AGORAPHOBIA: A STUDY OF THE
SYNDROME AND ITS TREATMENT

Thesis submitted in fulfillment of the
requirements for the degree of Doctor
of Philosophy, University of Leicester.

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ABSTRACT

AGORAPHOBIA - A STUDY OF THE SYNDROME AND ITS TREATMENT


The basis of the thesis is a treatment outcome study of agoraphobia which took place over a 4 year period. 132 subjects met inclusion criteria and 100 completed a trial of treatment using a standard exposure in vivo programme with follow-up to 1 year. Of the 32 subjects who refused or dropped out, 21 subjects were followed up to 1 year.

Chapter One of the thesis reviews the literature on the nature of agoraphobia. Chapter Two reviews the literature on exposure treatment and describes the outcome of such treatment with the study population. Also included was a comparison of treatment base (home or out-patient clinic) and an assessment of the relationship between marital satisfaction and outcome and some other minor variables. Chapter Three reviews the relevant literature on treatment failure and describes a study of the 60 treatment failures in the study (i.e. drop outs, treatment refusers, treatment non-responders and treatment relapsers). This was effected by statistical analyses of the measures used in Chapter Two and additional questionnaire data.

Chapter Four reviews the relevant literature on cognitive variables and describes a study of cognitive processing in 12 of the study subjects. The principal measures used were those of subjective probability and value of aversive outcome, rated over treatment for six target behaviours for each subject. Chapter Five reviews the relevant literature on sex role variables and describes a study of the differential outcome of the 102 females and 30 male subjects, and of the subjects' responses to a measure of sex role stereotyping.

The thesis concludes with a summary which attempts to integrate the findings of the various chapters.
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I wish to acknowledge the following for their most valuable help during the 5 years of this project.

My supervisor and teacher, Dr. Kevin Howells

My secretary, Jo Todd

Dr. David Winter - Independent Assessor

Michele Roitt, Janis Flint, Lucy Johnstone, Dr. Fakir Hussein, Ken Allen, Bill Drysdale - Therapists.

Jill Davis, who was the research assistant.

Dr. Sue Davenport, Dr. Lawrence Ratna.

N.W. Thames Regional Health Authority (Locally Organized Grant)

Richard Elliot

Prof. Andrew Mathews

Prof. Isaac Marks, Dr. Julian Bird, Dr. Din Master, Mr. Peter Lindley.

All the patients and some of their spouses.

Jean Gournay and Alexander, of course.
INTRODUCTION

The agoraphobic syndrome probably affects 300,000 people in the United Kingdom, and if some other estimates (e.g. Costello (1982)) are correct, a considerably greater number suffer some agoraphobic fears. The syndrome has attracted considerable interest both because of its prevalence and its presentation.

Marks (1983) has argued that agoraphobia is an especially interesting condition, because although it seems to be a clear phobic disorder, it does have many features in common with mood disorders and in some unfortunate subjects there is a whole range of severe symptoms affecting the cognitive, physiological and behavioural response systems.

The disorder is also one of the commonest reasons for referral to clinical psychology services. The reason for this is that developments in behaviour therapy in the past two decades have rendered this previously intractable problem most amenable to treatment. However, as Rachman (1983) argues, there is no cause for complacency. While a majority of subjects who undergo behavioural treatment are improved by 60-70% (Jansson and Öst (1983)), even these subjects continue to experience considerable handicap. Furthermore, if one takes into account the rates of drop out and treatment refusal, probably half of sufferers referred remain unchanged. In essence our current treatment methods provide at best, an amelioration of the syndrome which allows sufferers to function relatively normally. Nevertheless, with the exception of a very small minority, our patients still call themselves agoraphobic at the end of treatment.
At the beginning of this decade, three major works on agoraphobia were published. Mathews et al (1981) described their research efforts which led to the home based exposure programme. Chambless and Goldstein (1982) edited a book containing "state of the art" reviews from workers representing psychoanalytic, behavioural, cognitive and medical models. Finally, Thorpe and Burns (1983) described their survey, originally carried out in the mid 1970's, and reported an evaluation of multimodal treatment for the syndrome. These three works reviewed the literature to the beginning of this decade and provided data on particular aspects of the syndrome. To some extent this thesis is indebted to these workers, as several of the hypotheses which have been put to the test were suggested by the results of these workers' efforts. The present thesis is intended to make a contribution in three main areas. Firstly, a much needed comprehensive set of literature reviews is provided. Secondly, the four experimental enquiries are reported which have direct relevance to the refining of current clinical treatment methods. Thirdly, some of the study results further our understanding of the theoretical issues relating to aetiology and treatment process.
# CHAPTER ONE

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CHAPTER ONE

AGORAPHOBIA - THE NATURE OF THE SYNDROME

- A REVIEW OF THE LITERATURE
Classification

Westphal originally coined the term "Agoraphobia" in 1871 to describe the condition of three male patients who feared going into streets and public places. The Agora in Ancient Greece was the place of assembly and a phobia is best defined using Marks' (1969) definition as a special form of fear which:

1) Is out of proportion to the demands of the situation.
2) Cannot be explained or reasoned away.
3) Is beyond voluntary control.
4) Leads to avoidance of the feared situation.

As Mathews et al (1981) point out, Benedikt's (1870) term Platzschwindel ("dizziness in public places") did not survive. However, this term is highly descriptive of the problem.

Over the years a number of different names have been given to the syndrome, including Locomotor anxiety (Abraham (1913)), Anxiety hysteria (Freud (1919)), Street Fear (Miller (1953)), Phobic anxiety depersonalization syndrome (Roth (1969)), Phobic Anxiety State (Klein (1964)), etc., etc.

The current Diagnostic and Statistical Manual (DSM III) of the American Psychiatric Association provides the most widely accepted definition of agoraphobia. This definition will be used as the operational definition of agoraphobia in this thesis and is accepted in this country as providing the most useful criteria for use in research. It is, as
follows, a syndrome in which:-

a) The individual has a marked fear of, and thus avoids, being alone in public places from which escape might be difficult, or in which help is not available, in the case of sudden incapacitation in such places as crowds, tunnels, bridges, public transportation.
b) There is increasing constriction of normal activities, until the fear or avoidance behaviour dominates the individual's life.
c) This is not due to a major depressive episode, obsessive compulsive disorder, paranoid personality disorder or schizophrenia.

However, this definition is further qualified in the manual by dividing agoraphobics into those with panic disorder and those without panic disorder. It has long been recognized (e.g. Chambless and Goldstein (1982)) that a proportion of agoraphobics have panic attacks which are not specific to the phobic situation. Increasingly such panic disorder is being viewed as a separate entity. Two studies (i.e. Di Nardo et al (1983) and Barlow et al (1984)) have demonstrated that panic disorder can be identified reliably. However, this view is largely confined to the United States, while British and other workers take the view that panic disorder may be a reflection of a generalization process rather than an additional disorder. The work of Klein and his associates (e.g. Klein (1981)) suggest a biological cause of panic which is discussed in detail in the section on various formulations of agoraphobia.

One of Britain's most influential workers has recently apparently
accepted the different functional view of agoraphobia advanced by the Americans. He (Marks (1985)) reviewed the difficulties involved in the classification of anxiety and had agreed that the simplest way of classifying anxiety is to divide it into anxiety with, and anxiety without avoidance. Marks also suggests dividing panic disorder into 3 categories, namely phobic situational, spontaneous situational and spontaneous non-situational. He stresses the over-lapping nature of the various syndromes, highlighting the problems one finds in differentiating agoraphobia from panic disorder. One major recommendation of his paper was the differentiation of those agoraphobics with panic disorder from those agoraphobics without panic disorder. There is a clear indication from the literature that in patients with a high frequency of panic attacks there is a need for specific treatment for the panic attacks, regardless of outcome with exposure treatments primarily designed to modify agoraphobic avoidance. It is clear that any between group study of agoraphobia treatment outcome needs now to take into account the presence of panic disorder in subjects in the various groups. Therefore if an unequal allocation, based on the presence or absence of panic disorder, occurs, this needs to be taken into account in carrying out the statistical analyses.

There is some indication (Barlow (1983)) that, in keeping with the above recommendations of Marks, the next Diagnostic and Statistical Manual (DSM-IV) will omit the term Agoraphobia and use a system based on the concepts of panic and avoidance.
The Clinical Picture

As several writers (e.g. Mathews et al. (1981), Thorpe and Burns (1983)) have pointed out, the clinical picture remains unchanged from Westphal's (1871) account. No attempt will be made to describe the wide ranging presentation of symptoms which have been so ably described by many workers. Hallam (1985) provides three autobiographical accounts of anxiety and agoraphobia which not only vividly describe the subjective state but also illustrate the wider effects of the syndrome on social and family life.

Marks (1970a) described the many symptoms, but he felt that the central fear of going out was the source of development for many of these. Marks concluded that the syndrome had a poor prognosis, a view he was to radically change (e.g. Marks (1975)).

The most recent and comprehensive description of the clinical picture has been provided by Thorpe and Burns (1977 and 1983) who carried out a national survey of agoraphobics. This study is the most up-to-date survey in the literature and reported data on the sample of 963 subjects. Subjects were recruited by means of publicity in the mass media, and subjects were invited to write for a copy of a detailed 17 page questionnaire. Together with this, the main phobic organisations sent the questionnaire out with their newsletter. While it can be argued that the sample is by no means representative, the study yielded some interesting results.

The ratio of males to females in their sample (1:7.45) was much higher
than the probable incidence of agoraphobia between the sexes, while the marital status, religion and educational status of subjects was within the range expected from the general population (Registrar General's figures).

The authors also looked at occupational disablement and found that 28.67% of their sample had a job outside of their home. This compares with the figures of 22% of the women in the Marks and Herst (1970) study being employed outside of home, and the 33% reported in the Berg et al (1974) study. Of the agoraphobic subjects who were employed, only a quarter said that the agoraphobia seldom or never hindered their work. Nearly half (48.1%) of those working said that they would change their occupation if it was not for their condition. There were no significant sex differences with regard to this question. Of those not working, 83.2% reported that they would take a job away from home if it were not for the agoraphobia.

Regarding the childhood of the subjects, the authors found that a high percentage of the sample (42%) regarded their fathers as being strict, and a high percentage (43%) regarded their mothers as being over-anxious. While there was no control data, these results bear some closer investigation. Interestingly, 37% of the sample appear to have been separated from their parents, for a variety of reasons, for a period of at least 3 months during their childhood. Further, 13% of the total sample were not brought up by their parents after the age of 6. Once again, this is an interesting finding. The authors also find, (in accord with Marks and Gelder (1965) and others) that
the incidence of behavioural problems during the childhood of agoraphobics was high. Nearly half of the total sample (46%) had various childhood fears. 45% of the sample had childhood fears of the dark and in 69% feelings were too easily hurt. Of the common childhood problems, 30% of the sample had nightmares, 30% had frequent bedwetting and 29% demonstrated nail biting. 9.3% of the sample claimed that they were agoraphobic before the age of 16.

Other relevant parts of this very informative study are referred to elsewhere in this thesis.
The Validity of the Syndrome

There have been a number of studies employing factor analysis which have demonstrated an independent factor synonymous with agoraphobia. Dixon et al (1957) investigating the fears of a group of psychiatric out-patients, was the first of a number of contemporary studies. Marks and Herst (1970), Snaith (1968), Schapira et al (1970), Hersen (1973) and Arindell (1980) are further examples.

Two of these studies are worthy of note. Marks and Herst (1970) surveyed 1,200 agoraphobics drawn from several phobic societies. They used a principal components analysis of the main symptoms and found 3 major components including a core set of agoraphobic fears.

Arrindell (1980) also used a principal components analysis on the responses of over 700 out-patient phobics to the Fear Survey Schedule and demonstrated convincingly a specific agoraphobic syndrome. This syndrome was not reducible to a different subset of fears or general fearfulness, and was independent of simple phobia and neuroticism. Arindell defended in his paper the view that agoraphobia is a discrete entity. He pointed out that if agoraphobia was a part of an affective disorder, one would see evidence of mood change and/or general anxiety during long term follow-up. This was clearly not present in the large follow-up studies to date (e.g. Munby & Johnston (1980) reviewed below). However, Hallam (1978) has questioned the notions that (a) agoraphobia is a phobia, where the term phobia is used in the sense of fear attached to a discrete set of cues; (b) that the agoraphobic syndrome can be clearly differentiated from states of general anxiety.
Hallam argues that although there are clusters of fear which have been called the agoraphobic syndrome, that a simple fear avoidance relationship is not a central feature of subjects suffering from agoraphobia. Hallam cited evidence of not only the differences between agoraphobics and specific phobics but the similarities between agoraphobia and affective disorders. In this paper Hallam argued that the phobic avoidance found in agoraphobia merely represented a variation of coping behaviour in subjects with neurotic anxieties. In conclusion, he called for a fresh approach to classifying the neurotic affective disorders.

Certainly many authors have noted depressive symptoms in agoraphobics. For example, Buglass et al (1977) found a 30% incidence of depressive symptoms in their sample of agoraphobics. Conversely Schapira et al (1970) found that 54% of subjects with primary depression had agoraphobic symptoms. However, with regard to subjects suffering from the cluster of fears called agoraphobia there is clear evidence that this cluster remains stable over time (e.g. Marks (1971), Munby and Johnston (1980)). Furthermore, primary states of depression or anxiety do not occur in these subjects with any greater frequency than one would expect by chance during follow-up periods. That agoraphobia is such a handicapping disorder is, in itself, a reason for sufferers to become depressed with the limitations placed on their lives, and it is therefore not surprising that agoraphobic populations score highly on depression inventories.

Hallam (1983) has gone on to criticize the label "Agoraphobia" from a different stance. He argues that the term is a psychiatric description
which is incompatible with a psychological construction. He asserts that the psychological descriptions need psychological explanations and says that the current practice of combining psychiatric and psychological terminology indicates a misplaced eclecticism. Hallam concludes that psychiatric diagnoses such as agoraphobia are in fact fascinating examples of social stereotyping and of professional appropriation exercised through naming. He concluded this paper by saying that clinical psychologists should generate new systems of classification. He cited Lang's three response systems as being a most useful starting point for this exercise.

Hallam (1985) has developed his arguments in a book which criticises the disorder model and attempts to apply many diverse psychological theories to explain anxiety. He argues against the reification of anxiety and agoraphobia, urging the acceptance of lay constructs as a starting point for understanding these phenomena. Certainly he describes a range of studies which are very relevant to agoraphobic behaviour, but in contrast to many other authorities who have examined the same evidence, he concludes that the agoraphobic syndrome does not exist. At present Hallam's view represents a small dissenting minority.
PREVALENCE

Agras et al (1969) have provided the one major study of the prevalence of agoraphobia. Although its sampling method was meticulous, only 325 persons were interviewed. Therefore the extrapolation from this data, yielding an incidence of 0.6% in the general population, must be tentative. This estimate however, is consistent with wider estimates of "nervous symptoms" (Rennie et al (1957), Winter (1959) and Abe (1972)). Some recent evidence suggests that agoraphobic fears, not amounting to a full clinical syndrome, are much commoner. Costello (1982) reported a 13% incidence in a sample of normal women of such fears occurring in the previous year. Marks (1981a) has reviewed the epidemiological aspects of agoraphobia and agrees with Agras et al's estimate.

A number of studies suggest that approximately 3% of psychiatric patients have primary phobic problems (e.g. Errera and Coleman (1963)). Other authors, (e.g. Hollingshead and Redlich (1958)), have suggested that phobic states may occur in as many as 20% of the population of psychiatric patients. However, what is not clear is why some patients are referred for treatment while others are not. It is quite clear, as reference to psychiatric out-patient or psychology department statistics will confirm, that we (psychologists, psychiatrists) see only a small and probably atypical proportion of the total agoraphobic population, which in this country is likely to be in the region of 300,000.

Onset, acquisition and genetic factors

The onset of agoraphobia generally seems to be in young adult life and
the age of onset has a bimodal distribution. The peak ages are between 16-20 years and 30-40 years (Marks (1970)). It is generally agreed that the syndrome rarely begins before 16 years or after 40 years, but Thorpe and Burns (1983) reported 9.3% of their sample having developed agoraphobia before 16 years, and 13.2% developing agoraphobia at 40 years or more. Thorpe and Burns (1983) also reported that, in their sample, males had a significantly lower age of onset than women (24.25 yrs vs. 28.51 yrs). The age of onset in agoraphobia also appears to be similar to anxiety states in general.

Snaith (1968) reports that two thirds of his sample described a sudden onset, usually in the form of a panic attack. It is also the clinical impression of most authors (e.g. Mathews et al (1981)) that agoraphobia has an abrupt onset. Buglass et al (1977) looked specifically for "conditioning" events, but in only 7 of the 30 subjects was there even tentative evidence for these.

Solyom et al (1974) provided some evidence that the onset was related to a significant excess of life events such as bereavement. Likewise, Thorpe and Burns (1983) report what they term precipitating events. However, on closer scrutiny, these precipitating events are a mixture of:

1) significant life events such as bereavement,
2) conditioning events such as direct exposure to an aversive event,
3) events which could be construed as a mixture of the first two events, such as miscarriage.

This issue will be considered in more detail at the end of the chapter.
In only one study to date has there been any claim that the acquisition of agoraphobia can be explained by conditioning experiences. Öst and Hugdahl (1983) questioned 80 agoraphobic patients who satisfied DSM III criteria. These subjects also gave various items of background information, completed anxiety and avoidance scales and participated in a behavioral test which included measurement of heart rate. The subjects were categorized into 3 groups with regard to the acquisition of their phobia; i.e. (a) conditioning (b) vicarious experiences or (c) no recall of acquisition. The mode of onset was also categorized into rapid, medium and slow. Precipitating factors for each subject were elicited at the screening interview. The results supported the hypothesis that in most cases there is a conditioning experience which explains the acquisition. This is, of course, contrary to the Mathews et al (1981) stance. However, the authors go on to demonstrate no relationship between the mode of acquisition and the components of the three response systems of anxiety; or between severity of state and mode of acquisition. This is in accord with Marks' (1969) view.

The main shortcoming of this otherwise methodologically sound study is that data on acquisition is based on retrospective report. The mean of 8.6 years of problem duration, with a range of 1-29 years, emphasize this point. Further, the apparent lack of relationship between the way a phobia is acquired, and the degree of loading on the different anxiety response components in this study, can be explained, in part at least, by the probability that there may well be temporal variation of the relationship between the 3 systems within each subject. Delprato (1980)
examined the issue of whether fears and phobias were innate or learned. He carried out a detailed and scholarly review of the literature, and came to several important conclusions. Firstly, in examining the alleged failures to replicate Watson and Rayner's (1920) findings, he found little support for the notion of genetic determination of fear. He stated that it seemed more appropriate to view conditioning as but one class of organism - environment relationship that can contribute to the production of fear behaviour.

Delprato then went on to review taste aversion studies and concluded that there was no clear indication of genetic predisposition to the development of certain fears. In summary, he stated that approaching the ontogeny of behaviour as a matter of innate versus learned was rather short sighted. Rather, he argued, we should examine just how much variance in behaviour is attributable to each of these sources.

As far as genetic evidence is concerned there seems to be some evidence that a general predisposition to neurotic behaviour may be inherited (Slater and Shields (1969)), (Torgensen (1983)). However, there is no clear evidence that inheritance plays a specific role in the genesis of agoraphobia.

Moran and Andrews (1985) collected data on 60 agoraphobics, their parents and siblings. They found that 12 1/2% of relatives were reported to have, or have had, agoraphobia (the authors felt that this figure was a conservative estimate for the group). While there were some indications
that genetic transmission was a feature of the syndrome, the distribution
of the agoraphobia in the various families did not support the hypothesis
of a simple recessive or dominant pattern. Neither did there seem to
be any evidence for simple sex linking.

The authors felt that the case for environmental factors producing the
relatively high incidence was also inconclusive. In one interesting
case, a child was adopted shortly after birth, and while her adoptive
family showed no agoraphobia, her biological mother and two other family
members had agoraphobia. The authors called for further research, using
larger samples and twin studies.

Mathews et al (1981) shared the authors conclusion that what is inherited
is a diathesis for the condition, with other factors such as inter-
personal stress interacting to produce the "full blown" syndrome.
Research in this whole area again seems to underline the complexity of
aetiology and the wide variation of individual differences.
The Agoraphobia-Alcohol Relationship

In Westphal's (1871) account, he described how alcohol helped the agoraphobics he described, face public places. The over-use of alcohol among phobics seems on face value to be a logical action, as the anxiolytic effect of alcohol is virtually universally known. A review of animal experiments (Hodgson et al (1979)) concluded that alcohol does inhibit fear, and there has been much recent work on how feelings akin to fear determine the "craving" experienced by alcoholics (e.g. Rankin et al (1979)).

As several authors (e.g. Hallam (1985)) have pointed out, both alcohol dependence and anxiety/agoraphobia have a greater overlap than would be expected, even taking into account the fairly high base rate of occurrence of the two groups of disorders.

The literature in this interesting area is sparse. Quitkin et al (1972) estimated that 5 - 10% of agoraphobics had alcohol and/or drug abuse, but did not attempt to clarify the inter-relationships. Mullaney and Trippett(1979) in looking at consecutive admissions to an alcohol treatment facility found that 13% of the men and 33% of the women had clear agoraphobic symptoms, while 28% and 22% respectively were "border-line" agoraphobics. The paper indicated that treatment for alcoholism led to a reduction or removal of symptoms in this group, but no long term follow-up was attempted. These findings led Chambless (1982) to suggest that large numbers of agoraphobics (and particularly males) did not present at phobia treatment centres, but in bars and Alcoholics Anonymous.
Mullaney and Trippett's (1979) findings were recently confirmed by a second British study which was more rigorous in its method. Smail et al (1984) found 18% of their sample of alcoholics to have severe phobic states. There was clear evidence that alcohol was specifically used by these subjects as an anxiolytic. A control group of phobics was used in this study and one third of this group also used alcohol in this fashion.

Two recent studies complete the literature in this area. Samarasinghe et al (1984) looked at the use of alcohol and other drugs in a sample of neurotic patients attending a psychological treatment unit. The sample of 106 subjects included 30 agoraphobics. The authors used a questionnaire which looked at the amount of alcohol consumed, and also whether the alcohol reduced phobic anxiety in those subjects. Contrary to expectation, the authors did not find that the phobic group's drinking behaviour was significantly different to that of the general population, and that alcohol was not perceived as a reliable anxiolytic, or so used. The 30 agoraphobics in the sample consumed slightly less alcohol in quantity and frequency than the other phobics in the rest of the study sample. The authors concluded that the data did not support the hypothesis that spontaneous panic attacks drive agoraphobics to alcohol dependence (as suggested by Quitkin et al (1972)).

Contrary to the findings of Samarasinghe et al (1984), Bibb and Chambless (1983), presented a preliminary summary of a study in progress which showed that 17% of patients referred to their anxiety programme, who met DSM III criteria for agoraphobia with panic attacks, scored in
the alcoholic range on an alcohol screening test. They looked at these 24 subjects in detail and found that 54% of the sample met the more stringent DSM III criteria for alcohol dependence. Bibb and Chambless went on to estimate that up to 10% of the total of agoraphobics presenting for treatment may have an alcohol problem. They also suggested that the alcohol usage accounted for some of the dysphoria associated with agoraphobia. In examining this sub-group of alcoholics they felt there was evidence to suggest that alcoholic agoraphobics tended to have more disordered childhoods, more suicidal ideation and more marital dissatisfaction than other agoraphobics. However, they were unable to find any evidence to suggest that the alcoholic agoraphobics were less assertive or socially phobic than their non-alcoholic counterparts.

In summary, research in the area of the Agoraphobia-Alcohol relationship is sparse and rather inconclusive. In view of the obvious treatment issues, more systematic research is urgently needed.
STUDIES COMPARING AGORAPHOBICS WITH NORMAL CONTROLS

There have been only 3 studies comparing agoraphobics with matched normal controls. In the first Solyom, Beck and Hugel (1974) compared 47 phobic patients with a matched normal control group. They showed that the agoraphobics had significantly more symptoms of depression and hysterical disorder, and that the agoraphobics were significantly more hypochondriacal and anxious. There was no significantly greater incidence of sexual problems than in the normal control group. This study in fact contained a mixture of simple phobic and agoraphobic subjects, but these results were very consistent with a study conducted by Buglass et al in 1977. The latter group investigated a group of agoraphobics with a view to determining aetiological factors. The authors examined 30 married agoraphobic women and matched them for age, sex and social class with 30 normal controls from a general practice. They also compared the husbands from the two groups. The study examined domestic activities, decision making, assertiveness and affection. The authors also examined the marital situation and in particular sexual behaviour, conflict and co-operation within the marriage. They also examined psychiatric symptoms in the children, the nature of social contact and the husband's view of their spouses with regard to the agoraphobic syndrome. Contrary to their original hypothesis, the authors found striking similarities between the groups on all measures. The data provided no evidence to support any theory of assortative mating e.g. Kreitman (1968), or that the illness affected the husband in any significant way. Obviously there were differences between the two groups in minor behavioural areas such as the amount of shopping done by the spouse. (The area of agoraphobia and marriage
is reviewed in detail below.)

The most significant other differences were that the agoraphobics seemed to have a more disturbed early family life and there was also a loss of erotic drive. However, the loss of erotic drive seemed to be a consequence of the problem rather than pre-dating it. Likewise, any increase in anxiety or depression in a group of agoraphobics can also be viewed as a consequence rather than a cause. The studies of Buglass et al and Solyom et al cannot be assumed to describe typical examples of agoraphobics, but the overall impression is that the groups appear far more normal, with regard to general behaviour, than had previously been hypothesised. In particular the data from these studies indicates that certain variables such as the marriage of agoraphobic patients may have been prematurely labelled as aetiological significant. The control groups highlighted, in this respect, that normal populations consist of fairly large proportions of subjects with marital and sexual dysfunction.

The final study in this area was conducted by Fisher and Wilson (1985). Fisher and Wilson (1985) investigated the psychological characteristics of agoraphobics and used a control group. They assessed and compared groups in terms of personality measures, level of arousal, cueing, attributional processes and marital satisfaction. While the agoraphobics were predictably more anxious, depressed and less assertive, and reported feeling more powerless and helpless than non-agoraphobics, the group of agoraphobic subjects appeared far more "normal" than the hypothesis of workers such as Chambless and Goldstein (q.v.) would suggest. Overall their findings were in accord with those of
Buglass and her colleagues. The authors also felt strongly that, in agoraphobia, helplessness was a consequence of severe debilitating panic rather than causative. This view is of course contrary to that of workers with a more psychodynamic stance. Fisher and Wilson felt that this helplessness and the associated fear of fear becomes part of the agoraphobics self-schema and thus becomes self-perpetuating and recalcitrant to change. The authors also believed very strongly that disconfirming experience rather than verbal reassurance was the only measure which would change central cognitions. They suggested that exposure in vivo would achieve such disconfirmation. The authors also studied details of the marital relationship in agoraphobia and this is discussed below.

Agoraphobia and Marriage

This section will deal with studies concerning this relationship, while the effect of marital variables upon the treatment process will be discussed in Chapter Two.

Marital problems have long been considered to be an important variable responsible for the maintenance and reinforcement of agoraphobia & some authors seem to imply (eg Holmes 1982) that agoraphobia may actually be caused by marital dysfunction. The first study which attempted to look at this issue in a systematic way was carried out by Webster (1953). He compared the case records of a group of married agoraphobics with the records of two groups of conversion hysterics and anxiety neurotics. He concluded that agoraphobics had poor "emotional development" and that their marriages were mostly pathological, characterized by sexual unresponsiveness and psychologically disturbed husbands. This rather
gloomy speculation was shared by Tucker (1956) who used his rather general, non-specific data to argue that agoraphobics have "ambivalent and dependent" relationships. These findings must be viewed with some caution as the study was also retrospective.

The first adequately controlled study in this area was carried out by Buglass et al (1977) who looked at 30 female married agoraphobics and 30 carefully matched controls. They found no striking differences between the groups and certainly their systematic enquiry of a wide spectrum of operationally defined variables failed to support the speculations of Tucker (1956) or Webster (1953).

Fisher and Wilson (1985) in comparing a group of agoraphobics with a group of normal controls, replicated Buglass et al's (1977) data regarding marital satisfaction which demonstrated no difference between the two groups. However, in the same study, both groups were asked to view a video tape of a married couple arguing. In terms of self-report of fear and anger and measured heart rate, the agoraphobic group showed significantly less reaction than the control group. While this data may suggest that agoraphobics deny presence of marital conflict, the lack of reaction of subjects in terms of fear and heart rate could suggest that agoraphobics do not respond with fear to marital conflict and may be simply less upset by marital conflict than so-called normal controls.

Arrindell and Emmelkamp (1985) conducted a comprehensive study of the spouses of female agoraphobic patients. They looked at 32 spouses of patients fulfilling stringent criteria for agoraphobia and compared
them with spouses of 12 female non-phobic psychiatric subjects and spouses of 38 female non-patient normal controls. They used a test battery of 600 items used in previous research into agoraphobia and marriage, together with a range of other measures of psychological function. The study was carried out prior to the therapy of the agoraphobic subject, and thus no attempt was made to examine the effects of treatment, successful or otherwise, on the spouse.

Overall the study showed a striking similarity between the spouses of female agoraphobic patients and normal controls, this being very much in keeping with the properly controlled studies of Buglass et al (1977) and Fisher and Wilson (1985). Again, the results were much at variance with the somewhat clinical anecdotal view that the agoraphobic's partner either had a history of symptoms resembling symptoms of the patient, or that the partners of agoraphobic patients were more neurotic, socially anxious, obsessive or seclusive than the partners of normal controls.

The authors concluded with the view that the literature on the spouse of the agoraphobic patient is dominated by a self-perpetuating myth.

Wilson (1984) in reviewing why marital conflict is ranked so highly as the variable in neurotic disorders, and in particular agoraphobia, has suggested that a small number of unrepresentative clinical case studies carry more inferential weight than the more objective, but as he puts it, 'pallid' information of well controlled studies.

