are:

- Lack of self-study skills resulted from inadequate teaching methods (SS).
- Overload of factual knowledge (FS).
- General gender blind culture (GI)
- Insufficient advice for future career and stereotypical career preparation (IP).
- Insufficient mentoring or role models and support for students (IM).
- A lack of school ethos (ET).

**Table 5.6**
The different sources of perspectives on curriculum preferences and school experiences’ problems

<table>
<thead>
<tr>
<th>Source of perspective</th>
<th>Descriptive</th>
<th>Preferences</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>Male</td>
<td>MI</td>
<td>FS, IP, IM, ET</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>MT</td>
<td>GI, IP, IM, ET</td>
</tr>
<tr>
<td>Bs Faculty members</td>
<td>Male</td>
<td>MT</td>
<td>SS</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>MI</td>
<td>SS</td>
</tr>
<tr>
<td>Clinician Faculty</td>
<td>Male</td>
<td>MT</td>
<td>SS, IP</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>MI</td>
<td>SS, IP</td>
</tr>
<tr>
<td>School study</td>
<td>Old</td>
<td>MT, HT, LC</td>
<td>SS, FS</td>
</tr>
<tr>
<td>programme</td>
<td>New</td>
<td>MI, AT, PC</td>
<td></td>
</tr>
</tbody>
</table>

Note. Preferences: MI=innovative student centred methods, MT=traditional teacher centred methods, AT=ambulatory teaching, HT=mainly hospital based teaching, PC=early patient contact
Problems: SS=lack of self-study skills, FS= overload of factual knowledge, GI= gender blind culture, IP=insufficient advice and career preparation
IM=insufficient mentoring and role-models, ET=no school ethos

The comparison (table 5.6) shows that students’ preferences are not compatible with either faculty members’ preferences or the new school policy, which claims to be student centred. As well, problems as seen from the point of view of the students are not given an answer by the school new study programme, especially the problem of lack of students’ advice, role models for women students and mentoring experiences for both men and women.
Gender discrimination and sexual harassment during the medical training

Documentary analysis of the official policy of the university with regard to gender discrimination and harassment

Documentary analysis of the prospectus of student information shed light on what is the official policy at school “A” with regard to gender discrimination and harassment. The 2000/2001 edition of the “Yedion” is referring to gender issues in the following ways

1) As from the 1999/2000’s edition this prospectus includes, in the section of the general regulation of the university, separated and detailed chapter titled “sexual harassment”. The sexual harassment regulations including a detailed definition of sexual harassment and regulations how to file complaints based on violation of these regulations. The definition of sexual harassment at university, according to its official policy, is that sexual harassment is a legally actionable form of gender discrimination. It includes both the legal aspects of sexual harassment and the aspect of authority use:

i) “Quid pro quo” which is the bargaining form of sexual harassment and means that academic consequences are explicitly or implicitly tied with students’ compliance with or rejection of unwanted sexual demands.
ii) Hostile environment harassment. This form of harassment is frequently harder to define and may include any environment charged with sexual language, gestures and innuendo.

iii) The use of authority to emphasize the sexuality or sexual identity of a student in a manner, which prevents or impairs students’ full enjoyment of educational benefits, climate or opportunities.

2) According to the official regulations of the university, as from the academic year of 1999/2000, among the other reasons (illness or mandatory reserved army service) for granting special examination dates, birth giving and maternity leave for female students only are added as justified reasons. The maternity leave is given for three weeks.

3) Maternity leave for three weeks is an accepted special reason for leave during the required year of internship (Seventh year of the medical school).

Medical students perceptions regarding the definition and occurrence of sexual harassment

Based on the questionnaire data, not all students define gender and sexual harassment the same way and there is disagreement as to what are the behaviours, actions or other manifestations of sexual harassment. To clarify and triangulate the survey data, these issues were raised in the interviews conducted with the students in the case study. The students were asked if they have
encountered any bias at medical school and specifically any sexual harassment. They were also asked what is their own definition of sexual harassment.

The data from the interviews confirmed the survey data with regard to occurrence of sexual harassment. Six out of the ten students in the sample said that during their studies they have neither personally experienced sexual harassment nor have they heard of any sexual harassment directed toward their colleagues. Six students testify that sexual harassment is totally non-existing during medical training. The majority of them (four out of six) are women. The only student who clearly testified that he had witnessed sexual harassments against women during medical training was a man. The other woman student and two men students who did not deny the existence of sexual harassment were much more ambiguous.

The interview data was important to clarify the students’ perceptions with regard to the definition of sexual harassment. According to the survey, sexist remarks were very current phenomena during the medical training, yet students seldom agreed that there were any sexual harassments. The interviews with the students confirm that chauvinism and sexists’ remarks are neither considered by some of the students, both male and female, as a manifestation of gender harassment nor as discriminatory acts against women only. Furthermore, students, both men and women, see sexism as a rather accepted culture of behaviour in Israel. According to some of the interviewed women, they do not find sexism too hard to endure. They even compared hospital life with the atmosphere experienced by
them when they served the mandatory army service. For example, one female student (A 28) said:

"You have to understand that when I have served in the army, I was one of only few female soldiers at the army base. The atmosphere there was very chauvinistic. So, by now, I am very immune to sexist remarks and for me it is not terrible to endure it. I imagine that many women in Israel, who serve in the army, are used to such behaviour. Maybe not all of the women see it that way, but, I am sure, some do"

The students offered a wide range of definitions to sexual harassment. One male student (A 27) defined sexual harassment as "sexist advancement toward a person including a threat of preventing him/her full educational benefits". He said he never witnessed such behaviour at school. Another female interviewee (A 30) had a much more inclusive definition for sexual harassment:

"I believe that any rude behaviour or activity that discriminate, hurt or has other impact on a person because of his gender can be viewed as harassment. I think it also includes the use of authority to emphasize the sexual identity of a person"

Although her definition included a wide range of discriminatory acts, this student too reported that she had never felt any signs of it. She also said that she never felt any discrimination or any intended bias against women at medical school. She said that she did not witness any sign of discrimination toward men either at school and that the claim that male faculty members tend to favour
female students and give female students better grades was untrue. On the other hand, a male student (A50) who defined sexual harassment in a similar way said that the phenomenon of sexual harassment of women is very prevalent. Other students are referring to the use of power and authority, included in this students’ definition of sexual harassment. A common complaint was that both men and women felt hesitated to complain of improper behaviours. One male student (A 22) explained:

"You can't always protest on rude behaviour of the clinical staff at the hospital. After all, you are dependent on them for good grades"

Students’ views on general student abuse in medical school

The interviewed students seemed to be more ready to report the more general discrimination acts and biases against students than on sexual harassment. Six students, three of them male and three female, reported on discriminatory acts toward students. The three female students said that discrimination against women was prevalent at medical school and reported incidents defined by them as gender discrimination. As an example for gender discrimination against female students at medical school, one student (A 28) described an incident, which she defined as “clearly discriminatory in a legal sense”. She was referring to an incident that had happened to two of her female friends from the same class:
"I have heard that after the clinical rotation in the orthopaedic hospital ward, the ward head said to them that it was a waste of time for him to let them take the mandatory clinical examination in orthopaedic. The reason he gave was that he would never let female residents into his ward and therefore women students should not be obliged to be tested on this subject."

This student said that gender discrimination against women is very prevalent in medical school and the main reason for agreeing to be interviewed for this research. Yet, she was quite sure that this particular incident was later settled.

Another female student (A 33) gave another example for gender discrimination in a form of not providing women with equal educational opportunities. She reported of an incident that the surgery ward’s head asked specifically for a male student to be present at a surgery and not a female student.

The third female student (A 35), who complained on discrimination, reported of a general hostile atmosphere, sarcasm and envy against women:

"There is some kind of anger, envy and unsupportive attitudes toward female medical students as well as toward female faculty members. Both my fellow male students and male faculty members are hostile toward women in medicine. There is a general sarcasm and mistrust of women’s skills and abilities. I have been witness to an incident hearing slander remarks from male students on a very successful female faculty member."
She came to lecture us and the male students said she had succeeded only because she slept with one of the senior medical staff.

Out of the three male students who reported on discrimination, two said that sexist remarks should be considered as bias against all students and not as sexual harassment because it is offensive to men as well. One male student (A22) said that he does not think that sexist slurs are against women in particular:

"Sexist jokes, rude and unpleasant behaviours of faculty members were prevalent at the clinical phase of the our studies. Some faculty members created a very hostile learning environment in the ward. But they were upsetting and humiliating toward male and female students alike. I have heard heads of hospital wards talking dirty and saying sexist jokes, and I can say that this is a rather common way of talking at the hospital's wards but those remarks were hurting and annoyed me as a man as well and not only my female colleagues."

On the other hand, this student gave an example of bias against female students, which was raised by others as well. He said that what women students suffer most from was that they were disregarded, ignored, or not taken seriously enough as professionals by both faculty members and patients at the hospital wards. He told that he was often a witness during doctor hospital calls on patients. when a female doctor came as a teacher together with a mixed group of both male and female students to see a patient but the patient answered back to the male students only. Yet, he said he did not regard such behaviour as
discrimination against women. Other students too were complaining about the hostile environment that students face while at their clinical phase. A male student (A 13) gave examples of mistreatment of students at the clinical phase toward men and women alike:

“It depends on the tutor at the clinical setting. I have experienced some clinical staff that were very rude and insulting toward students and discriminate against men students as well as women”

Men students also complained of other gender discrimination directed toward men students by male faculty members. Two of the male students confirmed the complaints raised in the survey data that the teaching male staff at the hospital were at times more academically lenient to women students and that women students were let off lightly by male staff and gets higher grades then men. The third of the male student who complained about discrimination (A 27) said:

“Some of the male doctors at our last clerkship were softer with my female friends. They didn’t shout at them and humiliate them as they did on us and they provided them with better feedback and gave them higher grades”.

Summary of the experiences of student abuse reported by students

Although not always agreeing in terminology, the picture arise from the above evidences is a substantial degree of agreement, regardless of students’ gender, about the prevalence of mistreatment toward medical students in general and toward women medical students in particular during the schooling years. Another general finding is that many students tend to overlook it.

Students reported different kinds of mistreatments, which range from gender insensitivity to publicly belittlement and humiliation and sexual harassment although no form of direct exchange of sexual favours for grades or other awards, was reported. The mistreatments reported by the students in this section either happened to them personally or they heard about it. Their reports of different mistreatments could be categorized into six types of biases toward students:

1. General gender blindness and insensitivity including mismatch in learning styles and preferences.
2. Providing unequal and inappropriate clinical educational experiences including insufficient clinical feedback and inequality in educational tasks during clinical rotations.
3. Disrespect, belittlement or humiliation – from faculty members, colleagues and patients and negative perceptions of women’s abilities based on gender.
4. Verbal abuse such as rude language, general unpleasant behaviours and acts including unwanted physical contact.
5. Offensive sexist slurs and jokes or other remarks creating hostile environment toward women

6. Gender and sexual harassment

**GRAPH 5.2**
*Frequencies of all the reports of six different types of mistreatments at medical school as reported by students, by gender (n=33 reports)*

All of the reported incidents (n=33) of any mistreatment by students were divided into six categories. The above graph (graph 5.2) describes the frequencies of students’ reports of these six categories of mistreatment according to the student’s gender. As can be seen from the above graph, contrary to what might be expected, women students perceived less biases in most areas than did men and are less sensitive to it. Nineteen of the reported incidents of mistreatment were reported by men in comparison with fourteen mistreatments, reported by women. Nevertheless, women were found to be more sensitive to bias because of differential treatment with regard to clinical
educational experiences and clinical feedbacks and report a feeling of being excluded from certain specialities as well as general blindness to gender issues at school. It should be noted that men feel as sensitive as women to the wide definition of sexual harassment, which includes sexist remarks based on gender.

*Faculty members’ views with regard to gender discrimination and harassment*

The faculty members were encouraged to speak about possible biases against students and whether they think medical students suffer from discrimination and harassment. They were also asked to consider the impact of these biases on speciality choices. None of the interviewed faculty members agreed that there was any problem of discrimination against women at medical school, let alone harassment. Some of the male faculty members were quite annoyed at raising the issue at all. A faculty member (FM 1) said:

"I am quite positive that we treat all our students alike. May be some female students are over sensitive and see discrimination in every remark where there is none but, from our side, it cannot be regarded as gender discrimination. One should not exaggerate with gender discrimination issue the way they do in the U.S."

Other male faculty member (FM 6) was not so harsh. He recognized the prominence of the issue and the possible relation between gender discrimination and future speciality choice:
"The over sensitivity of female medical students to gender discrimination and harassment is justified because exposure of medical students to gender discrimination or sexual harassment could influence future career choice."

Gender differences in perceptions of gender effect on future career opportunities

Gender differences in future career opportunities according to the interviews with the medical students

The question whether or not there is a gender differences in future career plans was asked in the survey. The case study provided more opportunity to explore gender effect on the students’ future career and to evaluate whether career opportunities are different because of gender discrimination or because of individual choices.

In the interviews, students were asked to evaluate, based on their school experience whether or not their career choices in the future would be affected by their gender and in what way gender affected career opportunities. More than half of the interviewed students think that their gender is not bound to affect their personal career plans but that it is affecting career opportunities in general. The following table (table 5.7) sums up the view of the interviewed students on the affect of gender on women’s opportunities.
### Table 5.7

*Medical Students Views on the Effect of Gender on Women's future career (n=10)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Effect</th>
<th>General effect of gender on speciality choice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A 13</td>
<td>No</td>
<td>No general effect. No difference in abilities and no discrimination.</td>
</tr>
<tr>
<td>A 22</td>
<td>No</td>
<td>No general effect. No difference in abilities.</td>
</tr>
<tr>
<td>A 27</td>
<td>Yes</td>
<td>General effect because of women self choice and not because of discrimination.</td>
</tr>
<tr>
<td>A 42</td>
<td>Yes</td>
<td>General effect because of women self choice and not of discrimination.</td>
</tr>
<tr>
<td>A 50</td>
<td>Yes</td>
<td>General effect because of social stereotypes and discrimination against women.</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A 28</td>
<td>No</td>
<td>General effect because of some discrimination against women in work organizations.</td>
</tr>
<tr>
<td>A 30</td>
<td>No</td>
<td>No general effect. No discrimination.</td>
</tr>
<tr>
<td>A 33</td>
<td>No</td>
<td>General effect according to personal inclination. No discrimination.</td>
</tr>
<tr>
<td>A 35</td>
<td>No</td>
<td>General effect according to personal inclination. No discrimination.</td>
</tr>
<tr>
<td>A 49</td>
<td>Yes</td>
<td>General effect because of self-choice. No discrimination</td>
</tr>
</tbody>
</table>

Note. Effect: No= gender does not affect future opportunities for women in medicine, Yes= Gender has an affect on future opportunities for women in medicine

As can be seen in the table 5.7, six of the students do not think that gender will affect women opportunities. Yet, the majority of men think that there is such an effect on women's career in comparison with only a single woman student.
Among the three male students, who indicated in their interviews a relationship between future career opportunities and gender, two students said it is due to personal choice. One male student said there was gender discrimination against women at school and related this discrimination to the future opportunities of women. This male student (A 50) said:

"There is a connection between the student' gender and medical specialities. This connection is still based on social stereotypes at school that women are suitable to certain careers only but not to other. It is not based on skills, abilities and inclinations. Currently, there is a tendency of change in this regard and more women are entering new specialities. But women are still very much under-represented in a number of medical disciplines and in the higher positions of medicine. Women still suffer very much from institutional and social discrimination and are not given the same career opportunities as men and the current situation is far from reaching gender equality."

Another female student (A 28) agreed with him that there was discriminatory policy against women. Yet, she said it is not the school fault and discrimination came from "above" (ministry of health, doctors' union and similar medical work organizations blocks the way of women to many positions). She also believed her own career choices would not be affected by her gender because of her professional capabilities.
Views of the faculty members on the question of gender differences in future career opportunities

The faculty members were asked in their interviews to evaluate if there are any gender differences with regard to future career opportunities. Unfortunately, most of the faculty members either avoided answering this question directly or said it was not a relevant question for them and they didn’t know enough about it.

Judging by the three faculty members who did reply, faculty members do not think that women are limited with regard to future career by any organizational factors. They think that the reason women don’t climb the hospital ladder is mainly women’s self-choice.

Sex role segregation among clinical faculty members

Documentary analysis served as additional source of data on career opportunities for women and shed more light on the question of gender segregation in the different medical professions. The prospectus of student information about the school “A” includes the current lists of clinical faculty members at school “A” of medicine who practice medicine as doctors at hospital wards.
Table 5.8

Frequencies of female clinical faculty members at school “A” in the different clinical teaching departments by descending order

<table>
<thead>
<tr>
<th>Teaching department</th>
<th>N All faculty members</th>
<th>N Female faculty members</th>
<th>% Of women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiology</td>
<td>53</td>
<td>31</td>
<td>58.49</td>
</tr>
<tr>
<td>Haematology</td>
<td>34</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td>Dermatology</td>
<td>18</td>
<td>8</td>
<td>44.44</td>
</tr>
<tr>
<td>Family medicine</td>
<td>77</td>
<td>34</td>
<td>44.16</td>
</tr>
<tr>
<td>Neurology</td>
<td>42</td>
<td>16</td>
<td>38.1</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>73</td>
<td>23</td>
<td>31.51</td>
</tr>
<tr>
<td>Psychiatric</td>
<td>99</td>
<td>26</td>
<td>26.26</td>
</tr>
<tr>
<td>Paediatric</td>
<td>178</td>
<td>40</td>
<td>22.47</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>343</td>
<td>74</td>
<td>21.57</td>
</tr>
<tr>
<td>Anaesthetics</td>
<td>50</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Oncology</td>
<td>29</td>
<td>4</td>
<td>13.79</td>
</tr>
<tr>
<td>Surgery</td>
<td>208</td>
<td>11</td>
<td>5.29</td>
</tr>
<tr>
<td>Gynaecology</td>
<td>118</td>
<td>6</td>
<td>5.08</td>
</tr>
<tr>
<td>Orthopaedic</td>
<td>78</td>
<td>2</td>
<td>2.56</td>
</tr>
<tr>
<td>Otolaryngology</td>
<td>30</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>1430</td>
<td>299</td>
<td>20.91</td>
</tr>
</tbody>
</table>

As can be seen in the above table (table 5.8), the presence of women faculty members among faculty members of some medical disciplines like surgery, orthopaedic, gynaecology or otolaryngology is nearly zero. In other disciplines, though, such as family medicine, radiology, haematology or dermatology, the percentage of women among the faculty members is very substantial. The gender division of faculty members in the various disciplines may not be an accurate picture of the general national gender division in those specialities but can serve as a good estimation to it. The relevancy of the above data to the question of gender differences in future career and its influence on the students’ perceptions of their future career opportunities cannot be ignored.
Implications of the gender issues for educational managers

Medical students’ views on the implications of gender differences and equality issues for educational managers

The interviewed students were asked if they think that there was a problem of gender equality at the medical school and whether or not the medical school has to change and why. Furthermore, whether or not they believed that gender differences and equality problems existed, they were asked to give an example for a possible educational application such as curriculum changes or a change in the assessment methods. The following table (table 5.9) sums up the students' attitudes toward those questions.

As can be seen in table 5.9, the majority of the students don’t think that there are gender equality problems at the medical school. Three students, two female students and one male student, hold a conviction that once the female students are freely accepted into medical school, equality has been already achieved and there is no further problems or need of change. Other students thought that this question was completely irrelevant. One male student (A 13) protested:

“In what world are you living in?!? Time has changed and women are already the majority among medical students so there is no further problem of gender equality”
### Table 5.9

Students' views on educational management application (n=10)

<table>
<thead>
<tr>
<th>No.</th>
<th>Sex</th>
<th>Equality</th>
<th>Curriculum Change</th>
<th>Other Applications</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A13</td>
<td>M</td>
<td>N</td>
<td>Not needed</td>
<td>Not needed</td>
<td>Women students are &gt; 50%</td>
</tr>
<tr>
<td>A22</td>
<td>M</td>
<td>N</td>
<td>Not needed</td>
<td>Not needed</td>
<td></td>
</tr>
<tr>
<td>A27</td>
<td>M</td>
<td>N</td>
<td>Not needed</td>
<td>Not needed</td>
<td></td>
</tr>
<tr>
<td>A28</td>
<td>F</td>
<td>Y</td>
<td>Not needed</td>
<td>Needed</td>
<td>A need of General health organizations changes</td>
</tr>
<tr>
<td>A30</td>
<td>F</td>
<td>N</td>
<td>Not needed</td>
<td>Not needed</td>
<td>Women are now freely accepted into medical school</td>
</tr>
<tr>
<td>A33</td>
<td>F</td>
<td>Y</td>
<td>Needed</td>
<td>Needed</td>
<td>More mentoring and guidance</td>
</tr>
<tr>
<td>A35</td>
<td>F</td>
<td>Y</td>
<td>Not needed</td>
<td>Not needed</td>
<td>A care should be taken to avoid feminism</td>
</tr>
<tr>
<td>A42</td>
<td>M</td>
<td>N</td>
<td>Not needed</td>
<td>Needed</td>
<td>More advice is needed</td>
</tr>
<tr>
<td>A49</td>
<td>F</td>
<td>N</td>
<td>Not needed</td>
<td>Not needed</td>
<td>Women students are &gt; 50%</td>
</tr>
<tr>
<td>A50</td>
<td>M</td>
<td>Y</td>
<td>Not needed</td>
<td>Needed</td>
<td>More advice and total educational changes of the society are needed</td>
</tr>
</tbody>
</table>

Note. Sex: M=male, F=female, Equality: Y=I think there is gender equality issue in the medical school, N= I do not think there is gender equality issue

Furthermore, the vast majority of the students don’t think that gender equality problems have any curricular implications to the educational managers of the medical school, even if there are still some problems of gender equality during the medical education. All the students but one do not want any change in the medical school curriculum. They did not think that a change in the medical
school curriculum could contribute to gender equality. They added that even if they were dissatisfied with their medical training, it was not due to the curriculum.

The main implication for educational managers according to the four students who do want other changes at school is the lack of career guidance and career advice for student during the medical education. Two students thought that the career advice given to them at medical school left a lot to be desired. They said that one of the most needed improvements was better careers guidance given to medical students. One of the interviewed students, a man (A 42) said:

"The medical schools don't pay a lot of attention to some medical professions. A good example for such professions is Epidemiology. The managers of the school should better realize that this area could become one of the most important areas in medicine in the future. It is advisable to plan ahead men-power and not let the choice of career be decided by chance or by ignorance. Another problem is that the faculty members of the medical school don't really get to know the abilities and aptitudes of their students and therefore are not able to advise them effectively."

This student also raised the issue of the obvious connection between students' advice and the deficiencies of the assessment system used in the medical schools. Nevertheless, students did not complain that the assessment methods at medical school could not truly assess their professional skills.
With regard to other needed changes during medical education, one female student (A 33) mentioned mentoring relations:

"I believe that what is really needed at medical school is more mentoring activities. I would prefer as an assessor and career adviser a mentor that knows how to assess students."

Faculty members' views on the implications of gender differences for educational managers

**Table 5.10**

*Faculty Members' Views on the Implication of Gender Differences for the Educational Managers*

<table>
<thead>
<tr>
<th>No</th>
<th>Sex</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM1</td>
<td>M</td>
<td>Introduction of psychosocial elements into the curriculum would be Beneficial to all.</td>
</tr>
<tr>
<td>FM2</td>
<td>M</td>
<td>Some changes are needed in the curriculum but care should be given not to dilute the scientific basis of the medical curriculum.</td>
</tr>
<tr>
<td>FM3</td>
<td>F</td>
<td>Women should be encouraged and advised to enter a wider variety of medical specialities.</td>
</tr>
<tr>
<td>FM4</td>
<td>M</td>
<td>The current curriculum gives good basis for all medical students for their medical career. No special encouragement should be given to women.</td>
</tr>
<tr>
<td>FM5</td>
<td>M</td>
<td>Women and men students should be given the same advices.</td>
</tr>
<tr>
<td>FM6</td>
<td>M</td>
<td>No changes in the curriculum are needed.</td>
</tr>
<tr>
<td>FM7</td>
<td>F</td>
<td>Special encouragement of women into leadership positions can improve the current medical practice into more patients oriented.</td>
</tr>
</tbody>
</table>
The interviews with the faculty members were carried out in order to deepen the understanding with regard to the ninth research question of this study: “what are the implications of the above areas to the educational managers of the medical schools?” The faculty members were asked to carefully consider what would be the implications of any gender differences relating to educational issues among the medical students for their school policy and practice.

To all faculty members, regardless of their position at the school, this question appeared a risky question and their answers were hesitating and carefully considered. The above table (table 5.10) sums up the answers of the faculty members. Male faculty members disagree that women’s entrance into the profession should be accompanied with any curricular or other change. One clinician men faculty member (FM 6) said that any changes in the medical education due to the entrance of women into the profession, could be a sign that the medical professionalism is diluted. Women faculty members, on the other hand, were calling for a change in guiding of women and were more tolerant toward a change. The pre-clinician women faculty member (FM 3) complained of stereotypical guidance:

"Women are encouraged to go into Paediatrics and Family Medicine only and men into the more prestigious and highly paid specialities like Neurology, Surgery or Cardiology. I think women are as able as men and should be actively encouraged to go into those specialities as well”

The clinician woman faculty member (FM 7) said:
Medical education is oriented to science and diseases and neglects prevention, environmental and social concerns which are equally important aspects of medicine. Doctors trust only what they had learned and experienced in their clinical practice and discount other knowledge such as their patients' knowledge. This should be changed to the benefit of better medical practice. Women practice medicine differently: they talk more with their patients, positive talk. The entrance of women into the different medical professions can change medicine to the better. Now men are still commanding the resources and the authority and control the medical education policy. When women will be in the position to change medical training programmes they can develop better patient's protocol.

Summary

The case study findings (appendices 6-7), were supposed to deepen the understanding of gender differences in three areas: 1) personal career motivations, 2) school experiences including discrimination and 3) future career predictions. In addition, the case-study findings were supposed to answer what could be the implications of the above areas to educational managers.

The case study included interviews with faculty members. The most substantial findings of these interviews are with regard to implications of gender differences to the educational managers of medical school "A". It is also important to
compare the views of the students with the views of faculty members. The case study also provided triangulation of the data with school official documents.

The findings indicated that men and women medical students are more alike then different. The faculty members’ reports of the students’ considerations and perceptions contradict in some ways the students’ reports and there were indications that faculty members are blind to gender differences.

The main findings with regard to career motivation are that family and private life’s consideration are important to men as well as women. One gender differences is that women tend to avoid competitive specialities and men look for quality of life in their future career. There are some differences in learning styles, which are regretfully ignored by the school policy and faculty members. Faculty members also ignore women’s lack in mentoring relations. More women than men students complained of not being given equal educational opportunities in clinical setting. Men complained more than women of overall abuse of students. Faculty members deny any discrimination. Women tend to think that their gender do not influence their personal career choices nor to believe that discrimination exists, yet documentary analysis indicates such tendencies.

There is an agreement between most students and few faculty members (mainly women) that one of the most practical implications of gender equality problems to educational managers is the need of career advice and mentoring relations.
Chapter 6: Analysis

Introduction

The structure of this chapter

This chapter looks at the findings of this study in light of the existing theory and findings on gender issues in the general educational arena, gender issues in higher education and in particular gender issues in medical education. The discussion is arranged according to the research questions of this study, and divided into four main areas. First the meaning of the findings are highlighted and discussed. Then an attempt is made to integrate and link these findings with the existing literature. The findings of this research are examined in light of their implications for the current theory on gender equality issues, compared and contrasted with other empirical studies, which examine the same or similar questions. The discussion relates the design of the research methodology to the answers obtained for the research questions.

In the concluding section of this chapter, an attempt is made to examine the extent to which the research findings can answer the nine research questions. A predictive model of student satisfaction with the medical school experience and learning environment is offered, based on the findings. Conclusions of this research, the limitations of this study as well as recommendations for further research will be discussed in chapter seven.
Research questions

The findings are arranged according to the nine research questions:

1. Are there any gender differences in self-esteem?
2. Are there any gender differences in career goals and motivation for leadership?
3. Are there any gender differences in perceptions of combining a medical career with a family life?
4. Are there any gender differences with regard to learning styles, curricular contents preferences and preferred evaluation systems?
5. Are there any gender differences in the preparation and advice given to medical students?
6. Are there any gender differences with regard to the mentoring processes experienced during the medical education?
7. Are there any gender differences in the nature and extent of gender discrimination, harassment or other student abuses at medical school?
8. Are there gender differences in the effect of gender on speciality choices and career opportunities in medicine?
9. What are the implications for educational managers of the issues raised in the previous questions?
Implications of the findings of this study to educational managers of medical schools in light of the theoretical background

The relevant theories of gender inequality in the work and educational world were summarised by dividing them into three sets. The first type of theories includes theories that "blame" women for their inferior situation. Part of this claim is that personal characteristics of women like the lack of qualities to succeed in the world of work and lack of self-esteem or motivation for leadership are the main causes for women not reaching leadership positions. Another part of this claim is gender differences in attitudes toward combining a work with a family life. One of the possible important applications of such theories is that in order to improve women's status, a change in women's personalities and values is needed. The second set of theories places most of the blame for women's position in society on situational circumstances like organizational constraints. The possible implications of such theories are that in order to improve women's status some changes are needed in the work organization. The third kind of theories blames society, which is perceived as androcentric and patriarchal.

The theoretical background accepted for this research was mainly based on feminist views. Feminist theories blame organizational and social constraints for women's inferior position. The more radical feminist movements claim that the operation of patriarchy in our society is the main reason for women's status and its aim is to change the social structure (Lorber, 1994, p. 4). Liberal feminism aims to change women's status but accepts the existing social framework of the
world. Liberal feminism is grounded in the concepts of individual civil rights and emphasizes women's equal access to domains where men dominate, via small changes. It puts the emphasis on removing only organisational barriers that prevent women from attaining their full potential (Bensimon and Marshall, 1997, p. 3). This is more doable kind of feminism, which may be appropriate for educational managers.

This study operates within the parameter of the equal opportunities approach and the research questions relate to the institutional context rather than society as a whole. It is acknowledged that it is difficult to change the outside organizational context as well as the social background but understanding of gender differences among medical students, can have implications for possible changes within the medical schools to further equal opportunities for women.

On the whole, the study findings were expected and easily related to current theories. Thus, the findings could be integrated with other empirical studies examining the same or similar questions, mainly those from the US, UK and Israel. Yet, some of the findings were not supported by the existing literature. The explanations of such findings could be based on some cultural differences between Israel and other countries. The Israeli context of this study is unique in some ways and may help to understand the deviation from the current theories. An additional way of understanding the findings that are not consistent with other studies' findings is the uniqueness of the context of this study with regard to time. As with other current social questions, the question of perceptions of gender equality depends largely on the specific time when the study is
conducted. It is understandable that some of the findings in studies on gender issues would be a revelation and surprise, given changing circumstances.

**Gender differences in person-centred values of the medical students**

**Gender differences concerning self-esteem and motivation for leadership**

Significant findings concerning gender differences in self-esteem and motivation for leadership

According to the survey, both men and women medical students have rather high self-esteem and motivation for leadership and there is no evidence of gender difference. Nevertheless, this evidence raises the question as to whether self-reported survey may produce a certain extent of ambivalence as a result of the mechanism of "social desirability". Women students might think it is expected of medical students to have motivation for leadership. Furthermore, this evidence was not validated in the case study. Faculty members, interviewed in the case study, tend to report, based on their acquaintance with the students, that women medical students may have less motivation for leadership in comparison with men and are more likely to avoid leadership positions. Yet such views might be the result of a stereotypical misconception of the faculty members.

**Implications of these findings for the current theory regarding self-esteem of the medical students**

Some old but very rooted theories claim that innate gender difference in personal characteristics is the root of the gender differences in career status (Lorber, 1994,
p. 203; Radford, 1998, p. 180; Rosner, 1990, p. 120; Cooper and Lewis 1995, p. 29; Shakeshaft, 1989, p. 51; Hall, 1997a, p. 313). It has often been claimed that women have a lower level of self-confidence and self-esteem than men, which prevents them from applying for jobs unless they are highly qualified to do those jobs (Ouston, 1993, p.9; Shakeshaft 1993, p. 51). Many researchers note that women question their competence for leadership. Yet other researchers believe that it is now less of a problem (Gupton and Slick, 1996, p. x).

The findings of this research indicated no such gender differences in self-esteem among medical students. Israeli women medical students reported that they were just as confident and had as much motivation for leadership as the men students. The contradiction between the literature and this finding could be explained by the fact that women medical students are not typical of other women with regard to self-esteem and motivation for leadership (Hojat et al, 1999, p. 343). Women medical students represent a selected group of women from the point of view of career motivation. From the start these women wanted to choose a profession, perceived as male profession, which demanded high motivation and dedication.

In a national survey on gender differences among medical students in the U.S, it was concluded that men and women medical students are probably much more alike than they are different because they are a highly select group and due to socialisation during their medical education (Bickel and Ruffin, 1995, p. 558). This finding is also confirmed by the findings of a US study of the psychological profiles of medical students which found no difference in personal qualities that may be related to leadership, such as self-esteem and external locus of control (Hojat et al, 1999, p. 346).
Discrepancy between the literature and the findings regarding gender differences in motivation for leadership

The findings of this research could not support the rather prevalent claim in the literature that women medical students rated themselves lower than men in leadership potential (Leonard and Ellsbury, 1996, p. 503; Clack and Head, 1999, p. 103).

Researchers argue that men and women are different with regard to their motivation and aspiration at work and that women rarely have motivation for leadership positions (Shakeshaft, 1993, p. 51; Van Eck et al, 1996, p. 407; Wilson, 1997, p. 214). According to the specific literature on medical education there is general agreement about the disadvantages of women in career goal achievement. It is found that medical students in the UK agree that female students have a disadvantage with regard to the possibility of achieving their career goals (Field and Lennox, 1996, p. 251). It was also found that the increase in the number of women entering into the medical profession did not increase their career prospects or guarantee them equal access to leadership positions (Weilepp, 1992, p. 739). Furthermore, according to the medical education literature only very few women reach top management positions (Notzer and Brown, 1995a, p. 450; Trowell, 1999, p. 1; Nonnemaker, 2000, p. 399). The combination of being an excellent researcher, clinician and teacher at the same time becomes harder and harder to achieve by women who also have more competing needs from family, and for most of the junior clinical faculty, are caught between conflicting demands (AAMC project, 2000, p. 7). In addition, it is claimed that young female doctors are less likely to value being in leadership positions compared with men (Buckley et al, 2000, p. 286).
A possible explanation for the discrepancy between the findings of this research that both men and women medical students have high self-esteem and motivation for leadership and most of the literature, might be the particular nature of the methodology. Using a self-administered questionnaire may be faulty as a reliable and valid scale for personal qualities. Thus, it can be argued that women medical students regard self-esteem and motivation for leadership as preferred qualities for medicine and therefore show a high level of those qualities. A self-administered questionnaire gives them the opportunity to fit their replies to their social desires. The fact that Israeli women medical students try to conform to the norms, is evident in other findings as well.

Another possible explanation can be that Israeli women are indeed unique in the sense that they feel more equal to men because of social circumstances in Israel such as the myths relating to the emancipated Israeli women in the past and the mandatory army service for women (Moore, 1999, p. 50). Furthermore, although other research regarding personality attributes is rather recent, it is possible that the new generation of Israeli women students, and medical students in particular, perceive themselves to be more similar to men with regard to self-esteem and motivation for leadership than former generations.

Yet, the faculty members perceive that there are some gender differences in motivation for leadership. Thus, alternative explanation is that women medical students in this research have high self-esteem but are just not yet fully aware of
the difficulties to achieve leadership positions that may lie ahead when they graduate.

**Gender differences in career goals**

Findings concerning gender differences in career goals

Two main findings in this study are relevant with regard to career goals. First, this study made a distinction between two types of career goals mentioned by the students. One type is ‘altruistic’ goals such as the wish to help people and have intellectual challenge in their work. The other type is ‘materialistic’ goals such as gaining high status, prestige, power and materialistic rewards in addition to challenging work. According to this study more women students than men tended to wish to help people or work with people and more men than women tended to look for materialistic gains.

Unpredictably, those who gave a higher weight to ‘materialistic’ reasons for being a doctor, such as wishing to achieve leadership positions in medicine and national recognition, did not have a statistically significant higher average score in self-esteem and motivation for leadership. This contrasts the logical expectation to find a relationship between higher motivation for leadership and materialistic goals.
Implications of the findings for the current theory regarding gender differences in career goals

The finding regarding the two types of career goals of this research are confirmed by the literature. According to the literature, women have different career goals and motivations than men. Men tend to emphasize status and independence while women emphasize connectedness and caring for others (Cooper and Lewis 1995, p. 29; Morgan et al, 2001, p. 304). This finding is consistent with general psychological sex role theories (Morgan et al, 2001, p. 304) and is confirmed by a national American survey among medical students, which found that women medical students tended to be more interested than men in patient education, community service, and the psychological aspects of patient care and gave a greater weight to altruistic reasons when choosing their career. Men in that study tended to place more emphasis on high-income prospects, decision-making under pressure and employing manual dexterity skills and gave a higher weight to economic status (Bickel and Ruffin, 1995, p. 556). Women students were also found to be more sensitive to the emotions of other people, more reflective about their own reactions to situations and better able to deal with ambiguous situations than men (Ibid, p. 557). Another more recent survey conducted in the US found that female faculty members are more likely than their male counterparts to value patient care and local recognition, and less likely to value being in leadership positions (Buckley et al, 2000, p.286). Results of an earlier study among paediatric faculty members at teaching centres in the US were similar (Kaplan et al, 1996, p. 1288). Women students and residents were more interested in patient care and less interested in research than their male
Gender differences in perceptions of combining career and family responsibilities

An overview of the significant findings of gender differences in perceptions on combining career and family obligations

Several findings are relevant to students’ perceptions on combining career and family responsibilities:

1. Men and women, in the survey, express the same level of consideration toward family and personal life. According to the survey, both women and men Israeli medical students perceive the medical career as a very demanding one and think that many personal sacrifices are needed to succeed in the fulfilment of their career goals. Also, all the students in the case study said that they would consider family constraints in choosing their career.