In summary, the literature does not support the notion that agoraphobia
is influenced in a major way by marital variables. However, it does seem that in some individuals, (probably a small minority) marital factors may be a major reinforcing variable of the agoraphobic syndrome. Perhaps the simple fact of one in three of all marriages made today end in divorce, may account for some of the apparently groundless assertions regarding the marital relationship and agoraphobia.

Formulations of the Syndrome
The aetiology of Agoraphobia is viewed in many diverse ways, this perhaps being a reflection of the different orientations to clinical psychology and psychiatry. The various formulations can be divided into 4 broad groupings i.e. the organic, the psychodynamic/psychoanalytical, the learning theory or behavioural and finally the cognitive. While, for the sake of simplicity these areas are discussed separately, many authorities take the view that Agoraphobia is best explained in terms of multi-factorial aetiology, and therefore overlap of these groupings does occur. These so-called integrated models of agoraphobia, held by some of the most respected authorities, will be discussed in the conclusion of this section.

The Organic
Westphal and his contemporary Benedikt were both neurologists, and Benedikt's (1870) coining of the term "Platzschwindel" (dizziness in public) stressed the symptoms of unsteadiness and vertigo which are commonly assumed to be organic in origin. The search for organic causes of agoraphobia continues to the present day and plays an important part in research endeavours. While a few workers holding
predominantly psychoanalytical views of the problem dismiss organic factors, most workers agree that these variables are important. The weight attached to these factors, however, varies widely. There are those who view them as central to the causation and maintenance of the syndrome, with psychological factors being merely interesting epiphenomena. At the other end of the spectrum there are those who would see such factors as of secondary importance to, for example, cognitive processes. Those who hold "Integrated or Interactive" formulations of agoraphobia would probably occupy the mid part of this spectrum.

Roth (1959) was the first of the modern day workers to take a basically organic view of the syndrome. He studied 135 cases of agoraphobia, with 50 neurotic and 50 normal controls. He looked at 100 items relating to development, personality, family background and general features of the problem, together with recording electroencephalographs (EEG's) on all subjects. Overall the E.E.G. evidence was equivocal, but some subjects showed anomalies. These anomalies, together with the symptoms of depersonalization, led Roth to suggest that agoraphobia was caused by "a subtle sustained disturbance of the temporal lobes or limbic system". His overall view was that the syndrome was predominantly chronically organic in nature with associated anomalies of personality.

In the wake of Roth's paper, came the observation of Klein and Fink (1962) that Imipramine (a tricyclic antidepressant - the use of which is discussed in Chapter Two), blocked panic attacks. The work of Klein and his co-workers has been prolific since that time, and has certainly
influenced current classification. The central element of this theory (see Liebowitz and Klein (1982) for the most comprehensive account), is that the panic attack is the central feature of agoraphobia. The theory has become more complex over the years, embracing other organically oriented research, some of which is described below. Liebowitz and Klein (1982) have linked panic disorder to separation anxiety which they define as an innate arousal response occurring as a result of separation from a mothering figure. They hypothesise that subjects with panic disorder have a reduced threshold for the activation of this mechanism. They further hypothesise that the disorder is modified by progressive avoidance to, in some cases, a fully developed agoraphobic syndrome.

The neurophysiological mediation of this process is, according to this theory, centred in the locus coeruleus. Redmond (1979) has proposed that this area mediates physiological, psychological and behavioural aspects of fear. This work is based on a number of well controlled experiments on animals and humans, and does clarify some issues in fear mediation. However, despite Liebowitz and Klein's (1982) elaborate description, they are unable to describe in any more than general terms, a neurophysiological explanation of causation of the agoraphobic syndrome.

One interesting area of organic causation, which seems to have clinical possibilities, is that of hyperventilation.

Hyperventilation

Another formulation of the panic attacks in agoraphobia is that they may be caused by hyperventilation, and that this has a central role in
maintaining the syndrome. Hyperventilation can be defined simply as breathing in excess of bodily requirements. Such a respiratory pattern leads to a reduction of arterial carbon dioxide levels. The ensuing reduction of arterial ph. leads to the wide range of physiological symptoms described in detail by various authors e.g. Lum (1984). Physiologically the effect of lowered blood ph. is bi-phasic; i.e. it first stimulates, at less profound levels of hypocarbia, neurone activity and at greater levels, depresses neurone activity. The term hyperventilation was arguably coined by Rice (1950) but its prominence with relation to agoraphobia has been restricted to the last 2 years.

Garssen et al (1984) conducted a study of all new out-patients at their clinic in Utrecht, Holland, and found that 60% of the agoraphobic patients suffered from hyperventilation complaints, and about 60% of their hyperventilation subjects were agoraphobic. They subjected their patients to a hyperventilation provocation test in which the subjects were asked to breathe as deeply and rapidly as possible for some minutes. The authors found that patients found the provoked symptoms to be the same as the panic symptoms they feared. Indeed, as in the Chambless and Goldstein (1978) formulation on agoraphobia (q.v.), there seemed to be this central element of fear of fear, this central fear being of the symptoms experienced during hyperventilation.

While the authors pointed out that there was not any simple cause and effect issue between hyperventilation and agoraphobia, they implied that their findings suggested that the agoraphobia was made worse by the presence of such symptoms. Indeed Bonn et al (1984) demonstrated that breathing re-training given additionally to exposure treatment seemed to lead to greater improvement and maintenance in a group of 7
patients with agoraphobia. They too used a hyperventilation provocation test which they also carried out on a large control group. The authors felt strongly enough to suggest the routine use of a hyperventilation provocation test with agoraphobics and other phobic patients. The authors are now conducting breathing re-training as a routine addition to exposure treatment. They hope to publish data on a larger group of patients (Readhead(1985) Personal Communication).

The latest in the series of studies examining the relationship between agoraphobia, the panic attack and hyperventilation comes from Ley (1985). He examined a small sample (10), of agoraphobics, to investigate the sequence of events. He used an interview to collect self report data, together with the use of observation of respiratory behaviour by another observer. Ley's findings strongly suggested, that on this self-report data at least, that the symptoms of hyperventilation preceded the fear. Of particular interest was the fact that only one of these subjects was a clear clinical hyperventilator, and one other subject was, on closer scrutiny, not a typical sufferer of panic attacks. One major drawback of this study, like all the other studies conducted so far, is the heavy reliance on self-report. It would be useful to use the ambulatory respiratory monitoring devices currently available, to assess the role of panic attacks in real life. While this is clearly a difficult task, it is now made possible by technical advances in equipment design in the last few years. Ley gives much the same advice as other workers in controlling hyperventilation (i.e. education of the mechanics of respiration, education
of the consequences of hyperventilation and teaching the control of anomalous breathing). There is, as yet, no definitive evidence to suggest that these re-breathing exercises provide a lasting cure for panic attacks, though on the face of it, it would seem to be an area of promise for the sufferer.

There are several other findings in the area of organic factors which are worthy of mention.

MITRAL VALVE PROLAPSE SYNDROME

Kantor et al (1980) hypothesized that this cardiac anomaly was responsible for palpitations which in turn led to panic attacks in psychologically susceptible individuals. The authors felt that, in those who were more vulnerable, the panic attacks heralded the development of agoraphobia. They therefore looked at the incidence of mitral valve prolapse in agoraphobic women, compared with matched controls. The study group consisted of 23 agoraphobic women and 23 age matched controls. The agoraphobics were all diagnosed as fulfilling DSM III criteria for agoraphobia with panic attacks, the group studied appearing to be highly representative of agoraphobic women in general. They found that most of the patients were troubled by palpitations, and that 11 had definite mitral valve prolapse syndrome compared with 2 subjects in the control group. This was highly statistically significant. The authors stated that the diagnosis of such an anomaly would help give patients reassurance. They felt that explaining that the palpitations were caused by a harmless cardiac
anomaly was of major importance. They concluded that the study provided definite evidence that the feedback loop of physiological reaction and anxiety existed in patients with agoraphobia. While the authors of this study together with authors of similar studies would seem to favour a predominantly non-psychological approach to the treatment of agoraphobia, their findings do give an indication, that in using a psychological approach to such problems, some kind of physical screening procedure should be carried out before a programme begins. This would be conducted to rule out important physiological factors. This is not an argument for involving medically qualified psychiatrists in such treatment programmes. These screening procedures can be adequately carried out by the patient's general practitioner. In fact, of the general practitioners referring to the current study, there is an indication that some of the better informed practitioners will already be doing this type of screening prior to making a referral to the Psychology Department.

Jacob et al (1983) described yet another study looking for the organic basis of agoraphobia. They administered a battery of tests to examine vestibular and audiological function in 8 patients with panic disorder and 13 patients with agoraphobia with panic attacks. They found that more than 2/3 of the patients had a significant vestibular dysfunction and that the acoustic reflexes were abnormal in 44% of cases; (this seemed to indicate a disorder of the cochlear). The authors thought that this disordered middle ear function could be a triggering mechanism for attacks of anxiety, and thus be part of a
feedback loop.

However, there are two particular points of caution to be made when considering the results of this study. Firstly, the pool from which the patients were drawn does seem, from their description, to be overinclusive of subjects with symptoms such as dizziness and fear of falling. This factor in itself would render the group atypical. Secondly, the range of abnormal signs and symptoms found in the group are also found in patients with schizophrenia. It would therefore be interesting to study this phenomena with control groups derived from psychologically normal and psychologically abnormal populations. There remains a strong possibility that many of the signs and symptoms elicited may in fact be an effect of the agoraphobia rather than a cause. All the measures used to determine middle ear dysfunction are indirect (by necessity), and one would therefore wish to see clearer evidence of a histological nature before drawing any definite conclusions regarding this particular aetiological factor.

Visual Perception

Blythe and Mc. Glown (1982) reported that a sample of agoraphobics showed evidence of distortion of visual perception. They argued that this abnormality leads to feelings of unreality, and thence to a chain leading to panic and avoidance. However, their findings are isolated, and no attempt was made in the paper to discuss the actual mechanism of production of agoraphobic symptoms.
TRIBULIN

This substance, named by Sandler (1982) was originally identified in human urine. A raised urinary output of this substance seems to be specifically related to anxiety states, and panic states in particular. Tribulin is an endogenous monoamine oxidase inhibitor - benzodiazepine ligand, which has been the subject of much research on both sides of the Atlantic. It seems to have two properties, firstly an ability to bind specifically to central benzodiazepine receptors (Clow et al 1983) and secondly to inhibit monoamine oxidase activity (Glover et al 1980). Over production has been found in alcohol and benzodiazepine withdrawal states, both of which are characterized by acute anxiety.

Tribulin does seem to be an important biochemical correlate of anxiety, found in raised levels in agoraphobic subjects. The author of this thesis in conjunction with Sandler and others, is currently investigating Tribulin levels in agoraphobics before, during and after treatment by exposure in vivo.

The Psychodynamic/Psychoanalytical

There are currently many who continue to hold a view of agoraphobia (and other psychological problems) based on theories of unconscious drives and conflicts. While many such workers no longer ally themselves explicitly to traditional Freudian or Jungian views, they continue to assert that the symptoms expressed by agoraphobics are in themselves unimportant. Further, they state that in order for such symptoms to be relieved, resolution of the underlying conflict must be achieved.
In varying degrees they reject behavioural and biological theories.

Weiss (1964) provides an interesting example of a traditional analyst's view of agoraphobia. He viewed agoraphobic avoidance as being a mechanism used to avoid unconscious urges of sexual exhibitionism. In keeping with the general views of the contemporary psychodynamic community, Friedman and Goldstein (1974), Frances and Dunn (1975) and Arieti (1979) share the view that agoraphobia is really a form of separation anxiety, much in the spirit of the theories of John Bowlby. Their theories are rather complex, but one central idea is that the motivating drive behind agoraphobic symptom formation is a strong dependency need which has been reinforced (sic) by real or imagined separation. Some of these theories have been assimilated in theories of workers whose main stance is stated as behavioural e.g. Chambless and Goldstein (1978) (1982) (q.v.). An Italian worker Liotti (1984), provides another such example. Liotti carried out retrospective research on 100 agoraphobic patients using information drawn from their therapy files. He concluded that early experience of separation predisposes patients to agoraphobia and that their reaction to distressing inter-personal events is a separation anxiety reaction taking the form of agoraphobic symptoms. Liotti is himself an influential figure in the Italian Behaviour Therapy movement and manages to combine this approach with learning paradigms. This peculiar mixture is extended into therapeutic endeavours, where extinction approaches are mixed with an insight oriented approach, which contains not only the separation anxiety component but a liberal dash of Freudian theory!
Thyer et al (1985) looked specifically at this idea of separation anxiety in a group of 44 agoraphobics, and a control group of 83 simple phobics. They found no differences on any measures to support the notion that separation experiences led to agoraphobia. The authors held the somewhat unpopular view (in psychological circles at least), that many psychological explanations of agoraphobia should be discarded. Their results illustrate how many vague defined notions such as separation become clinical lore and remain unchallenged.

One group of workers holding psychodynamic views have attempted a systematic/experimental approach to agoraphobia. These belong to the school of Personal Construct psychology. Frazer (1980), for example, demonstrated that agoraphobics construed themselves less favourably than neurotic and normal controls, and their grids demonstrated a family background based on strict rules, particularly concerning emotional expression. While the personal construct approach has some intellectual appeal, there is a major problem that the account of antecedent events to the onset of the agoraphobic syndrome are retrospective. Therefore the emotions of the present, demonstrated in the grid, may well be a product of the problem rather than aetiologically significant.

Although there are volumes of psychodynamic and psychoanalytical writings on agoraphobia, it is difficult to attempt a systematic critique because of vaguely defined variables. Perhaps referral to Rachman and Wilson's (1980) work "the effects of Psychological Therapy" will suffice.
Learning Theory Models

The evolution of these models to explain phobias has to some extent paralleled the evolution of clinical psychology in this country. Undoubtedly, these models fulfilled a great need, at a time when psychoanalytic ideas, which had dominated the clinical sphere for so long, were becoming more and more obviously redundant. Eysenck and Rachman (1965) advanced an explanation of phobic behaviour based on the work of Mowrer (1947, 1960). This two factor theory involving the classical conditioning of fear, and its maintenance by instrumental conditioning, has continued to be held, albeit in modified fashion, by some workers. One important such modification to the theory is that certain phobias are biologically prepared for rapid acquisition (Seligman 1971). In demonstrating this phenomenon convincingly, Ohman et al (1978) used an aversive conditioning procedure with various stimuli, concluding that certain of these seemed "pre-programmed" for rapid learning.

An example of the stance of a current classical learning theorist is provided by Eysenck (1982). His view of phobias in general, is that they are produced by classical conditioning, and that phobias are incubated. This theory accommodates 3 main difficulties of classical conditioning theory that:

1) Neurotic conditioned responses persist in spite of numerous presentations of unreinforced conditioned stimuli;

2) That traumatic unconditioned stimuli are infrequent in the development of peacetime neurosis, and

3) That conditioned responses increase in strength with repeated...
presentations of unreinforced conditioned stimuli.

Eysenck states that with neurosis we are dealing with Pavlovian B rather than Pavlovian A conditioning, but under these conditions, the conditioned response, is essentially identical with the unconditioned response, and acts as a positive reinforcement in the absence of an unconditioned response. He uses the Napalkov phenomenon (Napalkov (1963)) as the laboratory analogue of the process that takes place in neurotic disorders. In this experiment a single combination of a conditioned stimulus with an unconditioned stimulus, followed by repeated presentations of the conditioned stimulus alone, was followed by an incrementation of the conditioned response. Eysenck (1982) has suggested possible mechanisms which may operate to produce this effect, and concludes that it is more likely to occur in neurotic introverts. He goes on to argue that measures of individual differences, such as his Personality Questionnaire, should be considered when drawing up treatment programmes.

However, many workers in both the theoretical field (e.g. Bersh (1980)X1983) and in the clinical field (Marks (1981b) Mathews et al (1981)) have criticised the notion that learning theory satisfactorily explains the acquisition, evolution and maintenance of phobias. The main criticisms are several. Firstly, as previously discussed, there is little evidence to suggest that specific conditioning events are present in clinical cases. Secondly, although one can explain in learning theory terms why phobias may fail to extinguish (e.g. The Napalkov effect), the fact that phobias vary considerably in their intensity over time suggests a severe shortcoming in a simple conditioning process.
Recently, in a series of papers which have addressed both theoretical and clinical issues in agoraphobic avoidance, Rachman (1984) has advanced the argument for introducing properly experimental analyses of agoraphobia. He puts forward, as a first step in effecting such analyses, the suggestion that safety signals be analysed, and he puts forward a specific set of predictions. He agrees with Hallam that agoraphobia is not a categorical pathological condition, which is either present or absent, but is rather part of a continuum ranging between severe clinical agoraphobia, and as he puts it "impaired mobility". He states that there are 6 arguments which justify the inclusion of the safety signal component into the analysis of agoraphobia, and they are:

1) That the use of the safety signal concept can help to account for the undue persistence of agoraphobic avoidance behaviour;
2) That the safety signal concept can be used to explain fluctuations in the agoraphobics fears;
3) That safety signal concepts help to explain why fear is limited in space and time;
4) That the theme of a search for safety is prominent in many clinical conditions of the disorder;
5) That the concept helps to make intelligible some puzzling features of agoraphobia — eg. the onset of the problem after bereavement or loss;
6) That the introduction of the concept of the safety signals is capable of promoting new therapeutic approaches to this disorder.

He goes on to list a full set of hypotheses concerning the determinants
of the strength of the safety signal, and other peripheral related hypotheses. The main questions he puts forward as being worthy of attention are:-

1) what conditions promote the development of safety signals?
2) what factors determine the strength of safety signals?
3) what is the relationship between safety signals, avoidance behaviour and fear?
4) how, and to what extent do safety signals moderate fear?
5) Are the effects of safety signals specific or general (presumably, internalised safety signals will have more general effect than external ones).
6) How, and to what extent, do safety signals maintain avoidance behaviours.

These questions seem an outstanding challenge to clinical and experimental psychologists. They seem to represent a most valuable attempt to systematise the previously rather haphazard research attempts to investigate the development of agoraphobia. If Rachman's hypotheses are correct, the learning theory basis for agoraphobia will be the soundest of the various explanatory models.

Cognitive Models

The cognitive and the behavioural models are discussed separately for the sake of simplicity, and there follows in Chapter 4 some further consideration of the cognitive aspects of agoraphobia.
All current cognitive explanations complement, to a greater or lesser extent, classical and operant learning paradigms, although of course protagonists of each school would argue the cognitive or behavioural components as central!

While workers such as Ellis (1961, 1970) and Beck (1970) have long since recognized cognitive distortions in anxiety and depression, a systematic "scientific" approach to cognitive processes in phobias largely belongs to the last 10-15 years. Previous to this, Rotter (1954, 1972) had examined the effect of expectancy of reinforcement on behaviour, and as Woods (1985) points out, Irwin's work (e.g., Irwin 1966) on expectancy brought "scientific respectability" to cognitive theory.

There has been some research over the last 10 years or so, which has attempted to use cognitive mechanisms to explain some of the shortcomings of conditioning theory. One such example is that of Borkovec (1974), who suggested that the shortcomings in Mowrer's two factor theory can be explained by the fact that cognitive avoidance prevents exposure to the conditioned stimulus, thus preventing extinction. His argument is based on two studies (Borkovec 1972, 1974) where subjects were asked to cognitively avoid, and did not habituate to anxiety produced by various stimuli.

At the other end of the spectrum are those who describe comprehensive cognitive theories to account for the development and maintenance of phobias. For example, Gosling (1977) has described a model based on
a central decision process which is influenced by information derived from a number of different sources. Initially real life experience provides evidence which is in turn modified by covert rehearsal and feedback from the Behavioural and Physiological systems. This process is also influenced by perceptual processes such as selective attention and environmental scanning, and also by language based processes. Gosling argues that this complex of cognitive processes distorts estimation of probability of various outcomes. Therefore, in an agoraphobic, an initial feeling of fear in a specific situation will eventually be seen as evidence that a particularly aversive outcome will ensue if the situation is faced again. If the subject rates highly the subjective probability of the aversive outcome occurring, avoidance is used to terminate exposure. Gosling goes on to cite Meichenbaum’s (1972) work, in arguing that the cognitions relating to such probability estimates are central to the maintenance of the problem, and are attended to as self statements.

Perhaps the most influential account which integrates cognitive and learning theories is the social learning theory of Bandura (1969, 1974 and 1977b). In essence this theory would state the phobias would be initially acquired by classical and operant learning, but cognitive processes would have a centrally important mediating action. Thus as Thorpe and Burns (1983) argue, a phobia would be acquired and maintained after a direct conditioning experience by vicarious influences, symbolic instruction and symbolic logic. Thus the expectation of an aversive outcome produces anxiety and avoidance.
Bandura's theories define human behaviour in terms of a reciprocal relationship with the environment, and this of course is the crux of the difference in philosophy with traditional learning theorists and cognitive theorists. Bandura's theories are of course extended to the treatment process and this extension is described in Chapter two.

It is arguable that Social Learning Theory has provided the basis for the integrated models set out below.

INTEGRATED OR INTERACTIVE VIEWS

Mathews et al (1981) provide an integrated model which involves biological, cognitive and behavioural factors. They summarise their model as follows. (Fig. 1, see over)

Factors leading to the onset of Agoraphobia (from Mathews et al (1981))

The authors suggest that once the agoraphobic avoidance is established several factors may maintain the syndrome. Firstly, they define aversive influences (which discourage the subject re-entering the phobic situation), in terms of severe panic attacks and anticipatory anxiety. They argue that a feedback loop involving the production of anticipatory anxiety is in itself a major factor. This, in other words, is the central "Fear of Fear" referred to by Chambless and Goldstein.

The authors then briefly discuss factors which positively reinforce phobic behaviour. They state that the sympathy and attention gained by adoption of a "sick role" may lead to a "behavioural trap", whereby the attitude or concerns of others prevents extrication from avoidance patterns. These points are greatly amplified in the context of the
Early Family Environment  

Increased "Non specific" stress  

High levels of Trait anxiety  

Re-activation of Dependent/Avoidance Behaviour  

Over-arousal to Environmental stimuli  

Elevated level of general anxiety  

Acute Anxiety Attack  

Anxiety attack attributed to external stimuli  

Phobic Avoidance Behaviour  

External locus of control  

FIGURE 1

authors treatment manual. This valuable manual stresses throughout the behavioural and attitude modification of significant others during a self help programme for agoraphobia (q.v. in Chapter Two). However, the behaviour of significant others has not been studied in detail. In studies such as Buglass et al (1977), there were only general indications of spouse behaviour and attitude. Therefore in light of current treatment endeavours using the spouse as a co-therapist (q.v.), it seems important for detailed research on "significant other" behaviour to be undertaken.
Probably the most popular integrated model belongs to Goldstein and Chambless (1978, 1982) who have argued that a combination of behavioural and psychodynamic ideas are necessary to understand the nature of agoraphobia. The authors argue that agoraphobia can be divided into two syndromes. The first is simple agoraphobia, which is probably caused by drug experiences or by hypoglycaemia, and amounts to several simple phobias of public places. In this problem is there is no generalization of anxiety to other life areas, and general psychological adjustment is normal. Chambless and Goldstein also state that this syndrome is uncommon. The second, most prevalent disorder, they call complex agoraphobia. This is characterized by:

1) Fear of fear as the central phobic element.
2) Low levels of self-sufficiency, due to anxiety, or a lack of skill, or both these factors.
3) A tendency to misapprehend the cause of antecedents of uncomfortable feelings. For example, anxiety following interpersonal conflict, is interpreted as fear of being on the street alone.
4) The onset of symptoms occur in a climate of notable conflict. This conflict is generally, but not necessarily, interpersonal in nature.

Chambless and Goldstein based their conclusions on wide clinical and research observations, and supported their arguments by data obtained from thirty-two agoraphobic patients and thirty-six patients with phobias of external stimuli. The groups were not matched, but did not differ statistically in age or sex ratio. The authors describe traditional explanations of the syndrome based on classical and operant models, but
add two further operant elements which maintain symptoms. First there is social reinforcement for being sick or dependent, strengthened by punishment for autonomous behaviour, and secondly, avoidance behaviours are negatively reinforced by reduction of exposure to the 'fear of fear' and by other situations which cause difficulty.

A pre-requisite for these conditioning events is therefore a particular "vulnerable personality". The authors work is obviously much influenced by John Bowlby's (1973) concept of separation anxiety and ensuing fear of abandonment.

The main criticisms of the theory have been made by Emmelkamp (1979), Thorpe and Burns (1983) and Mathews et al (1981). These criticisms include the fact that the study on which their theory is based, was retrospective, and that there was considerable emphasis on clinical impression. Secondly there is no explanation of the mechanism of how separation anxiety becomes a fear of public situations. Thirdly, as "conflict" is essential to the definition of complex agoraphobia, a circular definitive process occurs.

While the theory has the appeal of being all embracing, it does use rather nebulous concepts such as "dependence" which do not lend themselves readily to experimental testing. Further, there is now some evidence that the rather central concepts of separation anxiety and inassertiveness have a far lesser incidence than was previously assumed (Thyer et al (1985), Emmelkamp (1982a)).

The integrated models of Mathews et al (1981) and Chambless and Goldstein
(1982), while having several important differences, provide clear examples of working clinical models, and the various points of criticism indicate the extent of our lack of knowledge of the syndrome.

CONCLUSION

This size of this review demonstrates the large research effort that has gone to investigate the nature of the agoraphobic syndrome. The central problem in understanding this very complex problem seems to be the way in which the various schools exclude consideration of findings outside of their specific domain of interest. At the same time, progress within each school highlights the inadequacy of singular theories. This inadequacy is clearly demonstrated within behavioural research, where the problems of matching the nuances of the syndrome to experimental paradigms increase by the year.

The integrated models of Mathews and his co-workers and of Chambless and Goldstein have several flaws and inconsistencies, but these complex models are leading to a better clinical and theoretical understanding of the problem. As several workers have pointed out (e.g. Thorpe and Burns (1983)), there is much reliance at present on correlational data derived almost exclusively from self report. Therefore, as difficult as it may be, probably only prospective research will advance our knowledge of this fascinating problem.

In summary, there is a large amount of evidence regarding the nature of agoraphobia, but there is little conclusive evidence regarding the nature
of the syndrome. Perhaps the most revealing evidence of this assertion comes from the questions asked by our patients. Probably no clinician feels able to answer fully and honestly, the questions our patients ask about this syndrome. However, the experience of not being able to make honest and comprehensive answers is probably a major source of motivation to carry out further research.
CHAPTER TWO

EXPOSURE TREATMENT AND AGORAPHOBIA
Some of the hypotheses and findings referred to in Chapter Two have already been discussed extensively in the authors M. Phil thesis. These areas are referred to again for sake of presenting the complete experiment, but discussion is obviously kept to a minimum. Therefore in Chapter Two emphasis is placed on data not presented before, and of course the experiments referred to in Chapters 3, 4 and 5 are completely novel to this (Ph.D.) thesis.
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INTRODUCTION

This chapter deals with an investigation of some facets of exposure treatment, as well as examining the general outcome of this treatment in a group of 132 subjects, of whom 100 completed a full trial of treatment to follow up. This study constitutes the largest single group of agoraphobics reported in the treatment outcome literature. Jansson and Öst (1983) in reviewing the 24 controlled studies of behavioural treatment for agoraphobia published between 1976 and 1982 reported on a total of only 400 subjects receiving exposure treatment.

Prior to describing the experiment the relevant literature is reviewed.

A Review of the Literature

Approaches Prior to Behavioural Strategies

Other than behavioural treatments for agoraphobia, (and in particular exposure therapy which is reviewed in detail below) there have been a number of approaches used over the years. Some of these are still in use.

Drug treatment will be discussed in the body of the review as it is often used as an adjunct to exposure. The cognitive therapies will also be discussed below, as the term "behavioural treatments" includes, for practical purposes, the cognitive and cognitive/behavioural approaches.

Since agoraphobia was not really considered as a diagnostic entity until Westphal's (1871) definition, it is rather difficult to discuss treatment before that time. However, it can be safely assumed that a range of
remedies was tried, and as de Silva (1984) points out in his review of Buddhism and Behavioural methods, "treatment successes" of significant proportions have not been confined to our present day period. De Silva's study also indicates that exposure as a method of fear reduction has been used for thousands of years.

Other than drug and behavioural treatments for agoraphobia used in the last 100 years there have been two central psychological/medical approaches. This is not, of course, to dismiss the impact of other non-professional remedies such as faith healing or simple common sense advice which frequently seem to effect significant change, however, space does not permit such an examination.

The two main methods are those based on psychoanalytic psychotherapy and psychosurgery.

**Psychoanalytic Psychotherapy**

Psychotherapy, based on the tenets of psychoanalysis, can vary widely from a brief course of a dozen or so hourly meetings, to five times a week analysis carried out over many years. While many contemporary psychotherapies seem to have little connection with the classical Freudian and Jungian ideas, there are two central themes common to both approaches. Firstly there is the notion that the symptoms of agoraphobia are merely reflective of unconscious conflict, and secondly, there is a belief in the central importance of the therapist-patient relationship as a treatment variable. The author will not attempt to review the effectiveness of psychotherapy, this is ably covered by
Rachman and Wilson (1980) in their classic book. Mathews et al (1981) in reviewing such treatments with agoraphobia are extremely critical of the psychoanalytical approach. However, they make the interesting point that the analysts themselves consistently agree with the hypothesis that phobic disorders are an exception to the rule of the therapist remaining passive. Even the more analytically oriented writers concur that at some stage in therapy the patient has to practice facing the avoided situation. However, this exposure is not usually therapist aided.

The authors own view, is that while some agoraphobics are undoubtedly helped by traditional psychotherapy, it is nearly impossible to define just what variables facilitate change. Further the paucity of controlled experimentation in the psychoanalytic literature precludes objective comment being made.

LEUCOTOMY

It is perhaps an indication of the handicap caused by agoraphobia that until the 1960's agoraphobics were commonly treated with varieties of this operation. Marks and Gelder (1966) studied a group of agoraphobics who had the operation. They matched these patients with a group of 400 agoraphobic patients treated with a variety of drugs and psychological treatments. The operation group of patients seemed to improve on both phobic avoidance and anxiety. It should however be borne in mind that in 1966 exposure in vivo was not used, and the various treatments in vogue at that time probably made little impact on what appeared to be an intractable problem.
Despite the unpopularity of surgery for psychological disorders, it continues to be used in a number of centres. Bartlett et al. (1981) published a literature review and made a statement of the contemporary indications for psycho-surgery. They stated that although only three centres carried out psycho-surgery in Great Britain, there were some 431 operations carried out between 1974 and 1976. Of these patients, 12% had anxiety, tension and phobic states. Thus the sample contained probably 50 patients with anxiety and phobic disorder. The indications for psycho-surgery set out by the three centres are described in the paper.

Of the 3 centres offering the main surgical facilities in this country, the largest centre, the Brook Hospital in Woolwich, still cites intractible phobic anxiety as a main indication for the operation of sub-cudate tractotomy. This operation is not in fact as radical as previous attempts at psycho-surgery. It consists of burning out a small area of tissue in the substantia innominata thought to be responsible for causing anxiety. This entails using a radioactive seed (Yttrium 90) to burn out the tissue rather than making surgical cuts. The implantation site is approached by stereotaxis. This procedure is used in the surgical treatment of Parkinson's disease, and entails a minimally damaging procedure involving the insertion of two hollow needles under radiological scrutiny. In the indications stated in Bartlett's review article, the hospitals involved state that behaviour therapy is often required after the rehabilitation programme. Therefore one assumes that agoraphobics are often treated with a combination of psycho-surgery and behaviour therapy. However numbers of cases suffering from specific syndromes are not published.
Other than the Marks et al (1966) paper, there are no accounts of the outcome of agoraphobic patients after the operation. However, Bartlett et al cites largely uncontrolled studies, and claims an overall improvement rate of 63% for the group of patients with "chronic anxiety states". It is reasonable to assume that this group contains patients with agoraphobia.

Mathews et al (1981) state quite clearly that they do not advocate leucotomy as a treatment, even in the most severe cases of agoraphobia. In view of many damaging side effects of the operation, this conclusion is likely to be shared by a large majority of workers in the field, and probably by most neurosurgeons!

Helpfulness of Treatment
In only one study have subjects been asked for their views regarding the helpfulness of previous treatment. Burns and Thorpe (1983) asked in their National Survey of Agoraphobics just how helpful various treatments had been. They used a 3 point scale of "no help", to "somewhat helpful" and "very helpful" and found that behaviour therapy was rated as the most helpful. However, this was for only 31.4% of the sample. The least helpful treatment was rated to be psychotherapy or psychoanalysis (14.8%), the next least helpful being the use of medications of one kind or another (16.8%). It is interesting to note that 73.8% of the sample felt they had not received adequate help for their agoraphobia. The authors found no significant sex difference. The authors also surveyed the kinds of treatments previously given to their sample. They found that 10.7% of their sample had received some form of behaviour therapy as opposed to 28.3% receiving psycho-
therapy or psychoanalysis, while 76.6% had seen a psychiatrist and 95.8% had received medication.

This single study has provided valuable preliminary information regarding consumer satisfaction and hopefully Burns and Thorpe's study will provide the impetus for further research in this area. In a related area, Foa and Emmelkamp (1983) for example, have turned their attention to treatment failures. (This issue is covered more comprehensively in Chapter 3.) Further large scale studies of consumer satisfaction in relation to behavioural and other therapies seem a necessity.

**Historical Background to the Exposure Method**

The basis of modern behavioural procedures for helping people face their feared situations/objects has been the work of experimental psychologists from Pavlov to Mowrer. Early examples of the study of phobic behaviour and its extinction are seen in the cases of Little Albert (Watson and Rayner's 1920 description of traumatic conditioning) and Little Peter (the real life desensitization by Mary Cover Jones published in 1924). However, details of both cases have been undoubtedly coloured by history. The two stage theory of learning of Mowrer (q.v. below), while not tenable as an explanation of the formulation of phobic behaviour, undoubtedly influenced the early & relatively successful attempts to desensitize fear.

Systematic exposure to the anxiety evoking stimulus in imagination, with concommittant techniques of inhibition such as relaxation, was first described in 1954 by Joseph Wolpe in his now classic paper "Reciprocal Inhibition as the main basis of Psychotherapeutic Effect". This was followed, in 1958, by the book "Psychotherapy by Reciprocal Inhibition".
Wolpe's approaches to anxiety linked behaviour, and particularly desensitization have been researched in great detail.

Wolpe originally used the term Reciprocal Inhibition to describe the technique of coupling a pleasant with a fear evoking stimulus. A description of classical systematic desensitization appears in Wolpe and Lazarus (1966).

In the mid 1960's flooding and "implosive" techniques were introduced with the emphasis on facing anxiety evoking stimuli until the anxiety reduced, rather than attempting to reduce it in very gradual stages.

The work of Stampfl (1967), Stampfl and Levis (1967), Hogan and Kirschner (1967) and Kirschner and Hogan (1966) are generally viewed as forming the basis for clinical flooding therapy and current exposure approaches.

At this time Bandura and other social psychologists had begun publishing papers describing participant modelling. Bandura and Roethenthal (1966) described vicarious classical conditioning, while Bandura and Menlove (1968) described vicarious extinction of avoidance. Ritter (1968) described how phobic children were treated in groups using modelling procedures, while in the same year Bandura (1968) published a notable paper describing the factors determining vicarious extinction. These papers form the basis of present day exposure procedures which are used in conjunction with therapist participation. Parallel to this research, Rachman (1966) and Wolpin and Raines (1966) discussed issues relating to laboratory experiments. Thus by the late 1960's the basis was established for applying rapid exposure procedures to phobic patients.

In one isolated study in 1959 Malleson had described what would now
be called exposure in a case of examination phobia. He emphasised repeated confrontation as being essential.

One of the earliest controlled studies of systematic desensitization in imagination with agoraphobia was undertaken by Gelder and Marks (1966) who demonstrated a poor outcome, but later Gelder et al (1967) showed significant improvement with a less handicapped group of agoraphobic patients. The patients from this study, together with patients from another study were followed up jointly over a four year period, and data on 65 out of a total of 71 patients showed a stasis in the phobic symptoms over the follow-up period, after the improvement which occurred during the treatment period. Furthermore, there was no change in the agoraphobic group as a whole in general anxiety, depression, obsessions, depersonalization, social and sexual adjustment and family relationships over the follow-up period. The authors also added that they could find no evidence of symptom substitution. The study was replicated by Gillan & Rachman (1974) in the context of a broader investigation of desensitization, with similar findings.

The first in vivo exposure method of modern times was arguably that of Meyer and Gelder (1963) who described a procedure according to which patients were gradually exposed to phobic situations in real life, while training the patient in relaxation. The description of their cases showed that the approach was much more gradual than that used today, taking some 4 months to train one patient to walk a quarter of a mile to meet the therapist. Further, two of the cases described by Meyer and Gelder were rather complicated, these subjects having multiple psychiatric
symptoms in addition to the agoraphobic avoidance. This study was followed by that of Cooper et al (1965) and Marks and Gelder (1965) who described behavioural methods with samples of psychiatric patients, including a large control group of agoraphobics who had been in the same hospital, but not received behaviour therapy. The patients in the behaviour therapy condition received graded re-training and other treatments, the specific nature of which was not clearly defined. The behaviour therapy group seemed to improve slightly more than the controls, although they needed double the amount of therapist time. As Mathews et al (1981) point out, this method of treating agoraphobia was viewed more than cautiously by the authors. They concluded that the results did not justify the expenditure of effort. Eysenck (1965) went on to criticize the study on a number of grounds, including the inappropriateness of including graded re-training under the descriptive umbrella of behaviour therapy.

Boulougouris and Marks (1969) were the first to describe the application of classical flooding to clinically phobic patients. They described the treatment of four patients who were given real life exposure to the phobic stimulus following preparatory imaginal sessions. The paper emphasised the work of Baum (1966) on conditioned avoidance responses, and the necessity of blocking such an avoidance response for extinction to occur. Two of the four patients were agoraphobic and they improved. One non-improver was a case of free floating anxiety.

At this point it is worth clarifying what exposure treatment actually
is, as there is some disagreement as to whether it is different from flooding. For the purposes of this thesis exposure means facing previously feared or avoided situations in gradual stages. It has, to some extent, become synonymous with flooding, although strictly speaking flooding demands facing the fear stimulus with maximum evocation of anxiety. Exposure treatments usually use a crude hierarchy, but passing on to the next step is indicated by a sense of coping by the subject, rather than by the complete extinction of anxiety which is used in classical systematic desensitization. Marks (1972a) pointed out that flooding is not, in clinical practice, a single technique, but comprises a wide range of over-lapping procedures. At that time (according to Marks) at least 24 different terms had been used to describe flooding and its variants. By 1981 Marks was able to cite a total of 40 terms describing, as he put it, exposure and allied treatments.

It is now generally accepted that exposure in real life is the optimum treatment for agoraphobia, and research is currently directed towards 3 main issues. Firstly, for the last 10 years or so, workers have been attempting to define the most effective ways of applying exposure in the clinical situation. This work forms the bulk of the research carried out. Secondly, there has been some research carried out into the general issues that such treatment generates, for example, social validity. The third issue concerns the theory of exposure. This area has been much neglected until only recently, a fact pointed out several times by Rachman. Rachman (1983) stated that while results with exposure treatments are good, it is nevertheless the case, that many
patients, although improved by treatment, have considerable residual difficulty. Furthermore, he underlined the fact that there are significant numbers of treatment failures. Rachman goes on to argue in later papers (1984, 1985) that only a thorough understanding of the mechanism of agoraphobic avoidance, and then, logically of exposure treatments, will refine treatments further and yield a higher rate of treatment success. At least some of the reluctance to research the underlying psychological processes can be traced to the view of empiricists such as Marks. This author has stated (Marks (1981b)) "that experimental psychology was one of the many idols of origin ignored by behavioural practitioners". Marks has gone on to advocate speaking of the $E_s$ or Evoking Stimulus which trigger the phobic or obsessional reaction, these reactions being $E_{RS}$ or evoked responses which can themselves become further $E_s$'s in a vicious circle (e.g. anticipatory fear of fear. He then discussed the need for considering complex conditioning theories, and suggested that all clinicians need to carry out treatment is the central hypothesis of exposure. This states "that phobias and rituals are reduced by exposure of the patient to those stimuli which evoke his discomfort or rituals, until these no longer occur ..." (Marks 1972(b), 1977, 1978, 1981(a), Greist et al (1980)). Marks considers that the unsuccessful approaches in the treatment of phobias omit exposure. (This latter point has been the subject of further intense controversy, but this will be reviewed in detail below.)

Marks' general view of exposure in agoraphobia is that psychological processes are only part of the picture. He makes it clear that he considers current psychological models to be inadequate. Wilson (1981)
has challenged Marks' views at length, and while concurring with Marks' expressed dissatisfaction with current conditioning models of neurosis and exposure, argues convincingly for more psychological research in these areas. Wilson considers that Marks' $E_s - E_R$ paradigm carries the same limitations as the conditioning paradigm, and that a more profitable line of enquiry can be derived from the approach of Bandura. In particular he argues that this approach, which incorporates cognitive variables within a behavioural framework, has a more comprehensive and heuristic quality.

To appreciate the current theoretical issues and controversies more fully, a detailed account of the research of the exposure method and specific associated variables follows.

**Speed and Duration of Exposure Sessions**

Stern and Marks (1973) used a Latin square design to compare brief with long periods of flooding, i.e. four half hour sessions of exposure in real life with single 2 hour sessions of exposure in real life. Prolonged flooding was superior in this study to brief flooding, and over the second hour there was an increase in habituation, as measured by heart rate and subjective anxiety.

Stern pointed out that the design precluded any long term differentiation. In criticism of this study, Mathews et al (1981) point out that the nature of the exposure was not identical between conditions, but suggest that extensive periods of exposure are more effective. Stern reviewed
17 analogue studies of exposure. This author distinguished effective from ineffective exposure according to length of session. The average times were respectively 56 minutes for effective exposure, and 32 minutes for ineffective exposure.

Foa et al (1980) showed that exposure treatment was more effective if given on consecutive days than if given once a week. Emmelkamp (1982a) concludes in his review that massed sessions of several hours are optimal.

Rapid vs Slow Exposure

Recently Yuksel et al (1984) compared rapid exposure in vivo with slow exposure in vivo, in a group of phobic patients, including some agogaphobics. Interestingly they employed a balanced design to treat 12 patients in London and 16 patients in Istanbul. Rapid exposure was characterised by moving to the next hierarchy item after subjective anxiety had dropped by 2 points on a 9 point scale, and in the slow condition by 4 points on a 9 point scale. Prior to the programme commencing, the criterion for termination of treatment was set as toleration of the highest hierarchy item, with minimal discomfort, for a maximum of 8 sessions. While both groups improved substantially and equally, the rapid exposure group achieved termination criterion quicker than the slow exposure group. Peak anxiety was similar for both groups.

In all the above studies there was individual variation, and the conclusion must be that while these studies suggest excellent general indications for exposure treatment, it is nevertheless vital to make individual assessments, and thence to individualise programmes.
Comparisons of various modes of exposure

Although the most favoured mode of exposure is a graduated one in real life, controversy regarding the various modes continues (e.g. James 1985). The early studies of agoraphobia treated by systematic desensitization (e.g. Gelder et al (1967)) yielded poor results, and by 1969 Marks concluded that flooding was a superior procedure. Crowe et al (1972) also demonstrated, in a crossover design, that flooding in imagination was superior to desensitization in imagination, but not as effective as shaping in real life (also called reinforced practice). However, Mathews et al (1976(a)) compared imaginal flooding and exposure to real phobic situations with a group of 36 agoraphobic patients, and concluded that, provided patients practised confrontation between treatment sessions, there was no long term difference between treatments. This paper pointed out that the usefulness of imaginal exposure had been overlooked because of the large amount of accrued positive evidence for prolonged in vivo exposure. Mathews et al also pointed out that experimental designs used in comparative research ruled out delayed or carry over effects. This study to some extent confirmed the suggestion of Gelder et al (1973) that real and imaginal exposure were equivalent. Similarly, James et al (1983) questioned the results of studies which indicated a superiority of in vivo to imaginal approaches, pointing out that these claims were based on research which has involved flooding or rapid exposure procedures. The authors used a multiple baseline across single subjects design to compare imaginal and in vivo desensitization in agoraphobia. Their measures were those of avoidance, subjective distress and heart rate, and these were repeated at various
follow-up points. Both treatments yielded improvement, but no
differences were seen. In a recent review the main author of this
study (James 1985) points to the fact that only three studies (his own
and those of Crowe et al (1972) and Mathews et al (1976)) have compared
imaginal and real life desensitization. James's critical review
points convincingly to the conclusion that the treatments are similar
in effect (provided of course that the subject carries out their own
exposure between treatment sessions). He also goes on to point out
that in clinical practice (and probably in experimental studies) the
two processes are inextricably confounded. He recommends the employ­
ment of a judicious blend of both imaginal and in vivo exposure, which

The above studies seem to have important ramifications in two very
different areas.

Firstly, the two procedures have important similarities and differences.
For example, imaginal and in vivo flooding would seem to be extinction
processes, while imaginal exposure would seem to have a quality, not
shared by in vivo exposure, of cognitive rehearsal. It would therefore
seem that in this area, James et al's (1983) strategy of "dismantling"
the procedures in a number of single case designs is the most fruitful
line of enquiry.

Secondly, the issue of real life versus imaginal desensitization versus
flooding is being settled in clinical practice by issues of economy and environment. For example, hourly sessions of desensitization would seem to lend themselves more readily to the private practice settings of the United States, much more than in vivo exposure sessions of unpredictable length. Goldstein (1984) (Personal Communication) also points out that in vivo exposure within certain inner city settings of the U.S.A. is potentially hazardous for the therapist, thus favouring a more artificial approach such as imaginal exposure. Conversely, in this country, brief high demand exposure treatment is in vogue as a cost effective treatment, but takes no account of a substantial proportion of treatment refusers who may find such treatment too demanding.

In summary, all of the studies reviewed contain a major element of in vivo practice, and between treatment session exposure carried out without the therapist. Therefore, the central question would seem to be just how this self initiated exposure could be facilitated. The one major advantage of imaginal exposure would seem to be the reduction of the possibility of the subject engaging in cognitive avoidance. However, it does seem that the particular balance of technique(s) depends on the result of the individual assessment. If group treatments are being used, graded in vivo exposure is the obvious treatment of choice. One interesting, if overlooked, possibility however, is that patients treated in vivo within a group could be prepared by imaginal procedures, either alone or in a group session.
Theoretical Issues

Recently there has been some controversy as to whether exposure is a necessary condition for fear reduction. This is highlighted in the papers of Boyd and Levis (1983) and de Silva and Rachman (1981, 1983). The latter authors take the view that while "In most of the effective techniques for reducing fear, exposure to the fear-provoking stimulus is a prominent feature" (de Silva and Rachman (1981) p.227), and that while exposure treatments were important and significant, that there was evidence that: "fear reduction can take place in the absence of exposure to the fear stimulus". They cited seven types of evidence in support of this likelihood. Their list is comprehensive and worth stating in full:

- a) The common clinical and experimental observations that imparting information about the harmlessness of the stimulus can lead to a reduction of fear;
- b) Cognitive therapy can produce fear reduction;
- c) That there is spontaneous remission of neurotic, including anxiety, reactions in a proportion of patients;
- d) Improvement is often observed after the administration of placebos;
- e) Experimental results show improvements in some patients after non-exposure types of therapy;
- f) Improvements are shown by patients in other phobias than the treated one;
- g) There is indirect experimental evidence of the success of non-exposure therapy with obsessional neurotics.

The basis of Boyd and Levis' (1983) reply was that the above evidence
could be explained, because in all of these examples exposure may have taken place and was thus responsible for extinction. Boyd and Levis were not satisfied by the post hoc nature of their own evaluation, but urged further investigation of the extinction process & elaboration of the C.S. model. The last word (so far!), was left with de Silva and Rachman (1983) in the following article in the same journal. They advocated abandoning attempts to extend the exposure model meaninglessly, and called for a methodical collection of data concerning non-exposure fear reduction.

One of the central features of the exposure method is that patients should remain in the feared situation until their anxiety level falls. Authoritative texts of agoraphobia and its treatment emphasise the importance of never leaving a situation until the fear decreases. This assertion is very much based on Mowrer's theory of fear and avoidance (Mowrer (1947, 1960)). de Silva and Rachman (1984) have argued that such escape behaviour is not necessarily followed by increases in the strength of associated avoidance behaviour. They conducted an experiment with 18 agoraphobic patients, randomly allocating them to two conditions. The first was a condition of exposure whereby patients were instructed not to leave the situation until their anxiety dropped to at least half of the peak anxiety felt. In the second group, patients were asked to approach fear provoking situations, but were instructed to leave when their subjectively felt anxiety level reached a pre-set level of 75% of the maximum anxiety estimated before the exposure. In a third wait list condition, patients were taken on for therapy at a later time. Contrary to the results one would expect if a Mowrerian model held true, the patients who were taught to escape did not show increased avoidance
behaviour, and the results of the two treatment groups on measures of change were very similar. The authors have suggested that their findings underline the need for a more satisfactory explanation of persistent avoidance behaviour, and while cognitive changes were not monitored, they suggest that variables such as self-efficacy could well be crucial in the fear reduction therapies.

Most clinicians would agree that an important factor of exposure treatment is to make sure that the subject is not avoiding cognitively, when confronting the phobic stimuli. Borkovek and Grayson (1980) have pointed out that events which interfere with the subject's awareness and/or processing during exposure will critically influence the effects of exposure procedure. However, Rachman et al (1976) has suggested that with regard to exposure with obsessinals, that such exposure may well be facilitated by the introduction of competing activities. There is no published investigation of distraction during the exposure treatment of agoraphobia. However, Grayson et al (1982) compared two conditions of exposure in 16 obsessive compulsives. The first condition was attention focusing, during which the therapist engaged the subject in a conversation about the phobic stimulus. The second condition was exposure with distraction, with the subject being asked to hold the contaminating object, i.e. the phobic stimulus in one hand, while playing video games with the therapist throughout the session. The results clearly indicated that attention focusing led to greater habituation. Furthermore, in this condition there was greater synchrony between physiological and subjective measures of anxiety, such synchrony
being a positive indicator of treatment outcome. The authors concluded that treatment by exposure was more effective if attention focusing is promoted. This finding has obvious applicability for the management of agoraphobics, but obviously needs experimental testing.

Marks is arguably the most influential worker in the area of exposure treatments, and as stated before, he has often criticised e.g. 1981(a)(b) the theoretical approaches based on laboratory learning theory. In reviewing the literature his stance does however seem in accord with the three most prominent groups of researchers in the early 1980's, (see Mathews et al (1981), Chambless and Goldstein (1982) and Thorpe and Burns (1983)). Marks summarizes (Marks (1981b)) the main considerations for exposure theory cited as the most relevant, by himself and the other prominent workers. These considerations summarize comprehensively current questions regarding the theory of exposure.

In his first consideration he asks, just how does exposure that is traumatic differ from exposure that is therapeutic (or in the loosest sense of the term, habituating). The clearest example of this distinction is the case of the subject who prior to treatment faces a shopping precinct, and who panics and shows increasing fear. The same subject however, benefits from the same exposure during therapist aided treatment & with repeated exposures shows a decrease in anxiety. Marks suggests that our very definitions of what constitutes exposure and avoidance need to be tightened. The results of de Silva and Rachmann's (1984) experiment referred to above would seem to reinforce this suggestion.
Marks goes on to ask why various modes of exposure (for example in terms of length of exposure session and intervals between sessions) seem more effective. There seems to be very little in the way of experimental evidence to answer this question. This area of research may well help to explain why some subjects fail to habituate to anxiety evoking stimuli, in the absence of obviously explanatory factors such as the use of sedatives or alcohol. Marks also indicates that the answer to variability in habituation between individuals may well be accounted for by as yet unknown biochemical or physiological variables. (The author of this thesis is carrying out collaborative research with Sandler on Tribulin which addresses part of this particular problem.)

In a wider set of questions, Marks asks whether exposure acts by teaching subjects how to cope with unpleasant feelings in general, and suggests that exposure theory could be widened to a general coping theory. Marks, in his ten major considerations for exposure theory, includes other variables, the role of which needs more careful enquiry. These include therapist variables, the subjective state and various cognitive factors.

Perhaps the most important theoretical consideration concerns the lack of a comprehensive explanatory model of aetiology, of not only agoraphobia, but also other syndromes where avoidance is central e.g. obsessive rituals. The current position is that the successful exposure based treatments are empirically derived procedures for ill understood syndromes. Therefore Rachman's (1984) call for experimental analyses of agoraphobic behaviour probably offers the most helpful line of enquiry for future research.
ANXIETY EVOCATION

In early studies (e.g. Marks et al. (1971)), anxiety evocation was used in treatment, the theoretical basis of this being the experimental work concerning flooding. However, anxiety evocation does not now seem to be a necessary addition. Hafner and Marks (1976) looked at this issue by comparing groups of agoraphobics with high and low exposure anxiety. In this experiment the therapist was responsible for making anxiety evoking statements. The authors found no difference in outcome. Emmelkamp (1982b) points to the evidence of Foa et al. (1977) and Mathews and Rezin (1977) that flooding without cues is more effective. Therefore, in clinical practice most therapists no longer use strategies aimed at increasing anxiety.

Individual and Group Treatments

Exposure treatments carried out in groups have obvious advantages. Patients feel reassured that they are not alone in experiencing the distressing symptoms of agoraphobia. Further, the modelling of coping behaviour by other group members would seem to be of obvious benefit. In the setting of scarce resources in the N.H.S., therapist time can spread more effectively over more patients.

Hand et al. (1974) examined group exposure for agoraphobics with two balanced conditions of group cohesion. He concluded that group treatment was at least as good as individual treatment. Also there was a continuing improvement evident at follow-up. This finding was contrary to the results of previous studies of individual treatment which showed that the net gains remained constant at follow-up.
However, Hafner and Marks (1976) and Emmelkamp (1975) found no difference between group and individual treatments. Teasdale et al (1977) failed to replicate the results of Hand's study in one important area i.e. the post treatment improvement. Teasdale discussed the issue of continuing improvement, and suggested that a high level of social cohesion was present in Hand's structured groups, and that post-treatment exposure was facilitated by informal contracting between group members to continue group exposure exercises.

Sinnott et al (1981) conducted an experiment to look at group treatments conducted with subjects either from the same neighbourhood, or subjects from differing neighbourhoods several miles apart. They found that there was evidence to suggest that the "neighbourhood group" did slightly better than the other group. In particular the authors felt that the fostering of neighbourhood groups offered the potential for continuing co-operation and maintenance of long term gains. Unfortunately their follow-up period was only 3 months and they do not appear to have conducted any further longer term assessment.

The important issue of gains occurring only during treatment contact led Mathews et al (1977) to devise a home based treatment programme, a central feature of which was a treatment manual used by the patient. Evaluation of this programme demonstrated a good treatment response with further gains occurring in the follow-up period. The continuing improvement was effected presumably by a continuing use of the manuals.

In summary, group treatments would seem to yield results equivalent to individual treatments, with the added benefit of therapist cost effect-
iveness. (The issue of home treatments is discussed below.)

The Role of Various Groups of Drugs

The main groups of drugs used with agoraphobic states are the tranquilizers, antidepressants and beta-blockers. The most commonly used drug is, of course, alcohol. The use of alcohol to quell panic is so common a strategy as to make systematic enquiry of alcohol consumption of vital importance when assessing a new patient.

Drug Treatment and Alcohol

The Beta-Blockers

The beta-blockers or more correctly the beta-adrenergic receptor blocking drugs, have been used for the last 15 years or so by some workers as a treatment for anxiety. They have also been prescribed for the anxiety which accompanies both agoraphobia and other phobic states. It has been argued by the advocates of beta-blockers, that they have an anxiolytic effect by reducing the tachycardia associated with anxiety, and there are several studies which indicate that various beta-blockers seem to reduce subjective anxiety with specific phobias and situational fears (e.g. Brewer 1972, Tyrer and Lader 1974).

However, there are other studies which yield equivocal results e.g. Bernadt et al (1980), Gibbons and Phillips (1976). There is only one well controlled study of beta-blockers used with agoraphobic patients. Hafner and Milton (1977) compared Propranalol and a placebo in a double blind trial. Subjects in both conditions had a matched amount of exposure. Although the subjects taking the active drug did
significantly better on behavioural and subjective measures in the first 2 days of treatment, on subsequent days, and at the end of treatment and at follow-up intervals, the drug group fared less well on all measures than the placebo group. The conclusion of the authors was that the drug Propranolol actually seemed to have an adverse effect on the study subjects. It is interesting to note that beta-blockers are still commonly prescribed in cases of agoraphobia by both trained psychiatrists and general practitioners. This widespread prescribing occurs without any experimental evidence in support of such practice.

The Anti-Depressants

Anti-depressants are of two main categories, the mono amine oxidase inhibitors and the tricyclics.

The Monoamine Oxidase Inhibitors (MAOI'S)

This group of anti-depressants have been used for many years to treat depression and anxiety states. Their discovery was based on the observation that a precursor of these compounds, used to treat tuberculosis, caused a euphoria in patients undergoing such treatment. As the name implies, the drugs prevent the breakdown of Serotonin by the inhibition of the enzyme monoamine-oxidase. One major theory of depression is that a depressed mood state is caused by low Serotonin levels at certain neurotransmitter sites. Sargent and Dally (1962) were the first workers to report the successful use of the Monoamine-Oxidase Inhibitors in the treatment of phobic disorders and the use of these drugs continues to the present day as a first line treatment for agor-
phobia. The current Monthly Index of Medical Specialities (MIMS) lists five examples of this group of drugs. Many workers are reluctant to prescribe them as the drugs have potentially fatal interactions with common food stuffs containing free amines. Such foods include cheese, Chianti, Marmite and pickled herring. Furthermore, there are a whole range of drugs which cannot be given with Monoamine-Oxidase Inhibitors, thus causing fairly simple treatment such as dentistry to become problematic. There is even a degree of caution to be used when taking simple cold remedies in conjunction with the MAOI's. For these reasons, many patients are reluctant to take the drugs when prescribed. Despite fairly enthusiastic reports based on uncontrolled observations, there is very little in the way of objective evidence to support that the MAOI's are any more effective than a placebo. In one of the few controlled studies, Tyrer et al (1973) used a MAOI in the treatment of a mixed group of phobic patients (some with agoraphobia and some with social phobia). While there were some secondary improvements in some of the subjects taking part in the study, there was no evidence that the patients treated by a drug did any better than those taking the placebo. The authors did not attempt to measure change beyond the active treatment phase with the drug. This shortcoming makes the study results inconclusive. Other studies e.g. Lipsedge et al (1973), Mountjoy et al (1977) and Sheehan et al (1980) have shown some improvement in patients assigned to treatment with Monoamine-Oxidase Inhibitors. However, all these studies are beset by the problem that self initiated exposure may have confounded the treatment conditions. Further to this, all the studies had other major methodological flaws.
such as the concurrent administration of a Benzodiazepine tranquiliser or the continuance of the drug during the follow-up period.

THE TRICYCLICS
These drugs have been used with agoraphobics since Klein and Fink (1962) reported that Imipramine apparently suppressed the panic attacks of agoraphobics. Klein (1967) and other authors (e.g. Zitrin et al (1978), Sheehan (1982)) have argued that panic disorder is a central feature of agoraphobia. They argue that Imipramine and other tricyclic compounds block spontaneous panic (the panic formulation of agoraphobia has already been reviewed in this thesis) and thus "cue" agoraphobic avoidance.