2. Some gender differences were found, with regard to perceived barriers to career achievement. Most female medical students were of the opinion that the main barriers to career would be family commitments. Most male students, on the other hand, considered that organizational factors connected with health provision institutions would be the most prominent barriers affecting their career achievement.
3. It was found that the wish to combine career with family considerations is stronger among those students who think that family is a barrier to career goals, most of them women, in comparison with the view among those students who thought that organizational constraints or self-choice tend to block the students' way to achieve leadership careers. This finding can serve as a validation of the survey's scale for measuring family and work relations in this study.

4. The wish to combine career with family responsibilities was also found to be significantly stronger among married students in comparison with single students. Married students said in their interviews that they involved their spouses in their career considerations and relied on their help in achieving their motivations. This is consistent with evidence of no difference between the attitudes of men and women toward work or home.

5. Age was also found to be a significant factor for stronger commitment to family responsibilities.

Implication of the findings of this study for the current theory regarding barriers to career plans and perceptions of combining career and family life

The findings of this study are confirmed by findings in several other studies. According to the findings, women think that family barriers are the main barriers to their career in contrast to men who think that mainly organizational constraints impede their achievement. Nevertheless, men students also realize the role-conflict of family responsibilities and their career's demands and say that family constraints are factors that should be considered when trying to achieve their career goals. Other studies among medical students found that both
genders had a strong commitment toward work and family (Bickel and Ruffin, 1995, p. 556; Fields and Lennox, 1996, p. 252; Hartung and Rogers, 2000, p. 270). It is also found in the general literature that there is a tendency among educated men in Europe to take a more even share of the child-care responsibilities (Vinnicombe and Sturges, 1995, p. 8).

Discrepancy between the literature and the findings regarding combining career and family responsibilities

According to other medical education literature, family responsibilities seem to have a devastating effect only on the status of women. In many studies, women doctors were found to experience a conflict between family and their medical career. The fact that they had children interfered with their promotion and career progress (Levinson et al, 1989, p. 1515; Carr et al, 1998, p. 535). Only for women doctors, marriage and child rearing are strongly associated with changing career plans, reductions in hours worked and lower earnings (Bryant et al, 1991, p.484; Tesch et al, 1992, p. 542; Allen, 1994, p. 20; Trowell, 1999, p. 2). As well, previous Israeli data indicates that women doctors will minimise role conflict by lowering their professional sights and choose primary care specialties rather than hospital specialities in order to enjoy shorter more predictable hours (Shye, 1991, p. 1177). According to studies in general literature, more women than men face barriers as a result of being married and having a family. The findings in many other studies suggest that the responsibility of homemaking is very often still mainly women’s business (Grogan, 1996, p. 134). Married women have been experiencing difficulty in working long hours (Davidson and Cooper 1992, p. 140; Ouston, 1993, p. 11)
and are discriminated against because some work organizations regard married female employers as a risk (Vinnicombe and Sturges, 1995, p.7). Career women in Europe were found to be more likely to be single in comparison with non-career women (Ouston, 1993, p. 10; Vinnicombe and Sturges, 1995, p.7; Coleman 1998, p.32). Family commitment and career conflicts are still found to be mainly women’s problem (Lewis and Cooper, 1999, p. 382-383).

This seems to contradict the findings of this study that both genders agree that they would need to consider family responsibilities when choosing their career. This contradiction can be explained by the fact that the above studies deal with working women and doctors and not with students, more than half of whom are still unmarried, as is the case in this study. It is therefore no surprise that gender differences are found in this study in perceptions of future barriers. The married students better understand role-conflict. Yet, women students in this study are realistic enough to perceive that family responsibilities are likely to block their way in achieving their career goals whereas men students thought of different kind of barriers.

The fact that men medical students are also concerned about combining career with family commitments may also be explained by a new trend that corresponds with general social development over recent years (Morgan et al, 2001, p. 303), hence its prominence in this study. In the concluding statement of a study of medical students in the UK it was commented that having time for family is an important consideration for men and women alike in choosing a career in medicine. The concluding statement is:
"...Both male and female (medical students) saw having time for their families as an important consideration in choosing a career. This is no longer simply a 'female' issue but reflects changing expectations of what are acceptable working practices in medical careers. These changing expectations demand consideration in discussions about future recruitment, deployment and retention of medical staff" (Fields and Lennox, 1996, p. 252).

Gender differences in school-related experiences.

Gender differences in learning styles, curricular contents and preferred assessment system

Findings concerning gender differences in pedagogical issues

The findings concerning gender differences in pedagogical issues such as learning styles, curricular contents preferences and preferred assessment system are based to a certain extent on the different perspective on such issues. Based on the open question in the survey's questionnaire, more women than men were satisfied with the traditional medical education curriculum, which consists of a substantial number of lectures especially during the pre-clinical period while men students showed a higher tendency than women to prefer innovative teaching methods such as problem based learning. Yet, based on the closed question part of the questionnaire, both groups of students were likely to report that group study was their preferred learning method, agree that communication
skills should be emphasised by the assessment methods of the medical school and hold the opinion that psychosocial components should be emphasised in the medical curriculum. In the case study it was found that the new official “A” medical school policy ignores the possibility of gender difference with regard to pedagogical issues and assumes that the innovations are beneficial to all students. Faculty members of school “A” also tend to ignore any possibility of gender differences among their students with regard to curriculum preferences. Yet, in contrast to the school’s official policy, most of the faculty members think that lectures are by far the preferred method of learning among all Israeli medical students and that all students try to avoid self learning and reading on their own from books or other written materials. The data from the interviews with the students confirmed the findings of the open part of the survey that female students were more satisfied than male students with the existing traditional curriculum of their school. An additional point is that with regard to self-study, both groups of students report that self-learning often fails for them. The fact that most of the reading material is in English, a second language in Israel, is an important factor in that regard.

Implications of the findings with regard to gender differences in pedagogical issues

According to the open-question part of the questionnaire, more women than men prefer the traditional curriculum and more men than women prefer innovations. The finding that women are likely to be content with the existing medical curriculum was confirmed in the students’ interview data. One other current research found similar evidence. In a study from the United Arab Emirates
University it was found that female medical students preferred teacher-oriented, well-organized practical learning while male students preferred to working in groups and learning from each other (Paul et al, 1994, p. 184).

Nevertheless, the findings of this study of gender differences in pedagogical preferences are quite surprising in light of most of the literature and do not support the current theory regarding gender differences.

Discrepancy between the literature and the findings regarding gender differences in pedagogical issues

Based on the literature, a hypothesis could be developed that in comparison with men, women tend more to be ‘innovators’. There is plenty of evidence that women students feel more comfortable with new teaching methods, think they will do better if assessment methods are changed and look for new content in the curriculum ((Hite and McDonald, 1995, p. 10). There is a growing body of literature in higher education that claims gender differences in pedagogy and preferred learning styles of men and women. The predominant pedagogy at universities, based mainly on lectures and debates in a competitive environment, was found not to be compatible with the learning styles of many female students (Massin, 1992, p. 31; Hite and McDonald, 1995, p. 6; Morley, 1999, p. 101). It was claimed that the methods of teaching that are more suitable for women include experiential learning or problem solving in an atmosphere of praise and encouragement (Hite and McDonald, 1995, p. 6-7). Researchers point out that the learning environment in higher education discriminates against women. There are findings of gender differences in classroom interaction, informal

Gender differences in curricular preferences are confirmed by the educational medical literature. According to the medical literature, female students are claimed to have a higher preference for people-directed content and are presumed to be better in independent learning skills such as problem solving, analysis and conceptualisation, applying knowledge to unfamiliar situations (Peplow, 1998, p. 353). Women gave greater weight than men to medical ethics and humanities emphasis (Bickel and Ruffin, 1995, p. 553). As well, it was found that men medical students tend to be more satisfied with the learning environment at their school (Robins et al, 1997, p. 137). Reforms in medical careers and the introduction of new psychosocial contents are considered to be beneficial to women medical students (Hoffman et al, 1999, p. 1054).

In this study, no gender differences are found with regard to curriculum preferences. Furthermore, there is even an indication that women prefer the traditional medical undergraduate education curriculum while men students tend to prefer new teaching methods and are supporters of innovative teaching methods. The case study provided the perspectives of other sources, which contradict students’ perceptions. Both faculty members and school official policy do not see any gender difference with regard to curriculum preferences. Yet the school policy states that all students prefer innovations like self-learning
and problem based learning, while faculty members believe that students prefer
the traditional teaching methods of lectures.

There are three possible ways to explain the contradictions. It may be that the
contradictions between the main body of literature and the survey findings
indicate some problem of validity of the questionnaire with regard to that
particular issue. The attempt to validate the data from the open and closed parts
of the questionnaire by finding logical significant differences in the preferences
in the curriculum, between the “innovators” and the “traditional” groups of
medical students, failed. It may also be that women medical students in Israel
tend to identify themselves as “traditional” in pedagogical issues because they
are raised in a rather patriarchal society (Moore, 1999, p. 50). They may tend to
point out their success and satisfaction in getting along in the traditional
management of the medical schools and not complaint too much about their
experience at the medical schools. This is in contrast to American women
medical students raised in a society that is more open to feminism. It should also
be pointed out that the findings from a study carried out at the United Arab
Emirates (Paul et al, 1994, p. 184), another traditional society, support the
findings of this study that women tend to be more traditionalists than men with
regard to curriculum preferences. In other areas as well it is concluded that
women medical student are conformists. They also tend to attribute success and
failure to their qualities rather than to social and organizational circumstances
and try to avoid being labelled as “feminist”. Another explanation is that there
are differences with regard to the nature of lectures in Israeli universities and in
the medical schools in particular. A lecture in Israeli medical schools, which are
much smaller schools, in comparison with medical schools in the US, is not as formal and teacher oriented as in other western countries. The student's testimony in the case study that the typical lecture format of school “A” is informal and it is possible to ask questions during lectures supports such an explanation. It is likely that the faculty members in medical schools “A” who hold the perception that lectures are by far the most preferable methods of teaching among all Israeli medical students know the reality as it is. They claim that all students try to avoid self-learning and reading as much as possible. The fact that the written material is mostly in English, a second language for the students may support such a conclusion.

*Gender differences in school preparation and advice*

**Significant findings concerning gender differences in school preparation and advice**

According to the closed part of the questionnaire, women think that men get a better quality of career preparation at school by being more welcomed in some areas of medicine such as surgery. Men students disagree and the difference in agreement of that statement between the sexes is statistically significant. In the open questions students of both genders state that the career preparation and advice given at the school is very limited. The case study interview data confirms that medical students think preparation and advice at medical school “A” is lacking in quality, being only informal and inconsistent. Many of the interviewed students said that they did not get any career advice. All of them reported that they did not feel intentions to direct them to any specific medical
profession. Nevertheless, several female students reported on occasions in which they heard from faculty members in surgery that women were not suited for surgery. Faculty members supported students’ evidence on the lack of career advice. Most of the faculty members thought that the students should be provided with more information on the opportunities and prospects regarding the different specialities. Half the faculty members thought that women needed special treatment and career advice at medical school because women’s careers were more affected by family life than men’s. The other half thought that women should not be treated different than men on any account. The interviews with the faculty members, gave room to suspect some hidden sex role prejudices among several faculty members. The prejudices included thinking that women should be told that married life does not go well with some medical careers, or being gender blind and thinking that women do not need special preparation to help them with their specific career barriers.

The official school policy, according to published documents of school “A”, declare an ethos of making the medical profession more humane along with excellence in science and fostering gender equality. Yet, all of the interviewed students said that they did not feel that medical school “A” had any ethos with regard to the purpose of the medical education, the future values of the graduate students and the importance of gender equality. Most of the students said that they did not think that the school promoted any excellence in science or encouraged academically successful students.
Implication of the findings of this study for the current theory regarding school advice

School advice and the consequent school influence on speciality choice is a major concern of this research. Difference in preparation and advice based on gender may, on the one hand, be a sign of hidden sex-role stereotypes. On the other hand, women may need extra career preparation and advice to encourage them in such a difficult career path as medicine. In accordance with the complaints of women in this study, there are findings in higher education literature that men students get more attention in class and more informal counselling on social occasions than women (Tidsell, 1993, p. 223; Hite and McDonald, 1995, p. 6). In the medical education literature, it is found that formal student counselling and formal career advice is minimal (Allen, 1994, p. 66; Bickel and Ruffin, 1995, p. 557; Field and Lennox, 1996, p. 251). In all the medical areas, women students are given less attention and encouragement than these given to male students by faculty members (Bickel and Ruffin, 1995, p. 557). One study found that faculty members directed women in stereotypical directions into certain speciality choices by giving them more favourable evaluations in those specialities (Pamies et al, 1992, p. 128). Yet, doctors interviewed about their medical school experience said they were neither influenced nor encouraged by anyone into their speciality choice (Allen, 1988a, p88; 1994, p. 60) and neither were they discouraged from any speciality (Ibid, p. 62).

Overall, the literature calls for more student advice in the medical schools (Allen, 1994, p. 275). This confirms the findings of this study that there is a
need for more personal support and career advice especially to women, in Israeli medical schools. In a study that examined gender differences in attitudes toward the learning-environment at medical schools, men were found to be more satisfied than women medical students with the overall learning environment at their medical school. They also more strongly believed than women that the school encouraged both genders and that education is a high priority for faculty members (Robins et al., 1997, p. 137).

**Discrepancy between the literature and the findings concerning gender differences in school preparation**

School’s advice is an additional issue of discrepancy between the literature and the findings of this study. Students do not report of intentions to direct them into any specific medical profession. Yet, in accordance with the evidence from the literature, it is not unusual for women students to hear remarks from faculty members that women are not suited for surgery (Allen, 1994, p. 70). Interviews with the faculty members indicate a hidden prejudice of the faculty members who ignore gender issues in medical school. No clear official policy of sex role stereotypes is reported but certain findings indicate that in some specialities, in particular surgery, such stereotypes do exist although in other countries gender prejudices are highly prevalent and reported by female medical students and female doctors (Allen, 1994, p. 75; Barnett et al., 1998, p. 180). In light of the literature of the still prevailing sex role prejudice in general and in medicine in particular (Holdstock, 1998, p. 80; Korabic, 1999, p. 16; Foster et al., 2000, p. 657), it is rather surprising that the Israeli students from both genders report that
there are no sex role prejudices within the medical school. In particular it is surprising that women students do not complain about apparent prejudice.

Again, this contradiction may be attributed to the already apparent conformism of Israeli women medical students to adapt to the existing culture and not to criticize the medical school and may be again attributed to the Israeli cultural context of students’ experiences in serving in the army, where women had to endure very patriarchal and chauvinistic culture.

**Gender differences in mentoring experiences**

An overview of the research findings regarding gender differences in mentoring experiences

No gender difference was detected with regard to mentoring relations during the medical education. According to the survey findings, all Israeli medical students view rather positively the support and mentoring systems in their medical schools regardless of their school and gender. According to the students’ reports in the case study, most of the students do not enjoy official mentoring relations at the medical school. Yet, faculty members believe that the provision of tutors, when students undergo their clinical rotations divided into small groups, should be equivalent to official mentoring as those tutors are supposed to coach students about their personal and organizational problems as well as their professional personal growth and awareness of values and priorities. The most suitable mentors for students, according to the faculty members, should be young residents who know the current difficulties with regard to career opportunities. Their gender has no relevance to their capacity as mentors.
There are gender differences, though, with regard to the qualities of the ideal mentor. According to the students' views at the survey, an ideal mentor or role model should be a person who has either 'political' abilities which means he/she is skillful, knowledgeable in his/her medical area and has political power or should have 'psychosocial' abilities such as being kind, sympathetic, open-minded and have a good rapport with students and patients as well. Male students are more likely to wish to have a mentor with 'political' abilities whereas women are more likely to wish to have a person with 'psychosocial' abilities as an ideal mentor.

Mentoring relations and positive influence and encouragement of the students in medical schools in Israel seem to be based on personal relations between the mentors and students and not on formal programmes. It was noted that students disagree that mentoring relations should be based on same-gender relations. Although young clinical faculty members nominated by ward heads to be the tutors of student during their clinical rotation are supposed to fulfil the function of mentors for the students, the students do not see them as role-models except in the cases when the tutor's personality was outstanding.

Implications of the findings of this study with regard to the current theory on gender differences in mentoring relations

The general literature recognizes the importance of mentoring for the development of individuals. The research literature stresses that although mentoring enhances the development for both genders (Bush et al, 1996, p.121),
it is especially important for women. Women often lack a sense of how people advance in their organisations and mentors become invaluable in explaining the real essentials about advancement and hidden power structures (Hill and Ragland, 1995, p. 76). The educational medical literature confirms that mentoring and networks are essential for the advancement of women in medicine (Mann, 1992, p. 314; Benz et al, 1998, p. 461; Bligh, 1999, p. 2).

Nevertheless, it is questionable as to whether women enjoy the same level of support from mentoring relations during their medical training, as men do. Several surveys found no gender difference in getting support from mentoring activities or similar academic support systems (Tesch et al, 1995, p. 1024; Bellini et al, 2001, p. 664). Other articles suggest that inadequate mentoring during medical training is still a problem mainly for women (Foster et al, 2000, p. 657).

In the present survey it was found that Israeli medical students view rather positively the support and mentoring systems in their medical schools regardless of their gender. Yet, most of the interviewed students said that they did not have formal mentoring at the medical school. The students did not perceive the tutors, appointed to accompany them during the clinical rotations, as mentors. Probably the explanation for that contradiction is that not all the students have succeeded in forming mentoring relations with some of those tutors and getting the support and encouragement from them, needed to develop their careers. It may be due to the fact that the tutors’ personalities are not what students wish to have as mentors as they don’t possess the required personality qualities for being
mentors such as political abilities (being knowledgably and politically able), or psychosocial abilities (being sympathetic and understanding towards patients and students and being open with the students). It is quite probable that tutors are chosen based on considerations other than whether or not they have the needed personality qualities for mentoring students.

In accordance with findings in the literature (Haapanen et al., 1996, p. 794; Palepu et al., 1998, p. 320), it was found in this study that male and female students differed with regard to the ideal qualities of mentors. The fact that there are gender differences with regard to the ideal qualities of mentors is relevant to efforts of educational managers to develop official mentoring relations between tutors and students during the medical education process and supply suitable training for mentors.