There have been eight controlled studies which have investigated, among other variables, the use of tricyclic compounds with agoraphobia. While some of these studies have indicated some positive results there are, as with the work with Monoamine-Oxidase Inhibitors, considerable methodological and conceptual problems. Some of these have been reviewed by Talch et al (1983) in a detailed review article. One central criticism is that the subject criteria in the studies varies considerably. In addition in several studies agoraphobic subjects are pooled with other phobic subjects and subjects with other neurotic disorders. This is further confounded by the failure to separate out the various diagnostic groups in the final analysis.

Another considerable problem is that dosage levels and treatment lengths have varied considerably between trials, and many of the studies lacked the fundamental safeguard of checking that subjects actually took their medication. In addition to the rather equivocal outcome with
pharmacotherapy, two other important factors should also be taken into account. First is the commonly reported fact that many agoraphobics are reluctant to take medication (e.g. Telch (1982)). The second factor is that drop-out rates from anti-depressant trials consistently average between 35 and 40% (Mavissakalian and Barlow (1981)) thus probably rendering the final treated group atypical.

Tranquillizers

The commonest tranquillizers belong to the group known as the Benzodiazepines. This group was introduced some 25 years ago as the apparently safe and efficacious replacement for barbiturates. Their use is so widespread that it is estimated that nearly 9% of adults in the U.K. have taken a Benzodiazepine for at least a month in the previous year (Skegg et al (1977)). In the same survey more than 30% of women over the age of 45 received at least one prescription for psychotropic medication in the course of a year. Valium (Diazepam), the most commonly prescribed Benzodiazepine, accounted for 4.3% of all N.H.S. prescriptions in 1974. This drug, along with the other Benzodiazepines, is commonly prescribed to agoraphobic patients. In the author's previous study (Gournay (1983)), half of the agoraphobics investigated were taking a member of the drug group long term. There is however, very little evidence that Benzodiazepines contribute anything to the alleviation of symptoms in agoraphobia. Certainly, as long ago as 1980, the Committee on the Review of Medicines stated more generally, "there was little convincing evidence that Benzodiazepines were efficacious in the treatment of anxiety after four months' continuous
treatment". Only two studies have specifically investigated the use of the drug in exposure programmes for agoraphobics. Hafner and Marks (1974) and Hafner (1976) could demonstrate only that Valium seemed to reduce anxiety in exposure sessions, but did not affect overall treatment outcome. It should be borne in mind that these studies did not investigate long term effects. Further, there is a range of evidence that these drugs may have long lasting side effects and be positively harmful. For example, Betts et al (1972) and Seppala et al (1976) have shown an increased proneness to road accidents, Cardos et al (1968) and Salzman et al (1974) have shown hostile and aggressive behaviour associated with Benzodiazepine consumption. However, perhaps the most worrying effect of chronic usage of this group of drugs is a true dependence syndrome, which is both physical and psychological in nature, and can cause life threatening symptoms when abrupt withdrawal occurs (e.g. Petursson and Lader (1981), Kennedy (1979)).

It has long been assumed that Benzodiazepines impair learning (Kennedy (1979)). It has also been posited that when learning does occur, it is state dependent. This, of course, if true would have major implications for the agoraphobic receiving exposure treatment. However, there is nothing in the literature concerning treatment outcome with chronic Benzodiazepine consumers. Further, only 3 of Jansson and Ost's (1983) reviewed studies took the precaution of keeping medication intake at a stable level. In view of the increasing problems associated with Benzodiazepine addiction and their wide prescription among agoraphobics, research into use and outcome is a most urgent priority.
Exposure Treatment and the Influence of the Spouse

While there is a large literature concerning marital interaction and neurosis, the specific issue of the influence of the spouse on exposure treatment and outcome has been studied only since 1976. Marriage and agoraphobia has already been discussed in Chapter 1. Various studies (e.g., Kreitman (1968)) have suggested that there is a higher incidence of psychiatric disturbance existing in both marriage partners than could be due to chance. Two broad and contrasting theories have emerged to account for this. These are the theories of Pathogenic Interaction and Assortative Mating. The hypothesis of pathogenic interaction, in essence, states that the spouse develops psychological disturbance in their own right. Implicit in this theory is the notion that successful treatment will have the effect of causing improvement in the spouse. The other theory of assortative mating suggests that partners choose complementary partners who would, by definition, be potentially psychologically abnormal in their own right. Therefore any treatment endeavour would need to be directed to both partners.

While there is only a small amount of evidence relating to exposure treatment and outcome, there is already considerable disagreement regarding interpretation of the data of these studies.

The first major study regarding exposure and spouse influence was conducted by Hafner (1977(a)(b)) who examined the symptom and personality profile of 33 agoraphobic women and their spouses and treatment outcome.
He did not find an overall high level of neuroticism among spouses, but he demonstrated that there was a complementary pattern in the marriages, supporting the notion of assortative mating. He divided his groups in terms of scores from the Hostility and Direction of Hostility Questionnaire (Caine et al., 1967), and indicated 2 types of interaction. Type I was characterized by extrapunitive women with high levels of hostility who are married to men with normal total hostility scores and relatively low intrapunitive scores. In this group there appeared to be more widespread neurotic disturbance, and when treatment changed the level of independence of the agoraphobe, the consequences were dramatic. In some cases this involved either relapse of the patient in the post treatment phase, or serious breakdown (e.g., suicidal depression and psychosis) in some of the spouses. In type II interactions there seemed to be a group of intrapunitive women with lower total hostility scores, who were married to highly hostile men with high extrapunitive scores. This group seems to exhibit less general disturbance, and the marital system was stable enough to accommodate the effects of positive treatment outcome. In these women it seemed that the agoraphobia was an isolated problem, while in Type I interactions the agoraphobia was part of complex neurotic symptomatology.

Hafner concurred with the view of Webster (1953) who asserted that a proportion of agoraphobics are unlikely to relinquish their symptoms unless their husbands enter psychiatric treatment. In support of Hafner's conclusion, Bland and Hallam (1981) found that while graded exposure led to a decrease in phobic severity regardless of the marital...
state, subsequent improvement or relapse depended on patterns of marital interaction. A similar study by Milton and Hafner (1979) yielded the same results.

On the same theme, Barlow et al (1981) provided some preliminary evidence that two patterns of relationship between marital satisfaction and phobic severity exist. While they examined only six cases, they did so in a painstaking way. They noted either a parallel change in phobic severity and marital satisfaction, or an inverse relationship. Further the spouses who agreed with their wives ratings of phobic severity, belonged to the group in which marital satisfaction improved with the phobia.

To examine just how treatment should be designed in phobics with marital problems, Cobb et al (1980) used exposure on 11 such subjects. In a cross over design, contract marital therapy and exposure were given as separate treatments. However, marital therapy had no effect on the fears and rituals, while successful exposure seemed to lead to improvement in the marital state. This finding confirmed the findings of Hafner and Marks (1976) study which showed an increase in marital satisfaction in a group treated by exposure alone. While apparently at variance with Hafner's (1977b) findings, these findings may well be congruent with the notion that marital interaction may have significant effect on treatment outcome. Hafner (1977a) (1977b) does not pool his data to show overall effect; this is a pity as it would provide more direct comparison with studies such as Hand and Lamontagne (1976). These authors described marital problems in 21
patients treated by exposure in vivo, of whom 6 patients demonstrated severe problems at follow-up post treatment.

Monteiro et al (1985) have provided the latest in the studies of treatment outcome and marriage. They examined the outcome of 27 married patients and 13 single patients within the context of a between group design investigating the effects of Imipramine and exposure. They followed their patients up to 2 years. Overall they found no evidence that married patients did any worse in treatment than single patients. They also found that greater improvement occurred in those with better initial marital adjustment. In accord with the Cobb (1980) study, they demonstrated that even in those with poor initial marital adjustment there was a tendency for the marital adjustment to improve with successful treatment. The authors felt very strongly that there was no evidence to back the claim of systems theorists that if one changes the state of function of an agoraphobic, that this will necessarily have an adverse effect on the marital or family relationship. The systems theorists nevertheless persist in using this rigid homeostatic model. Further, many of their basic assumptions are rooted in untestable psycho-analytic theories. Monteiro et al suggested that the extent of marital adjustment after the clinical change resulting from treatment, may be dependent on the capacity of the marriage or the family group to accommodate to change. The authors felt this was in itself dependent on good problem solving capacity rather than any complex psychodynamic factor. However, there has been no direct evidence regarding problem solving ability and outcome in behavioural treatment.
While Monteiro et al's point seems to have face validity, it is rather a difficult hypothesis to test experimentally. The second point raised by the authors was that there seemed to be a discrepancy between the observers' view of marital problems and the patients' rating on these scales. This led the authors to question whether such rating scales capture the subtleties of marital relationships. The authors mentioned a further very relevant point regarding the marriages of agoraphobics. This was that some patients may regard their spouse as being helpful if they encourage or help them to avoid. This of course is a vital area to consider when working out treatment strategies. While it seems obvious that modification of such spouse attitude/behaviour is essential, there is little evidence to suggest how this may be effected.

The data in the above studies disconfirm a simple relationship between exposure treatment and marital dissatisfaction. However, two very interesting controlled studies have investigated using the spouse as a co-therapist in treatment.

Cobb et al (1984) looked at the difference in treatment outcome of two groups of agoraphobic subjects treated either with or without spouse co-operation. In the group with spouse co-operation, both patient and spouse were given manuals, and both partners were present at all sessions with the therapist. Treatment was brief (5 hours), and included just one session of therapist-aided exposure in vivo. There were two further monitoring visits at the patient's home. These visits emphasised instructions to the spouse to assist with home exposure.
assignments, and encouraged efforts of self-help. In the treatment of the patients' alone group, the spouse was seen only at the initial assessment for measurement, and the patient alone was given a therapy manual. Otherwise, treatment was based on the Mathews et al (1981) home-based method, and was the same as the spouse group. On their measures of outcome there were only 3 minor differences at post treatment, which all disappeared at follow-up. Altogether 54 separate analyses of co-variance were carried out, but there were only 3 significant findings involving the main measures of agoraphobic symptoms. Thus, the authors concluded that there were no convincing differences in outcome between the 2 treatments. On measures of marital satisfaction, there seemed to be some improvement, whether or not the spouse was involved. With regard to initial marital adjustment and treatment outcome, the authors could not find any relationship. This concurred with the finding of Emmelkamp (1980), who also failed to find any overall correlation between initial marital rating and change in agoraphobic symptoms, but was at variance with the already described studies of Milton and Hafner (1979), and Bland and Hallam (1981). The authors concluded that agoraphobia was primarily a problem arising from the individual. The relationship between agoraphobia and marriage did not seem to neatly fit a model of either assortative mating or pathogenic interaction.

In the second study, Barlow, O'Brien and Last (1984) also looked at the issue of involving the spouse in treatment. The treatment procedure was different to the Cobb et al study, in that treatment was more complex. It consisted of a self-initiated graduated exposure programme, together
with anxiety management training, the use of cognitive therapeutic
procedures and some communications training between spouse and patient.
To complicate matters, this study also lacked a follow-up, whereas the
Cobb et al study followed subjects up to 6 months. Barlow et al found
a distinct advantage in the spouse assisted group, when examining the
outcome group in terms of treatment responders and treatment non-responders.
The spouse assisted group of 14 subjects had 12 responders, while the
non-spouse group had 6 out of 14 responders. On measures of social,
work and family function, the spouse group changed more quickly than
the non-spouse group, but by the end of treatment their ratings of
these areas were similar. The authors pointed out that the preliminary
data suggested that including the spouse in treatment was advantageous.
The authors pointed out that their findings were much in accord with
the results of obesity treatments. One of the most interesting features
of this study was that there was no difference between the two groups
in the amount of between-session practice of exposure. The authors
found a very close matching of not only number of sessions of between-
session exposure, but also in the mean amount of time spent during
these exposures and the mean anxiety ratings. The authors also con-
cluded that other treatment variables such as modification of inter-
personal or environmental contingencies and/or the overall reduction of
general anxiety or stress were necessary additions to an exposure
programme. They speculated that in the long term, such a comprehensive
package was necessary for lasting fear reduction. The interesting
findings of this study, of course, will need to be confirmed by not only
follow-up of these study subjects, but also by a replication of the
use of the package described. It would have been interesting to have
used a control group of subjects having a "simple" exposure programme of comparable length, to separate out the effects of the additional strategies.

In summary, the results of research into the role of the spouse in exposure treatment yields a complex picture. The issue of whether agoraphobia should be viewed as an intra or interpersonal problem is largely unresolved, as the role of specific marital and other environmental contingencies is still not clear. To complicate matters, there is a high rate of marital dissatisfaction and divorce among the normal population. Therefore research in this area demands long periods of follow-up with adequate normal control subjects. Likewise, with spouses as co-therapists, there is as yet little evidence to define just what adjustments the spouse needs to make in her/his own behaviour, or indeed how they can best help change the behaviour of their spouse.

**Family Interaction**

Hudson (1973) described one of the earliest studies of the outcome of exposure treatment in relation to family interaction. On the basis of a single structured interview, a sample of 18 agoraphobics and their families were categorized as being well adjusted, anxious or "sick". In the well adjusted families no interpersonal conflicts could be detected, nor was there any other stress apparently arising from the home environment. In the anxious families, the main characteristic of this group was that the family members behaved in an "anxious" way towards the patient. In the group of sick families, the main criterion
for inclusion was clear evidence of severe family pathology. This severe family pathology was unfortunately not described in clearly defined terms. However, it was clear that the interviewer was conservative in assigning families to this group. The author concluded that there was an association between the state of family adjustment and patients chances of recovery. This was supported by measures repeated at 12 months follow-up.

While one could criticise the study on several grounds, not least for the far from clear criteria for assigning patients to various groups, it was a worthwhile preliminary attempt to look at the family as providing possible prognostic indicators of change.

The author suggested further research, which to date has not been carried out. It is somewhat surprising that there is no published literature regarding family behaviour, rather than spouse behaviour in agoraphobia. However, this can be probably explained by the methodological difficulties involved in assessing family situations, and our relative ignorance of what constitutes a normal set of family interactions.

Therapy with Adolescents

Barlow and Seidner (1983) looked at the treatment of 3 adolescent agoraphobics treated in a small group. They were accompanied by their mothers during a treatment which consisted of self-initiated exposure, panic management and cognitive re-structuring, with the parent acting as co-therapist. The authors concluded that adolescent agoraphobics
differed from adult agoraphobics in their inability to understand the irrational nature of their fears. The authors felt that this lack of comprehension interfered with motivation. However, two of the three clients showed improvement on their phobia, as well as an improving parental relationship. The authors felt that there was an analogy between the parallel changes in agoraphobic behaviour and parental relationships and the supposed change in marital relationships and agoraphobic behaviour described by some authors (e.g., Bland and Hallam (1981)).

The Role of the Therapist

Everaerd et al (1973) demonstrated the value of therapist reinforcement in a trial of successive approximation. In this procedure the patient was systematically praised by the therapist for staying in the phobic situation. This procedure was carried out in a fashion akin to shaping. This study led Emmelkamp (1974) to look at exposure sessions with reduced therapist presence, (the therapist was present at 5 of the 12 treatment sessions). He called this condition self-observation. He found it equivalent in outcome to traditional flooding where the therapist was present at all sessions.

Whether or not a therapist is necessary at all to conduct exposure sessions was raised by the Mathews' (1977) description of his home based treatment programme. (The notion of self help has been used for many years in agoraphobia (e.g., Weekes (1977)). Mathews pointed out that with some agoraphobics simple explanation and reorganization of reinforcers, together with an instruction manual, would suffice. Marks (1980) in his book "Living with Fear" includes detailed self-help
programmes. With the evidence that untrained non-professionals do better with some problems (e.g., Smokeenders, Weight Watchers, Alcoholics Anonymous) than professionals, it is encouraging to see comprehensive and clear jargon free instructions for phobic patients. There is no reason to suppose that the Stunkard (1980) finding that the attrition rate of obese subjects was lower with lay therapists than with professionals, should not apply to self-help oriented agoraphobic groups. This self help approach is advocated by Wilson (1981). He suggests that treated (sic) agoraphobics could run most exposure programmes, rather than using highly trained expensive professionals. He suggested reserving such professional help for the most complex problematic cases.

Untrained Therapists

Benjamin and Kincey (1981) investigated the results of treatment for severe agoraphobic in-patients by untrained therapists. The therapists involved in providing treatment included Registered and Enrolled nurses, student general nurses and medical students. Therapists were provided with a single page of explanation and instructions for the treatment procedure and involved day-to-day on an ad hoc basis. Therefore each patient had several therapists during the course of treatment. Therapists did not receive any supervision during programmes. The basic treatment strategy was a programme of in vivo exposure, using 3 modules (these modules were walking, travelling and shopping). Other than the therapist contact, explanation was given by supervising medical staff to the patient. Furthermore, the spouses were encouraged to participate in the patient's programme when the patient visited home at week-ends. Patients were also given a simple record sheet. The data showed highly
significant degrees of change on a variety of outcome measures from pre-treatment to a mean follow-up rating point of 20 months. One patient relapsed severely for reasons which are not clear, and one patient received some brief booster treatment during the follow-up period. While the study was not subject to stringent controls, the authors felt that the study results indicated that the approach of using relatively untrained staff to be worthy of further research. The overall impression was that the study showed such good results because the programme was well planned and flexible, and incorporated a great deal of exposure time. The range of treatment from 22 to 73 days indicates that the exposure input during this programme was massive compared with traditional out-patient programmes. Taking into account the documented very severe nature of the patients' agoraphobia, this extra exposure may well have been the main reason for such good results.

McDonald et al (1979) found that exposure instructions alone were effective in producing positive change in agoraphobic patients. The approach of giving exposure instructions alone is now used by a range of professionals seeing agoraphobics.

There is one account in the literature of agoraphobia being treated by self-instructions over the telephone (Taylor (1984)). This is surprising because of the apparently widespread use of the telephone in feedback of homework assignment with agoraphobics in treatment. As any clinician will testify, there are in every health district, subjects who could not contemplate travelling to the hospital because of severity of the problem. Most clinicians will know of subjects who have literally not
set a foot outside their front door for some considerable time. Taylor (1984) reports the case of a 29 yr. old man who attended the hospital for an initial assessment, but was unable to attend for more out-patient sessions. After the initial assessment the subject was treated using 10 minute telephone calls at weekly intervals over 11 weeks, with 2 x 20 minute sessions at the hospital at the end of treatment to review progress. His outcome on various measures of change showed considerable improvement, and the author concluded that the use of the telephone was a most cost effective measure in selected cases rather than using a more traditional home based programme. It would seem logical to attempt a pilot study at least of this method, as there would seem to be an obvious demand. What does seem clear, is that some patients will need a therapist to aid exposure, while others will make significant gains with self-initiated exposure alone. There is no published evidence concerning the patient characteristics which suit either approach. However, the home based programme of Mathews (q.v.) using minimal therapist time would seem to be ideal for most subjects, and provides a cost effective compromise.

Reinforcement and Exposure Treatment

Therapists praise their patients for counterphobic behaviour in treatment sessions probably by instinct rather than training. However, the specific role of praise has yet to be precisely defined. Crowe et al (1972) using shaping, and Everaerd et al (1973) using successive approximation have, in effect, described exposure with social reinforcement. Emmelkamp and Ultee (1974) however, argued that reinforcement in exposure treatment was not strictly necessary, saying that the potent ingredient in the procedure was the feedback opportunity provided by
therapist presence. Conversely, Mathews et al (1976b) found that, on post treatment questioning, the most important factor judged by patients as affecting their exposure, was encouragement for their efforts.

However, using therapist reinforcement may be a source of problems. Mathews et al (1981) and Emmelkamp (1982) point out that the patient may depend on the therapist to an extent which will eventually be counter productive. This over-dependence will naturally be strengthened by any within session reinforcement.

Assertion Training and Exposure

Various authors, (notably Chambless and Goldstein (1980) (1982) and Fodor (1974), have viewed agoraphobics as generally unassertive, and have speculated that this characteristic may be reinforcing of, or even partly causative, of the agoraphobic state. Emmelkamp et al (1983) examined this issue in a between group design comparing exposure in vivo, assertive training and a combination of the two. The authors did not wish to test the hypothesis that agoraphobia was the result of unassertiveness, rather they wished to examine the specificity of the treatments. In summary, they found that the treatments were indeed specific to unassertiveness and to avoidance, but were unable to reach any conclusions regarding the role of unassertiveness in maintaining agoraphobia. They pointed out that "while clinical lore suggests that most agoraphobics are unassertive, there is little in the way of empirical evidence to substantiate this notion". To emphasise this finding, Buglass et al (1977) found no differences in assertion between agoraphobic females and controls. Emmelkamp et al (1983) pointed to the need for more research to clarify
the issue and suggested a large cross centre study of unassertive agoraphobics.

**Communications training and exposure**

Chambless et al (1982), in looking at the difference between a drug-aided and a non-drug aided group of agoraphobics receiving exposure treatment, examined the contribution of communications training. They added to a number of sessions of exposure, a 16 week phase of psychotherapy based on the resolution of inter personal conflict by increasing communication and self-monitoring. The addition of this to the exposure package did not lead to any further change in measures of fear and avoidance, or of anxious mood and panic attacks. The major criticism of this particular study was that communication, or for that matter, any of the other factors involved in the psychotherapy phase, were not measured. This raises the possibility that the mode of communication training in this particular study was ineffective. There are no published accounts of any similar studies, although the issue of inter personal conflict is stressed throughout in the psychodynamic literature, and indeed in some of the more behavioural literature (e.g. Chambless and Goldstein (1981)).

**Multimodal Approaches Including Exposure**

Burns (1977) investigated multi-modal approaches to the treatment of agoraphobia, and compared 4 matched treatment groups:

1) behavioural counselling;
2) behavioural counselling and systematic desensitization;
3) behavioural counselling, systematic desensitization and reinforced graded practice;
4) systematic desensitization, reinforced graded practice and stress inoculation.

Contrary to expectation, all groups showed significant improvement at post-treatment using a range of outcome measures. Progress was maintained at 12 month follow-up. This is the only such study, although the so-called multi-modal approach continues to be widely used.

Interestingly, this study used a fifth group of waiting list controls. This group showed, on the same outcome measures, as much change as subjects in the treatment groups. Burns argued that non-specific effects are largely responsible for this change. One possible explanation for the change in the waiting list group was that the considerable number of measures used in this study (including behavioural testing), exposed the group to a considerable amount of therapist time when compared with wait list controls studied elsewhere. It is possible that short trials of exposure, in the form of behavioural testing, encouraged patients to try their own self-exposure. However, Burns did not examine these anomalous findings any further.

**Biofeedback**

Chiari and Mosticoni (1979) described the use of biofeedback techniques as an adjunct to treating agoraphobia. Their main method of treatment was systematic desensitization, and they set out three main reasons for incorporating biofeedback in their approach:-

a) They felt that biofeedback training aided greater specificity of
b) That biofeedback training led to greater depth of relaxation being attained in a shorter period of time;
c) That the relaxation level could be measured, thus giving more objective feedback after the presentation of the stimulus.

They reported their findings on four patients with agoraphobia, and were enthusiastic about the role of biofeedback training in the relatively successful outcome of their patients. However, the study was uncontrolled and the outcome data given was of a very subjective nature. While biofeedback training is used by many practitioners to aid various relaxation procedures, and is of particular popularity in Mediterranean countries and some parts of Latin America, its use as a specific procedure for treating agoraphobics has not been evaluated within any reasonably controlled study.

Thought Stopping

O'Brien (1979) reported the use of 'thought stopping' in the treatment of two agoraphobics. The cases reported were rather difficult ones, in that with both clients, repeated attempts to train them with relaxation and visualising phobic scenes failed. However, the way in which the clients' thought about their central anxieties had a ruminative quality. O'Brien used a 'thought stopping' procedure, very similar to that used with obsessionals, to treat the anxious thoughts as if they were obsessional ruminations. This central attack on cognitions was the main feature of therapy, although the account of treatment given by O'Brien implies that the clients were encouraged to practise exposing themselves to situations.
However, the thought stopping procedure seemed, from the description, to be the variable which changed the treatment exercise from being one of failure to one of success. Both clients were followed up for a year and reported a continuing of progress. While the study was uncontrolled, and had several methodological flaws, it does raise the interesting issue of how similar are certain agoraphobics' thinking patterns to classical obsessional thinking. This confirms that phobias and obsessions can be regarded as being on the same continuum. The results of this study would seem to suggest that patients with cognitions which are resistant to the usual strategies employed within the context of agoraphobia treatment programmes, may be helped by this procedure. The two case histories quoted by O'Brien do emphasise the necessity of carrying out a thorough individual behavioural analysis.

Certainly this procedure should be considered as an adjunct to exposure in certain cases.

Exposure and Epilepsy

Pinto (1972) published an interesting case study of a male agoraphobic who had movement induced epilepsy. The patient was treated by flooding in imagination and in real life, this apparently reduced his phobic avoidance on a measure of phobic severity and heart rate. Interestingly the treatment was followed by a seizure free period of 16 weeks. This contrasted with a previous maximum seizure free period of 2 weeks. Pinto commented on the possibility that because the flooding reduced physiological arousal, that the epilepsy was less likely to be triggered. Pinto
asserted that this case study indicated a relationship between anxiety levels and seizures. Unfortunately this possible relationship has not been researched further.

Computers in Assessment and Treatment

Carr and Ghosh (1983) (a)(b) reported a study examining the assessment of phobic patients by computer. Subjects were a mixed group of phobics, which included some agoraphobic subjects. The majority of the patients found the computer interview acceptable and indeed more than half found it easier to communicate with a computer than with a clinician. The ratings of severity of various agoraphobic and social phobic symptoms derived from the computer interviews correlated very highly with ratings made by the clinician and a blind assessor. The computer assessment also managed to distinguish true phobics from phobic symptoms secondary to other syndromes. Assessment of generalised anxiety by the computer did not closely match clinical assessments probably because of limitations of the questionnaires used in the computer interview. For treatment purposes the computer derived a number of treatment targets which were considered as highly suitable by the blind assessors. This finding suggested to the authors that computers could perhaps play an extensive part in treatment of phobics. A programmed practice format such as that of Mathews et al (1981) would seem an obvious choice. The possibilities for treating phobic subjects by computer are enormous, and a particular project assessing this treatment procedure is currently under way (Ghosh (1984) personal communication). There is every indication that self-help software designed for agoraphobics could be shortly on general
Problem Solving

Jannoun et al. (1980) compared home based programmed practice (q.v.) with problem solving, a treatment designed to have the same non-specific features as programmed practice, but to exclude exposure. D'Zurilla and Goldfried (1971) had previously described problem solving training as practical training in problem definition, brainstorming solutions, evaluating solutions and deciding on making a plan and evaluating the effect of that plan. Unexpectedly, one of the two therapists in Jannoun's study had good results with this treatment, these results being at least comparable with those obtained with programmed practice. Closer scrutiny of the procedure showed that the subjects in the problem solving procedure did not have exposure instructions given inadvertently, and they did not go out more during therapy than before treatment. Nor did these subjects differ on the pre-treatment measures from the other groups of subjects. Therefore, Cullington et al. (1984) very carefully replicated the study. They were unable to find a similar response to problem solving. The authors concluded that the subjects in the first experiment differed on some important attribute that was not measured - for example, motivation. The authors concluded in rather definite terms that problem solving was not an effective treatment for agoraphobia.

Other Miscellaneous Findings

Orwin (1974) noted that running facilitated exposure. This observation can be explained theoretically by the change in blood gas levels occurring with exercise, and raises some interesting possibilities. Greist et al
(1978) has successfully used systematic exercise programmes as a central
treatment for depressives, and in view of the current interest regarding
agoraphobia and hyperventilation, it should not be long before such
exercise programmes are evaluated with agoraphobics.

Of peripheral interest, Hand (1974) and Smith (1973) have reported that
humour and anger may be used by the therapist to facilitate exposure
sessions.

Home Based Programmed Practice

This mode of treatment is described fully by Mathews et al (1981) in
their book, and arose from devising exposure treatments for clients who
had not responded to earlier trials of behaviour therapy.

The treatment is basically a self-help approach. Clients and partners
(usually, but not necessarily, the spouse) use simple manuals which
detail instructions for graded exposure and give additional advice and
information about agoraphobia, its nature and treatment. The therapist
helps with advice and/or education, and visits the clients home for
about 5 sessions over a one month period, and at follow-up points over
a period of 6 months. A total of about 7 hours face to face time, plus
therapist travel time is used. Therapists do not actively conduct
exposure treatment other than accompanying client and partner during one
practice session to demonstrate the principles of exposure. Therapists
supply diary forms, and help with short and long term target selection.

This home based method prevents reliance on the therapist during exposure
sessions. This method also tends to prevent the client attributing any
therapeutic success entirely to the therapist. Another major advantage to the method is the reduction of therapist time. Furthermore there is the obvious advantage of not labelling the client as a formal patient. In conclusion, one major effect of a self-directed programme may be a radical change in problem-solving skills, which combined with exposure make for lasting behavioural and cognitive change. The method was evaluated by Mathews et al. (1977) with 12 newly referred agoraphobics, and the results replicated in the context of a controlled study (Jannoun et al. 1980). The control procedure was a general problem-solving procedure emphasising general stress-reduction strategies. Programmed practice showed not only significant improvement, but continuing improvement during the follow-up period to three months but no further. Unexpectedly, with one of the two therapists, the control problem-solving procedure produced a change equal on most parameters to the programmed practice condition. However, avoidance and time spent out, as reflected by behavioural diaries was unchanged. The authors put forward three explanations for such change, including the possibility that the therapist inadvertently encouraged exposure, secondly that a decrease in general anxiety was effected, and finally that the assessor was rating a change in anticipatory anxiety. As previously mentioned replication of this study failed to achieve similar results.

Programmed practice is now a fairly widely used procedure, and the authors own uncontrolled experience confirms that it is an effective procedure. Its obvious primary benefits are that it is therapist cost effective and secondly, that it can be viewed as mobilizing the client's
own resources in a natural setting. However, at present the crucial unanswered question is, which patient benefits from which mode of exposure. Some clients seem to need a therapist to conduct exposure and to be helped over a long follow-up period, while others seem to utilize minimal instructions very rapidly. These specific client groups can often be separated on a post-hoc basis, but the prospective task is more daunting. As yet definitive profiles of these groups of patients are lacking.

Follow-up after Exposure Treatment

Most follow-ups on treated agoraphobics are of brief duration, studies usually reporting a 3 or 6 month follow-up. Most studies report that there is no further change in the treated problem at various follow-up points.

Long follow-up data, post exposure treatment, are presented in four studies. A study by Marks (1971) followed up, among others, 36 agoraphobic patients who had been treated by imaginal desensitization, and who remained unchanged during the follow-up period. McPherson et al. (1980) followed up 56 patients (3 to 6.3 years - mean 4.3 years after treatment) by post, and collected data in rating scale form with regard to five variables, i.e. agoraphobic symptoms, other phobias, depression, social relationships and disruption of work. In addition, questions were asked about the patients' condition since the end of treatment, and the emergence of any new symptoms. The authors found stable improvement, with no significant augmentation or development of new symptoms.

Emmelkamp and Kuipers (1979) completed a slightly more detailed postal follow-up on 70 agoraphobics (from a sample of 81) between 3.5 and 5 years.
They found maintained improvement and partial augmentation in the areas of depression and anxiety. No evidence of new symptom emergence was found. Further, they found no clear relationship between external control, social anxiety, depression and problem duration on the one hand, and follow-up results on the other.

The findings of these two studies may be questioned in view of two major criticisms. Firstly only postal information was obtained, thus rendering ratings to be more subjective, and secondly the non-responders may well have had poorer outcome. However, a much improved follow-up study was conducted by Mumby and Johnston (1980), who reported on a total of 65 patients from a sample of 66. These subjects were followed up from 3 months, at respective intervals to 8.6, 6.8 and 5.3 years post treatment. Of the 65, 63 were interviewed and incomplete data obtained from the remaining two. While patients were, overall, much better at follow-up than they were pre-treatment, there was little difference between their state six months after treatment and at the last follow-up point. One interesting finding was that the 12 subjects who had been treated by the home based programmed practice, had superior results as a group to the other groups. Only one of the 12 had any further psychiatric contact during the five years since treatment, and none of the patients who had benefited from treatment had any exacerbations of their phobia during the same period.

In the fourth major follow-up study, Burns et al (1983) reported the 8 year follow-up on the 32 patients described in his thesis (Burns (1977)).
The 32 patients had had behavioural treatment in the context of a trial which used a between groups additive treatment design. Such treatments were behavioural counselling, relaxation training, systematic desensitization, stress inoculation and graded practice in vivo. They used a variety of measures of change including a behavioural test. They traced 18 of the 32 patients and showed that gains through treatment were generally maintained, and usually enhanced, at the follow-up point. While they were unable to demonstrate any new problems arising or any emergence of either generalised anxiety or depression, only 2 patients felt completely relieved of handicap. While it would have been interesting to have followed up the original group in full, an exercise which is apparently currently being carried out, the results do give weight to the view that agoraphobia is a syndrome in its own right. However, the study seems to confirm the view of Rachman (1983), that while the results of behavioural treatment with agoraphobia are overall good, that there is no cause for complacency.

One study which seems at first sight to emphasise this caution is that of Hafner (1976) who examined the emergence of fresh symptoms after prolonged exposure in vivo on 39 agoraphobic patients. His criterion for fresh symptom emergence was an increase in pre-treatment scores on a scale of the Middlesex Hospital questionnaire or the Fear Survey on more than one defined post-treatment assessment. By this criteria, 26 patients were deemed to be showing fresh symptom emergence. However, when one examines the data carefully, increase in the score of any one of these particular sub-scales does not, in itself reflect overall deterioration. Further some of these increases
could in fact be attributed, in part at least, to chance. There is also no indication of whether these isolated changes may in fact be counter balanced by positive changes on a number of other measures. Two other major criticisms are firstly, that some of the sub-scale scores would seem to have very little relationship to the exposure method per se, and secondly that control of other non-exposure variables was not undertaken. It would have been helpful to have looked at control groups having either no treatment or another psychological treatment, and preferably both of these conditions.

**Maintenance of Treatment Gains**

Jansson et al (1984) reported on an interesting method for maintaining the gains of behavioural treatment for agoraphobia. Their sample consisted of 40 agoraphobics, fulfilling DSM III criteria, who received either exposure in vivo or applied relaxation as the main method of treatment. The last session of the treatment programme was spent on the issue of maintenance, this being broken down to 5 variables. Firstly, subjects made commitment to their spouses or significant others about continued practice in approaching the phobic situations. Secondly, subject and therapist signed a contract on their respective duties during the maintenance phase. Thirdly, a plan for a routine week was set out, and a self-monitoring procedure commenced. Fourthly, an individualized list of strategies to deal with set-backs was developed. This included instructions to re-expose to the situation which caused difficulty, together with coping instructions. The last strategy was to inform the subjects about possible high risk situations for relapse, e.g. sickness.
conflicts at work or with spouses, and how to apply the setback strategies to these kind of situations. The mean improvement remained the same at follow-up as at post treatment, with 8 of the 40 subjects improving further and 5 deteriorating. The authors are currently comparing a maintenance package condition with a no maintenance condition, and are considering the role of brief regular telephone contact.

Prognostic Indicators

Michelson et al (1983) looked at the prognostic utility of the Rotter (1954) internal/external locus of control scale with agoraphobics having exposure treatment. They found the scale to be lacking in discriminative power and clinical sensitivity to mirror pre to post improvement in the subjects condition. However, the scale was found to have utility as a prognostic index of post treatment levels of improvement, with higher rates of improvement being demonstrated among patients who scored as externals. This result was in accord with other evidence reviewed in the same paper, that patients with other psychological problems tend to fare better if they score as externals. The authors suggest that the reason for this is that external scoring patients are more open to therapeutic influence and persuasion, and that this fits well with compliance with exposure in vivo treatment. The authors point out that there is some evidence that people who score as internals on this scale may be unresponsive to directive interventions.

However, this study highlights the fact that at present there are only rather tenuous indicators of outcome in the treatment of agoraphobia. This lack of prognostics is more fully referred to in Chapter 3.
A Summary of Controlled Studies of Behavioural Treatment

This was carried out by Jansson and Öst (1983). They reviewed 24 controlled studies of behavioural treatment for agoraphobia carried out between 1976 and 1982. A total of 650 patients were treated, and of these 400 were treated with an extinction based exposure method which was non pharmacological. They found that patients treated with direct exposure consistently improved with such treatment. Of importance was the fact that seven of these studies used some kind of control procedure in which a total of 54 patients either received no treatment or a placebo intervention. In none of these studies were any significant changes in the control group reported. This reinforced the view that agoraphobia is a disorder with a very low rate of spontaneous recovery, this being one of the key findings of Marks and Herst (1970). Jansson and Öst also critically examined whether the improvement in clinical status of the patients in all the studies was of real clinical significance, rather than just being a statistical phenomenon. Their criteria for clinical improvement were (1) a rating of three or less post treatment on the almost universally used 0-8 scale of anxiety and avoidance, and (2) a reduction of the pre-treatment mean of at least 50% shown at follow-up assessment. Regarding the direct exposure methods, they found that 55% of the subjects showed such clinical improvement at post treatment and 67% showed clinical improvement at a six month follow-up. However, using this criteria, the study of Munby and Johnston (1980), which followed up the total of 65 patients who had been treated in three trials conducted between five and nine years previously, did not show overall significant improvement.
Regarding the problems of design in the studies reviewed, and other experimental shortcomings, Jansson and Ost made several observations. Firstly, only eleven of the 24 studies reported inclusion criteria, and only six of these eleven had criteria of the stringency acceptable to most contemporary researchers. The problem duration of the sample of agoraphobics treated was, in all the studies, greater than 5 years, and in only three studies were there any reports of medication being held constant during the period of the study. Regarding assessment procedures, Jansson and Ost point out that the battery of measures used in outcome studies are less than comprehensive. For example, in only three of the studies were there measures of in vivo physiological activity, and even then these measures were not repeated at follow-up. Jansson and Ost also point out, that in making assessments of the difficulty, not a single study in the series used any measure of credibility.

Regarding treatment variables, Jansson and Ost point to the fact that there is little in the way of description of therapist behaviour during in vivo exposure sessions, and that the exposure method is often confounded by factors such as self-initiated exposure in the form of homework assignments. There is also the fact that imaginal procedures are used within in vivo exposure thus producing a major confound. Jansson and Ost also point to the fact that various studies use very different numbers and lengths of therapy sessions, and only two replications of session length and number have been attempted. Another significant criticism is that treatment programmes have been conducted over a variable period of time, from a few days to many weeks, thus making comparison difficult.

Finally, as referred to above, the authors could not find any firm prognostic
indicators.

Social Validity

The social validity of treatments for agoraphobia was investigated by Norton et al (1983). The authors pointed to two main reasons why such a study was important, and cited a range of studies. Firstly, therapists are ethically responsible for providing treatment which is not only effective, but acceptable to the consumers of treatment. Secondly, perceived acceptability of a treatment method may influence political and legal decisions affecting treatment procedures.

The five treatments for agoraphobia studied were:
1) Treatment with minor benzodiazepine tranquillizers;
2) Treatment with anti-depressants;
3) A therapy based on relationship insights;
4) A cognitive modification treatment;
5) Exposure in real life.

The experiment was divided into two parts. In the first part a group of university students were asked to rate on various scales the concepts of Treatment Acceptability and Perceived Effectiveness. In the second experiment ten female agoraphobic patients were asked (pre-treatment), to use the same rating scale to rate the same two concepts.

The student group consistently rated the psychological treatments as more socially valid than the drug treatments. Further, they also rated the psychological treatments as more effective. The patient group also
rated the psychological treatments as more socially valid and effective, but differed from the student group in seeing a therapy based on relationship insights as being less socially valid and less effective. The patient group also rated exposure as the most acceptable and effective treatment. However, there was unsolicited anecdotal evidence that the therapy was terrifying in prospect. The authors of the study, in conclusion, argued that views of treatment validity should be considered when planning a treatment programme.
Assessment and measurement of Anxiety before and during exposure to Treatment

The influential model of anxiety of Lang (1971) is of great help in assessing the complex anxiety of the agoraphobic. Lang views anxiety as being composed of three imperfectly correlated systems; i.e., the Subjective (verbal/cognitive), the Behavioural (motor) and the Physiological. Implicit in Lang's model is the notion of between and within client variability of these 3 components. He has also stressed (Lang (1984)), that this model does not pretend that the three systems are discrete entities, but rather useful models for research.

The gathering of information response system by response system allows the clinician to make an objective, systematic assessment of the complex anxiety of agoraphobic subjects. Further, clinical experience shows that this reduction of anxiety to operationally defined components helps the agoraphobic subject to view their problem more objectively, and to see the rationale which lies behind treatment approaches. Thorpe and Burns (1983) describe a detailed assessment procedure, based on the three systems model and they advocate measurement of each system. In practice such measurement is difficult. For example, the fear questionnaires in current use rely on subjects' self report of avoidance. However, the profile gained from such a questionnaire may not reflect actual behaviour. A refinement of this self report measure of avoidance has been devised by Chambless et al (1985). The authors reported a new paper and pencil measure for use in treatment programmes of agoraphobics. Their Mobility inventory for agoraphobia is a 27 item inventory which measures the amount of avoidance in a range of situations, both
alone and accompanied by a trusted other person. There is an obvious need for a detailed questionnaire for use in treatment programmes, as the best self-report measure to date (the Fear Questionnaire, Marks and Mathews (1978) has only five agoraphobic items. Further, as Chambless et al point out, there is little distinction between the avoidance of, and discomfort in, situations when the agoraphobic is alone, versus when accompanied.

The Mobility Inventory in an earlier form had two scales, one of discomfort, and one of avoidance. However, in keeping with previous findings (e.g. Marks and Mathews (1978)), there was a high correlation between discomfort and avoidance, and therefore the discomfort scale was omitted in the final version of the inventory. The scale was found to be stable and internally consistent, and sensitive to change with treatment. It had high test-retest reliability on the avoidance scores, but surprisingly, the test-retest data for panic frequency yielded a low reliability index. The authors also set out to examine the relationship of scores on the inventories to a range of other measures such as depression, trait anxiety and EPQ. This examination demonstrated that the scale had the quality of being highly sensitive to change in agoraphobic symptoms. The scale was validated on 159 agoraphobic clients entering the well-known treatment programme at the Temple University in Philadelphia. This scale is a most welcome addition to measures used by both clinicians and researchers. It seems to have capability of providing a measure of agoraphobic disability acceptable to the various research centres.
across the world.

The Behavioural Avoidance Test is a test of actual behaviour, but it too has its problems. Some of the problems which are ably reviewed by Mathews et al (1981), include the difficulties in finding a comprehensive test to match the patients every day tasks. Furthermore, there are considerable problems associated with hierarchically arranging items. Also such testing may be greatly influenced by the presence of an observer, who may act an an anxiety reducing factor. As Thorpe and Burns (1983) point out, the testing may well have general demand characteristics on the patient to do better on the test after treatment.

Rowland and Cannavan (1983) used a single case study to argue that the behavioural avoidance test could possibly be therapeutic. The case involved a spider phobic in whom there was a 50% reduction of self-reported fear following a behavioural test which took approximately 20 minutes. The authors thought that such a reduction in fear was consistent with an extinction model. Far from using their paper as a plea to abandon behavioural assessment, the authors suggested that such behavioural testing should be further investigated psychometrically.

The problems with the testing of the cognitive and physiological systems are even greater. Measurement of the cognitive system in clinical studies has largely been confined to asking the client to rate her/his global subjective distress on a numerical scale. A notable exception to
this was the study of Bandura et al (1980) who asked agoraphobics for self-efficacy estimates during treatment. This measurement has only rarely been followed up by other workers (see for example Elliot (1981)). In a later chapter in this thesis a pilot study of systematic cognitive assessment, before, during and after treatment, is described.

Physiological measures of anxiety have been used more often (see below), but there have been various practical problems with measurements in real life situations rather than laboratories. In the last 2 years or so, however, miniaturization of equipment has enabled measurement in every day situations of a whole range of physiological variables from heart rate and rhythm, to brain activity, to blood gas levels and skin conductance.

SYNCHRONY AND DESYNCHRONY

Rachman and Hodgson (1974) and Hodgson and Rachman (1974), in two classic papers, called for the experimental clarification of the highly variable relationships of the response systems. They recognized that such clarification would be invaluable in identifying, not only the underlying processes of fear reduction, but also subjects who would fare well or badly in treatment. Rachman and Hodgson hypothesised that if measures changed at a similar rate (synchronous change), during treatment the eventual outcome would be different than in subjects whose measures changed in a varied (desynchronous) fashion. It is only in the last 3 years that research in this area has yielded any results. Prior to that, Mathews et al (1976b) reported that physiological habituation seemed to occur more rapidly than subjective habituation. This result was in accord with the findings of Borkovek (1972, 1974) with analogue populations, & Marks
and Huson (1973) with simple phobics. Foa and Chambless (1978) studied a mixed group of obsessive compulsives and agoraphobics treated by exposure. They showed that subjective anxiety reduced within, and between sessions, and that with agoraphobics, within session anxiety reduced in a curvilinear fashion.

The first study which precisely explored change in the three systems was by Barlow et al (1980). They described a single case of an agoraphobic who improved on all measures of change after exposure treatment, except the heart rate reduction measure. The patient relapsed after treatment, leading the authors to conclude that change across all three systems was necessary for lasting change to occur.

There have only been two studies to date of synchrony and desynchrony of the three response systems in agoraphobics. Mavissakalian and Michelson (1982) looked at patterns of psycho-physiological change in the context of a study which had examined the effects of Imipramine and exposure, both separately, and as a combined treatment. The authors were particularly interested in examining the issue of synchrony between physiological and subjective measures of anxiety. With regard to measures at pre-treatment and follow-up, and of the whole group of 13 patients, there was overall synchrony between the physiological and subjective measures. However, in 2 patients there was increase in heart rate over sessions with a decrease in subjective units of distress. Behavioural gains occurred early in treatment, and after 4 and 8 weeks of treatment there was a decrease in heart rate and subjective anxiety, which was more marked in the earlier phases of treatment. As treatment progressed, there was increasing
synchrony between these two measures. These findings were in accord with
the predictions of Hodgson and Rachman (1974). The two factors worthy
of note to emerge from this study, were the fact that from an initial pool
of 32 patients, only 6 had a complete set of analysable data across all
assessments. This small proportion of complete data (this corresponds
to general research experience with this type of experiment), obviously
requires some caution when interpreting results. Secondly, the
paper also seems to raise the possibility that there is considerable
individual variation in patterns of change, and that while grouping data
may be a helpful simplification as far as interpretation goes, the
interesting individual differences are obscured.

Vermilyea et al (1984) examined the treatment response in a group of 28
agoraphobics in order to:-
1) Further establish the facts of desynchrony.
2) To establish patterns of synchrony that relate to treatment outcome, and
3) To investigate related and possibly simpler prognostics such as,
   pre-treatment responses to fear stimuli.

Treatment was spread over 12 weeks, and the central measurement was a
standardized behavioural walk evaluated at pre-treatment, mid-treatment,
and post treatment. They also used measures of heart rate and subjective
units of distress. Pooling the data with regard to the various response
systems yielded the usual "average diluted effect". However, when the
data were dichotomised according to synchronous and desynchronous patients,
treatment effects were much clearer for the synchronous group. Heart
rate levels decreased significantly in the synchronous group, while heart
rate tended to increase in the desynchronous group. When patients were divided into treatment responders and non-responders, 5 times as many non-responders occupied the desynchronous side of the contingency table. The data showed that synchrony between heart rate and subjective units of distress predicted various psycho-physiological changes, but did not predict treatment success. Only one characteristic i.e. high physiological responsiveness, seemed to predict outcome on a composite measure. This finding was in accord with the patients in the Watson, Gaind and Marks study (1971) who had initially high arousal during phobic imagery, and who seemed to be particularly responsive to imaginal flooding. While in the short term this study has some interesting findings which could well be followed up, there remains in the long term the question of whether the heart rate measure may be too limited a measure of physiological arousal. Likewise, the global measure of subjective units of distress may eventually prove to be too general, and other more specific measures of cognition devised. This area of research obviously needs to be further developed. There do however, seem to be two important areas of caution. Firstly, there has been the trend to use only one measure per system (e.g. heart rate for the physiological). This potentially leads to over simplification of issues. Secondly, the use of designs using groups of subjects rather than single subjects seems premature. It is possible such designs are in fact obscuring vital data concerning individual variation.
BACKGROUND AND RATIONALE FOR CURRENT EXPERIMENT

The planning of the current experiment commenced in 1980, and data on the first 44 subjects (of 132 subjects in total) was presented in an M. Phil thesis in 1983.

BACKGROUND TO THE M. PHIL EXPERIMENT

The author has been treating agoraphobics with exposure based methods since 1976, and worked initially in a London Postgraduate teaching hospital. Here treatment was given to out-patients who travelled to the out-patient clinic for treatment. Many of these people travelled many miles to the clinic, and the author's impression was that many agoraphobic sufferers declined treatment because of the distance that they had to travel.

In addition, many out-patients were referred but did not attend for a first appointment. Presumably their failure to attend may have been due, in part at least, to the distance they had to travel. It should be added that the hospital was in Central London, and travelling conditions for most people (let alone those with agoraphobia) could be most uncomfortable, crowded, and at times most unpleasant.

When the author moved to his present base in 1978 he found that service delivery in this District General Hospital differed considerably from the teaching hospital. Mental Health Staff ran a community oriented service, where the majority of new referrals were seen in their home for initial assessment, and many of these people continued treatment within this natural setting. Thus many patients did not even see the hospital during their particular treatment. In keeping with this philosophy the author therefore saw some of his new referrals at home for initial assessment, and continued treatment based from the patients home.
This approach seemed to offer several advantages. These were that firstly, there was a very low incidence of missed appointments. The non attendance rate for new referrals to all traditional out-patient services is approximately 30% (Barnet General Hospital Medical Records information). The district is small enough in size for many of the distances travelled to home visits to use only small amounts of time.

Secondly, the patient is more likely to be less anxious within their own home environment, and thus able to use assessment sessions more profitably. Thirdly, and perhaps most importantly, the use of the patient's home as a base allows treatment exposure sessions to more accurately replicate the very situations the patient finds difficulty with. This is in contrast to hospital based sessions which may be quite arbitrary in nature. The disadvantages to home based treatment seemed to be that firstly, the very act of travelling to the hospital was exposure in itself, and therefore therapeutic. Secondly, the initial journey to the hospital could be viewed as a "motivational" test, and it could be argued that patients who earnestly desire change would be prepared to face discomfort, and therefore would keep an appointment at any cost.

It was therefore decided to undertake the experiment which was reported in the M. Phil thesis. This experiment compared the outcome of 44 subjects who had been randomly allocated to exposure treatment based in either their own home or the out-patient clinic. The period of follow-up was 3 months after treatment.

The experiment also investigated the marital satisfaction of subjects and
their spouses and the relationship of scores on a measure of marital satisfaction and various treatment outcome measures.

The experiment investigated several other variables in a pilot fashion with a view to further experiments at a later date. These variables included:

1) The use of psychotropic medication during exposure treatment;
2) The nature of central agoraphobic fears and the relationship with treatment outcome;
3) The relationship of referral source and treatment outcome;
4) The relationship of subject and spouse scores on the Hostility and Duration of Hostility Questionnaire (HDHQ) with outcome;
5) The nature of repetory grid profiles of subjects and spouses.

Summary of Findings of the Initial Experiment (reported in the M. Phil thesis of 1983)

1) While there was a very significant change on the measures, indicating that overall the group of subjects benefited considerably from exposure treatment, there was no difference in outcome between the subjects in the home based condition and subjects in the hospital based condition.

2) Contrary to expectation the home based group did not continue to change (for the better) on the various measures, in the post treatment period.

3) There appeared to be a relationship between greater levels of marital satisfaction (measured pre-treatment) and a positive treatment outcome.
4) There was some tentative evidence that the nature of central agoraphobic fears may determine exposure treatment response.

5) There was some tentative evidence that subjects who use psychotropic medication do less well with exposure treatment than subjects who are medication free.

6) Subjects referred by their G.P. seemed to have a greater problem severity than subjects referred by a Psychiatrist, but there was no difference in outcome between the two groups.

7) The study failed to replicate the findings of Hafner (1977(a)(b)) with regard to the HDHQ.

Thus at the end of 1982/beginning of 1983, the first 44 subjects had been treated and their data analyzed. Consideration of the experiment and data generated a number of further hypotheses which are set out below.

**The Present Study**

The main priority of continuing the experiment using a standard procedure was to collect data on a large number of subjects having exposure treatment, within the context of a single experiment. As previously discussed, a total of 21 published exposure based experiments were conducted between 1976 and 1982 on a total of only 400 subjects. One major problem seemed therefore to be, that many of the general conclusions concerning exposure based methods were based on small numbers of subjects. Further the initial M. Phil experiment comparing treatment base had only a short follow up period. It therefore seemed worthwhile to continue follow-up and to enlarge the sample size to investigate further the issue of treatment base. This has important ramifications in the area of service
delivery. Other variables such as drug usage and marital satisfaction were also investigated further.

(Several other hypotheses, mostly generated by data from the M. Phil study are considered separately in Chapters 3, 4 and 5.)
Summary of Overall Design

Agoraphobic subjects were allocated at referral to exposure treatment in one of two conditions, i.e., treatment based in their own home or treatment based in the psychiatric out-patient department of a District General Hospital. Subjects in both groups received the same amount of treatment, (i.e. 6 x 2 hour sessions of exposure in real life). Multiple measures of treatment outcome were used to determine change, and follow up was continued for up to two years after treatment.

The central comparison concerned the treatment base. However, the large number of subjects treated meant that a wide ranging study of the exposure method per se was possible.

Apart from the main experiment which is described in this chapter, the design has allowed other important variables concerned with agoraphobia and exposure treatment to be studied. The investigations of these variables follow in Chapters 3, 4 and 5. These variables are:

1) Failure in Exposure Treatment

Using strict criteria, subjects considered as treatment failures were categorized into sub groups and systematically examined. This experiment is described in Chapter 3.

2) Cognitive Change

A group of subjects from the main experiment were studied using extra measures of cognition, and change in these measures was studied during treatment. This experiment is described in Chapter 4.
3) **Sex Role Stereotyping and outcome differences between male and female subjects**

A large proportion of the experimental population were studied with regard to their scores on a sex role inventory, and additional data was collected from a control group. Male and female subjects were compared with regard to treatment outcome. This experiment is described in Chapter 5.

4) **Additional studies**

The outcome of treatment was considered with relation to a number of additional variables e.g. scores on marital satisfaction, whether or not subjects took regular psychoactive medication. These studies are considered in this chapter.
HYPOTHESES

1) For the group of subjects who complete treatment there would be highly significant change on measures of agoraphobic avoidance from pre to post treatment rating points.

2) There will be no difference in treatment outcome at the post treatment rating point between the home based and hospital based group of subjects (using the measures of change detailed below).

3) The home based group of subjects would show significant further improvement at 1 year follow up, whereas the hospital based group would show no such change.

4) The third group of subjects who refuse hospital based treatment, but who subsequently complete a trial of home based treatment will show comparable levels of change with the two main experimental groups at the post treatment rating point.

5) The third group of subjects will show further change at the 1 year follow up rating point.

6) There will be a relationship between initial depression score and outcome, in that the lower the pre treatment depression score the greater the change in agoraphobic avoidance.

7) Subjects taking psychotropic medication would show lesser levels of improvement than subjects not taking such medication.
8) That there will be a relationship between pre-treatment marital satisfaction of the subjects and their response to treatment in that lower levels of pre-treatment marital satisfaction in subjects will be associated with poorer treatment response.

The statistical analyses will also check on the relationship of other subsidiary variables such as problem duration, referral agent etc, with treatment outcome.
MEASUREMENT

The measures chosen are all used widely in the treatment outcome research of agoraphobia. Because of resource limitations, it proved impossible to use physiological measures, although it is acknowledged that such measures will be increasingly used in treatment outcome research. The measures listed below were used for all subjects in the study. However, to test specific hypotheses in the subsidiary experiments detailed in later chapters, additional measures are used for some subjects.

1) Fear Survey Schedule:

   Comprising:- (a) Fear score
                  (b) Anxiety depression score
                  (c) Agoraphobic sub-scale score.

2) Phobic Severity:

   Rated by: (a) Subject
             (b) Therapist
             (c) Independent assessor.

3) Wakefield Depression Inventory.
4) Leeds Scales
5) Work/Home/Social/Private Leisure adjustment.
6) Behavioural Avoidance Test.
7) Maudsley Marital Questionnaire.

RATING POINTS

1) Pre Treatment Ratings

Subjects were given all rating scales, apart from phobic severity, after
the screening interview. The completed forms were collected at the
assessment interview. The spouse was seen at the time of the assessment
of the subject or shortly afterwards (but in all cases before treatment)
and were given rating scales at this point.

The pre-treatment independent assessment took place either one or two
days before, or one or two days after, the assessment interview.

Phobic severity was rated by the therapist at the end of assessment
interview. The subject was then asked to rate phobic severity after
the therapist had written down his/her rating.

2) Post Treatment Ratings
At the end of the last session of treatment all subjects were given
rating scales and asked to fill them in over the next 24 hours.
The scales were then posted back to the therapist or handed to the
Independent assessor in a sealed envelope at the post treatment assess­
ment interview. This Independent assessment took place in all cases
within seven days of treatment ending. Phobic severity was rated
at the end of the last session by the therapist who wrote down his/her
rating. The subject was then asked to rate their phobic severity.

3) Follow up ratings at Three Months Post Treatment
The subject was seen in the allocated condition and interviewed regarding
progress. Usually half an hour was planned for this interview, although
in some cases more time was needed. Rating scales were given with
stamped addressed envelopes. (In a few cases subjects elected to
bring them back personally to the department secretary). Again, phobic
severity was rated by the therapist at the end of the interview, and the subject was then asked for their rating. The independent assessment was arranged to take place within a few days of this interview.

4) **Follow up ratings at One Year Post Treatment**

The same procedure was adopted as in the case of the three month follow up.

5) **Follow up Ratings at Two Years Post Treatment**

The same procedure was adopted as at the three months and one year rating points.

**DESCRIPTION OF RATING SCALES USED**

1) **The Fear Survey Schedule (Marks & Mathews 1978)** (see appendix)

This is a brief standard self rating for phobic patients (see appendix). This form was specifically designed to facilitate comparison of results from various centres investigating treatment outcome in phobic populations. It was derived from the factor analyses of Marks and Herst (1970) and Hallam and Hafner (1978). The form includes one specific main target phobia, a global phobia rating, and a short questionnaire about the commonest fifteen phobias and five anxiety depression symptoms found in clinical practice. A nine point scale is used to assess severity. The ratings have been found to be reliable, a good guide to phobic severity and sensitive to treatment gains.

Three scores from this scale are used in the study:

a) **The Agoraphobic Sub Scale** yields a possible maximum score of 40. This has consistently been shown to be sensitive to specific change in agoraphobic avoidance (e.g., Mathews et al (1981)). This score is accepted as the central index of change by a majority of workers in
a variety of countries.

b) **The Total Fear Score** - This is the sum of the scores of the agoraphobic sub scale total, the social phobia sub scale total, and the blood injury sub scale total. The standardization data showed low intercorrelations between the three scales of the survey, which suggests that the total score reflects a separate rating of the overall problem from the agoraphobic avoidance per se.

c) **The Anxiety Depression Score** - This is a total of five common non-phobic symptoms reflecting more general affective disturbance. It is derived from the factor analysis of Hallam and Hafner (1978). As with the Total Fear Score, this scale helps to clarify overall clinical status.

2) **Phobic Problem Severity** (see appendix)

This scale combines fear and avoidance, which have been shown to correlate highly in agoraphobics (Mathews et al (1981)). The scale was derived from those of Gelder and Marks (1966) and Watson and Marks (1971).