Discrepancy between the literature and the findings concerning gender differences in mentoring experiences

The importance of the issue of same-sex mentoring is a matter of some discrepancy between the literature and the findings of this study. According to the educational management literature, one of the important factors in the mentoring relationship for women is the gender of the mentor. It was found that gender differences could make mentoring relationships awkward or too risky and threatening to male mentors (Hill and Ragland, 1995, p. 77; Hurley and Fagenson-Eland, 1996, p. 42). Women mentoring other women can establish opportunities to pass along the heritage of women’s struggle but also also create a negative effect (Hill and Ragland, 1995, p. 78). Nevertheless, according to the
medical education literature, it is uncertain if there exists a preference for same
gender mentors. In one study women medical students preferred a woman for a
mentor (Haapanen et al., 1996, p. 794). Yet another study found that women
reported that it was not important for them to have a mentor of the same gender
(Tesch et al., 1995, p. 320).

Although it is puzzling to note that students of both genders disagree that
mentoring relations should be based on same-gender relations, this finding is
confirmed by another study (Tesch et al., 1995, p. 320). This may indicate the
realism about the paucity of women faculty members in senior positions who
could act as mentors (Palepu et al., 1998, p. 321). Israeli students of both
genders rated the importance of having same gender mentors as very low. In
light of the fact that women are still the minority among medical faculty
members in medical schools in Israel and abroad, the preference for a same sex
mentor might be a problem for women medical students. Yet, women medical
students in Israel, who proved to be overall uncritical, also tended not to
complain about the shortage of same sex mentoring relation.

Gender differences in the extent of general abuse of students

An overview of the research findings with regard to general abuse of students

Medical students in Israel suffer from different manifestations of abuse. The
survey findings indicated that students made a distinction between sexual
harassment and general student bias. With regard to sexual harassment, there is
evidence that medical students in Israel have to accept living with a high
prevalence of sexist remarks during their medical education and that sexist slurs created a hostile learning environment for women and hurt their feelings. Male students also commented that sexist slurs disturb them. Yet, according to the findings, all Israeli students tend not to consider those sexist remarks as one of the manifestations of sexual harassment. In the closed part of the questionnaire most of the students agree that hearing sexist slurs is not an exceptional phenomenon at medical school but the vast majority of them disagree that sexual harassment is prevalent at medical school. In the open questions of the questionnaire, it is also clear that most of the students think that sexist remarks should not be included within the definition of sexual harassment.

The case-study provided an opportunity to deepen the knowledge about sexual harassment in medical education by looking at the question from the points of view of three data resources: official policy of the medical school, the views of faculty members and the views of students. The definition in the university regulations about sexual harassment includes the form of explicitly and implicitly tying academic consequences with students’ compliance with or rejection of unwanted sexual demands, as well as sexual language, gestures and behaviour. It also includes the aspect of abuse of authority, which prevents or impairs students’ full enjoyment of educational benefits, climate or opportunities. The inclusion, only in the last three years, of sexual harassment regulations within the general regulations of the university indicates that the official policy of the university recognizes problems of sexual harassment within the university. In contrast, the interviewed faculty members of medical school “A” denied its existence. So did the majority of the interviewed students.
Women students are the majority among those who deny the existence of sexual harassment during medical training. In fact, only one student, a male, openly reported witnessing sexual harassment against women during medical training. The students' interviews confirm the survey finding that sexist remarks are not considered by the students as manifestations of gender harassment and are not discriminatory acts only against women. Furthermore, students saw sexism as accepted normal behaviour and compared it to the behaviour they became used to during their compulsory military service.

With regard to other abuses, students in the survey were reluctant to answer the open question of the questionnaire about general discrimination and bias against students. The response rate to the particular question about incidents of actual discrimination experienced by students themselves or their colleagues was much lower than the response rate for any other open question of the questionnaire as only 101 students (84 per cent) responded. Among those students who responded, the majority said they had not experienced discrimination. Significantly more men than women reported discriminatory acts against them during their medical training. Furthermore, even those women who responded affirmatively about feeling discrimination commented that gender discrimination was not an official policy of the medical school.

Overall, students revealed a variety of discriminatory incidents that ranged from differential treatment or denied educational opportunities to women, to declarations of several wards' heads that they would not consider accepting women into their wards as residents because of their gender. Both men and
women medical students reported that surgeons are the most chauvinistic among faculty members and most cases of discrimination were related to experiences on the surgical rotations.

The majority of the interviewed students in the case study acknowledged the existence of discrimination against students but reported that discrimination may occur against men as well. Men felt that they were discriminated by receiving lower grades from several male faculty members, in comparison with women. Men students also reported that women students suffer more than men from being disregarded, ignored, or not taken seriously enough as professionals by both faculty members and patients at the hospital wards. Yet, these incidents, according to the men students, should not be considered discrimination. The women interviews provided evidence of different and severe manifestations of discriminatory acts. They reported that certain ward heads refuse to examine women medical students, telling them that they have no chance to be accepted as residents after school. Women also reported of envy, a hostile environment and that they were not given the same equal educational opportunities as men at surgical clerkships.

Implications of the findings of this study with regard to the theory of gender discrimination and harassment

Sexual harassment as defined by the law in most western countries is both hostile attitudes without initiation of sexual cooperation ('hostile environment' in legal term) and ‘quid pro quo’ meaning behaviour that explicitly or implicitly links sexual cooperation to related outcomes (Bowes and Tata, 1999, p. 265).
Although it also applies to men, women, according to the evidence, experience much more than men unwanted sexual attention and hostile environment (Cooper and Lewis 1995, p. 30; Gale and Cartright 1995, p. 6; Vinnicombe and Sturges 1995, p.11). Sexual harassment of medical students by superiors has recently been extensively reported in the medical education research literature and found to be very prevalent (Nora, 1996, p. s118; Jacobs et al, 2000, p. 468; White, 2000b, p. 983; Baldwin and Daugherty, 2001, p. S6).

Gender discrimination against women is still a very prevalent phenomenon in our world (Cooper and Lewis 1995, p. 30; Gelfand et al, 1995, p. 164; Vinnicombe and Sturges 1995, p.11; Bowes and Tata, 1999, p. 280; MIT, 1999, p.11). In the general literature researches have noted a high prevalence of sexual harassment at schools, which, caused persistent gender discrimination (Bell and Chase, 1994, p. 150). Gender inequities and potential gender bias are often found in the college environment (Connell et al, 1991, p. 24; Gallos, 1993, p. 13; Tidse, 1993, p. 223; Tharenou et al, 1994, p. 928; Hite and McDonald, 1995, p. 9). Different forms of gender bias, including harassment, are supposed to create substantial gender differences in the learning environment. The literature of both general higher education and medical education, testifies that the amount of general gender bias that students are exposed to during their education might have a major influence on their future career. The medical education literature notes a high prevalence of perceived gender bias and sexual harassment among both students and faculty members. Women faculty members report behaviour, actions, policies, procedure or interactions that affect women's work due to disparate treatment or the creation of a hostile or intimidating work
or learning environment (Fried et al, 1996, p. 900; Carr et al, 2000, p. 892).

Studies documented a range of gender bias and discrimination at medical schools including the active influencing of women medical students not to enter certain specialities (Allen, 1988a, p. 14; p. 59; 1994, p. 77; Field and Lennox, 1996, p. 249). The medical education literature also provides evidence that several male students also complain of gender bias against men (Allen, 1994, p. 75; Tinsley, 1998, p. 1130; Elnicki et al, 1999, p. s100).

Students of both genders in this study complained of denied learning opportunities while training, poor evaluations and malicious gossip which may prove how harmful all of these behaviours are to the learning environment of students. Discriminatory remarks that women are not good enough for some medical specialities are also common occurrences.

An additional issue, raised by the literature with regard to abuse, is whether or not a distinction should be made between sexual harassment and other discrimination. A recent empirical article on discrimination and sexual harassment during medical training (Baldwin and Daugherty, 2001, p. s6) made a clear distinction between these concepts. Discrimination according to that article includes favouritism, denied learning opportunities during training, poor evaluations and malicious gossip. True sexual harassment, on the other hand, according to that article is specifically sexual in intent and form. It consists of three elements: it is unwanted; it is gender related and it occurs within the context of a power imbalance where one person has real or perceived power over another. The article found that this distinction is empirically based on the
factor analysis of the survey data of 3577 American medical students and interns. The article confirms the findings of the present study. Based on the survey findings, the present research made a similar distinction between two factors as two distinct kinds of abuses against medical students: the factor of general discrimination and the factor of gender harassment. This distinction was also empirically proved based on the factor analysis of the closed questionnaire results. Nevertheless, it should be noted that according to the case study findings it appeared that some Israeli students do not necessarily make such a distinction. Thus, sexist remarks, which are part of the literature theoretical definition of sexual harassment, are considered by all Israeli students as unavoidable common abusive behaviours at the medical school but not as sexual harassment directed against women. One female student (A 28) testified how most women were quite immune to sexual slurs

“I have served in the army, ...the atmosphere there was very chauvinistic. So, by now, I am very immune to sexist remarks and for me it is not terrible to endure it...”

A distinction between discrimination and sexual harassment might lead to the wrong attitude that the very prevalent general discrimination should be taken more lightly than the less prevalent sexual harassment. It is dangerous to regard gender discrimination as part of an acceptable culture, or as subjective feelings that are not necessarily an indication of a true or illegal discrimination against women. The problem of bias against women students is that women are not given equal opportunities at school and such attitudes connected with women’s
educational experience at school or hospital can serve as a barrier to fulfilling their professional goals. Complaints of gender bias are sometimes discounted and attributed to oversensitivity, weakness of character, rationalisation for poor performance, or feminism (Tinsley, 1998, p. 1130). Therefore it may be expected that medical students would not fully be open about such an issue and this may explain why, in these circumstances, the majority of students said they have not experienced gender discrimination.

The conclusion of this study is that a more general factor, which includes both discrimination and harassment, should be constructed. Such an overall factor of both gender discrimination and harassment may be defined as abuse against students or general gender harassment. It is proper to define it all as gender harassment because all of these behaviours and attitudes, which can be overlooked by some, can harass and damage the school experience of the students.

**Discrepancy between the literature and the findings concerning gender differences in general abuse of students**

According to the medical education literature, the occurrence of sexual harassment at medical schools is very high. Furthermore, significantly more women than men claim that they encounter sexual harassment during medical school (Cook et al., 1996, p. 1664; White, 2000b, p. 984). This raises arguments of whether the perceived behaviours are sexual or gender harassment or whether women interpret those behaviours differently (White, 2000b, p. 984). In contrast to the literature, in the survey findings of this study, students reported very little
sexual harassment. Yet they openly reported that they had to accept a high level of sexist remarks during their medical education, which was very disturbing.

The first issue that calls for an explanation is how it is possible that most students say that there is no sexual harassment at medical school while acknowledging the high level of sexism in the school environment. The obvious explanation is that the medical students' definition of sexual harassment is not the same as the legal definition of sexual harassment and that students do not include sexist remarks as an aspect of sexual harassment. Several students testified quite clearly that they did not regard sexist remarks as sexual harassment. Yet, it may also be the case that the difference in the severity of the wording of statements regarding sexual harassment and sexist remarks in the survey's questionnaire contributed to this contradiction. Furthermore, sexual harassment is a very sensitive issue and the survey may be an unsuitable research design to fully understand such a phenomenon (Wilson, 2000, p. 184).

A case study research design such as the one in the second phase of this research may be more suitable for answering questions about gender harassment and discrimination (White, 2000b, p. 985). The evidence from the case study reveals that while the official policy of the university acknowledges the possibility of sexual harassment at the university, both medical faculty members and students deny its existence. Only one male student clearly testified about sexual harassment against women during medical training. The interviews with the students further explained how it is possible for the students to acknowledge the prevalence of sexual remarks yet report no incidents of sexual harassment. All students testified that they saw sexism as accepted behaviour similar to
behaviour they experienced during their compulsory military service. It may be unique to Israel that women are toughened during their mandatory military service to endure a high level of a patriarchal culture. Acceptance of male chauvinism at the medical school is not unique to medical students in Israel and is confirmed by the literature from other countries as well. A survey carried out in Australia found that female medical students tended to ignore sexual harassment incidents because ‘nothing could be done about them’ (White, 2000b, p. 984). Nevertheless, in Australia women more than men, reported of observing sexual harassment incidents (Ibid, p. 983), while, in the present study hardly any women complained of sexual harassment.

With regard to discrimination, one of the surprising findings of this research is that women students perceive less bias in medical school. This contradicts the majority of articles on this subject both in the general literature and in the medical education literature (Allen, 1988a, p. 14; p. 59; 1994, p. 77; Field and Lennox, 1996, p. 249; Bowes and Tata, 1999, p. 280). Women were the majority among those who denied gender discrimination against women. Furthermore, even those who responded affirmatively about discrimination commented that gender discrimination was not the official policy of the medical school.

Case study interviews provide a better opportunity than a questionnaire to express feelings of discrimination (Wilson, 2000, p. 184). Indeed, the interviews with the students proved the existence of clearly discriminatory acts against women. The male students reported that women students suffer from being disregarded, ignored and not taken seriously as professionals by both faculty
members and patients in the hospital wards; yet, they did not consider this as
discrimination. Female students claimed that although several of the faculty
members, especially in surgery, are bluntly discriminatory against women, there
is no evidence of official discriminatory policy in the medical school. The
discriminations were described as anecdotal problems connected with individual
faculty members who are "living in the past".

Although other explanations are possible, the most probable explanation is that
women students are just not frank and open about their experiences of being
subject to discrimination such as being belittled, disrespected, ignored, not
getting equal educational opportunities and being subject to sexual harassment.
It may be that women feel that complaining about being discriminated against
might indicate weakness of some sort and that they are not tough as they are
supposed to be. It is clear that the women are afraid of being identified as
feminists, symbolised in their perceptions of those who blame the circumstances
for not succeeding rather than their lack of ability. Women medical students in
Israel tend to minimize complaints about their medical undergraduate education
even when it is obviously very offensive. On top of it, it is speculated that
women in Israel may be toughened during their army service to endure a high
level of chauvinism and are thus relatively able endure such behaviour. This
refers to the wider cultural context of this study. The literature confirms that the
Israeli social and cultural context is slightly different from that in other
countries. Despite myths relating to emancipated Israeli women, such as taking
an equal part in the founding of Israel and serving in the army, studies have
shown that Israeli society is very androcentric. Most Israelis hold traditional
values regarding the gender division of labour, including stereotypes that it is the women’s job to take care of the family’s children and elders. Israeli women have to endure a patriarchal society more than in other western countries (Moore, 1999, p. 50).

It is claimed in the literature that women medical students may have a high level of social desire to conform to the tough male image of doctors (Allen, 1988a, p. 94; Allen, 1994, p. 77). The general research on women in management has identified a phenomenon of ‘denial of personal discrimination’ among ‘token’ women in management in general. Such behaviour is one of the ways women learn to cope with discrimination. This phenomenon indicates that individual women tend to see themselves as being justly treated even though they recognize that women in general are not (Colwill, 1995b, p. 55). These women are termed ‘individualists’ (Matthews, 1995, p.259).

Based on the findings of this study, it is also a relevant question to ask if gender discrimination only means discrimination against women. This angle of gender discrimination is not well illuminated in the literature survey. Both general literature and the specific medical education literature, rarely report of gender discrimination against men. In this study, men complained of gender discrimination directed specially toward men students by male faculty members such as being given lower grades in comparison with women. Yet, the nature of the men’s complaints about inequality is very different from the nature of women’s complaints. One male student complained that women medical students enjoy “corrective discrimination” by male faculty members, adding this
was true especially with the “good looking women”. In a very thorough follow-up study of doctors in the UK, it was found that over the years there were more complaints from men on gender differences in the treatment at medical school while a decrease was noted in the amount of complaints of gender differences made by women. One fifth of the men, saying that women receive different treatment, said it is because women received preferential treatment from senior medical school staff. This study quoted the words of a male doctor who testified that the reason for this preference was that those women students “slept with senior medical staff” and that “pretty girls were favoured by the consultant” according to his words (Allen, 1994, p. 75). The similarity of these words to the words of the Israeli male medical student quoted above indicates that the issue is a serious phenomenon worthy of discussion and not just an anecdotal finding. While women students complain of favouritism toward men based on male seeming superiority in professional qualities, men’s complaints suggest that women succeed using their sexuality in a male dominated environment. It is suggested that although there is ongoing development that works in favour of equality of women medical students, some of the deep-rooted discrimination against women has not changed. It is very disturbing to find that even among the younger generation of men students themselves, it is possible to find those who claim that women use sex in order to succeed. Recent studies found that the presence of women in top positions violates the norm of men’s higher status and superiority. The culture of male superiority is very resistant to change so even the young generation believe that women cannot succeed based on their own capability (Powell, 2000, p. 242).
Gender differences in future career opportunities, career choices and gender segregation by speciality

An overview of the significant findings concerning gender differences in future career opportunities and speciality choices

The survey findings indicated that women students were less determined in choosing their speciality than men. It is found that among the sample of this study, fewer women than men have a specific career plan at this level. Only 57 per cent of the female students responded to the question about their likely career choice in comparison with 68 per cent of the male students. Among those women who had made up their mind, the majority tended to choose internal medicine or surgery and none indicated a desire to choose family medicine as a speciality. The men students also tended to choose internal medicine and surgery but several chose family medicine as well.

In addition, according to the survey findings, most students, by the end of medical school, agree that there are gender differences in career opportunities. No gender or school difference is found with regard to that agreement. According to the open question about future career plans, there is general agreement between the two groups of students that gender has an affect on the students’ career choices in general. Yet, the two groups of students gave different explanations for that phenomenon. According to the female students, the main explanation is socio-cultural stereotypes. Women students say that the gender differences in their career plans are based on stereotypes, sex role
segregation and the belief that men and women should behave according to feminine and masculine images of professions and thus perpetuate existing gender segregation in medical professions. They report that it is expected of women to give their priority to their family and take an active part in raising children while men are not supposed to give family responsibilities the same priority. In comparison with the women, men students gave a higher weight to self-choice with regard to future career plans. They believe that women choose certain careers in order to manage combining career with family life. In fact, it is found that this is not the case.

In contrast to the survey finding, in the case study phase of this study, it was found that, most of the interviewed students did not believe that gender affected future career choices. Nearly all the women students did not think that gender would affect their own career opportunities while the majority of the male students thought that gender might affect women’s careers. One male student said that there was a connection between career opportunities for women and gender discrimination during school education. Another student, a woman, agreed that in general discrimination against women affected their career but said that this discrimination was only in the policy of health-provider organizations and not the medical school’s policy. Based on the students’ interviews, although the students had a rough idea which speciality they were going to choose based on their pre-school motivation, the final decision was made mainly by elimination of the specialities they were not going to choose, based on bad school experiences. Their experiences during the clinical- rotations period, how well they were taught and what they had learned about the
atmosphere in the hospital wards contributed to shaping their career decisions. The faculty members reported that women were not officially limited with regard to future opportunities and the reason that women do not climb the career ladder was women’s self-choice.