Nearly all the studies conducted into the outcome of behavioural treatments for agoraphobia since the early 1970's have used this scale, or one very similar. Jansson and Ost (1982), in their review of the 24 published studies of treatment outcome in agoraphobia from 1976 to 1980, used improvement on this scale as the main criterion for clinical improvement.

3) **The Wakefield Depression Inventory** (Snaith et al (1971)) (see appendix)

This is a self-rating scale which is a modified and shortened version of Zung's self-rated depression scale (Zung (1965)). It consists of 12
items scored from 0-3, yielding a maximum score of 36. The source article quoted a test/re-test reliability of 0.68, and a high correlation (0.87) with the widely accepted Hamilton Inventory.

The Rating Scale is a very brief, simple measure and it was used as a central measure of depression in the majority of the studies of outcome with agoraphobics from 1966 to 1982. However, Kearns et al (1982) compared several rating scales for depression, including the Montgomery-Asberg scale, the Hamilton rating scale, the Beck Depression Inventory, the Leeds Scales and the Wakefield Inventory. They found, in this large study, that the Wakefield and Beck inventories compared badly with interviewer ratings of depression. The authors felt strongly enough to advise that the Wakefield Inventory should be discarded as a research instrument. They recommended the use of the Leeds scales (see below for description) as a measure of depression. They concluded their article by observing that more research needed to be conducted on the milder degrees of depression found in community or out-patient based psychiatric practice. This study was published as the subjects were being allocated in the first phase of the study described in this thesis. It was felt that such an important finding as Kearns et al (1982) could not be over-looked, and therefore it was decided to follow their recommendations. Therefore the decision was taken to use the Leeds Scales (after the first 44 subjects) and to modify the proposed statistical analysis accordingly.

4) Leeds Self Assessment Scale (Snaith et al (1976)) (see appendix)

This measure replaced the Wakefield Inventory as a measure of self-
rated depression. The scale was derived from the original Wakefield scale and additional items were taken from the anxiety scale of the Symptom rating test (Kellner and Sheffield (1973)). The questionnaire uses 2 scales, one for depression and one for anxiety, and an overall depression score. This score is used in the final analysis.

5) Work/Home management/Social Leisure/Private Leisure (see appendix)
This rating scale is a simple clinical measure of how much the problem affects these four areas of function. It has been used extensively in clinical and research work at the Maudsley Hospital/Institute of Psychiatry, and is used in the programme described by Marks et al (1977). A total score (maximum possible 32) is used as a measure of general adjustment.

6) Behavioural Avoidance Test (see appendix)
The scale used was devised especially for this study, but relies heavily on the suggested format of Mathews et al (1981) (pp.21-28). While no Behavioural Test of agoraphobia to date has been shown to be entirely satisfactory, the measure used does seem to provide a direct test of agoraphobic avoidance. The score derived consists of a simple count of items successfully completed.

7) Maudsley Marital Questionnaire (Crowe and Golombok (1979)) (see appendix)
The questionnaire was adapted from the Structured Scale Interview to Assess Maladjustment (Gurland et al (1972)). The items refer to marital satisfaction, but exclude sexual items. It seems to be a reliable index of marital change, and was used in the last major British study on Agoraphobia and Marriage (Cobb et al (1984)). This fact enhances the comparative power of the current study.
Independent Ratings

These were carried out during the first phase of the study (the first 44 subjects). The independent assessor was a Top Grade Clinical Psychologist, experienced in clinical research, who was blind to the experimental conditions. His ratings were carried out in two health centres both central to the catchment area.

The assessment consisted of a standard procedure to assess the impact of the problem on the subject and his/her spouse and family. The assessor asked for information regarding avoided situations, description of domestic work and social functioning, and generally elicited goals by asking questions on the theme of, "What would you like to do that you can't at present, because of your phobic problems". He made a phobic severity rating on the basis of the above information.

To ensure that he remained blind to the experimental conditions, he recorded his data separate from overall records. Further, he used a standard introduction to all patients, in which he stated that his function was to give an independent judgement of progress, and for that reason he was unable to discuss individual treatment details. He qualified this statement by explaining that he knew broadly how treatment was being organized. There were no reported problems of subjects wishing to disclose their particular treatment condition.

The author met with the independent assessor at roughly bi-monthly intervals. This was principally to ensure that there were no problems, and that the experimental conditions were adhered to.

At post treatment and follow-up points the assessor made further phobic
severity ratings. These were based on how much disruption and discomfort was caused by the agoraphobia, and by repeating the questions detailed above.

At the end of the first phase of study (after the first 44 subjects were assessed), the independent assessment procedure was discontinued because the assessor was unable to further commit his time to the study. However, at this stage there were high correlations evident between therapist, subject and assessor (all $p<0.001$ see appendix).

**Criteria for Inclusion in the Research Trial**

These were:

1) That the subject's primary problem was agoraphobia, as defined by the Diagnostic and Statistical Manual III (DSM III) of the American Psychiatric Association (1980). This is, a marked fear leading to avoidance of being alone in public places from which escape might be difficult, or help not available. This then leads to constriction of normal activities by such fear and avoidance behaviour. Further, the state does not co-exist with, or was caused by, major depressive, schizophrenic, paranoid or obsessive compulsive disorder.

2) That all subjects should have a history of at least 12 months of the problem, without any complete remissions in that period.

3) That no subject should have previously had any form of exposure treatment.

4) There was no current drug or alcohol abuse evident.

5) That there was no concommitant psychiatric or psychological treatment other than specified medication.
Funding

The experiment was conducted with patients who were referred to the District Clinical Psychology Service for treatment. Thus, in part at least, the experiment was also fulfilling a clinical service. After the experiment commenced the author was awarded a locally organised research grant for a 2 year period to employ a part-time clinical psychologist. This grant ran from 1 October 1982 until 30 September 1984. The research psychologist's main duties were to treat patients in the experiment, but she also aided in collecting some of the follow-up data. The blind assessor and therapists, including the author, all work within the Barnet Health Authority Department of Clinical Psychology.

Ethical Approval

Prior to treating subjects, the experimental hypothesis, design and working protocol were examined by the Ethical Committee of the author's base hospital. Written Approval was obtained from this body prior to seeing any of the subjects. The protocol was also fully discussed in the Department of Psychiatry and Psychology, to ensure that it was ethically sound.

Catchment Area

Subjects were referred from various general practitioners (28) and consultant psychiatrists (8). Subjects lived in an area covering North London and South Hertfordshire with a population of 500,000. This area is served by two separate psychiatric services, but one Department of Clinical Psychology. Subjects lived in a variety of
urban, suburban and rural settings. They lived in a variety of housing, and social and employment conditions varied widely.
Referral and Allocation

Referrals were made by letter to the behaviour therapy service of the District Department of Clinical Psychology. Because of existing policy, only referrals from a medical source were accepted. Therefore referrals from a social worker, another psychologist or a community nurse were made with a covering note of referral from either the G.P. or, if the subject was already receiving psychiatric intervention, from the Consultant Psychiatrist. Therefore, for purposes of coding data, subjects are divided into G.P. or consultant psychiatrist referral. The referral source is shown in appendix.

When referrals were received, allocation to home or hospital based treatment was made thus: Coin toss decided treatment condition of that referral, and the next referral was allocated to the other condition. Following allocation, a standard letter was sent to the subject offering an appointment in the assigned condition. The letter offered the option of arranging alternative dates and times, and enclosed a reply paid envelope.

In all, 190 subjects were referred and allocated prior to initial interview. Overall disposal is shown in Figure 2, p 148.

Therapists

As some therapists had more time to give than others for treating research subjects, and such time was subject to variation, it was impossible to estimate how much each therapist could contribute to the study. Therefore the following procedure was adopted.

The Department secretary, who received all referrals, and who made
<table>
<thead>
<tr>
<th>Stage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referred</td>
<td>190</td>
</tr>
<tr>
<td>Home based treatment</td>
<td>95</td>
</tr>
<tr>
<td>Unsuitable</td>
<td>31</td>
</tr>
<tr>
<td>Hospital based treatment</td>
<td>95</td>
</tr>
<tr>
<td>Unsuitable</td>
<td>21</td>
</tr>
<tr>
<td>Did not attend initial appt.</td>
<td>6</td>
</tr>
<tr>
<td>Suitable</td>
<td>68</td>
</tr>
<tr>
<td>Completed Treatment</td>
<td>43</td>
</tr>
<tr>
<td>Dropped out</td>
<td>11</td>
</tr>
<tr>
<td>Refused treatment</td>
<td>14</td>
</tr>
<tr>
<td>Offered home based treatment</td>
<td>14</td>
</tr>
<tr>
<td>Completed Treatment</td>
<td>12</td>
</tr>
<tr>
<td>Dropped Out</td>
<td>2</td>
</tr>
</tbody>
</table>

**Totals**
- Referred: 190
- Unsuitable: 31
- Dropped out of treatment: 13
- Refused treatment: 6
- Completed treatment: 45

**Allocation and Disposal**

*Figure 2*
appointments following screening, maintained a list of therapists. When
the author had screened the subject, and the subject had accepted treat-
ment, the secretary checked the list and allocated the subject to the
next therapist available in strict order. As far as possible, therapists
treated not only in list order, but alternated treatment condition. This
was done to prevent any systematic selection bias, and therefore any
consistent effect would be more likely to be attributable to the treatment
rather than any particular therapist. This assumption will be checked
in the statistical analysis.

The therapists were:-

1) The author (who had 5 years experience prior to the trial using
   behavioural methods, including exposure in vivo). He treated 57
   subjects; 31 in the hospital condition, 29 in the home condition and
   5 subjects allocated to the hospital condition but treated at home
   subsequent to refusal. (10 subjects dropped out during treatment).

2) A research psychologist who was naive to exposure in vivo methods in
   practice prior to partaking in the trial. She treated 50 subjects;
   24 in the hospital condition, 26 in the home condition and 5 subjects
   who refused hospital treatment, but subsequently accepted home
   treatment. (11 subjects dropped out during treatment).

The other 6 therapists were respectively a Nurse Therapist with one year’s
experience of using exposure in vivo (4 subjects; 3 home, 1 hospital),
a Senior Clinical Psychologist with 4 years experience using behavioural
methods including exposure in vivo (1 hospital subject, 1 home), and 4
Probationer Clinical Psychologists. These therapists treated a total of
22 subjects. (5 subjects dropped out during treatment).
SUBJECTS

Of the 132 subjects who accepted treatment and entered the trial, 100 completed a full trial of treatment. 26 subjects dropped out before a full trial of treatment was complete. 6 subjects refused the offer of treatment at screening. The mean age of the 30 male subjects was 37.37 years (SD. 11.16). The mean age of the 102 female subjects was 39.56 years (SD. 12.51). The mean problem duration of agoraphobia for the male subjects was 9.17 years (SD. 7.78) and for female subjects was 11.35 years (SD. 8.51).

TREATMENT PROCEDURE

Screening Interview

Of the 190 subjects referred, 175 subjects were seen for a preliminary screening interview. The screening interview was arranged by standard letter with a confirmatory phone call. The author conducted all of the interviews in the allocated condition. The measures of change, (apart from phobic problem severity and behavioural avoidance test), were administered at the end of this interview.

The subject was told that a research trial was being conducted investigating factors involved in the treatment of agoraphobia, and that a wide range of information was being sought. It was stressed that the treatment offered was tried and tested, and that careful evaluation of progress was ensured. Subjects were asked for their permission to be included in such research, and were told that if they objected they would not have to complete questionnaires. If the subject had a spouse, the subject was asked for permission for the therapist to interview the spouse on
this occasion, or at assessment. The subject was informed that the spouse would be asked to complete questionnaires. The spouse was interviewed using a standard procedure.

Assessment Interview

The assessment interview took place in the allocated condition. Therapists used a standard procedure, and to ensure that all therapists used the same approach, the author used a list of key information (see appendix p 200). Basically the interview was divided into three parts. First the therapist obtained a detailed account of the agoraphobic problem, including the nature of the core fear, factors modifying the problem, impact on self and impact on others. The second part of the interview consisted of detailed history taking, including personal and family history, thus attempting to establish the context of the problem. The third part of the interview involved negotiation of target behaviours and overall goals.

Each subject had at least 2 written targets specific to the agoraphobic problem. Examples of such targets "to shop alone for 30 minutes in a local supermarket at a busy period and queue at the deli-counter" or "to travel by the 123 bus from High Street to Brent Cross Shopping Centre, and sit on the upper deck away from the staircase".

At least two other targets were chosen which would reflect overall change, and which would be longer term than the specific targets. Examples were; regular meals out, evening classes, taking week-end breaks etc. Because targets were individualized, no analysis of target success was undertaken.
over the groups of subjects. Most interviews took between 1½ and 2 hours.
(Subjects in the subsidiary study of cognitive change had a different
procedure for eliciting targets.)

Follow Up

Subjects were seen for follow up interview at 3 months (91 subjects),
1 year follow up (58 subjects) and 2 year follow up (28 subjects). Nine
subjects were not seen beyond the post treatment rating point. Of these
nine subjects, 3 had not completed the necessary period at the end of the
trial. The remaining six subjects could not be contacted. At least
two of these subjects had moved and could not be traced.

The majority of follow up interviews were conducted face to face with the
subject. Of a total of 177 follow up interviews, 16 were conducted by
telephone, and postal ratings obtained.

Spouse Contact

The therapist asked all married subjects for permission to interview their
spouse. This contact was in order to:

a) collect data i.e. marital and other questionnaires;
b) to give a standard explanation and rationale of treatment.

Of the 92 subjects with spouses, complete data was missing from 45 spouses.
16 subjects refused to fill in questionnaires relating to marital satis-
faction. With regard to the missing data of the remaining 29 spouses,
this was in fact caused by an error. Unfortunately there was an error in
the making up of batches of forms, and marital questionnaires were omitted.
Duration of sessions, spacing of sessions, number of sessions

Six treatment sessions were carried out over a period of as close to 3 weeks as possible. All subjects were given 2 sessions per week. All subjects were treated within 18-22 days. As each session of two hours exposure treatment was preceded by a few minutes of task negotiation, and ended with feedback and evaluation, session time averaged 2\frac{1}{2} hours.

The details of the exposure session are set out below, and were the same in both groups.

Thus, while the treatment procedure was the same, the treatment base varied, and with it other details concerning the base.

Characteristics of the Home Based Condition

Screening and assessment interviews were carried out in the subject's home. For treatment sessions the therapist travelled to the subject's home, carried out the session, and returned to the subject's home for the post treatment evaluation and homework setting. All trips were therefore designed in relation to the subject's home. Thus, target areas were always familiar and very much related to the subject's usual routine, or at least preferred ideal routine.

Characteristics of Hospital Based Condition

The subject travelled to the hospital and was seen in the Psychiatric Out-Patients Department for screening and assessment. The great majority of subjects were accompanied to these initial interviews. For treatment sessions, subjects met their therapist at the Psychiatric Unit, and each
session ended there with post treatment evaluation and homework setting.

All trips were therefore designed in relation to the hospital, and for most subjects the target areas chosen for the session were unfamiliar, e.g. Barnet High Street was the closest busy shopping centre to the hospital, but was not the closest shopping centre for the majority of subjects.

As treatment progressed, subjects were able, in many cases, to graduate to coming along to the treatment sessions alone.

Detail of Exposure Sessions

As closely as possible therapists attempted to give sessions of 2 hours, and to ensure that exposure was continuous to the feared/avoided situations. Exposure trips consisted of visits to main streets, shopping centres and corner shops. There were also visits to enclosed shopping precincts. These contained conditions known to be difficult for many agoraphobics (such as air conditioning, escalators, lifts and a variety of lighting conditions). Examples of such included Wood Green Shopping City and Brent Cross Shopping Centre. These shopping centres were chosen because of their long opening hours and convenience to the treatment catchment area. There were also trips on buses, overground trains and the underground. Three branches of the London underground run through the catchment area. An underground trip from Barnet or Edgware takes about 40 minutes into Central London. Some subjects therefore were able to graduate to travelling to Central London, and to very busy areas such as Oxford Street.
Exposure trips also involved crossing streets of varying busyness, using zebra crossings, queueing in shops, eating and drinking in snack bars and restaurants, and using banks and post offices. While exposure sessions were tailor-made to individual requirements, all subjects would have had at least one trip to the enclosed shopping precinct, exposure to public transport, walks along streets of varying busyness, crossing roads, purchasing items and queueing. All therapists set the exposure target for each session as a difficult, but just manageable exercise, mutually negotiated with the subject at the beginning of the treatment session. All subjects were required to undertake trips on their own. All therapists gave their subject the same instructions and explanation for the session.

The explanation and instructions were as follows: Subjects were told that the object was to enter situations which had previously caused anxiety or other unpleasant feelings, and that the therapist would accompany them only if they thought it was impossible to enter the situation alone. It was also made clear that the therapist would leave them as soon as possible. Therapists explained that there would be 2 hours of continuous exposure in each session, and that periods of avoidance could inhibit progress. Subjects were told that the object of the exposure session was to remain in the situation for as long as it took for their anxiety and/or discomfort to diminish. They were told that this would probably take some time, and that they were to stay in the situation at all costs. Subjects were told that if they escaped from the situation before they experienced a reduction in anxiety, that this escape would probably make their problem worse. They were further told that if they stayed in the situation, and did experience a lessening of fear,
that this would probably make them feel more confident to tackle similar situations. It was pointed out that the 12 hours of treatment given would enable them to assimilate the principle of facing anxiety until they felt better. They were also told that it was vital to practise in-between sessions, using the same principles of exposure. Subjects were given specific instructions regarding the use of the nominated co-therapist.

Explanation to Subjects and Subjects Permission

All subjects were given a standard explanation of the research, verbally at screening, and in writing prior to treatment. They were told that the research was investigating various characteristics of agoraphobia, and how individuals responded to treatment. They were told that the offered treatment was very much tried and tested, and had been shown to be effective for the majority of individuals.

Homework and Feedback

All subjects in both of the experimental groups were given the same instructions regarding homework and telephone feedback. At the assessment interview, subjects were told that between-treatment-session practice was vital to their progress. Such practice should be carried out alone if possible, or with their spouse or "closest" other, if they found the situation too difficult. Subjects were told that during homework they should expose themselves as much as possible to previously avoided/feared situations in the same fashion as during treatment sessions with their therapist. They were instructed that the same major principle applied i.e. staying in the situation until they experienced a reduction in
anxiety. Subjects were told that there was no limit to the amount of
time they should spend practicing homework of "difficult but manageable"
variety. It was emphasised that they should attempt as much as possible.

Subjects recorded homework tasks on diary sheets which were distributed
at the initial interview and collected regularly by their therapist.

Regarding feedback via the telephone, this was felt to be necessary on
two grounds. Firstly, to reinforce homework practice, and secondly as
an opportunity for the therapist to assist in planning homework. All
subjects were instructed to telephone their therapist on non-treatment
days for a brief feedback session. All therapists were instructed to
limit such calls to simple praise and goal setting, and not to enter any
prolonged discussion regarding treatment progress or other problems.
This was monitored at regular meetings of the author and research trial
therapists.

Monitoring of Experimental Conditions

All therapists and blind assessor met regularly with the author to
discuss issues such as the flow of referrals, and to ensure that all
concerned were adhering to experimental procedure. No major problems
were reported.
Medication

During history taking, detail of past and current medication was noted. Where regular psychoactive medication was being taken, subjects were told to continue with the same regime for the duration of treatment. This was communicated in the assessment letter to the subjects' doctor, who was also asked to re-evaluate the need for medication at the end of treatment. Where tranquilisers were taken on an as required basis, and did not amount to regular medication, the subject was asked to refrain from taking this during the period of treatment.

The varieties of medication were divided into categories (Benzodiazepines, tricyclic antidepressants, etc) and coded (see appendix 1 for details). The relationship of outcome and the taking of medication forms part of the investigation of treatment variables.

Alcohol

Subjects were questioned at screening and assessment regarding their alcohol intake.

At screening 10 subjects were considered unsuitable candidates for the treatment programme because of their alcohol use. All of these subjects had some phobic symptoms, 8 of the 10 subjects scoring more than 10 on the agoraphobic sub-scale of the Fear Survey. However, all were drinking in excess of 75 units of alcohol per week (one unit is roughly equivalent to a half pint of beer, a single measure of spirit or a glass of wine). All of these subjects were given advice or referred to the
local alcohol treatment service. 3 subjects have subsequently reduced their intake or become abstinent, and been offered treatment for their phobic symptoms but out of the research context.

Subjects were told not to take any alcohol before or during exposure sessions. Two subjects who commenced treatment became drop-outs when it became clear during treatment that they had drinking problems. Both were referred to the local alcohol treatment service, and one subject returned some months later to be given exposure treatment out of the research context.

Further Treatment

All subjects were told at the outset that after their programme was complete, their progress would be reassessed at regular intervals (i.e. the various rating points), and further treatment given if necessary. It was difficult to decide what constituted further treatment, as for example, subjects could visit their G.P. and be given general advice, or the referring Psychiatrist may have recalled the subject to re-evaluate for her/himself, the subject's progress. It was decided to define a subject as having further treatment if one of the following criteria was met:

a) The subject returned to the author's service for further exposure, by reason of agoraphobia.
b) They visited another agency for treatment of their agoraphobia by exposure.
c) They visited another agency for treatment of their agoraphobia by non-exposure methods.
d) They visited another agency for treatment of another psychological problem by any treatment method.

As no subjects were treated by another other method, or for any other problem during the exposure period, subjects meeting criteria (a) (b) or (c) were considered thus: Their ratings up to their contact for further treatment were analysed. After such contact, their ratings were not included in the tables of raw data and were not considered for statistical analysis. The inclusion of such data in the analysis could cause a potential confound.

Breakdown of Further Treatment
Criterion (a)
5 subjects returned for further exposure. Two of these subjects made further gains. However, the remaining 3 subjects made no more significant gains. All three of these subjects were eventually referred for non-exposure treatment.
Criterion (b)
1 subject was subsequently referred to another Behaviour Therapy Service for more exposure treatment.
Criterion (c)
7 subjects were subsequently referred for drug treatment or psychotherapy.
Criterion (d)
7 subjects received help for other problems. (4 by reason of clinical depression, 2 by reason of sexual difficulties and 1 for reason of a bereavement reaction.)
Statistical Analyses

The basic approach to the analyses involved in the outcome experiment is to use parametric tests. Everitt (1979) has argued that with the kind of data involved in psychological outcome studies, such an approach is the most appropriate. He takes into account that such data tends not to be normally distributed, but argues that parametric tests such as t-tests are robust enough to withstand some violation, and are preferable to the much weaker non-parametric tests.

In a literature review of statistical approaches to outcome data, Turner (1978) concludes that a multivariate approach is an appropriate way of analysing data from a randomized experimental design. He suggests that using a multivariate analysis of variance is a more conservative procedure for significance testing, when there are multiple dependent variables. He points to some empirical support for the use of the multivariate approach. In a study conducted by Hummel and Sligo (1971), univariate and multivariate analyses were compared with computer generated data, and the multivariate approach was shown to be superior. However, Turner does point out that there are occasions which warrant performing separate analyses, particularly where the researcher may have theoretical reasons for imposing an assumption of statistical independence among the dependent measures a priori. Alternatively, the investigator may be using multiple measures, but in fact is interested in one dependent measure as an index of change. In the current study, the agoraphobic sub-scale score is the central measure of change. This sub-scale is used in all contemporary outcome research of agoraphobia treatment as the main index of change. Correlations of pre treatment measures demonstrate that there was no need to "partial out" the effect
of other significant variables. Furthermore, there were no pre treatment differences between the experimental groups on the central dependent measures. It was therefore decided that a simpler analysis was indicated, there seemingly being little evidence to support multiple analyses of covariance.

In the M. Phil study, analyses of variance were carried out on each of the dependent measures. However, from this study and the literature, several specific predictions concerning between group differences and between rating point change were made. It was therefore decided to use t-tests to examine these very specific predictions.
Data Processing

Raw data was coded on to sheets and put on to the computer system at Hatfield Polytechnic. Prior to analyses being performed, data coding sheets were checked with a computer print out of raw data. The data was analysed, using the Statistical Package for Social Sciences (SPSS) Version H (May 1982) on DEC System 10.

Several of the analyses were performed manually to effect a second check of accurate data entry.
RESULTS

Tables of data are set out in the appendix at the end of this chapter. The tables show mean scores and the results of various statistical analyses.

In view of the large amount of data only the most interesting results are described, but the tables contain all analyses performed.

Mean Scores (see tables 1,2)

Mean scores and standard deviations of score at the various rating points, for all the measures, are set out according to the following: (a) All subjects as a group (b) the home based group (c) the hospital based group and (d) the third group of subjects who were originally allocated to hospital based treatment, but refused this and were subsequently treated at home.

Pre Treatment Differences between experimental groups (see table 3)

There was only one significant difference between the home and hospital based groups at the pre treatment rating point. This was on the Behavioural Avoidance Test. The Home based group mean for completed items was significantly lower than the hospital based group. $p < 0.01$.

Post Treatment differences between experimental groups (see table 4)

There were no significant differences on any of the measures at post treatment between the experimental groups. The table shows results of the main analyses.

The mean change from pre to post on the Behavioural avoidance test was 3.87 items for the Home group and 3.82 items for Hospital group (this difference was not significant $t = 0.207$). This was the measure where there was a pre treatment difference between the groups.
Relationship between Pre treatment agoraphobic sub scale scores and other variables (see table 5)

There were significant correlations with the following pre treatment scores - the behavioural avoidance test, the total fear survey score and the disruption of work/home/social and private function. There was also a significant correlation with age.

Relationship between change in agoraphobic sub scale score and other variables (see table 6)

There was a significant correlation with initial agoraphobic severity as measured by the agoraphobic sub scale score. There were significant negative correlations with pre treatment marital satisfaction as measured by the Maudsley Marital Questionnaire (higher scores indicating higher levels of dissatisfaction) for both subject and spouse.

There were no significant correlations between change in the agoraphobic sub scale score and pre treatment scores on either of the scales measuring depression.

Change in Agoraphobic sub scale scores for various drug taking groups (see table 7)

The group of subjects who completed treatment and who were not taking psychotropic medication had a significantly greater change ($p < 0.01$) on the agoraphobic sub scale score (from pre to post treatment), than the group of subjects who were taking psychotropic medication. When this group of subjects was further subdivided, comparison of the two main groups (benzodiazepines vs. benzodiazepines plus antidepressants) revealed no significant difference in change score.
Pre treatment Phobic problem Severity Ratings (see table 8)

Pearson correlations between all combinations of subject, therapist and independent assessor were all highly significant. Subject and assessor ratings showed the highest correlation (0.85).

Pre treatment Marital Questionnaire Scores (subject) and other variables (see table 9)

There were significant correlations with both depression scales. There was no correlation with pre treatment agoraphobic severity as measured by the agoraphobic sub scale of the Fear Survey.

Change in Marital Questionnaire Score (see table 10)

There was a reduction in mean scores of the marital questionnaire between pre and post treatment for subjects and spouses. This indicates a change towards greater marital satisfaction. However, this did not reach significance. There was a further reduction in scores between post treatment and 1 year follow up and overall the change from pre treatment to 1 year follow-up reached statistical significance for subjects and for spouses (\( <0.005 \) and \( <0.025 \) respectively).
DISCUSSION

If one considers the subjects' scores on the various pre-treatment measures, it is clear that the group of agoraphobics studied presented with a severe level of handicap. The mean scores would indicate that the "average" subject presenting for treatment would be, able to walk only a few yards alone from a secure base, troubled by a range of neurotic symptoms, obviously depressed, phobic of social situations and various blood/injury/illness themes and avoid undertaking most items of autonomous behaviour away from the home. The problem would also have a profound impact on work, home and leisure activities. The subjects in the study are typical of those presenting for treatment to any District Department of Clinical Psychology and their level of handicap certainly belies the notion that agoraphobia is a minor neurotic disorder.

The mean problem duration, when presenting for treatment, of 9.17 years for male subjects and 11.35 years for female subjects, indicates the intractable nature of the problem. The problem duration in this study is of the same order as that found in other outcome studies. (For example the problem duration in the outcome study of Burns (1977) was 8.40 yrs.) As Thorpe and Burns (1983) report, the vast majority of agoraphobics have consulted their GP at some time, and what is particularly alarming is that they are not referred for exposure treatment earlier. There is a national shortage of personnel to carry out behavioural treatments, but this can account only in part for the delay in referral. In the author's service, only 28 G.P.'s (of a total of over 200 working in the catchment area) referred subjects for treatment of their agoraphobia during the five year period of the research trial. The trial received publicity in local papers and on national television and the author
circulated all local GP's with detailed information regarding the
treatment trial. This apparent under-referral of agoraphobics for
treatment is therefore a matter of concern on at least two major counts.
Firstly, there seems to be a reluctance to refer to clinical psychology
services, and secondly, the public image of behaviour therapy seems far
different from the reality. The latter issue has been addressed by
O'Leary (1983) who argues that both public and professional impressions
of behaviour therapy are rather negative. O'Leary cited data which
suggested that many professionals see behavioural procedures as simplistic,
mechanistic and lacking the humanitarian qualities of the so-called
insight oriented approaches. It also seems true that such attitudes
are more powerful than the very encouraging outcome data which is
probably only read by a small already enthusiastic minority. With regard
to the apparent reluctance of GP's to refer to clinical psychology
services, this problem has been recognized in a most general sense
by the British Psychological Society. Morris (1985) has reviewed some
of the issues in a paper which announced the appointment of a Director of
Information for the BPS. This role is in part educational and should help the dissemination of information. While this development is most
welcome, to quote Morris's conclusion, "Do not expect too much too soon".

While overall the response to treatment of the study subjects was
excellent, and change was highly significant on all measures (Tables 1,
2) the mean post treatment scores on the measures still indicate a
considerable degree of handicap. This confirms Rachman's (1983) assertion
that there is no cause for complacency. (The issue of treatment failure
will be addressed in detail in Chapter 3.)
With regard to the second hypothesis regarding difference in treatment outcome between the groups based either at home or in the hospital outpatient clinic, there was, as predicted, no significant difference on any of the outcome measures. This result is entirely in accord with the results of the authors' M. Phil study. On the behavioural avoidance test there was a significant pre-treatment difference between the groups, but the net change from pre to post for the two groups was very similar (5.62 items vs 5.82 items). This difference was not significant (t = 0.51).

The apparent equivalence of treatment base raises some important questions for service delivery and organisation. Other than the group of subjects who refused hospital treatment, who are referred to below, it seems of little importance where exposure treatment takes place, as any benefit of seeing the subject in their own environment seems to be counter balanced by the therapeutic effect of exposure to travelling when attending for hospital based treatment. As this area was discussed in detail in the M. Phil thesis, no further reference will be made here.

With regard to the third hypothesis regarding post treatment improvement, the M. Phil study had only 3 months follow-up, and it was felt that this was not a sufficient time to measure post treatment improvement. Contrary to the hypothesis, the home based group made no further change, but the hospital based group made a significant improvement on the measure of the Behavioural Avoidance Test (p < 0.01). This isolated finding needs to be considered with the non-significant change on all the other measures, and the fact that other outcome studies do not generally show such post treatment improvement. In effect, therefore, long term follow-up of
subjects in the study shows an overall stasis in symptoms over the follow-up period, regardless of treatment base.

The results of the outcome of the third treatment group of subjects who refused hospital based treatment but subsequently accepted home based treatment are much in accord with the findings reported in the M. Phil study. Their results on the outcome measures are of a similar nature to the other two experimental groups. Of the 68 subjects allocated to the hospital condition of treatment, 14 subjects refused, and 12 of these subjects subsequently completed home based treatment. Therefore, if the study population of agoraphobics is typical of clinical agoraphobic populations, one can assume that 20% of subjects will refuse hospital based treatment for one reason or another. As the M. Phil study indicated, there seem to be two main reasons for this refusal. One is that some agoraphobics feel they cannot travel to the hospital for treatment, although they appear on the evidence of pre-treatment measures, to be no more handicapped than the other subjects. Secondly, there is a fear of being stigmatized by attendance at a psychiatric facility. The results of treatment with this group were comparable with the other study subjects, but contrary to the fifth hypothesis there was no further change in the measures. The issue of the group of refusers of hospital based treatment was fully discussed in the M. Phil thesis and will not be discussed further, other than to say that refusers of hospital based treatment should be approached with considerable flexibility.

Contrary to expectation, there was no correlation between pre-treatment
scores on either of the depression inventories and treatment outcome. In considering reasons for this, it is noteworthy that the mean pre-treatment depression scores were certainly in the range found in subjects suffering from autonomous depressive disorder. Further, there was a highly significant mean reduction in these scores over treatment. There is overwhelming evidence (reviewed by Marks (1981a)) that primary depressive states inhibit the habituation process of exposure treatment, and it would therefore seem reasonable to suggest that, because habituation obviously took place in the study subjects, the depressive symptoms were secondary to the agoraphobic syndrome rather than a primary problem. Therefore, it seems clear that if one changes the state of the agoraphobia for the better, depressive symptoms will abate significantly. A final point concerns the measurement of depression per se. This problem was studied by Kearns et al (1982) and their findings regarding the Wakefield Inventory led to the change in measurement of depression in this study. Agoraphobia in its severe forms has many affective symptoms, and thus it becomes difficult to establish whether depressive symptoms are part of the agoraphobia or in fact indicative of a primary process.

44 subjects of the 100 subjects who completed treatment were taking psychotropic medication. 40 of these were taking a benzodiazepine tranquillizer, or a benzodiazepine and anti-depressant in combination. (4 subjects took an anti-depressant or major tranquillizer alone and were excluded from the analysis.) The treatment results of the drug-taking group were significantly poorer than the group not taking drugs. A comparison of pre-treatment scores demonstrated no significant difference.
on any of the measures between the two groups, and there seemed to be
no other obvious differences between the groups of subjects. Therefore
there seems no particular reason to suppose that the drug taking group
were any more handicapped prior to treatment. In view of recent evidence
that the benzodiazepines are, at best, ineffective in chronic anxiety, and
that there is no evidence that this group of drugs benefits agoraphobics
in any way, it is of considerable concern that large numbers of agora­
phobics are continuing to be prescribed benzodiazepines. Of particular
concern is that these drugs are addictive and cause a miscellany of side
effects including a severe withdrawal syndrome resembling delirium
tremens (evidence reviewed by Committee on the Safety of Medicines 1980).
Despite this, as recently as 1981 Mathews et al (arguably one of the
country's leading research teams) advised "It may be useful to take a
single dose of a tranquillizer shortly before the (exposure) practice"
(p. 178).

One major problem in current research is that the taking of benzodiazepines
does not apparently exclude subjects from experiments. As the study
results show, the outcome of such subjects is significantly poorer than
subjects not taking drugs. Therefore this variable needs both recognition
and control when considering outcome data.

There is an additional problem in the area of benzodiazepines which has
yet to be addressed with regard to agoraphobia. This concerns the
anxiety experienced if one reduces intake. As many agoraphobics report
that they take their medication on an 'as required' basis, there is
probably a considerable dosage variation over time. If one also considers the fact that benzodiazepines and their metabolites have a complex half life chemistry, there is a strong possibility that some of the anxiety felt by agoraphobic subjects is attributable to a drug effect.

It seems important to investigate how anxiety symptoms and phobic avoidance change over the period of benzodiazepine withdrawal, as some of the symptoms reported by our agoraphobic subjects may be attributable to their medication rather than their agoraphobia.

As the literature indicates, no clear relationship between marital variables and agoraphobia has been demonstrated. The study results give some support to the argument that treatment outcome is related to pre treatment marital satisfaction. The negative correlation between initial marital satisfaction score and outcome was significant ($r = 0.225$, $n = 55$, $p < 0.05$), and in accord with the eighth hypothesis. However, this correlation was of a much lower order than that obtained in the M. Phil study ($r = 0.523$, $n = 24$, $p < 0.01$). The current study used the same measure of marital satisfaction as the studies by Cobb et al (1984) and Monteiro et al (1995). Of these, only the Monteiro et al study demonstrated a similar relationship between initial marital satisfaction and outcome. The Cobb et al study contained only 19 subjects (in contrast to data on 55 subjects in the current study) and the authors reported a wide variation in patterns of response, with every possible permutation of good and bad marital satisfaction and various levels of outcome. Scrutiny of individual data in the current study shows the same variation as in the Cobb et al study. Perhaps if one considers the perspective of Barlow et al (1981), who demonstrated two separate patterns
of interaction between the variables (in 6 single cases) the apparent
discrepancies in the literature tend to disappear. It seems therefore
that we should be debating how much of variance in outcome is attributable
to marital adjustment in different marital sub groups, rather than looking
for a simple relationship between marital adjustment and outcome. Further­
more, as Monteiro et al (1985) point out, it is likely that our measures
of marital adjustment are far from satisfactory.

One clear result from this study, which is totally in accord with Cobb
et al (1984) and Monteiro et al (1985), is the clear overall change (for
the better) in marital satisfaction over treatment for the group. This
change was not evident in the M. Phil study, but this was probably
attributable to the brief (3 month) follow-up period in that study.
Scrutiny of individual data does, of course, show that for a minority
of subjects who improved in respect to agoraphobia, their marital satisfaction
decreased. Conversely, some individuals with very poor marital satisfaction
levels showed post treatment improvement in both agoraphobia and the
marital state. Certainly the conclusion of Cobb et al (1980) that in
cases of agoraphobia with marital disharmony one should attempt exposure
treatment as the first strategy, seems to have been validated.

The maintenance of agoraphobia is clearly both intra and inter-personal,
and it is possible we have been overly interested in marital variables.
Perhaps we should be concerned to tackle the thorny issue of family
assessment and gathering data on the way a wider network of family, friends
and work colleagues influence agoraphobic avoidance. Clearly, we need to
measure more than marital satisfaction as a central interpersonal variable.
The study provides some interesting data regarding alcohol. Two subjects who accepted treatment were later found to have a serious alcohol problem which caused them to drop out from treatment. A further 8 subjects with significant agoraphobic symptoms were not accepted for the trial because of high alcohol intake. This total of 10 subjects may of course be an underestimate of the true prevalence of alcohol problems in the study population, as no special enquiry was undertaken to reveal alcohol problems. This finding is more in accord with the results of the Ribb and Chambless (1983) study than with the results of the Samarasinghe et al (1984) study. The conservative figure of approximately 7% of agoraphobic subjects with alcohol problems, or at least high levels of intake, in the current study would indicate the need to ask more than cursory questions regarding alcohol at the assessment interview. A simple alcohol screening questionnaire and checking of alcohol consumption with the spouse or significant other, would seem to be a reasonably effective measure to be incorporated into the assessment procedure.

The statistical analysis (see table 11) showed that there was no significant difference in outcome between therapists. However, the subjects treated by the group of 6 inexperienced therapists achieved a higher mean change score on the agoraphobic sub scale than the two main therapists. Both the main therapists had a considerable amount of experience of using exposure methods. Furthermore, there was little difference in outcome between the subjects treated by therapist 1 and therapist 2, although therapist 1 had received an intensive full-time training in behaviour therapy, while therapist 2, at that time, had received no formal training in either behaviour therapy or exposure procedures. These results confirm
Marks' (1981(a)) assertion that only minimal training is necessary to carry out a range of medical and psychological procedures and, in particular, exposure therapy. In the current study therapists carried out a standard exposure procedure with significant benefit to their subjects. It would therefore seem reasonable to suggest that trained personnel should concentrate on organizing and supervising exposure programmes and use a range of people (including agoraphobics who have overcome their fears) to implement the treatment. This call has been made before, by eminent workers (e.g. Marks (1981(a), Mathews et al (1981)) but remains largely unheeded. It may well be that administrative and (perceived) ethical issues prevent professionals from handing over responsibility for treatment to others. This seems unfortunate as the demand for exposure treatments is growing rapidly and even now is far greater than available resources.
### APPENDIX ONE

#### RESULTS

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<td>CORRELATIONS BETWEEN PHOBIC SEVERITY RATINGS</td>
<td>8 187</td>
</tr>
<tr>
<td>CORRELATIONS BETWEEN PRE-TREATMENT MARITAL QUESTIONNAIRE SCORES AND OTHER VARIABLES</td>
<td>9 188</td>
</tr>
<tr>
<td>MARITAL QUESTIONNAIRE SCORES AT VARIOUS POINTS</td>
<td>10 189</td>
</tr>
<tr>
<td>COMPARISON OF OUTCOME BY THERAPIST</td>
<td>11 190</td>
</tr>
<tr>
<td></td>
<td>Agoraphobic Sub Scale</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td><strong>All Subjects</strong></td>
<td></td>
</tr>
<tr>
<td>n = 100</td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>28.97 (7.13)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>12.09 (7.14)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>11.94 (8.14)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>13.42 (9.47)</td>
</tr>
<tr>
<td><strong>Home based Group</strong></td>
<td></td>
</tr>
<tr>
<td>n = 45</td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>29.70 (7.09)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>12.89 (7.90)</td>
</tr>
<tr>
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<td>13.04 (9.28)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>13.70 (9.14)</td>
</tr>
<tr>
<td><strong>Hospital based group</strong></td>
<td></td>
</tr>
<tr>
<td>n = 43</td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>28.27 (7.38)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>11.04 (6.23)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>11.02 (7.12)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>12.83 (9.18)</td>
</tr>
<tr>
<td><strong>Third Group</strong></td>
<td></td>
</tr>
<tr>
<td>n = 12</td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>28.29 (6.49)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>11.29 (6.41)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>10.91 (6.66)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>11.00 (9.24)</td>
</tr>
</tbody>
</table>

( ) = Standard Deviation

* Originally allocated to hospital based treatment, refused, but subsequently treated at home and considered separately.

**TABLE 1**
<table>
<thead>
<tr>
<th></th>
<th>Leeds Depression Inventory</th>
<th>Wakefield Depression Inventory</th>
<th>Work/Home Social/Private</th>
<th>Behavioural Avoidance test No. of items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Subjects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>n = 100</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>12.19 (3.97)</td>
<td>23.50 (5.54)</td>
<td>19.31 (5.86)</td>
<td>2.16 (1.25)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>7.20 (3.46)</td>
<td>16.23 (6.79)</td>
<td>9.12 (5.34)</td>
<td>6.08 (1.74)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>8.04 (4.26)</td>
<td>13.34 (6.46)</td>
<td>9.59 (6.29)</td>
<td>5.95 (2.31)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>7.30 (4.06)</td>
<td>9.25 (6.45)</td>
<td>8.93 (6.87)</td>
<td>6.14 (2.24)</td>
</tr>
<tr>
<td><strong>Home Based Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>n = 45</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>12.69 (3.69)</td>
<td>22.31 (6.41)</td>
<td>19.82 (6.39)</td>
<td>1.79 (1.10)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>8.51 (3.04)</td>
<td>12.93 (7.03)</td>
<td>8.68 (6.17)</td>
<td>5.41 (1.56)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>9.27 (3.56)</td>
<td>13.20 (7.31)</td>
<td>9.65 (7.21)</td>
<td>5.10 (2.52)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>8.87 (3.44)</td>
<td>8.56 (5.76)</td>
<td>10.21 (5.03)</td>
<td>4.83 (2.37)</td>
</tr>
<tr>
<td><strong>Hospital Based Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>n = 43</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>11.16 (3.98)</td>
<td>25.00 (4.53)</td>
<td>19.09 (4.81)</td>
<td>2.60 (1.39)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>5.82 (3.61)</td>
<td>15.46 (7.25)</td>
<td>9.97 (4.41)</td>
<td>6.42 (1.73)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>6.60 (4.39)</td>
<td>13.46 (6.51)</td>
<td>9.97 (5.67)</td>
<td>6.75 (1.93)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>6.23 (4.54)</td>
<td>10.23 (7.30)</td>
<td>8.46 (5.39)</td>
<td>7.75 (3.15)</td>
</tr>
<tr>
<td><strong>Third Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>n = 12</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre Tt.</td>
<td>13.80 (4.51)</td>
<td>23.25 (3.40)</td>
<td>17.69 (7.02)</td>
<td>2.10 (0.87)</td>
</tr>
<tr>
<td>Post Tt.</td>
<td>7.25 (2.76)</td>
<td>14.75 (3.59)</td>
<td>7.63 (4.84)</td>
<td>6.25 (1.71)</td>
</tr>
<tr>
<td>3 MFU</td>
<td>8.12 (5.22)</td>
<td>11.75 (2.87)</td>
<td>8.00 (4.35)</td>
<td>6.50 (1.69)</td>
</tr>
<tr>
<td>1 Yr. F.U.</td>
<td>4.50 (2.38)</td>
<td>8.66 (8.06)</td>
<td>4.85 (4.56)</td>
<td>7.60 (2.16)</td>
</tr>
</tbody>
</table>

( ) Standard Deviation

**SUMMARY OF SCORES ON MEASURES USED IN COMPARING EXPERIMENTAL GROUPS**

(Continued)

Table 1 (Continued)
<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Rating Point</th>
<th>Mean Agoraphobic Sub Scale Score</th>
<th>t</th>
<th>Mean Problem Rating Subject</th>
<th>t</th>
<th>Behavioural Avoidance Test</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POST</td>
<td>12.89 (7.90)</td>
<td>t=0.54</td>
<td>2.78 (1.60)</td>
<td>t=0.32</td>
<td>5.41 (1.56)</td>
<td>t=0.89</td>
</tr>
<tr>
<td></td>
<td>1 YR. F.U.</td>
<td>13.70 (9.14)</td>
<td>n.s.</td>
<td>2.89 (1.67)</td>
<td>n.s.</td>
<td>4.83 (2.37)</td>
<td>n.s.</td>
</tr>
<tr>
<td>HOME GROUP</td>
<td>POST</td>
<td>11.04 (6.83)</td>
<td>t=0.91</td>
<td>2.46 (1.22)</td>
<td>t=0.34</td>
<td>6.42 (1.73)</td>
<td>t=3.08</td>
</tr>
<tr>
<td></td>
<td>1 YR. F.U.</td>
<td>12.33 (9.18)</td>
<td>n.s.</td>
<td>2.38 (1.50)</td>
<td>n.s.</td>
<td>7.75 (0.75)</td>
<td>p&lt;0.01</td>
</tr>
<tr>
<td>HOSPITAL GROUP</td>
<td>POST</td>
<td>11.29 (6.42)</td>
<td>t=0.10</td>
<td>1.86 (1.06)</td>
<td>t=0.85</td>
<td>6.25 (1.71)</td>
<td>t=3.00</td>
</tr>
<tr>
<td></td>
<td>1 YR. F.U.</td>
<td>11.00 (9.27)</td>
<td>n.s.</td>
<td>2.28 (1.79)</td>
<td>n.s.</td>
<td>7.00 (2.16)</td>
<td>p 0.058</td>
</tr>
<tr>
<td>3rd. GROUP*</td>
<td>POST</td>
<td>11.29 (6.42)</td>
<td>t=0.10</td>
<td>1.86 (1.06)</td>
<td>t=0.85</td>
<td>6.25 (1.71)</td>
<td>t=3.00</td>
</tr>
<tr>
<td></td>
<td>1 YR. F.U.</td>
<td>11.00 (9.27)</td>
<td>n.s.</td>
<td>2.28 (1.79)</td>
<td>n.s.</td>
<td>7.00 (2.16)</td>
<td>p 0.058</td>
</tr>
</tbody>
</table>

* Originally allocated to Hospital based treatment but refused, then offered and accepted home based treatment.

CHANGES IN MEAN SCORES FOR EXPERIMENTAL GROUPS FROM POST TO 1 YEAR FOLLOW UP
<table>
<thead>
<tr>
<th></th>
<th>MEAN AGORAPHOBIC SUB SCALE SCORE</th>
<th>MEAN PROBLEM RATING SUBJECT</th>
<th>BEHAVIOURAL AVOIDANCE TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE</td>
<td>28.29 (6.49)</td>
<td>7.50 (1.11)</td>
<td>2.10 (0.87)</td>
</tr>
<tr>
<td>POST</td>
<td>11.29 (6.42)</td>
<td>1.86 (1.06)</td>
<td>6.25 (1.71)</td>
</tr>
<tr>
<td>t</td>
<td>6.82</td>
<td>9.85</td>
<td>6.69</td>
</tr>
<tr>
<td>p</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

n = 12

CHANGE IN MEAN SCORES FOR THIRD GROUP (ORIGINALLY ALLOCATED TO HOSPITAL BASED TREATMENT BUT REFUSED, THEN OFFERED AND ACCEPTED HOME BASED TREATMENT).

TABLE 2B
<table>
<thead>
<tr>
<th>MEASURE</th>
<th>PRE TREATMENT</th>
<th></th>
<th>Home Group</th>
<th></th>
<th>Hospital Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DIFFERENCE IN PRE-TREATMENT SCORES BETWEEN EXPERIMENTAL GROUPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>t value</td>
<td>n.s.</td>
<td>0.54 n.s.</td>
<td>1.34 n.s.</td>
<td>1.40 n.s.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sig. level</td>
<td>p &lt; 0.01</td>
<td>1.06 n.s.</td>
<td>0.65 n.s.</td>
<td>0.16 n.s.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.71 p &lt; 0.01</td>
<td>0.69 n.s.</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 3**
<table>
<thead>
<tr>
<th>Group</th>
<th>Agoraphobic Sub scale Score</th>
<th>Problem Severity (subject rating)</th>
<th>Behavioural Avoidance Test</th>
<th>Change in Agoraphobic sub Scale Score (pre - post)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home</td>
<td>Hospital</td>
<td>Home</td>
<td>Hospital</td>
</tr>
<tr>
<td>Mean Score (SD)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 45</td>
<td>n = 45</td>
<td>n = 43</td>
<td>n = 43</td>
<td>n = 49</td>
</tr>
<tr>
<td>12.89</td>
<td>11.04</td>
<td>2.78</td>
<td>2.46</td>
<td>5.41</td>
</tr>
<tr>
<td>(7.96)</td>
<td>(6.83)</td>
<td>(1.69)</td>
<td>(1.73)</td>
<td>(1.56)</td>
</tr>
<tr>
<td>t</td>
<td>t = 0.541</td>
<td>t = 0.250</td>
<td>t = 1.652</td>
<td>t = 0.301</td>
</tr>
<tr>
<td>df 86</td>
<td>df 86</td>
<td>df 53</td>
<td>df 86</td>
<td></td>
</tr>
<tr>
<td>P</td>
<td>n.s.</td>
<td>n.s.</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

DIFFERENCES BETWEEN EXPERIMENTAL GROUPS AT POST TREATMENT

TABLE 4
### Pearson's Product Moment Correlations Between Pre-Treatment Agoraphobic Sub Scale Score and Other Variables

**Table 5**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>r</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pear Survey (Total Score)</td>
<td>132</td>
<td>0.666</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Symptom Checklist</td>
<td>132</td>
<td>0.215</td>
<td>0.013</td>
</tr>
<tr>
<td>Wakefield Depression Inventory</td>
<td>44</td>
<td>0.134</td>
<td>n.s.</td>
</tr>
<tr>
<td>Leeds Scales</td>
<td>88</td>
<td>0.120</td>
<td>n.s.</td>
</tr>
<tr>
<td>Problem Rating (Assessor)</td>
<td>27</td>
<td>0.545</td>
<td>0.003</td>
</tr>
<tr>
<td>Problem Rating (Therapist)</td>
<td>132</td>
<td>0.604</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Problem Rating (Subject)</td>
<td>132</td>
<td>0.449</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Work/Home/Social/Private Rating</td>
<td>127</td>
<td>0.402</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Marital Questionnaire (Subject)</td>
<td>62</td>
<td>0.006</td>
<td>n.s.</td>
</tr>
<tr>
<td>Marital Questionnaire (Spouse)</td>
<td>58</td>
<td>-0.041</td>
<td>n.s.</td>
</tr>
<tr>
<td>Behaviour Avoidance Test (No. of items completed)</td>
<td>82</td>
<td>-0.544</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>AGE</td>
<td>132</td>
<td>0.211</td>
<td>0.015</td>
</tr>
<tr>
<td>Problem Duration</td>
<td>132</td>
<td>0.124</td>
<td>n.s.</td>
</tr>
<tr>
<td>Duration of Marriage</td>
<td>92</td>
<td>0.129</td>
<td>n.s.</td>
</tr>
<tr>
<td>Change in Agoraphobic Sub Scale Score</td>
<td>114</td>
<td>0.456</td>
<td>0.001</td>
</tr>
</tbody>
</table>

* Significance level for two tailed test
### Change in Agoraphobic Sub Scale Score (Pre to Post Treatment) with Other Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>r</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear Survey (Total)</td>
<td>114</td>
<td>0.184</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Symptom Checklist</td>
<td>114</td>
<td>-0.071</td>
<td>n.s.</td>
</tr>
<tr>
<td>Wakefield Depression Inventory</td>
<td>38</td>
<td>-0.105</td>
<td>n.s.</td>
</tr>
<tr>
<td>Leeds Scales</td>
<td>76</td>
<td>-0.033</td>
<td>n.s.</td>
</tr>
<tr>
<td>Problem Rating (Assessor)</td>
<td>24</td>
<td>-0.095</td>
<td>n.s.</td>
</tr>
<tr>
<td>Problem Rating (Therapist)</td>
<td>114</td>
<td>0.069</td>
<td>n.s.</td>
</tr>
<tr>
<td>Problem Rating (Subject)</td>
<td>114</td>
<td>0.129</td>
<td>n.s.</td>
</tr>
<tr>
<td>Work/Home/Social/Private Rating</td>
<td>111</td>
<td>0.102</td>
<td>n.s.</td>
</tr>
<tr>
<td>Marital Questionnaire (Subject)</td>
<td>55</td>
<td>-0.225</td>
<td>&lt;0.05**</td>
</tr>
<tr>
<td>Marital Questionnaire (Spouse)</td>
<td>52</td>
<td>-0.252</td>
<td>&lt;0.05**</td>
</tr>
<tr>
<td>Behavioural Avoidance Test</td>
<td>74</td>
<td>-0.045</td>
<td>n.s.</td>
</tr>
<tr>
<td>No. of items completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>114</td>
<td>0.085</td>
<td>n.s.</td>
</tr>
<tr>
<td>Problem Duration</td>
<td>114</td>
<td>-0.019</td>
<td>n.s.</td>
</tr>
<tr>
<td>Duration of Marriage</td>
<td>80</td>
<td>0.048</td>
<td>n.s.</td>
</tr>
<tr>
<td>Pre Treatment Agoraphobic Sub Scale Score</td>
<td>114</td>
<td>0.456</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

** Significance level for one tailed test
* Significance level for two tailed test

Pearson's Product Moment Correlations Between Change in Agoraphobic Sub Scale Scores (Pre to Post) with Other Variables

Table 6
Mean change in agoraphobic sub scale score (pre to post treatment)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Change</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects who completed treatment not taking psychotropic medication n = 56</td>
<td>18.09</td>
<td>8.15</td>
<td></td>
<td>98</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>All subjects who completed treatment taking one or more psychotropic drugs (see below for sub groups) n = 44</td>
<td>14.20</td>
<td>7.44</td>
<td>2.499</td>
<td>98</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Subjects taking Benzodiazepines alone n = 29</td>
<td>13.14</td>
<td>7.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjects taking Benzodiazepines and antidepressants n = 11</td>
<td>14.40</td>
<td>8.42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHANGE IN AGORAPHOBIC SUB SCALE SCORE (PRE - POST TREATMENT) FOR VARIOUS DRUG TAKING GROUPS.

TABLE 7
### Table 3

<table>
<thead>
<tr>
<th>PRE TREATMENT SCORES</th>
<th>n</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT AND ASSESSOR RATINGS</td>
<td>27</td>
<td>0.850</td>
<td>&lt;0.0005</td>
</tr>
<tr>
<td>SUBJECT AND THERAPIST RATINGS</td>
<td>132</td>
<td>0.607</td>
<td>&lt;0.0005</td>
</tr>
<tr>
<td>ASSESSOR AND THERAPIST RATINGS</td>
<td>27</td>
<td>0.793</td>
<td>&lt;0.0005</td>
</tr>
</tbody>
</table>

* PEARSON'S PRODUCT MOMENT CORRELATION

** SIGNIFICANCE LEVEL FOR ONE TAILED TEST

CORRELATIONS BETWEEN PHOBIC SEVERITY RATINGS

TABLE 8
SUBJECTS' PRE TREATMENT MARITAL QUESTIONNAIRE SCORE WITH:-

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>r*</th>
<th>p**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wakefield Depression Inventory</td>
<td>30</td>
<td>0.301</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Leeds Scales (Pre Treatment)</td>
<td>32</td>
<td>0.519</td>
<td>0.004</td>
</tr>
<tr>
<td>Agoraphobic Sub Scale Score (Pre Treatment)</td>
<td>62</td>
<td>0.006</td>
<td>n.s.</td>
</tr>
<tr>
<td>Change in Agoraphobic Sub Scale Score</td>
<td>55</td>
<td>-0.225</td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Marital Duration</td>
<td>61</td>
<td>0.189</td>
<td>n.s.</td>
</tr>
<tr>
<td>Spouse's Pre Treatment Marital Questionnaire Score</td>
<td>58</td>
<td>0.811</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

* Pearson's Product Moment Correlation
** Significance levels for one tailed test

CORRELATIONS BETWEEN PRE TREATMENT MARITAL QUESTIONNAIRE SCORES AND OTHER VARIABLES

TABLE 9
<table>
<thead>
<tr>
<th>MEAN SUBJECT SCORES (S.D.)</th>
<th>Pre</th>
<th>Post</th>
<th>3 M Follow up</th>
<th>1 year Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.25 (15.25)</td>
<td>17.63 (13.44)</td>
<td>14.72 (12.65)</td>
<td>13.46 (12.05)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MEAN SPOUSE SCORES (S.D.)</th>
<th>Pre</th>
<th>Post</th>
<th>3 M Follow up</th>
<th>1 year Follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.47 (12.20)</td>
<td>13.19 (10.52)</td>
<td>13.01 (10.41)</td>
<td>12.23 (9.86)</td>
<td></td>
</tr>
</tbody>
</table>

Related t tests

Subject scores pre - post t = 1.67 n.s.

Subject scores - pre - 1 yr. follow up t = 3.33 (p < 0.005)*

Spouse scores pre - post t = 1.47 n.s.

Spouse scores - pre - 1 yr. follow up t = 2.34 (p < 0.025)*

(FOR SUBJECTS COMPLETING TREATMENT

* value for 2 - tailed test)

MARITAL QUESTIONNAIRE - SCORES AT VARIOUS RATING POINTS

TABLE 10
<table>
<thead>
<tr>
<th>Therapist 1</th>
<th>Number of Subjects Completing Treatment</th>
<th>Mean Change in Agoraphobic Sub Scale Score for Subjects Completing Treatment</th>
<th>Number of Subjects dropping out During Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist 1</td>
<td>47</td>
<td>15.75 (8.01)</td>
<td>10</td>
</tr>
<tr>
<td>Therapist 2</td>
<td>36</td>
<td>16.88 (8.67)</td>
<td>11</td>
</tr>
<tr>
<td>Therapist 3</td>
<td>20 (6 therapists combined)</td>
<td>20.06 (9.12)</td>
<td>5</td>
</tr>
</tbody>
</table>

* t test for change scores: Therapist 1 vs Therapist 2
  \[ t = 0.73 \text{ n.s.} \]

* Mann-Whitney U for change scores.

Therapist 2 vs Therapist 3
  \[ Z = 0.81 \text{ n.s.} \]

COMPARISON OF OUTCOME BY THERAPIST

**TABLE 11**
CHAPTER TWO

APPENDIX TWO

RATING SCALES AND QUESTIONNAIRES

<table>
<thead>
<tr>
<th>Rating Scale / Questionnaire</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fear Survey</td>
<td>192</td>
</tr>
<tr>
<td>2. Phobic Problem Severity Rating</td>
<td>193</td>
</tr>
<tr>
<td>3. Wakefield Inventory</td>
<td>194</td>
</tr>
<tr>
<td>4. Leeds Inventory</td>
<td>195</td>
</tr>
<tr>
<td>5. Work/Home/Social/Private Adjustment</td>
<td>196</td>
</tr>
<tr>
<td>6. Maudsley Marital Questionnaire</td>
<td>197</td>
</tr>
<tr>
<td>7. Assessment Data</td>
<td>200</td>
</tr>
<tr>
<td>8. Behavioural Avoidance Test</td>
<td>201</td>
</tr>
</tbody>
</table>
FEAR QUESTIONNAIRE

Choose a number from the scale below to show how much you would avoid each of the situations listed below because of fear or other unpleasant feelings. Then write the number you chose in the box opposite each situation.