The findings of the lists of the clinical faculty members at school “A” shed further light on the presence of gender segregation in the different medical professions. According to those lists, in some medical disciplines like surgery, orthopaedic, gynaecology or otolaryngology there is nearly no representation of women faculty members. Yet, in other disciplines such as family medicine, radiology, haematology or dermatology, the percentage of women faculty members is substantial and can be as high as 58 per cent. It may be that the gender distribution of faculty members in the various disciplines may not be the exact picture of the national sex role segregation in these specialities but it does seem likely that such evidence is an indication of sex-role segregation. The implications of this situation for gender differences in career opportunities are obvious. It is obvious that women cannot expect to find women role models among the surgery faculty members whereas in other specialities like family medicine the chances for women to meet female role models for encouragement and advice is much more likely.
Implications of the findings on gender differences in future career opportunities
and gender segregation by speciality

The literature on higher education graduates stresses that the main problem for
women students is gender difference in career opportunities after graduation
from university. Inequality for women with university degrees is apparent with
regard to career planning, career breaks, as well as sex role segregation, the
contribution of school experiences to sex role segregation, barriers to achieve
career goals and attitudes of women toward feminism and political power.

Gender differences in career planning

The finding of this study that women are less decisive at this level with regard to
career planning is in agreement with the literature. Studies in many areas
conclude that there is a marked difference between men and women regarding
career plans (Adler et al, 1993, p. 29; Hite and McDonald, 1995, p. 8; Gold,
1996 p. 424). Women usually develop career plans as their career progresses
undergraduate education literature about gender differences in career planning
suggests that women are less likely to plan ahead and do not look for
management posts because they think they have fewer opportunities to reach the

Career breaks

In the general literature it is evident that many more women than men take
career breaks, mainly those associated with maternity leave and child-care
(Ouston, 1993 p. 8; Hall, 1996, p.58; Coleman, 1997, p. 131). Such career breaks are harmful for any career (Hall, 1996, p.58) and are particularly harmful for careers in medicine (Bryant et al, 1991, p.484). The literature stresses that, in comparison with other professions, career breaks have become less acceptable in medicine over the years due to the competition for jobs (Allen, 1988b, p. 35; Potee et al, 1999, p. 919). Yet, many more women than men have taken a break during their postgraduate training or practise, especially for parenthood reasons, which practically no men took (Bryant et al, 1991, p. 484). Women doctors are found to be more concerned than men doctors about career structure and work arrangement (Carr et al, 1998, p. 535; Foster et al, 2000, p. 657).

The question of gender differences in planned career breaks is a hypothetical one for the medical students at that level. As students and interns, women are given three weeks maternity leave. No gender differences among the students were found in this study in plans to combine the considerations of both family obligations and career, which may include career breaks as well. It is still very doubtful, though, to conclude that both genders would be ready to take career breaks for parenthood reasons.

Sex-role segregation

One of the main problems for career opportunities for women is the existence of sex role segregations within the medical profession. Gender roles are claimed to be stubbornly resistant to change (Gupton and Slick, 1996, p. XI). The literature on medical education reveals how much gender-based segregation is persistent in medicine. Women receive the message at an early phase in their medical
undergraduate education that only certain specialities are open to them and that they should not expect a built-in support system to fulfil their plans (Showalter, 1999, p.72). According to the literature, it is generally assumed that women prefer different specialities than men, which emphasise the psychosocial aspects of care. They favour greater contact with patients and sharing of responsibility with them and their relatives. It is also suggested that they prefer work in public systems, salaried employment, less involvement in emergency care, home visits, or administrative work (Castro Figueiredo et al, 1997, p. 68).

Sex-role segregation in medicine is evident, in particular, with regard to two medical specialities: surgical and primary care specialities. Surgical specialities are regarded as being very prestigious, highly paid and very demanding in time resources (Jones, 2000, p. 670). Research conducted in many western countries has established that there is a negative correlation between being a woman and choosing surgical specialities (Meir and Engel, 1986, p. 529; Allen, 1996, p. 2; Baxter et al, 1996, p. 376; Falck and Brattebo, 1996, p. 944; Field and Lennox, 1996, p. 251; Lambert et al, 1996, p. 23; Biermann, 1998, p. 709; Jones, 2000, p. 670). Compared with surgery, primary care specialities and especially family medicine are characterised by a high level of patient contact, less prestige, lower monetary rewards, and a less demanding time schedule (Bland et al, 1995, p. 636; Villanueva et al, 1995, p. 263; Elks, 1996, p. 1281). Many studies have found that women might be likely to choose primary care or family medicine as a career (Shye, 1991, p. 1177; Carr et al, 1993, p. 222; Hojat et al, 1995a, p. 308; Bland et al, 1995, p.636; Xu et al, 1995, p. 401; Allen, 1996, p. 2; Kasselbaum et al, 1996, p. 197; Barnhart et al, 1996, p. 294). It is uncertain if

The claim that gender segregation of the medical professions is determined by self-choice is not evident among the sample of Israeli medical students of this study. The same number of women and men declared their intention to choose surgery for their speciality and no women chose family medicine, one of the most prominent primary care specialities. Hence it can be concluded that the career plans of Israeli students at the end of their medical undergraduate education does not follow the gender segregation scheme of women who go into family medicine or paediatrics and not into surgery.

The role of school experiences in promoting gender segregation

The main question for this discussion is whether possible gender differences in future career opportunities are associated only with patriarchal culture of the wider context such as the work-organization climate. The possibility that gender segregation is also influenced by school experiences and not only a result of gender difference in self-choice has major implications for educational managers of medical schools.

Several articles claim that gender segregation is self-choice. It is claimed that women medical students continue to favour career choices, which are mainly “family friendly”, thus leaving little space for challenges to male professional hegemony in medicine (Crompton, 1997, p. 10). The association between the gender differences in students’ school experiences and gender differences in
career plans or speciality choices among medical professions has also been documented in the literature survey. The medical education literature blames the medical undergraduate education in sex-role segregation at work (Bickel and Ruffin, 1995, p. 558; Showalter, 1999, p. 72). A recent article deals with the role of school experiences in promoting gender segregation across specialities (Boulis et al. 2001, p. 65). This article demonstrates that school experiences increase gender segregation and does nothing to prevent the concentration of women in a few, lower income specialities.

The findings of this research contradict the argument that self-choice predetermined future career plans of medical students (Crompton, 1997, p. 10). The findings confirm the conclusion that career choices of medical student are based on medical school and after-school experiences. Medical students reported that they made their speciality choice mainly by elimination of those specialities they were not going to choose due to school experiences. Students stressed that their actual school experiences during the clinical rotation period, how well they were taught and what they got to know of the atmosphere in the ward helped them in making their career decisions.

**Attitudes towards feminism and political power**

Several researchers argue that higher education raises women’s expectations and leads to feminism. A study among medical students in the US found that both genders feel positive about feminism (Hartung and Rogers, 2000, p. 270). Feminist theories recognize the importance of political power and the problematic issue of women and power (Morley, 1999, p. 3). It is very often
It was not always the case that women support feminism (Jacobs, 1996, p. 172). There is a claim that feminism can be an excuse for women and that women justify their failures to succeed by perceiving themselves as being treated differently on the basis of gender. Thus, gender bias, which is most often used to refer to the inequitable treatment of women, may be discounted as over sensitivity and in extremity attributed to feminism (Tinsley, 1998, p. 1130). Those who find it difficult to make it in medicine because of family and social constraints are treated as "whingers" (Maddock and Parkin, 1994, p. 36). There is evidence in the literature that women regard feminism negatively (Schmuck and Schubert, 1995, p. 283). Women try to distance themselves from any association with feminism because they have been accommodated in what remains a culture of male leadership (Grace, 1995, p. 190). One of the four types of women educational managers identified in the context of U.S. educational management is 'individualist': women-managers who disbelieve in gender equity (Matthews, 1995, p. 259). Individualist typed women say they never join women's groups because they do not agree with them (Ibid, p. 260).
The findings of this study, gave the strong impression that Israeli women medical students are against feminism. In the survey it was found that while claiming no discrimination against women, several female students said that feminism is only harmful. They claimed that women could achieve any high position in medicine if they possessed the suitable qualities for it and did not need any encouragement or help in the form of feminist movements. As well, in the case study, one of the women students interviewed said with regard to the implication of gender difference to educational management that care should be taken to avoid feminism.

*Discrepancies between the literature and the findings regarding gender differences in gender influence*

Most of the evidence of this research regarding gender differences in future career opportunities and speciality choice confirm the current theory. Nevertheless, there are two issues of discrepancy between most of the literature and the findings. These concern gender differences in students’ perceptions of gender influence and the main causes for gender segregation.

In the survey part of this research it was found that both genders agreed that gender influences future career in general. In contrast, in the case study, it was found that more than half of the interviewed students do not think that gender is bound to affect career choices. One explanation for the discrepancy between the findings from the survey and the findings of the case study is the possibility of some validity problems of those findings. The probable main explanation for the
contradiction between those two sets of evidence is that the interviewed students are thinking not about the effects of gender on career choices in general terms but on how their gender might affect their own career choice. This differentiation between personal and general effect of gender on career choices was partly confirmed in a UK study asking medical students to consider the effects on their ability to reach their personal career goals. The most common response was that it was irrelevant for them (Field and Lennox, 1996, p. 250) although most students believed it had an effect in general terms (Ibid, p. 249). It is relevant to point out that according to the findings of this research, proportionally the same number of women and men declared their intention to choose surgery for their speciality and only men wanted to go into family medicine. It is also related that men and women students in the survey offer different explanations for the difference in career choice. Men say it is self-choice but women say it is the social expectation. It is probable that female Israeli medical students realize how sex role stereotypes work. They know it is expected of women to give their priority to family responsibilities, although they might have different personal plans.

It has been recorded in the literature that female and male medical students agree that females have fewer possibilities than men to achieve their career goals (Field and Lennox, 1996, p. 251). Furthermore, it was found that the majority of female students feel that their gender would have an effect on their career choice, while the majority of the male students felt their gender did not have any effect on their personal career choice (Ibid, p. 249). Other studies also recorded women’s conviction that it is harder for women to reach the top due to
their gender (Allen, 1988b, p. 35). In the case study of this research it was found that the majority of female students did not think that their gender is bound to affect their career choices. Thus, the discrepancy between the theory and the findings of this research is that according to the evidence of the present research, women also thought gender to be irrelevant to their career choices. It is very hard to explain this discrepancy other than questioning the sincerity or the self-awareness of the interviewed women in this study concerning the influences of gender on their career choice.

Another issue of discrepancy concerns the issue of who is to “blame” for gender segregation. According to the findings of this research, school experiences have a major influence on students’ career choice. Contrary to the suggestion in the medical literature that women receive a message at an early phase of their medical undergraduate education that only certain specialities are open to them (Showalter, 1999, p. 72; Boulis et al., 2001, p. 65), both genders in this study hesitate to directly “blame” the medical school for gender segregation and such a connection can be only hinted at by the data. Men students also thought that it is the self-choice of women to choose certain specialities that can accommodate more easily family care but women thought it had to do with the stereotypes of health work organizations although not stereotypes of the school. There is only the single evidence of a male student, who clearly testify in his response that there is a connection between future career opportunities for women and school experiences. He reported that he was an eyewitness at school to many incidents of gender discrimination against women. Another female student agreed with him that gender is bound to limit women’s career opportunities. She said that
there is, in general, discrimination against women at health providers institutes. Yet, she claimed that what blocks the way of women to the top is not a result of school experience but policy from “above” such as the Ministry of Health, the doctors’ union and similar medical work organizations. Again it is hard to explain this discrepancy other than doubting the self-awareness of most of the interviewed women medical students and claiming again that female Israeli medical students are is a situation similar to token status at school, despite their proportion, denying their obvious discrimination and conform to the basically androcentric social culture of Israel.

Implications of gender differences for educational managers

An overview of the significant findings concerning the implications of gender issues for educational managers

The questions on the opinions of both the faculty members and students on the implications of gender differences for educational managers were explicitly raised in the case study phase in order to gain empirical data on that issue. It is of particularly interest to establish whether or not there are disagreements between faculty members and students on this issue.

Overall, there is general agreement between students and faculty members as to the irrelevancy of gender equality issues within the medical school. Summing up both the attitudes of students and faculty members toward the implications of gender issues to educational managers, there appear to be several reasons that all
of them think alike that there is no need to apply gender equality issues to educational management at the medical school:

1. Students and faculty members think that gender differences among medical students are minimal.

2. About a third of the students think that the fact that female students are freely accepted into medical school means that there is no further problem of gender equality for women in medicine or need of any change in the medical school.

3. The faculty members and most of the students do not want to make any change in the medical school curriculum. The students think that a change in the medical school curriculum cannot help solve problems of gender equality, even if there are such problems.

One of the major questions that follow possible gender inequality is: what changes are needed within the medical school? Most of the students did not want any change in the medical school curriculum and did not believe that such a change would contribute to gender equality in any way. The only suggestion that emerged from the case study for improvement in the medical school was better career guidance for medical students. The issue of the obvious connection between student advice and guidance and the deficiencies in the assessment system used in the medical schools was also raised.

Faculty members did not advocate curricular changes either. Unlike some students, they think that the school provided the students with the necessary support systems to ensure success in the future careers of both men and women
students. Men faculty members hold the opinion that changes in the medical education as a result of women’s entrance into medical school, can be regarded as a sign that the medical profession is losing its prestige as a profession due to the entrance of women. Women faculty members, on the other hand, were more tolerant about such prospects of change in the medical school curriculum. Yet they could not put their finger on any change in the curriculum that might be beneficial mainly to women.

Implications of gender differences for educational managers and the literature on programmes for gender equality in the medical education

Interviews with the faculty members were supposed to provide the main data for the research question about the implications of gender issues for educational managers. Faculty members were in the opinion that there should be no implications of gender issues for educational management. The main reason is that most of the interviewed faculty members were against the idea that any change aimed at encouraging women in the medical school. The faculty members might probably hold similar views to those ‘gender blind’ British public managers who believe that women are as capable as men but avoid recognizing the gender differences in the students’ lives and school experiences which cause gender inequality (Maddock and Parkin, 1994, p. 34).

Contrary to the attitudes of the faculty member, in the literature, there are many suggested implications of gender equality issues to the educational management of medical schools. These implications are the basis for recommendations made
through the literature. The recommendations also echo some of the conclusions of the present study as well, such as the following examples:

1) According to the present study, more men than women tend to agree that their goals in medicine are to achieve leadership positions. In the medical literature it is recommended to provide women faculty members and medical students with opportunities for leadership skill building (Bickel and Clark, 2000, p. 670; Morahan et al, 2001 p. 23). A different strategy is improving pathways to leadership through the discovery of new ideas for better representation of women on policy-making committees and boards (AAMC, 1996, p. 808).

2) According to the findings of this research both women and men medical students are very poorly advised at medical school as to their careers. In the literature it is suggested that women need more information and advice on specialities most compatible with domestic commitments (Allen, 1994, p.275; Morahan et al, 2001 p. 24). Programmes including a special focus on the concerns of women students are also suggested (AAMC, 1996, p. 807).

3) One of the findings in this study is that there is a shortage of formal mentoring programmes at medical schools in Israel. In the literature it is recommended to have formal mentoring programmes that aid women in making the best use of mentors but avoid the problems like paternalistic attitudes of male mentors, different standards for females and mentor’s use of work to advance his career (Weilepp, 1992, p. 267; AAMC, 1996, p. 807).

4) According to this study, medical students in Israel suffer from problems of discrimination and harassment at medical school. In the literature it is recommended that the educational management of medical schools send out
clear messages about the unacceptability of sexism and harassment, the elimination of sexist stereotypes and improvement of the medical school environment for women (Bickel and Ruffin, 1995, p. 559).

5) In this study Israeli women medical students are less determined about their career than men students. Since the earliest career decisions can be so determinant, it is recommended in the literature that medical schools’ managements should create professional development opportunities for students and residents (AAMC, 1996, p. 807)

6) According to this study, gender segregation in the medical specialities is prevalent in Israel. In the literature it is suggested that medical educators should be committed to ensuring that women enjoy the same access as men to skill development and speciality choice opportunities (Bickel and Ruffin, 1995, p. 558). It is also suggested that educational management should attend to the shortage of women faculty members in certain medical fields (Weilepp, 1992, p. 267).

7) According to the findings it is quite probable that the future career opportunities for women are not the same as those for men. Several articles claim that it is in the best interest of medical institutions to be aware of the advantages of hiring women (Reed and Buddeberg-Fischer, 2001, p. 142). Programmes to aid faculty members in building their career, salary equity reviews and studies are suggested. (Reed and Buddeberg-Fischer, 2001, p.144). The promotion of medical schools’ managements of after school programmes to ease women’s career path can also contribute to the gender equality issue at school. After school programmes to facilitate the entrance of women into medicine are recommended in the medical education literature.
There are two types of targeted programmes: The first type of programmes is aimed at achieving women’s leadership development including mentoring programmes and network building among women (Weilepp, 1992, p. 267; Fried et al, 1996, p. 900; Reed and Buddeberg-Fischer, 2001, p. 143). The other type of programmes is aimed at providing work-life support such as part time and flexible working hours, child-care provisions, etc (Etzkowitz et al, 1994, p. 54; Reed and Buddeberg-Fischer, 2001, p. 143). Part time residency programmes can be very helpful. Studies from the US report very promising results from such programmes after several years experience (Carling et al, 1999, p. 283). Such programmes are also available in the UK (Goldberg and Buckley, 1998, p. 114). On the other hand, several of the younger female doctors distance themselves from this development, fearing that it would create second rate jobs and entrench women in subordinate positions within the hospital (Pringle, 1998, p. 39). This was evident too among women medical students in the case study. Resources such as day care centres should be developed (AAMC, 1996, p. 807). It has even been suggested that assistance for job options should be given to partners of women candidates for faculty members’ positions, in order to make it easier for these women to move to another location (AAMC, 1996, p. 807).

8) It was found in this study that general awareness of gender issues in the medical education in Israel is very low. In the literature it is suggested to lead discussions and workshops among faculty members to address specific gender-based problems, appointing a task force of women academics and appointing development specialists to analyse problems experienced by women faculty members (Weilepp, 1992, p. 267; Fried et al, 1996, p. 901).
Discrepancy between the literature and the findings regarding the implications of gender difference issues for management improvement

The medical education literature suggests many institutional change initiatives in the curriculum of medical schools in order to promote women. The changes consist of stressing the value and importance of skills, such as communication and patient orientation in the curriculum (Elks, 1996, p. 1282), changing traditional teaching and assessment methods that may have a negative influence on women students (Hoffman et al, 1999, p. 1054) and integration of women’s health issues into the curriculum of the medical school (Hoffman et al, 1999, p. 1054). In contrast, in this study, the students, including women students, and the faculty members, do not believe that a change in the medical school curriculum could contribute to gender equality in any way.

The explanation for the discrepancy between the findings of this study and the literature with regard to curricular changes may be the distinction between “Bottom up” evolutionary curricular changes that would probably be favoured in Israel and “Top down” revolutionary changes as initiated at medical school “A”. “Top down” curricular changes cause suspicions by students and faculty members alike and are therefore unwanted. The evidence of this study suggest it wouldn’t be justified to implement curricular changes as suggested by recent medical education literature (Guilbert, 1998, p. 68) without evaluation, prior to the implementation of any curricular reform, of the curricular needs of the medical students in Israel.
Summary

A predictive model of student satisfaction with their medical education

Based on the survey data of this research, a regression analysis model looked for the factors, to predict the satisfactions of students with the medical education, among all the factors examined in this study. Four variables are found to influence the level of satisfaction of students with their education. Three factors influenced (in a negative way) the level of student satisfaction: the extent of harassment, the extent of discrimination and the extent of gender segregation at the school. Other factors (self esteem and motivation for leadership, consideration of family responsibilities, pedagogical preferences, mentoring experiences and perceptions of gender influence on career opportunities) are found not to add to the prediction of student satisfaction.

The fourth variable that had positive impact in the prediction of student satisfaction is where the students study. The variable 'school of study' was tested with regard to all of the survey’s questions but found as irrelevant to all but one area of inquiry (self esteem) of this study. According to the regression analysis model, it is found that studying in medical school “B” had a significantly positive influence on student satisfaction with their school. As mentioned in the introduction chapter, school “B” is the youngest of the four medical schools in Israel and is known to be unique among the medical schools of Israel. Its’ uniqueness was identified by the Israeli medical education literature (Prywes, 1987, p. 952). Medical school “B” implements many
innovative approaches in medical education, which are not yet implemented by the other three medical schools. These include four elements (Mirvis, 1993, p. 4):

1. Integrating the clinical and the basic science parts of the curriculum with each other.
2. Promoting education in outpatient settings.
3. Fostering the credibility of primary care and community medicine in academia.
4. Demonstrating the relationship between medical education and health care delivery.

This school is also unique in using different student acceptance criteria (Glick, 1994, p. 268). All of these aspects probably contribute to higher satisfaction with the medical education at that school. It is encouraging to find that educational innovations can contribute to better satisfaction with the medical education in the undergraduate phase. It could mean that similar changes in other schools may contribute to greater satisfaction with the school. The other two schools “A” and “C” are probably too similar with regard to curricular issues and student population to show any difference.

The predominance among the other variables (mentioned above) of gender discrimination and harassment in creating a hostile and unsatisfactory environment for students is well understood by the literature as well as the evidence from the case study. Gender discrimination, leaves the students with
the feeling that they cannot do very much about it because of a fear of being too critical and because it is so well disguised and commonly acceptable. Discriminatory behaviour also interferes with students' enjoyment of their medical school (Jacobs et al., 2000, p. 468). The school’s role in creating sex-role segregation by being more welcoming to men than women in surgical wards is also a significant predictor (negatively) for the overall satisfaction with the medical school. This too indicates the importance of discriminatory behaviour against women in predicting student satisfaction. It is interesting that gender had no influence on school satisfaction, indicating that men and women students are in agreement about the important factors for predicting satisfaction with the medical education. This model is based only on the survey findings but is validated by the data derived from the interviews with the students from school “A”. These students emphasize that school’s ethos, career preparation and advice as well as an environment free of discrimination and harassment are important factors in their school experience.

The obvious application of this model is that in order to increase student satisfaction educational management has to pay attention to change the medical school ethos to a more innovative ethos, similar to the ethos of school “B” and implement programmes to eliminate student discrimination, in particular discrimination toward women at the surgical wards.
Summary of the findings according to the research questions

The findings of this research tried to answer the following research questions:

1) Are there any gender differences in self-esteem?
2) Are there any gender differences in career goals and motivation for leadership?
3) Are there any gender differences in perceptions on combining a medical career with a family life?
4) Are there any gender differences with regard to learning styles, curricular contents preferences and preferred evaluation systems?
5) Are there any gender differences in the preparation and advice given to medical students?
6) Are there any gender differences with regard to the mentoring processes experienced during medical education?
7) Are there any differences in the nature and extent of gender discrimination, harassment or other student abuses at medical school?
8) Are there gender differences in the effect of gender on speciality choices and career opportunities in medicine?
9) What are the implications for educational managers of the issues raised in the previous questions?

The answers to the questions on gender differences are that men and women medical students at the end of their medical education are much more alike than different. There is also a large diversity and disagreement about gender equality
issues within each group. With regard to personal values, no clear picture of
differences in self-esteem and motivation for leadership are evident. Yet, women
tend to have more altruistic goals than men and avoid competitive specialities.
This tendency leads to their disassociation with leadership positions. The
considerations of combining a career with a family/private life are becoming as
important to men as it is to women. Nevertheless, the existing social gender
stereotypes in Israeli society are that it is women's job to take care of the
children and elders in the family (Moore, 1999, p. 50). It is therefore more
probable that women students will eventually have to compromise more than
men students in order to combine work and family.

As for school experiences, in contrast to the theory, men tend to prefer
innovations in teachings and women appear satisfied with the existing traditional
curriculum. With regard to career advice and mentoring experiences, there are
indications that men are more encouraged in certain medical disciplines. Both
genders have very little career advice during medical education and mentoring
relations with faculty members at school. This lack of advice and mentoring
relation are harder for women. With regard to the extent of bias at medical
school, women students tend to avoid complaining but they complain more than
men of not being given equal educational opportunities. Men complained more
than women about favouritism against them. Overall, there is overwhelming
evidence of abuse toward students at least in the form of sexual slurs and
chauvinistic remarks, mainly during the clinical rotations at surgical wards.
There is general agreement among the students that gender affects future career choices in general but not their own. The main implications to educational managers of the above questions are the need to eliminate general gender discrimination in order to increase student satisfaction with the school and the need for more career advice and mentoring during medical education. Both genders did not recommend any curriculum change in content or changing the assessment methods. It is advisable for educational managers of the medical school to concentrate on “bottom up” changes and the implications of the findings with regard to a lack of career advice and formal mentoring as well confronting the issue of student abuse.
Chapter 7: Conclusion

Introduction

This chapter is divided into five sections. It starts with outlining the conclusions of this research, arranged according to the research questions of this study. These conclusions serve as a basis for the recommendations in the following section. The recommendations highlight the contributions of this study as well as serving to answer the final research question about the implications of these issues to the educational managers of medical schools. This chapter reflects on the strengths and contributions of this study as well as the limitations and methodological difficulties of this study. Recommendations for further research then follow.

Conclusions of this study

No evidence for gender differences in self esteem and motivation for leadership

The research tools of this study could not entirely eliminate a possible influence of social desirability to intervene with the results of gender differences in personal qualities relevant to a medical career, such as self-esteem and motivation for leadership. Furthermore, there is no difference in self-esteem and motivation for leadership between those who have altruistic goals and those who have materialistic goals including motivations for leadership positions.
Nevertheless, the probable conclusion based on the evidence of this research, is that there are no differences between the two genders with regard to qualities. The most likely explanation for the discrepancy of this conclusion with most of the literature is that the sample of this research represents a new generation of women medical students. This new generation of women medical students is academically as successful as their male counterparts and are self confident because of the realization of the growing need for women doctors. Although female role models are absent in some disciplines, the massive entrance of women into medicine probably convinces the young women students that they are likely to succeed. This is expressed in the words of one of the female student from school “A” (A 30), who said:

“I have seen others doing it so I believe I can do it as well”

*Gender differences in career goals and motivation for leadership*

It is found that women students are less determined in choosing their speciality and tend to give a higher weight than men do to ‘altruistic’ goals while men tend to give a higher weight to ‘materialistic’ goals including motivation to be leaders. Evidence of gender differences in career goals may contribute to the popular explanation of ‘self-choice’ with regard to women’s distaste from leadership positions and may perpetuate it. On the other hand, the evidence of no differences with regard to self-esteem and motivation for leadership challenges such an explanation. The conclusion of this study is that although women tend to
give a higher priority than men to altruistic goals in medicine, they believe in women’s ability to become leaders and reach their career motivations.

*Gender resemblances in perceptions of combining a career with a family life*

Gender resemblances are found in students’ perceptions with regard to the importance of family life when considering a career in medicine. This finding is surprising in light of most of the existing evidence in the literature. Yet it is confirmed by other studies as well. This may be another indication that the sample of this research represents a new generation of students. It is understandable, following the enormous increase of women taking a share as breadwinners of the family, that family matters are beginning to be part of men’s consideration as well as that of women’s. Unfortunately, there are still some gender differences with regard to the barriers society poses to women’s achievements. According to this research female medical students perceive that the main barrier to their career goals will be their family commitments while male students consider organizational factors to be the main barrier to their career. This may not necessarily indicate a contradiction. Although men probably realize that family responsibilities interfere with career goals, they may evaluate that organizational factors connected with health provision institutions are more effective barriers.
Gender differences in learning styles, curricular contents preferences and preferred assessment systems

In this study it is surprising to find that in discrepancy with the literature men rather than women seem to support new and unknown pedagogical innovations. The conclusion of this study is that women medical students hesitate to complain and tend to exhibit satisfaction with the existing medical school’s management. They are not critical with regard to other school issues as well. The fact that women manage to do academically just as well as their male counterparts in the traditional system probably contributes to their satisfaction and the fact that they tend not to complain about school.

Gender differences in school career preparation and advice

The findings indicate that career preparation at medical schools in Israel is very limited. Based on previous evidence that male faculty members create better informal relations with men students, the research’s evidence that the existing career advice is based on informal relations probably works mainly against women. The findings from the interviews with the faculty members indicating gender blindness at best, give room to suspect hidden sex-role prejudices among some faculty members. The likely conclusion is that there are gender differences with regard to the preparation and advice students receive and a tendency of some faculty members to drive women from surgical specialities. Women are probably not just oversensitive in thinking that men get a better
quality of career preparation and advice from the schools, at least in surgical
specialities.

**Gender differences in mentoring experiences**

Similar to the situation found in other professions (Coleman, 1996b, p. 323),
there are several reasons to conclude that men medical students enjoy better
mentoring relations than women. Men and women medical students differ as to
what constitutes an ideal mentor. According to the male students, an ideal
mentor should have ‘political’ abilities and according to the female students a
mentor should have ‘psychosocial’ abilities. This probably works to the
advantage of men students because political abilities are considered the best
qualities for a mentor to advance his protégé (Haapanen et al, 1996, p. 794).
Furthermore, since mentoring relations in medical schools in Israel are found to
be based mainly on informal relations rather than on formal programmes, it is
more likely that men students have a better chance to enjoy informal relations
with the faculty members. As seen in the literature, informal relations are usually
based on same sex relations (Ehrich 1994, p. 11; Etzkowitz et al, 1994, p.52;
Hurley and Fagenson-Eland, 1996, p. 42; Toren, 1999, p. 80) but women faculty
members are the minority in most medical areas. Furthermore, according to the
literature (Hill and Ragland, 1995, p. 76) mentoring relations enable women to
achieve what men manage to achieve without mentors. The nature of mentoring
experiences evident in this research will thus tend to work mainly against
women.
Gender differences in student abuse

Medical students in Israel have to accept living with a high level of sexism during their medical education. The institutional policy of higher education in Israel includes since 1999 regulations that outlaws any form of gender harassment at university including sexist slurs. Yet, both the students and the faculty members deny possible existence of gender harassment. It is confirmed both in the case study and the survey findings, that chauvinism and sexist remarks are neither considered by students as sexual harassment, nor as discriminatory acts against women only. Yet, there is plenty of evidence in this study to conclude that women students still suffer from what can be defined as sexual harassment.

With regard to general abuse of students, surprisingly, significantly more men than women students complain of being outsiders and being belittled during their medical training. Nevertheless, it is likely that women suffer more from discrimination. Both genders report a variety of discriminatory incidents against women that range between differential treatment or denied educational opportunities for women and declarations of the heads of surgery wards that they would not consider accepting women into their wards as residents because of their gender. Male students report that there are discriminatory acts against men such as favouritism toward women and applications of more severe standards of evaluation toward men. It is therefore recognized that gender discrimination may not solely refer to inequitable treatment of women.
Gender differences in future career choices and opportunities

In the survey, both groups of students agree that there are gender differences in career opportunities and that being a female had a limiting effect on career opportunities in general. The literature supports this conclusion. There is plenty empirical evidence that women do not plan their career (Adler et al, 1993, p. 29; Hite and McDonald, 1995, p. 8; Gold, 1996 p. 424; Coleman, 1996b, p. 321), suffer the consequences of career breaks (Ouston, 1993 p. 8; Hall, 1996, p.58; Coleman, 1997a, p. 131) and suffer from persistent sex-role segregation (Gupton and Slick, 1996, p. XI).

In the case study, it is puzzling to find that a majority of students indicated otherwise. There is a gender difference with regard to the denial of gender’s influence on future career choices. The majority of women disagree that gender has an effect on future career choices while most men, agree to a gender effect. The likely explanation is that women are referring to their own career choices but men speak in general terms. A further conclusion is thus that when speaking about their own career choices, most of the female students are determined to disregard obvious constraints and not to let their gender interfere with their career decisions, although they realize such interference is valid in general terms.
Factors predicting school satisfaction

According to the regression analysis for predicting student satisfaction with the school, the main problem factors with regard to students’ experiences and satisfaction at medical school are bias and harassment against students. Men and even more so, women students are reluctant to admit existence of student abuse. Yet, very severe incidents of biases against students became evident from the students’ open remarks and the case study interviews. Another crucial issue of concern emerged from the findings. This is the need for more career advice and mentoring as well as the need for a clear school ethos. This probably explains why students from medical school “B”, which is famous for such an ethos, are significantly more satisfied with their studies than students in schools “A” and “C”.

General conclusions

In addition to the above-mentioned specific conclusions, one general conclusion is the culture of ‘gender blindness’ prevalent among the educational medical school managers in Israel, faculty members and the students themselves. It seems that the majority of those connected with medical education in Israel are either almost unaware of or choose to ignore gender equality issues and the massive medical education literature evidence regarding these issues.

Another general conclusion is that despite women’s increased numbers which no doubt create the necessary “critical mass”, there are still indications that
women medical students in Israel and women faculty members suffer from the ‘tokenism’ syndrome. Thus, women students try not to complain too much, and tend to ignore obviously necessary changes in the medical curriculum including the shortage of existing teaching and assessment methods to address the needs of all students. Most importantly, women students do not address the emerging need to include women’s health issues into the medical school curriculum. Several of the women medical students even accept obvious discriminatory acts such as the prevalent rude language used by some clinical faculty members and the near exclusion of women in some medical disciplines.

It is encouraging that the new generation of women medical students are self confident, bright, educated and free of stereotypes. Such women are less vulnerable to criticism if they put their development first (AAMC, 1996, p. 805). Female Israeli medical students dare to wish to have a medical career and a family and ‘having it all’ (Parker and Fagenson, 1994, p. 21) almost without feeling guilty and thus may have the power to achieve much more than the previous generation in terms of women’s equality in medical education.

Recommendations

Recommendations with regard to motivation for leadership

Women medical students in Israel possess as a high level of self-esteem and motivation toward leadership as men. Yet their self-esteem and motivation for leadership are not enough to secure their entrance into top management
positions. It is therefore recommended that encouragement of women’s self-motivation be initiated by educational means during medical school. Medical school can promote the motivation of its women students by advising them to aspire for leadership. School-initiated leadership development seminars to go beyond gender stereotypes and tokenism are one solution (AAMC, 1996, p. 808). Another way to promote women to leadership is by changing prevalent perceptions with regard to a leadership career path in medicine. It is suggested that a dedicated clinical career in primary medicine, favoured more by women than men, should be considered as an equivalent path for leadership positions as the traditional gold standard for leadership - many years of research grants combined with teaching and clinical excellence. Women in the professions, including those in academic medicine, live in a half-changed world (Morahan and Bickel, 2002, p. 110). It is questionable whether attempts to equip women with skills or revise some politics is enough to improve the advancement of women or whether there is a need to change social and cultural forces causing difficulties in accepting women as leaders (Davidson and Cooper, 1992, p. 104; Blackmore, 1999, p. 221). The wider context creates the system that allocates human potential according to gender (Morley, 1999, p. 76). Women probably have to support feminism and each other in the just fight to change this system.

Recommendation with regard to career goal barriers

According to this study, the main barriers to career goals are family responsibilities and organizational barriers. Organizational solutions for both barriers that include provision of child-care, part-time residency, official
promotion of young doctors and at-work mentoring programmes can be provided by health work organizations (AAMC, 1996, p. 807). A lot can be done at medical schools as well. Medical schools control the learning environment encountered by students at the hospitals and clinics affiliated with the medical schools (Atkinson, 1997, p. 199).

Recommendation with regard to perceptions of combining family life and medical career

It is encouraging to find that there is progress with regard to the perceptions of the students in combining a medical career with a family life to the extent that there are no gender differences. However, unnecessary barriers in combining work and family life still deserve close inspection. Family related issues take a greater toll on women in many other ways beginning with interviews for admission to residency and career and these are fully realized by the women medical students. The round-the-clock nature of a medical career presents special challenges for women during and after training. As promotion usually involves relocating, women are often exceedingly reluctant or unable to overcome the guilt associated with relocating their families even if their partners can find new jobs. Furthermore, women still remain vulnerable to criticism if they put their development first (AAMC, 1996, p. 805).

It is recommended that health care institutions would offer assistance in job options for partners such as the Partners Opportunity Programme at the
University of California (AAMC, 1996, p. 807). One recommendation that is successfully operating is less than a full-time track during residency so that women won’t be forced to choose between having a family and having a career (AAMC, 1996, p. 807; Carling et al, 1999, p. 283; Evans et al, 2000, p. 360). However, in the study sample not all women favour this solution. Other practical solutions, such as providing good alternatives to child-care and domestic chores, are also widely recommended (Carnes, 1996, p. 619). The current research points to the need to ask fundamental questions about current expectations for career development that remain rooted in the outdated assumption that ideal workers should devote themselves wholly to their work and never need extended time away from work while current needs and expectations are to combine work and family needs and revising the work culture to facilitate the retention and development of women. Women needs include not only equal opportunities for accommodation at work but also the dismantling of masculine norms of society (Williams, 2000, p. 241, pp. 271-276).

Recommendation with regard to medical schools’ curricula

The women medical students in this sample did not want any curricular change. Yet, the new teaching principles of school “A”, which are based on solid educational theories, could be beneficial for them. Similar curricula proved to be very successful in many other medical schools around the world (Schwatz et al, 1999, p. 679). Although women medical students do not look for curricular change, it is evident that some changes can be beneficial for them. At least in two areas, needed changes can be recommended to educational managers. One
of the most needed yet neglected changes is the inclusion of women’s health-related contents into the curriculum (Hoffman et al, 2000, p.1054). Nevertheless, the women students in this sample did not recommend such a change. Another obviously needed change is the encouragement of self-study. The conclusion of this research that students avoid self-learning because of a reluctance to read on their own is worrying. The possibility that it is because the reading materials are in English, their second language, can be well attended to by educational management steps such as a substantial increase of practicing reading skills in English. Another promotion of self-study methods is by faculty members developing means to make self-study more feasible.

It is probable that the introduction of new and effective teaching and assessment methods would be favourably accepted by women who do just as well if not better academically. Nevertheless, the fact that the new policy of medical school “A” does not report any acknowledgement of gender differences and the “top down” nature of the programme, based on similar programmes in the US, may be weak areas in the new policy.

**Recommendation with regard to preparation, advice and a clear ethos at medical school**

Medical school managements can do much to improve gender equality/equity. First, any possible prejudice should be eliminated as much as possible. If faculty members have preconceived notions that women have characteristics fit for paediatricians, being sensitive and emotional but not to be surgeons (who are
supposed to be aggressive), it may perpetuate the sex-differentiation of certain specialities being ‘female’ and others ‘male’ occupations (Lorber, 1984, p. 33). These choices do not reflect the students’ preferences but are the result of encouragement during medical school (Pamies et al, 1992, p. 128). According to the evidence of this research, as many women as men aspire for a career in surgery and it would be unjust to block their way. Secondly, women need more career advice than men. Targeted professional seminars for women faculty members and administrators, putting a special focus on the concerns and advice needs of women students are recommended ways to improve the career advice for women students (AAMC, 1996, p. 807). School ethos to aid humankind and other humanistic values, associated with feminine culture, could also work toward the advancement of women in medicine (Caelleigh, 2001, p. 1174).

**Recommendation with regard to mentoring at medical school**

The master-apprentice relationship between doctors and doctors-in-training was disrupted when medical education introduced basic and clinical science instruction to the medical curriculum and relied more on lectures to deliver that instruction. The move back to closer relationships between faculty members and students can recreate some of the benefits of this old relationship within the context of modern education (Mann, 1992, p. 317). It is claimed that encouragement and discouragement by faculty members as mentors during the clinical years determine to a great extent the specialities that the students choose and the career opportunities they encounter (Lorber, 1994, p. 31).
In light of the conclusion of this research that women are relatively disadvantaged with regard to mentoring experiences at medical schools, it seems appropriate to develop mentoring relations during medical education. A strategy to address the problem of gender inequality in medicine has been the initiation of mentoring programmes such as those funded at four diverse medical schools by the Office on Women’s Health in the US Department of Health and Human Services (Mark et al., 2001, p. 40). A key to successful mentoring relations in medical school is based on choosing tutors with ‘psychosocial’ qualities, identified by women students as ideal role models.

Recommendation with regard to abuse of students at medical school

It is alarming to conclude from this research the evidence of persisting student abuse at medical school. Although women are reluctant to admit it, it must be very destructive to their learning environment and every effort should be made to reduce it to minimum or eliminate it. The problem is that sexual harassment is deeply rooted and endemic and affects medical students. Professions such as medicine with hierarchical and strong historically patriarchal structures, long hours of duty, a high degree of tension and abundant opportunities for intimacy are at particular risk of fostering such behaviour. More pervasive and yet difficult to quantify is gender insensitivity and “micro inequality” (Jacobs et al., 2000, p. 468) incidents that tend to be cumulative and contribute to a lack of self-esteem and a sense of isolation yet are not legally actionable. Petty incidents and covert slurs can rarely be confronted outright by means such as the sexual discrimination regulations in the students’ information prospectus. The victims
of such behaviours can suffer from humiliation, depression, fear, and indecision regarding future opportunities and decreased productivity at work. Such an environment is inimical to the professional attributes medical schools try to inculcate in students.

As more women enter careers in medicine, the "critical mass" effect may have done something to ease the discrimination and abuse issue. But critical mass in itself has clearly not proven sufficient to create the desired learning environment of gender equal opportunities. To reach that objective active intervention remains necessary. A programme to diminish gender insensitivity and sexual harassment at medical school was recently implemented at one of the US medical schools. Given the complexity of the academic environment, such interventions must be multifaceted and take into account some unintended consequences such as claims for reverse discrimination, which may emerge and lead to the opening of a Pandora’s box (Jacobs et al, 2000, p. 468). Medical school managements have to be forceful to produce planned interventions accompanied by rigorous evaluations to understand the depth and complexity of the issues and to monitor and document change.

*Recommendation with regard to future career opportunities for women*

Women have made up a large proportion of the doctors in western countries for at least 20 years and now constitute half of the entering medical student body. Yet, very recent articles summarize the persistent unequal gender distribution of doctors and faculty members in the medical disciplines and the higher echelons.
(Morahan and Richman, 2001, p. 97). It is assumed that it is vital to guarantee that medical students’ career decisions will be based mainly on their abilities and skills and not on alien factors such as stereotypes or organizational constraints in order to ensure the best response to the complex health care needs of society (Bickel and Ruffin, 1995, p. 559).

According to the findings of this research students realize the effect of gender on future career opportunities. Yet, although sex-type occupational segregation (Crompton, 1997, p. 47) is persistent, there are ways to overcome it. In other countries organizations of women faculty members and students are lobbying for change to better integrate women’s perspectives (ELAM, 1999). In addition to forming women groups to protect women at work, a reconstruction of the medical career to be more suitable to women is highly recommended (Allen, 1997 p. 2).

Recommendations for the implications of the findings to educational managers of medical schools

It is claimed that it is obviously not enough to carry on with the simple ways to achieve the target of critical mass through affirmative action programmes to clear the blockages facing minority groups (Etzkowitz et al., 1994, p. 53). It is quite probably not enough to encourage women to enter a medical education if so few women emerge as professional leaders with power to change that education. The problem remains that at each transition point in climbing the ladder to the upper echelons, the number of women decreases at a significantly
higher rate than that of men. A key factor in overcoming this problem is medical school policies and programmes. Because the problem of gender inequality is apparent in after school outcomes, most of the recommendations for programmes to promote women in medicine are for after school programmes such as child-care provisions, parental leave, different recruitment and retention criteria and a slowing of the tenure clock. An environment within medical schools that encourages and understands the importance of these programmes is an essential precondition for the success and effectiveness of such programmes. The environment of the medical education in Israel, which can be described as almost blind to gender equality issues, is quite certainly unhealthy for creating the required change.

The most obvious recommendation is to highlight the problem by adding to the current research of gender equality. It is further recommended that some reforms must come from internal women initiatives to overcome divisions arising from the emergence of subgroups following male and female models and the tendency to 'tokenism', which appears to be a prevalent syndrome within women medical students despite the fact that they have overcome the critical mass barrier. Women faculty members and students in Israel have not yet undertaken innovative efforts to reduce isolation, provide information and implement programmes to support women medical students. It is suggested to exercise simple means such as electronic mail lists, organizing retreats and support groups and more complicated means such as official mentoring programmes for women, as relatively sure ways to reduce isolation among medical students. University counselling staff can also provide a resource for female students.
One of the most needed changes is to change the school environment into a more bias-free environment for all medical students and, thus, fulfil the aim of training the best medical force with the most talented and motivated doctors who choose their future career path according to their true abilities and not because other career paths are blocked to them. This is the essence of the feminist theoretical background held by this research. It may serve as an answer to some of the female students who thought promoting gender equality issues for women to be harmful.

Another very important needed change is more advice and mentoring. The findings indicated that there was very little student career advice and few mentoring experiences. School ethos is not made explicit to the students, who are concerned that their school does not care what becomes of its graduates. An obvious recommendation is, therefore, to have a clear ethos at each medical school. One particular medical school in Israel, school “B”, is known for his special school’s spirit such as emphasis on community services. It is, therefore, not surprising that the comparative importance of this school to the overall satisfaction of the students from their studies was established by this study.

The most obvious change, a curriculum change that is often suggested by medical education reformers, does not emerge in this study as the most necessary change from the viewpoint of the students. Probably, curriculum change cannot contribute significantly to the issue of gender equality if it is carried out “top down” by a dean’s decision as in the case of medical school
"A". Enormous change can be achieved by educational means during the medical education. Nevertheless, the natural persistence of the medical schools' educational management to defend traditional academic practices, evident in this research such as gender blindness at best and clear gender inequality in some circumstances must not be underestimated. There is even an old claim that it is impossible for medical education to change from within (Bloom, 1989, p. 238). Maybe outside pressures should be provided to make the necessary changes.

Legal actions should be viewed as only a last resort solution. It is quite likely, despite the protective legislation for women's status in Israel and the fact that gender discrimination has now been accepted as a valid basis for lawsuits challenging academic decisions, that courts would be unwilling to review decisions that can always be disguised as academic decisions. Participation of all groups in the medical profession is a basis for the public support of the medical schools. The legitimating of science, the moral injunction to achieve equity and the strategic national interest in utilizing talent to its fullest extent are reasons for change. Equal representation of women and men in the medical professions at all managerial levels seems a basic civil right. It can counter the chauvinistic image of medicine in the eyes of women and hopefully earn increased public support and allocation of public resources to medicine.
Strength of this research

Originality and significance of the research questions

This literature on women professionals, including women doctors has recently established and highlighted some of the hidden processes that produce gender discrimination against women and continued barriers to women's true participation in the professions. Less is known about the barriers encountered by women students while at school, especially at medical schools. Yet there is enough recent literature to base a theoretical background for questioning the barriers experienced by women students at medical schools (Bickel and Ruffin, 1995, p. 558; Field and Lennox, 1996, p. 252; Boulis et al, 2001, p. 567). Yet no other study fully implied the feminist theory in medical education and questioning whether or not all types of constraints are apparent during the medical training. Although there are several publications on the entrance of women into medicine in Israel (Shuval, 1992, p. 109; Notzer and Brown, 1995b, p. 380), on Israeli students' experiences as students (Shuval, 1980, p. 84) and on student abuse (Lebenthal et al, 1996, p.237), there is none concerning gender equality issues in experiences encountered by Israeli students at medical schools. As women are half the population of medical students in Israel, this research has important implications to educational managers in medical schools in Israel. Israeli society and culture is similar to other western countries in many aspects yet it holds more traditional values regarding family life and the gendered division of labour as well as tending to tolerate more readily androcentric views influenced by the centrality of the army culture in Israel (Moore and Gobi, 1995,
The implications of this study could contribute to consciousness-raising process beyond the medical education in Israel to the wider issues of cultural obstacles in Israel.

**Contribution of this study for educational improvement**

Current wisdom predicts that the winning organizations, particularly among high technology companies, will be those that can attract, develop, compensate and retain the best talented workers and members irrespective of gender. Literature in general as well as in medical education is beginning to emerge on possible best practices regarding the recruitment and retention of women in male dominated fields such as medicine (Morahan et al, 2001, p. 19).

The theoretical model of this study to predict career paths of medical students was based on three factors: student personality factors, including personal qualities, family values and career’s goals, factors connected with the school experience and factors connected with wider social forces, such as gender schemas and constraints within health care organizations. The purpose of this study was to establish the comparative importance of the school experience factors for the prediction of medical career in order to recommend ways in which educational managers can better deal with pedagogical matters, mentoring experiences or student abuse. Even if the other factors are equally important, there are many means by which the organizational culture of the schools management can act.
The practical issue for implementing changes in medical schools is determining which action is the most effective (Morahan and Richman, 2001, p. 97). If gender differences in personal values are important predictors of student career choices, educational management efforts should be invested to change those values by ways such as establishing pedagogical innovations to address and change those values. Current approaches focus on ‘for women only’ leadership programmes, special training or programmes aimed at women, to give them the skills that they lack for advancement. Based on the conclusions from this research, such programmes would probably have only limited success because such actions only look at part and not the complete view of the issue. There is probably no need to invest much management effort in the enormous task of changing women students’ values. Implementing such approaches in Israeli medical schools will ignore the fact that, at least by intention, the distribution of Israel students’ speciality self-choices is not the major gender-equality problem and specific social gender schemes are probably more major obstacles to the advancement of women.

Medical school managers can ease the barriers facing the students. The importance of the school experience may be crucial to the students’ development. It is concluded in this research that the experience at medical school is the major predictor or a determinant of residency choice. Educational managers should be aware that it is in the schools’ hands to influence the choices medical students make for their specialities. If it is believed that it is desirable to have a wider gender distribution across the specialities, it is advisable to look at
whether expectations such as procedure-oriented specialities for men and people-oriented specialities for women should be counteracted.

The contribution of medical school management programmes is only limited unless it takes place within a social revolution. Western society is still culturally patriarchal. Because Israeli society is even more traditional society than other western countries, other approaches that take into account the influence of society and deeply ingrained cultural gender schemas not only in medicine are needed. These include identifying and altering Israeli cultural norms (e.g. the masculinity of the Hebrew language), work practices that disadvantage women, redefining the “ideal worker” or valuing feminine knowledge and research in academia (Williams, 2000, p. 1; Morahan and Bickel, 2002, p. 111).

*Strength of the research scope*

Despite the circumstances that did not enable a big sample, the response rate and the completeness of the responses to the open questions provided a clear picture of the students’ perceptions. Having data from three of four medical schools in Israel enabled generalization about medical education in Israel. To overcome the sample size limitation of the survey, this research used the combination of research methods of survey and case study. Such a research design made it possible to triangulate the data and obtain rich data.
Limitations of this study

Nature of the topic

The topic of this study includes sensitive and intrusive questions that carry a lot of personal feelings connected with previous personal experiences. This sensitivity could work in two ways to limit the objectivity of this research. First it could be problematic to guarantee full objectivity and an open mind. For example, including interviews with male and female students by a female researcher may theoretically create a bias toward accepting women’s complaints as serious and overlooking men’s complaints as petty. Yet, the full consciousness of the author who was aware of this problem as much as possible, no doubt made this less of a limitation. The fact that the interviewer is a woman was also an advantage in dealing with women with empathy.

Secondly, the sensitivity of the topic could cost in terms of integrity of the responses of the students. Therefore, the issue of ethics and the respondents’ rights and dignity are taken into consideration in this study. The fact that the main subjects of this research are students who are still dependent on the educational system was also taken into account. The social desirability of the students not to present themselves as ‘trouble makers’ could affect their sincerity. On the other hand, it is an advantage that the students are at the end of their final year. They have practically finished their formal medical studies and are in the advantageous position of being able to reflect and criticize their
learning experiences at school as well as having a clearer view of their future without being harmed.

Sample size

A possible limitation in the survey part of this research is the sample size that cannot be subdivided into smaller groups according to other independent variables such as marital status or other variables that may influence students’ perceptions on gender issue. There is a relatively limited population available for the survey part of the study, which can include at best only 280 final year medical students in Israel. Only students from three schools could be used for sampling due to using the students from the fourth medical school for the pilot questionnaire. This fact limited the theoretical possibility for generalization to only three of four medical schools in Israel but according to the pilot’s results there is no reason to consider the population of school “D” as different. The response rate of 60 per cent made the available sample smaller and more liable to bias but is considered adequate under the circumstances of such research.

The case study’s sample of ten students is considered adequate due to representation of the whole population with regard to gender, marital status, age and place of birth. A justification for the size is that this study is a single researcher project with limited resources with regard to manpower and time. The sample includes only students who agreed to be interviewed. The justification for this possibility for bias is the mainly ethical consideration not to force those who do not want to refer to sensitive issues.
Research tools

The questionnaire used in the survey part of this research may contain flaws. One possible problem of the questionnaire is that it contains a limited number of items and thus cannot produce high reliability coefficients. On the other hand, not asking too many questions probably guarantees a much better response rate and the cooperation of the students. Another problem of the questionnaire is the inclusion of some items that were based on the literature background but did not match the reality as seen through the students' eyes.

The interviews may also suffer some limitations. In the case of faculty members who overlooked several of the questions, the interview sessions could not obtain full answers to all the research questions. Nevertheless, this is the price that has to be paid by this research in order to guarantee cooperation and trust. In addition, the documents used for the documentary analysis yielded only very general information. Access to more restricted insider documents may have yielded much fuller information.

Recommendations for further research

As the limitations of this research are concerned mainly with the ability of this research to achieve full validity, the recommendations for further research are to evaluate the validity and the reliability of the findings by more in-depth methods. Although quantitative methodologies are considered more reliable than qualitative approaches, there are limited possibilities for large enough samples in
the case of medical school populations in Israel, as there are only four schools
with a limited number of students. Recommendations for further research
therefore include more in depth and longitudinal studies such as a study that
follows female medical students from their entrance to medical school through
to graduation, looking at the factors in their medical education that encourage
them and alternatively factors that cause discrimination and abuse and block
their path to achieve their full potential.

A much more direct way to investigate educational management of medical
schools is to investigate this source directly rather than making conclusions
mainly from the students' point of view. Inside case study investigation to hear
the voice of the medical school managers themselves about their policy,
difficulties and future plans regarding gender equality issues, is recommended.
Unfortunately, the cooperation of the educational management of the medical
school examined in the present case study could not be fully achieved. This may
be due to the fact that this medical school is undergoing major curricular change
and encounter a lot of opposition from the faculty members and students.

The most needed further research is to add to the question of gender equality the
angle of the more general question of equity in medical education, which was
not discussed in the present study. The US literature reports on minority
discrimination in the medical profession. Since the 1980s, the proportion of
minority faculty members has increased steadily from less than three per cent of
newly appointed assistant professors in 1980 to about twelve per cent in 1997
(Di et al, 2000, p. 1086), yet a much smaller increase over the same period of
time among more senior ranks. It is not rare to find evidence for ethnic or racial
discrimination in the medical profession. Non-white medical students, residents
and doctors report of their experience of ethnic and racial harassment at medical
schools and hospitals (Corbie-Smith et al, 1999, p. 699), as well as under
representation in academic medicine and lagging behind in the promotion rate
of racial and ethnic minority groups (Petersdorf et al, 1990, p. 669; Palepu et al,
1998, p. 770). This issue has particular relevance to the Israeli population,
which consists of twenty per cent ethnic minority groups and where social
sensitivity and democratic values emphasize ethical tolerance. Women are not
alone at being disadvantaged in medicine in Israel. Other groups, based on
social class, race or ethnicities are not traditionally incorporated in the
leadership positions of medical schools and there is a need for a national effort
to improve career development and leadership opportunities for these
underrepresented minorities. Because the current population of medical students
in Israel consists of less than five per cent of ethnic minority students, of which
none responded to the survey’s questionnaire, their voice is not heard in this
study.

Summary

This study highlights issues of gender diversity of the medical student
population in Israel and emphasises necessary changes in medical education in
Israel related to gender issues. These changes may be generalised and carry
implications to the wider context of higher education in Israel and even to
general education as well. The study emphasises potential changes in pedagogy,
school organizational culture and ethos, mentoring processes, and countering a hostile androcentric learning environment as well as aspects of the wider social and cultural context in Israel.

There are several discrepancies that are uncovered by this research between what is considered the common knowledge of the topic so far and the findings of this research, such as:

1. The findings of this research could not support the prevalent claim in the literature that women medical students rate themselves lower than men in self-esteem and motivation for leadership.

2. No gender differences were found in the need to consider family responsibilities when choosing a medical career.

3. The findings contrast with the hypothesis that women tend to be ‘innovators’ with regard to pedagogical issues while men tend to prefer the traditional medical school delivery of the curriculum. According to the findings women medical students feel at ease with the existing pedagogy at medical school, whereas men tend to prefer new teaching methods.

4. Israeli students of both genders rated the importance of having same gender mentors as very low.

5. Men students complain more than women about general abuse and discrimination. Both genders tend to deny that sexual harassment exists within the medical school.

6. Women think that gender has no influence on their personal career choices. Both genders hesitate to blame the medical school for gender discrimination.
7. Curricular changes are not believed to contribute to gender equality.

These discrepancies between the literature reviewed and the findings of this research may have special significance and may be explained by understanding the particular context of this study. There are two main socio-cultural factors that enable the background of this study to be considered as contributing to existing knowledge: the Israeli context and the fact that it was carried out during 2001. This study may also be considered as original with regard to its methodology and conceptual background.

It is of importance that this study was carried out within the context of medical education in Israel. Most of the knowledge base on gender issues during medical education, which is used for comparing the data of the research, is based on studies carried out at medical schools in the US and the UK. There are several ways in which the special Israeli context could make an impact on the findings and explain the discrepancies between the current knowledge and the findings.

1. Israeli medical schools, although in many ways similar to medical schools in the US and the UK, may also be distinctive in other ways. They are considered as small schools and consist of small classes, which may encourage a more informal environment (Mirvis, 1993, p. 17).

2. Another typical distinction of the medical schools is that the interactions between faculty members and students may be less formal than those in the US and UK because of the particular democratic nature of the Israeli society.
which carries through into education (Mirvis, 1993, pp. 13-17). This difference may explain the empirical findings that most students, particularly women, are satisfied with their school. Other studies show that medical students, particularly women, are dissatisfied with the delivery of current medical curriculum and look for changes in the teaching and evaluation methods of the medical schools. In most studies it is found that women tend to feel that they cannot compete within the class-learning environment, where they are likely to be silenced by the prominence of male culture. It is quite possible that Israeli medical students and women in particular, feel quite free to express themselves and ask questions because of the informal nature of the classroom environment and lectures, which became apparent in the findings of this research. Therefore, they are not looking for changes in teaching formats.

3. The context of the particular nature of Israeli society is also distinctive. The Israeli cultural background is based on two contradicting influences, which may be unique to Israel. On the one hand, the Israeli society is a more traditional society than compared to other western countries. In particular, the importance of establishing families with traditional values and having children is emphasised (Moore, 1999, p. 50). It is not surprising therefore that both genders among Israeli medical students say they would take into account family considerations when choosing their career path. On the other hand, Israeli society is newly established and is based on pioneer settlements, with strong socialist influences. As a result of the communist and socialist values of its leaders, issues relating to gender, race and class diversities may
be in some ways less prominent in the Israeli society. This may explain the gender similarity in self-esteem and motivation for leadership.

4. An important factor within the cultural background of this study is that Israeli women have to serve in the Israeli army. This fact creates a different socialization for Israeli female medical students. This factor may explain the different way that Israeli women react toward sex discrimination and inequalities and overlook incidents of gender discrimination and sexual harassment. It became evident in the findings that women regard their military service as a very chauvinistic experience for them. It may be that they became 'immune' to later examples of discrimination as a result of the treatment the experience during their military service.

The time when this study is conducted is the other important factor within the context of this study. It adds to the research uniqueness and contributes to the current knowledge. It is based on research carried out in 2001. This era is different from previous era just few years ago with regard to the near equality in number of women working, equal number of women acquiring higher education and specifically in medical education. The rapid social and economical changes over the years in the work area influence change of values, with regard to an acceptance of women with career and expectations of women taking more equal share in the role of bread-winning of the family. A rapid recent evolution is carried out with regard to more links between work and family. These issues were discussed in the literature review (pp. 65-68). As a result of it, recent work-related values of medical students are expect to be much more accepting
women in medicine than those few years ago, despite resistance to change rooted in the power structure of society.

The influence of the new generation of higher education students is called upon to explain many of the discrepancies between the findings of this study and the current knowledge so far such as the fact that there are no gender differences with regard to self esteem and motivation for leadership, whereas literature shows that there are gender differences on this issue. The new self confidence acquired by young female students as to their self-esteem as professionals may explain the finding that personally women students refuse to recognize the limiting effect of their gender on their career choices and opportunities and the fact that they refuse to call for any gender equality changes within the medical schools. It looks as if they are confident in their ability to succeed despite their gender. The fact that no gender differences were found between how students perceive their family responsibilities seems to indicate that it is a new generation of young people recognizing their joint responsibilities as parents. Of course it may be that their views will change once they are established in their careers and looking for promotion opportunities.

This study may have additional reasons for claiming originality and adding a to the knowledge base in the medical education field in other ways. One contribution of this study in the medical education context is that it involves both quantitative and qualitative methodology. Most of the empirical research in medical education involves only quantitative methods. Solely qualitative research on medical education comes from the UK. As this research use a
diversity of methods, it enables the collection of richer data and therefore a better understanding of the existing data.

This study is also original in applying new perspectives in the medical research. The theoretical background of this research recognizes that access into medical education is no longer a problem for women. Yet, the patriarchal society is influencing in many ways to limit the career development of women by operating 'sex segregation' and 'glass ceiling' phenomena in leadership positions. The definition for gender equality of this study is a wider definition of what equal opportunities may involve than that proposed by other studies. The medical education literature includes within gender issues four issues that need to be dealt with: the need to promote motivation for leadership within the female population of medical students and doctors, the need to change the pedagogical environment of the medical schools to become more women-friendly, the need to promote mentoring and advice and the need to address gender discrimination and sexual harassment within the medical education environment. This study also stresses the influence of medical school on future career choices of medical students. Previous studies in medical education did not address all of these issues together. They tend to either address pedagogical issues, or only the lack of a women-friendly environment within the medical school organizational culture or were only concerned with the question of gender discrimination as if it was a separate problem within medical education. This study is unique in dealing with all the issues together drawing conclusions on the influence of each issue on the others and on the future career opportunities for women.
Appendix 1: The survey questionnaire

Student questionnaire on gender equality in medical education

Demographic characteristics
Please provide the information requested by ticking relevant boxes or writing your response

Medical school: _____________________ Gender: male □ Female □

Age: ________________ Marital status: Single □ Married without children □ Other □

Married plus children □ How many children? _____

Army service: yes □ no □ Country of birth: ________________

Residence in Israel since ________________ Permanent address: (Name of town/ settlement): ________________

Number of siblings: ___ Father’s occupation: ___ Mother’s occupation: ___

My broadly defined career choice is in: ________________

I agree to be interviewed on the topics of this research: if so, kindly give your telephone number ______

Please indicate the degree of your agreement to the following statements by ticking relevant boxes opposite each statement, using the following scale from: 1= Strongly disagree to 5= strongly agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1. Group study is my preferred learning style</td>
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<td>2. The evaluation system at my school should emphasize communication</td>
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<td>skills</td>
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<td>3. The psychosocial components of the doctor’s role should be part of</td>
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<td>the ethos of the medical school</td>
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<td>4. I prefer self-study to lectures</td>
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<td>5. It is preferable to have same-sex person as mentor</td>
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<td>6. I have encountered at least one role model during my studies</td>
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<td>7. I have encountered at least one confidant among the faculty members</td>
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<td>of my schools</td>
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<td>8. I plan to achieve recognition on a national level in medicine</td>
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<td>9. I already have specific career plans</td>
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<td>10. I have high self esteem with regard to my professional abilities</td>
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<td>11. Leading others is important to me</td>
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<td>12. The climate of my medical school is very supportive</td>
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<td>13. The ethos of my school include the importance of general practice</td>
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<td>14. Male students are considered more part of the team than female in the</td>
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<td>surgical rotations.</td>
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<td>15. Personal life commitments are more important to me than work</td>
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<td>commitments</td>
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<td>16. I will pursue a career only if it can accommodates family</td>
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<td>responsibilities</td>
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<td>17. There are differences in career opportunities for men and women</td>
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<td>18. During my studies, I felt at least once as an outsider</td>
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<td>19. Some of my teachers under evaluate my skills</td>
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<td>20. I have encountered some sexist remarks from my teachers during the</td>
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<td>course of my medical education</td>
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<td>21. Sexual harassment is prevalent at medical schools</td>
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<td>22. I am very satisfied with my studies so far</td>
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</table>
Please briefly express your views on the following questions

1. What are your career goals (be a head of a department/work as a specialist in hospital/ work with the community/academic career/administrative career)?

2. What will affect your probable career choice (Interest/ability/time for family/prestige/financial reward)?

3. What do you perceive as barriers to succeed in your career (personal or family commitments/ lack of ambition/ lack of ability)?

4. Have you been influenced by your school to pursue a certain speciality and which one?

5. What is your preferred learning style (e.g. self learning, group study, attend lectures, problem based learning)?

6. What are the characteristics of a mentor to help you with your career?

7. Have you experienced any abuse at the medical school and how?

8. Do you think gender has an effect on career opportunities and how?

Additional remarks

________________________________________

________________________________________

________________________________________

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE
Appendix 2: The student’s interview schedule

Promise (Orally):
1. Everything is confidential
2. Your anonymity will be kept anytime
3. You do not have to answer all the questions
4. You can see the report of your interview for approval
   *

Warm up questions: Tell me a little about how you come to decide to become a doctor?

At what age did you decide to become a doctor? Tell me a little about you, etc.
   *

Please answer the following five questions:

1. What are your career-goals, work-motivations and what are the factors that will affect your probable speciality choice?

2. Is the way you are taught at the medical school compatible to your learning styles and needs?
   (Can you give examples with regard to curriculum contents, methods of teaching and the fairness of the assessment methods? Do you feel you can ask questions during lectures? What subjects and skills are given more emphasis in the curriculum and examinations?)

3. Do you think that the medical school’s environment is supportive, unbiased and contributed to your career preparation and future success? (Give examples with regard to the following topics: school ethos, curriculum emphasis like hours and other teaching resources given to certain subjects, school’s advice with regard to future plans, official and unofficial mentoring processes, teachers’ prejudices, gender discrimination, sexual harassment during medical training, your definition of sexual harassment).

4. Based on your school experience, do you think your career opportunities in the future will be affected by your gender and in what way?

5. Do you think there is a problem of gender equality at the medical school? In this regard, do you think that the medical school has to change and why (give example for needed curriculum change, adding content or evaluation methods change)? Do you think that possible gender differences have any other educational management applications?
Appendix 3: The questionnaire cover letter

Tel Aviv, June 2001

Dear Student,

I am conducting a study on equity issues in the medical education experience in Israel. The aim of this study is to provide a contemporary picture of equity issues in the educational process. In addition, I wish to identify the implications of those issues for educational managers, which may contribute to the improvement of the medical education in the future.

Your cooperation in responding to the following questionnaire will be most helpful in achieving a true picture of these issues in your school. Nevertheless, your participation in the study is entirely voluntary. There are no right or wrong answers to the questions posed. Your answers and comments will be used for research purposes only and I guarantee that you will remain completely anonymous.

If you have any questions or comments regarding the research, I will be happy to reply.

Thank you for your cooperation,

Ruth Abramovitz

54 Pinkas St. Tel Aviv, 62261
E-mail: abratel@barak.net.il
Fax: 03-6046583
Tel: 03-6045168
Appendix 4: summary of survey analyses

**Table A.1**
Means and Standard Deviation for Individual Items of the Closed Questionnaire, by Gender

<table>
<thead>
<tr>
<th>Item</th>
<th>Men</th>
<th>Women</th>
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<tr>
<td></td>
<td>N</td>
<td>Mean</td>
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<td>1</td>
<td>61</td>
<td>3.16</td>
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<td>2</td>
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<td>4.25</td>
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<td>3</td>
<td>61</td>
<td>3.92</td>
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<td>4</td>
<td>61</td>
<td>2.54</td>
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<tr>
<td>5</td>
<td>61</td>
<td>2.23</td>
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<tr>
<td>6</td>
<td>61</td>
<td>4.41</td>
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<tr>
<td>7</td>
<td>61</td>
<td>3.52</td>
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<td>8</td>
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<td>3.57</td>
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<td>9</td>
<td>61</td>
<td>3.28</td>
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<td>10</td>
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<td>3.80</td>
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<td>11</td>
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<td>2.95</td>
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<td>12</td>
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<td>13</td>
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<td>14</td>
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<td>2.41</td>
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<td>3.97</td>
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<td>16</td>
<td>61</td>
<td>4.03</td>
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<td>17</td>
<td>61</td>
<td>3.26</td>
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<td>18</td>
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<td>3.85</td>
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<td>20</td>
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<td>21</td>
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<td>22</td>
<td>61</td>
<td>2.93</td>
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</table>
Appendix 5: Extract from an interview transcript with one student

Background:
“28” is female, 28 years old, born in Israel, lives in Tel Aviv, served in the army. Both parents are academic and she has two brothers.

Question:
Do you think that the medical school’s environment is supportive, unbiased and contributed to your career preparation and future success? (Give examples with regard to the following topics: school ethos, curriculum emphasis like hours and other teaching resources given to certain subjects, school’s advice with regard to future plans, official and unofficial mentoring processes, teachers’ prejudices, gender discrimination, sexual harassment during medical training, your definition of sexual harassment).

Answer:
"...The environment at my medical school is not supportive... School’s ethos!!, It is very important in medical school but I don’t think our school has any ethos at all. I did not feel that the school has no ideals or, you know, may be it has... but it is not made apparent to us. The faculty members are not encouraging us in any certain ways. They are not mentoring us and guide us. They certainly don’t encourage for excellence as doctors or researchers. They say nothing about our future as doctors and they don’t tell us a lot how to behave as professionals. .... I think that the medical school is not emphasising enough the teaching of ethical topics and communication skills. I certainly think more ethics topics are needed in the curriculum of my school. There were attempts to teach more ethics at the school curriculum but it always failed at the end. You know why? I think that the teaching of ethics in Israel is failing because the faculty members don’t think it is important enough. They have taught it as if they were forced to do it. And the way they teach it is as if it is not related to anything. So how are we to learn that way??! They are not relating it to other topics and they make you think it is not relevant for medical students.... You know what is worse? They may say one think and behave the opposite. This is really bad. They give us bad
example the way they react to patients sometimes or to us. Anyway, I also think that you can't teach all the subjects at schools. One topic is instead of another topic. There may be other topics like women health topics, which are also important but such subjects cannot be taught at school. There is no room for it in the curriculum. Not enough time for it... In the past all the clinical teaching was related to men's physiology and they gave examples of male illnesses. It may be better now that way... No, the medical school has not contributed to my career preparation. There is simply no advice and encouragement from the school. No one is giving me advice or helped me about my future career... no official mentoring..... There is a sexual discrimination and harassment against women but it is not overt. It is not that the faculty members are encouraging women or channelling them to certain specialities. But I think there certainly a strong gender discrimination against women at our school. I am sure of it although it did not happen to me personally... Many heads of wards in hospital and other doctors are very, very chauvinistic, especially within the surgical subjects. Some doctors have stereotype against the ability of women. They may be protecting women and so not let them experiencing everything at surgical wards... I have heard that after the clinical rotation in the orthopaedic hospital ward, the ward head said to them that it was a waste of time for him to let them take the mandatory clinical examination in orthopaedic. The reason he gave was that he would never let female residents into his ward and therefore women students should not be obliged to be tested on this subject. They were two women in a group of five students at that ward. Those women were as good as the men in their group. It is a very serious case of discrimination... It annoyed me so much. This is the reason why I agreed to be interview for this study to tell
about it. I don’t know what was the end of this story although I am sure it settled o.k.... Sexist remarks are also very prevalent and disrespect of women...Sure, many faculty members treat women students as women first and then as students. It is kind of harassment but I have to stress that personally, I can not say I was harassed.
Appendix 6: Extract from an interview transcript with one faculty member

Background:
“FM 7” is female, an MD, a full clinical professor, a head of a hospital ward, internal medicine specialist, teaching students for over 20 years, a member of a curriculum committee.

Question:
Do you think that there are gender differences in the educational experience at medical school with regard to advice, preparation for career, support, biases, encouragement, mentoring relations, gender discrimination and sexual harassment?

Answer:
“All the students have the same educational experience at my ward. They are prepared as equal for their medical career. About the issue of advice for medical student, the medical school do not advice the students in a way that might limit their career. Women can enter the same specialities like men... But, advice and mentoring are very important. I wish someone was there to give me advice when I was a medical student. I got no advice about my future career... You see,... students should be warned that certain specialities are almost not worth the efforts of trying to get into them. It is very important that the medical school will stress the fact that students should know that some specialities are not as glamorous as it is made to believe and the conditions of service are rather poor. When I was a student there was no one to advise me. My own experience is that one of the main problems in achieving career plans are the competition and the blocked bottlenecks in trying to achieve more senior posts in hospital and I try to pass this message to my students... I also think that mentoring is very important for the medical students. When a study group of students arrive at my ward for their clerkship, I provide them with a very experience tutor. He is always the same person because he is so good in it. He serves as a mentor for them. He is still young to understand their difficulties but he is very knowledgeable and can
coach them for their role and he can serve a role model for them and as a friend... Female students do not suffer from any discrimination there is no sexual harassment and I am very confident about their future in the medical world... It is true that the medical education is oriented to science and diseases and neglects prevention, environmental and social concerns, which are equally important aspects of medicine. Doctors trust only what they had learned and experienced in their clinical practice and discount other knowledge such as their patients’ knowledge. This should be changed to the benefit of better medical practice. Women practice medicine differently: they talk more with their patients, positive talk. The entrance of women into the different medical professions can change medicine to the better. Now men are still commanding the resources and the authority and control the medical education policy. When women will be in the position to change medical training programmes they can develop better patient’s protocol."
References


Berg, B.L. (2001), (4th edition), Qualitative Research Methods in the Social Sciences, Boston, Allyn and Bacon


Haapanen, K., Ellsbury K.E., Schaad, C.D. (1996), 'Gender Differences in the Perceptions of Mentorship among First and Second Year Medical Students', Academic Medicine, Vol. 76; p. 794.


The Times (2002), *The Times higher Education Supplement* (ONLINE-

Thompson, M. (1992), appraisal and Equal Opportunities, in Bennett, N. Crawford,

1131.

Tisdell, E.J. (1993), ‘Interlocking Systems of Power, Privilege and Oppression in


Travers, C. and Pemberton, C. (2000), ‘Think Career Global but Act Local:
Understanding Networking as a Culturally Differentiated Career Skill’, in Davidson,
M. J. and Burke, R. J. (eds) *Women in Management, Current Research Issues,

(ONLINE - http://www.heartjnl.com)


White, G. E (2000b), ‘Sexual Harassment during Medical Training: the Perceptions of Medical Students at a University Medical School in Australia’, *Medical Education*, vol. 34, pp. 980-986.