Would not avoid, slightly avoid it, definitely avoid it, markedly avoid it, always avoid it.

1. Main phobia you want treated (describe in your own words)

2. Injections or minor surgery

3. Eating or drinking with other people

4. Hospitals

5. Travelling alone by bus or coach

6. Walking alone in busy streets

7. Being watched or stared at

8. Going into crowded shops

9. Talking to people in authority

10. Sight of blood

11. Being criticised

12. Going alone far from home

13. Thought of injury or illness

14. Speaking or acting to an audience

15. Large open spaces

16. Going to the dentist

17. Other situations (describe)

Now choose a number from the scale below to show how much you are troubled by each problem listed, and write the number in the box.

Hardly at all troublesome, slightly troublesome, definitely troublesome, markedly troublesome, very seriously troublesome.

18. Feeling miserable or depressed

19. Feeling irritable or angry

20. Feeling tense or panicky

21. Upsetting thoughts coming into your mind

22. Feeling you or your surroundings are strange or unreal.

23. Other feelings (describe)

How would you rate the present state of your phobic symptoms on the scale below?

Phobias absent, slightly disturbing, definitely disturbing, markedly disturbing, very seriously disturbing, disturbing/disabling.

Date ............

FEAR SURVEY
Below are the agreed definitions of your problem(s). Read them through carefully and sign.

PROBLEM A

Date of agreement .............

Signature of Patient .............

PROBLEM B

Signature of Therapist .............

Below is a rating scale. For each problem select that number on the scale which best indicates how bad your problem is at present. Write your chosen number in the answer boxes at the foot of this page (you may choose "in-between" numbers if you wish).

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>does not</td>
<td>Slightly</td>
<td>Definitely</td>
<td>Markedly</td>
<td>very</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>sometimes</td>
<td>often</td>
<td>v. often</td>
<td>severe</td>
<td>continuous</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(UPSETSM AND/OR INTERFERES WITH MY NORMAL ACTIVITIES)

<table>
<thead>
<tr>
<th></th>
<th>PROBLEM A</th>
<th>PROBLEM B</th>
<th>date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>198 pre</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>198 Post</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>198 3 mths.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>198 6 mths.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>198 1yr.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>198 2 yrs.</td>
</tr>
</tbody>
</table>

2) PHOBIC (PROBLEM) SEVERITY
Read these statements carefully, one at a time, and underline the response which best indicates how you are. It is most important to indicate how you are now, not how you were, or how you would hope to be.

1. I feel miserable and sad
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

2. I find it easy to do the things I used to
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

3. I get very frightened or panic feeling for apparently no reason at all
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

4. I have weeping spells, or feel like it.
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

5. I still enjoy the things I used to
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

6. I am restless and can't keep still
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

7. I get off to sleep easily without sleeping tablets
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

8. I feel anxious when I go out of the house on my own.
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

9. I have lost interest in things
   (a) Yes, definitely
   (b) Yes, sometimes
   (c) No, not much
   (d) No, not at all

10. I get tired for no reason
    (a) Yes, definitely
     (b) Yes, sometimes
     (c) No, not much
     (d) No, not at all

11. I am more irritable than usual
    (a) Yes, definitely
     (b) Yes, sometimes
     (c) No, not much
     (d) No, not at all

12. I wake early and then sleep badly for the rest of the night
    (a) Yes, definitely
     (b) Yes, sometimes
     (c) No, not much
     (d) No, not at all

TOTAL

3) WAKEFIELD INVENTORY
Please indicate how you are feeling now, or how you have been feeling in the last day
day or two, by UNDERLINING the correct response to each of the following items:

1. I wake early and then sleep badly for the rest of the night.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

2. I get very frightened or panic feelings for apparently no reason at all.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

3. I feel miserable and sad.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

4. I feel anxious when I go out of the house on my own.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

5. I have lost interest in things.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

6. I get palpitations, or a sensation of 'butterflies' in my stomach or chest,
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

7. I still enjoy the things I used to.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

8. I feel scared or frightened.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

9. I feel life is not worth living.
   a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

10. I feel tense or ‘wound up’.
    a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

11. I find it easy to do the things I used to.
    a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

12. I get dizzy attacks or feel unsteady.
    a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

13. I have a good appetite.
    a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

14. I am restless and can't keep still.
    a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all

15. I am more irritable than usual.
    a) Yes definitely   b) Yes sometimes   c) No not much   d) No not at all
### 5) WORK/HOME/SOCIAL/PRIVATE ADJUSTMENT

| WORK | HOME | SOCIAL | PRIVATE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE |
|------|------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

#### Not at all

1. Private Leisure Activities (done alone, e.g., reading)
2. Social Leisure Activities (with other people, e.g., parties)
3. Home Management
4. Work

#### Because of my problems, my social leisure is impacted:
- College, clubs, outings, visiting
- Home management

#### 6) WORK/HOME/SOCIAL/PRIVATE ADJUSTMENT

| WORK | HOME | SOCIAL | PRIVATE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE | LEISURE |
|------|------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Not at all | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

#### Not at all

1. Social Leisure Activities (with other people, e.g., parties)
2. Home Management
3. Work

#### Because of my problems, my work is impacted:
- Childcare, paying bills
- Cleaning, laundry, shopping, cooking, looking after
- Work
INSTRUCTIONS

You will find on this sheet a series of questions about your marriage. Each question is followed by a series of possible answers, along a scale marked 0 - 8. What we would like you to do is to look at the questions and answers, and decide which answer best describes the way things have been for you in the past month; then circle the number of that answer. If your own situation comes between two of the printed answers, then circle the in-between number.

For example, take question 1 on the next page. If your answer to that question is "have often thought of separation", then you should circle number 6. If your answer lies between points 2 and 4 on the scale, you should circle number 3. But please do not use halves or quarters - whole numbers only.

6) MARITAL QUESTIONNAIRE
1. How much are you committed to this marriage?

<table>
<thead>
<tr>
<th>Never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Often think</th>
<th>On brink of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>thought of wonder about think of separation separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>separation separation separation separation separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>separation separation separation separation separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>separation separation separation separation separation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Does life with your marriage partner bring you satisfaction (leaving the sexual side apart)?

<table>
<thead>
<tr>
<th>Completely</th>
<th>Fairly satisfactory</th>
<th>Moderately satisfactory</th>
<th>Fairly unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>satisfactory</td>
<td>satisfactory</td>
<td>satisfactory</td>
<td>unsatisfactory</td>
</tr>
<tr>
<td>most of time</td>
<td>most of time</td>
<td>most of time</td>
<td></td>
</tr>
</tbody>
</table>

3. Is your marriage better or worse than those of your friends or relatives (leaving the sexual side apart)?

<table>
<thead>
<tr>
<th>Much better</th>
<th>About</th>
<th>Worse than average</th>
<th>Much worse</th>
</tr>
</thead>
<tbody>
<tr>
<td>better than average</td>
<td>about average</td>
<td>worse average</td>
<td></td>
</tr>
</tbody>
</table>

4. Do you feel your partner is a good or bad husband/wife?

<table>
<thead>
<tr>
<th>Pretty good</th>
<th>Better than average</th>
<th>About average</th>
<th>Worse than average</th>
<th>Much worse</th>
</tr>
</thead>
<tbody>
<tr>
<td>good average</td>
<td>about average</td>
<td>worse average</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. How much tension, coolness, quarrelling, nagging or violence is there in the marriage?

<table>
<thead>
<tr>
<th>Reasonably smooth, warm relationship</th>
<th>Some tension occasionally coolness or quarrelling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>Occasionally</td>
</tr>
<tr>
<td>relationship</td>
<td>coolness or</td>
</tr>
<tr>
<td>relationship</td>
<td>coolness</td>
</tr>
</tbody>
</table>

6. When you have arguments, are you able to reach a compromise?

<table>
<thead>
<tr>
<th>Complete</th>
<th>Usually a compromise reached, tho' with some difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>agreement or compromise</td>
<td>before a compromise is reached.</td>
</tr>
<tr>
<td>arguments seem unproductive</td>
<td>to drag on quarrelling, for ever</td>
</tr>
<tr>
<td>for both</td>
<td></td>
</tr>
</tbody>
</table>

7. Can you let your partner know your true feelings?

<table>
<thead>
<tr>
<th>Frank and open with partner</th>
<th>Usually open</th>
<th>Conceal some emotions part of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>arguments seem unproductive to drag on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>for both</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

6) MARITAL QUESTIONNAIRE (Cont'd)
8. Do you get enough warmth and understanding from your partner?

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Quite</td>
</tr>
<tr>
<td>1</td>
<td>Regret some</td>
</tr>
<tr>
<td>2</td>
<td>Feel a bit</td>
</tr>
<tr>
<td>3</td>
<td>Feel quite</td>
</tr>
<tr>
<td>4</td>
<td>Feel a deep satisfaction limitation in deprived of deprived of need for with warmth warmth and warmth and warmth and understanding understanding understanding understanding and warmth.</td>
</tr>
</tbody>
</table>

9. Is your partner attractive to you as a person (not physical attraction)?

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Very attractive</td>
</tr>
<tr>
<td>1</td>
<td>Fairly attractive</td>
</tr>
<tr>
<td>2</td>
<td>Moderately attractive</td>
</tr>
<tr>
<td>3</td>
<td>Not very attractive</td>
</tr>
<tr>
<td>4</td>
<td>Unattractive</td>
</tr>
</tbody>
</table>

6) MARITAL QUESTIONNAIRE (Con'd).
Referral
- by whom, for what (immediate precipitant).

Main Problem(s) (detailed)


Past Disorders (very brief):
This problem: treatment - dates - places.
Other psychiatric: treatments - dates - places.
Other medical: treatments - dates - places.
Forensic History: charges - court appearances - probation orders - dates.

Social Conditions (brief)
Home - where? what? with whom? social links?

Personality (brief)
(character/temperament)

Family History (brief)
Siblings - no./order (e.g. pt. 2nd of 5) - ages - links.
Psychiatric History in family: treatments - dates - places (very brief).

Personal History (brief)
School: duration (ages) - exams - friends - absences.
Further education: duration - exams - friends.
Work: current job: type - place - duration - friends,
longest job: type - place - duration - friends,
other jobs: number - type - duration - dismissals (very brief)
skills/plans (very brief).
Sex (use separate expanded section for sex problems)
ages of puberty, masturbation, sex play, coitus, partnerships - length and nature.
current activity - partner(s) - habits - frequency - satisfaction.
Marriage: Spouse - age - occupation - joint activities,
duration of marriage - plans for future,
past separations - divorces.
Children: ages - genders - problems (very brief)

Mental State
General: dress - manner - style of talk.
Mood: consistent up or down - sleep - appetite - energy - guilt - suicide - anxiety.
Reality Contact: strange beliefs - experiences - thoughts - attitude to problem and treatment.
Orientation: date - place - person.
Memory:

7) ASSESSMENT DATA
<table>
<thead>
<tr>
<th></th>
<th>Completed</th>
<th>Not Completed</th>
<th>Anxiety Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Walking 50 yds. alone from secure base e.g. home, clinic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Walking 400 yds. alone from secure base e.g. home, clinic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Walking ½ mile along busy road.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Spending 15 mins alone in busy local shops e.g. W.H. Smiths, Boots or similar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Standing in a queue to purchase an item in busy shop (5 minutes minimum).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Bus ride from stop nearest secure base for 15 minutes alone - being met at other end.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Bus ride as above (6) walking around alone return bus ride to secure base.</td>
<td></td>
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<td>8</td>
<td>Tube ride, 3 stops alone.</td>
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<td>Tube ride 15 stops alone.</td>
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<td>One hour in Brent Cross/Wood Green Shopping Centre alone.</td>
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CHAPTER 3

FAILURE IN THE (EXPOSURE) TREATMENT

OF AGORAPHOBIA
# CHAPTER THREE - Contents

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The issue of treatment failure is perhaps the most neglected area of outcome research. Yet, as Foa and Emmelkamp (1983) point out in their landmark book, failures are a challenge, which if properly studied, can teach us much about the shortcomings of our treatment methods. The main factors which have prevented detailed systematic research are as follows.

Firstly, there does not seem to be any universally acceptable definition of what actually constitutes failure, and only Foa and Emmelkamp (1983) have attempted to tackle this thorny issue with a view to systematic study.

Secondly, the lack of clear evaluation of treatment outcomes was an important factor prior to the application of the scientific method of outcome research. This shortcoming is unfortunately still prevalent today, with much clinical psychology and psychiatry being practised without any objective measurement of change, or pre-treatment target specification, being made in routine treatment.

Thirdly, the "Behavioural Revolution" of the past 3 decades has brought such enthusiastic optimism that any discussion of failure has been obscured. Outcome research has been focused on finding whether treatment A is better than treatment B, rather than looking at why treatment B was worse than treatment A. Furthermore, research reports discount failures, drop outs and treatment refusers in a sentence or two. Certainly the rivalry between the various "schools of thought" has done little to
concentrate effort on examining why methods fail. It could certainly be argued, that in treatment areas where behavioural methods are the most efficacious, there is a great deal of complacency.

Fourthly, as Foa and Emmelkamp (1983) point out, journals discourage reports of negative results. Competition between the various schools may be a factor influencing editorial workers when selecting papers for publication.

Finally, and of considerable importance, is that consideration of treatment failure is not very reinforcing for the clinician. While one can see intellectually that failures provide us with a valuable opportunity to learn and refine, actual confrontation with a patient who still suffers, or suffers more, is another matter.

With regard to the treatment of agoraphobia, there has been little systematic evaluation of treatment failure. Rachman (1983), struck a cautionary note when he pointed out that while agoraphobic patients were improved by behavioural treatment, many were left with significant residual problems. Only two papers have defined clearly what constitutes clinically significant improvement or failure in the treatment of agoraphobia. Jansson and Ost (1982), in their review of 24 studies of outcome with agoraphobics, defined improvement in terms of the Watson and Marks (1971) combined scale of anxiety and avoidance. This is used and fully described in Chapter 2 of this thesis. Treatment was considered to have accomplished a clinically significant improvement for the group of subjects, if the mean rating on this 0-8 scale was 3 or less at
post treatment, or if there was a reduction of the pre-treatment mean score of at least 50%, at the follow-up assessment. Thus, implicit in this definition is a definition of failure as an outcome of something less than those results.

Emmelkamp and van der Hout (1983) were more specific in defining individual failure. They defined failure as less than a 3 point change on the 0'-8 combined scale of anxiety and avoidance, rated over a series of 5 agoraphobic situations.

Emmelkamp with Foa (1983) has provided a general classification of groups of failure, which seems to be a most useful system. These groups are:

a) Individuals who do not accept, or refuse treatment.

b) Individuals who commence treatment, but drop out once treatment has commenced.

c) Individuals who do not respond to treatment.

d) Individuals who respond to treatment, but who subsequently relapse.

There are very few papers relevant to the specific area of treatment failure and agoraphobia.

Regarding non acceptance of treatment, Marks (1978) reported that 25% of subjects referred for behavioural treatment did not pursue this when offered. This percentage seems much in accord with the rates reported in the outcome studies referred to in Chapter Two. However, detail of non acceptors and treatment drop outs is virtually never provided in
With regard to Flooding and Flooding like treatments, Marshall and Gauthier (1984) reviewed failures and side effects. They surveyed 24 practitioners and researchers of flooding therapies, but could not find any evidence to suggest any major problems, major failure or major side effects associated with this mode of treatment. These authors went on to review factors responsible for treatment failure. It is their contention that it is the therapist, rather than the patient, that is responsible for failure. They have set out a number of factors they feel are important in influencing the outcome of flooding therapy. They have divided these factors into 3 main categories i.e.

a) Conceptualisation
b) Preparation for treatment
c) Implementation.

Under the heading Conceptualisation, they state that a common reason for failure is an inadequate behavioural analysis, which may not take into account certain physiological variables such as mitral valve prolapse syndrome and autonomous panic disorder. There is also the possibility that the therapist may focus on a limited aspect of the client's difficulty, and as Rachman (1981) suggests, not take into account patients who have "initially a very high level of reactivity". In these subjects, drugs may arguably have a role in the facilitation of flooding. However, in the light of recent evidence concerning Benzodiazepine addiction, such a course of action must be very critically considered.

In discussing preparation for treatment, Marshall and Gauthier suggest
that the therapist and patient may be inadequately prepared for various patient reactions to treatment. They add that one also needs to prepare the more general environment, including the reaction of the spouse to changes which may result from successful treatment. With regard to implementation, the authors suggest that there are two main areas that control effective flooding. Firstly, the duration of exposure seems critical, and secondly the adaptation of the procedure to the problems of specific clients is an often overlooked, but essential variable.

With regard to side effects of flooding, Marshall and Gauthier could find no evidence that this was a major problem. This finding was in accord with the study by Shipley and Boudewyns (1980) who undertook a mail survey of therapists conducting flooding, and flooding like procedures. They had a high response rate (i.e. 83% or 70 therapists) covering 3,493 clients. 6 of the 70 therapists reported a total of 9 clients suffering serious side effects. These side effects involved psychotic or panic reactions. It would be tempting to speculate that this number could be a chance effect, rather than being attributable to any specific therapeutic procedure.

Only Emmelkamp (1983) has specifically and systematically looked at the failure of exposure treatments with agoraphobics. He examined the reasons for non-acceptance of treatment by 25 agoraphobics referred to the Psychology Department of his hospital in the Netherlands. The treatment offered consisted of prolonged exposure in vivo conducted in groups, with the addition of cognitive therapy. Thus Emmelkamp's enquiry concerned a treatment mixture, rather than exposure alone. 16 of the 25 subjects
completed a questionnaire which was based on 22 factors related to non-acceptance of therapy. About half of the subjects reported that they were already somewhat improved and most of these subjects also gave reasons for failing to accept therapy. Some of the subjects blamed external circumstances such as problems with times of treatment for non-acceptance, and said they intended to contact the Department at a later date for treatment. However, two of the most important findings seemed to be that subjects were frightened of treatment; and secondly, that overall their expectations of therapy did not fit that of the therapist. Interestingly, 13 of the 16 responders agreed with the slogan "you have to overcome your fears on your own". Emmelkamp then went on to examine why subjects dropped out of treatment before an adequate trial of treatment had been completed. Questionnaires were sent to 15 agoraphobic subjects who had dropped out of group treatment over a 2 year period. Eight subjects returned questionnaires, which consisted of the questions used in the non-acceptance study, supplemented by questions pertaining to the specific treatment received. 4 subjects reported that the treatment had made them anxious, and in 5 subjects there seemed to be discongruent treatment expectations. Two subjects said that they would prefer a "less aggressive" approach to their problem. One subject wanted to talk to a doctor and nothing further, another subject wanted pills and "something else" and the fifth subject, although dissatisfied, did not state the kind of treatment he preferred. In addition to these findings, 5 of the subjects found that the therapist was either too young or did not understand their feelings. In summary, Emmelkamp felt that a pre-therapy training package might be useful in preventing drop-outs. Previously
Emmelkamp and Emmelkamp-Benner (1975) had found that showing a videotape of three ex-agoraphobics being interviewed about their treatment experiences seemed to prevent drop-outs occurring. Further, Emmelkamp suggested using former phobics as co-therapists and involving the spouse. This seems to be a relevant suggestion, particularly when demand outstrips resources. The use of the spouse has been advocated by many (e.g. Mathews et al (1981), Ross (1980)), and provides another saving of therapist time. This issue is discussed in Chapter Two of this thesis.

Emmelkamp (1984) examined the data of 5 agoraphobics who had received group exposure treatment and who were categorized as treatment failures. This study is the only published study of non response to treatment with agoraphobics receiving an exposure method. Failure was defined as less than a 3 point change on a 9 point scale of anxiety and avoidance (Emmelkamp et al (1978)). There did not appear to be a relationship of initial phobic severity with failure, nor did there seem to be a relationship between pre-treatment depression or assertiveness. Emmelkamp also looked at how over-valued ideation concerning the phobic stimulus and other variables such as age, duration of agoraphobia, previous treatment and previous use of medication were related to outcome. He could find no differences between failures and successful cases. One significant finding was that explicit complaints about marital partner seemed to correlate with poor outcome.

Emmelkamp (1984) also examined the relationship of the therapist to the patient within the setting of group treatments. 13 agoraphobics completed the Dutch version of the relationship inventory (Barrett-Lennard (1973)), as
modified by Liataer (1976), which consists of the following sub-scales:

1. Empathy.
2. Positive regard.
3. Congruity.
4. Negative regard.
5. Unconditionality.
6. Transparency.
7. Directivity.

There was a significant relationship between the outcome of therapy and "good" therapist characteristics such as empathy, positive regard and congruity. Emmelkamp (1983) concluded the study by looking at 8 subjects who were regarded as therapy failures. He used a semi structured interview centering around the following topics:

1. the current state of the agoraphobia;
2. the subjects experiences with respect to treatment;
3. the relationship with the therapist, and
4. family relationship.

All subjects had had a considerable number of treatment sessions, ranging from 17 to 68, with a range of treatment duration from 6 to 17 months. Subjects had been agoraphobic for between 1 to 30 years. 5 of the subjects had considerable difficulty dealing with the anxiety endured in treatment sessions, and the subjects generally felt that therapist did not show that they understood their patients feelings. All the married
subjects (6) felt they were not understood by their husbands, and the overall clinical impression was that there was often serious marital distress. As with all the other subjects studied by Emmelkamp with regard to failure, it should be emphasized that exposure was not the only treatment used. Subjects also had other treatments given within their treatment programme, e.g. Assertion training and Cognitive Restructuring. The emphasis in Emmelkamp's treatment centre is on group treatments, and as Emmelkamp points out, not all patients are suited for this method. There is also the important point that many of the problems of treatment may well be attributable to our embryonic knowledge of the functional analysis of agoraphobic behaviour.

Variables Associated with Failure

As Jansson and Öst (1982) point out, there is little research directed to the question of which variables predict outcome. Although one study (Zitrin et al. 1970) showed that very depressed subjects did less well with exposure treatment, there is overall little evidence of a relationship between initial depression and outcome. However, the average number of subjects per study (less than 20) in the research reviewed by Jansson and Öst, may well be explanatory in not detecting some relationships between variables. With regard to Marital Satisfaction, which is reviewed in Chapter Two of this thesis, this is a complex issue, and there does not appear to be any predictive quality in any of the measures of marital dysharmony which have been used.

Emmelkamp (1983) in reviewing the literature and examining his own data,
could find no predictive quality in measures of Assertiveness, initial severity, and independent variables such as age and duration of problem. However, the few studies which examined these variables contained small numbers of subjects. Emmelkamp's failure group for example, contained only five subjects.

In summary, there is little research on treatment failure, and only the study of Emmelkamp (1983) regarding agoraphobia and exposure treatment. In view of the fact that exposure treatment, while being generally effective, has its limitations, it is essential to gather more data.

At the end of the study of the first 44 subjects and prior to the publication of Emmelkamp's (1983) study, it was decided to examine failures. This decision was inspired by Jansson and Ost's (1982) review. Some aspects of treatment failure are also considered in Chapters 4 and 5.
SUMMARY OF OVERALL DESIGN

Using criteria derived from the two relevant studies so far, subjects are classified into four failure sub-groups. Statistical analyses are used to test some hypotheses and two questionnaires are used as a supplementary form of enquiry to subjects in all the failure sub-groups.
HYPOTHESES

NOTE:– The hypotheses include references to the failure groups. The detailed criteria for inclusion in these four groups are set out below.

The failure groups are:–

1) Treatment failures.
2) Treatment relapsers.
3) Treatment drop outs.
4) Treatment refusers.

1) The failure groups combined (but not including treatment relapsers) would show significantly higher scores (pre-treatment) than treatment responders on the following variables.
   a) Agoraphobic Sub Scale score.
   b) Depression Inventories.
   c) Symptom checklist.
   d) Marital Questionnaire (subject score).

2) Treatment drop outs would show improvement from pre treatment to follow-up without necessarily receiving any further treatment (of any kind).

3) Treatment failures would show no further improvement from post treatment to follow up.

4) Treatment failures (all groups) would contain proportionally greater numbers of subjects taking medication than the treatment responder group.
5) That the taking of psychotropic medication would be associated with a significantly greater rate of drop out or refusal than not taking such medication.

Two questionnaires were sent to two sub-groups of treatment failures (a) treatment drop-outs and refusers (b) treatment failures. As this is such an unresearched area, no specific predictions were made, rather the questionnaires asked essentially open questions to open topics.
Criteria for Failure

For the sake of consistency, it was decided to base the criteria for failure on the work of Emmelkamp and van der Hout (1983) and Emmelkamp (1983).

1) Treatment Failures
The subject was deemed to have failed in their treatment if one of the following criteria was met:

a) a change of less than 3 points on the 0 - 8 rating of anxiety and avoidance (Watson & Marks (1971)) - assessor rating between PRE and POST treatment.

b) a change of less than 3 points on the scale of anxiety and avoidance (Watson & Marks (1971)) - patient rating between PRE and POST treatment.

c) a change of less than 3 points on the scale of anxiety and avoidance (Watson & Marks (1971)) - therapist rating between PRE and POST treatment.

d) an increase of less than 3 successfully completed items on the 10 item behavioural avoidance test used in this study between pre and post treatment.

2) Treatment Relapsers
The subject was deemed to be a Relapser if he/she improved beyond the criteria stated above between pre-treatment rating and post treatment, but at a subsequent rating point met the above criteria as calculated between pre-treatment and that particular rating point.

3) Treatment Drop Outs
A subject was deemed to be a drop out if she/he did not complete the full
course of exposure treatment, but had embarked on at least the first
treatment session.

4) Treatment Refusers

A subject was deemed to be a treatment refuser if she/he decided not to
begin the exposure treatment. This refusal could occur at any point
after treatment was offered but before any treatment was commenced.
Questionnaires

Emmelkamp (1983) used a questionnaire with his group of drop-outs and refusers. In view of the fact that this questionnaire was comprehensive and that it had been used only on a small sample, it was used as one of the methods of the current enquiry. A copy of this questionnaire is reproduced in Appendix 4.

A copy of the second questionnaire used with treatment failures and relapsers is reproduced in Appendix 4. This questionnaire is based on the four areas covered by Emmelkamp (1983) in his semi structured interview. Although the areas covered were wide ranging, it should be noted that Emmelkamp reported on seven subjects only. Further, all Emmelkamp's subjects also received at least one treatment additional to exposure (e.g. cognitive restructuring, assertion training) during their treatment.
FOLLOW UP

Attempts were made to follow up all subjects, including treatment drop outs and refusers. Follow up was usually conducted by face to face interviews, but the questionnaires relating to failure were posted to the subject after the last follow up point.

Of the 19 subjects deemed to be treatment failures, 18 were seen for follow up interviews, 1 was interviewed by telephone, 14 subjects returned questionnaires.

Of the 9 subjects deemed to be treatment relapsers, 8 were seen for follow up interviews, 6 subjects returned questionnaires.

Of the 26 subjects deemed to be treatment drop outs, 14 were seen for follow up interviews. 3 were interviewed by telephone and 13 subjects returned questionnaires.

Of the 6 subjects deemed to be treatment refusers, 2 were seen for follow up interviews, 2 were interviewed by telephone but none of these subjects returned questionnaires.

Thus the total group consisted of 60 subjects of whom 48 were interviewed. 33 questionnaires were returned from failures, relapsers and drop-outs.
RESULTS

Using the above criteria for failure, 60 subjects were deemed to be treatment failures.

19 subjects (13 women, 6 men) were deemed to be treatment failures.

9 subjects (8 women, 1 man) were deemed to be relapsers.

26 subjects (17 women, 9 men) were deemed to be treatment drop-outs.

6 subjects (4 women, 2 men) were deemed to be treatment refusers.

For sake of simplicity, detail of the results is shown in table form and the text describes only the most important findings.

*16 subjects dropped out after the first session.

4 subjects dropped out after the second session.

6 subjects dropped out after the third or fourth session.
Comparison of Pre treatment scores of Responders and Non-responders
(see Table 12)

The non responder group comprised drop-outs, treatment refusers and
treatment failures. As relapers showed a positive response to treat­
ment, they were included in the responder group.

t-tests between pre-treatment mean scores of the two groups showed
only one significant difference. This was on the Marital Questionnaire
(subject) score. The non-responder group had a higher score (p < 0.02)
on this measure, this reflecting a higher level of marital dissatisfaction
for the group.

The non responder group was divided into a group of drop-outs and
refusers and a group of treatment failures. A t-test between the
means of the pre-treatment agoraphobic subscale scores for these groups
demonstrated no significant difference (t = 0.085).
Follow-up scores (on the agoraphobic sub scale) of treatment drop outs and treatment refusers (see table 13)

Treatment drop outs showed very significant improvement at the follow up rating point from pre treatment ($p < 0.001$). However, there was no change in the treatment failure group from post treatment to follow-up.

Medication and drop out/refusal of treatment (see table 14)

A chi square analysis demonstrated that subjects who took psychotropic medication were more likely to drop out or refuse treatment than subjects not taking such medication ($p < 0.001$). A further analysis demonstrated that there was no significant difference in drop out rates between the group of subjects taking a combination of Benzodiazepines and antidepressants and the group taking Benzodiazepines alone.

Medication and Treatment Outcome (see table 15)

A chi square analysis showed no significant difference in frequency of treatment failure between the group of subjects taking psychotropic medication and the group of subjects not taking psychotropic medication. However, this result should be considered with the finding reported in Chapter Two regarding the significantly better overall outcome for the non drug taking group.

Questionnaire responses (see tables 16, 17 and 18)

14 of the 19 treatment failures returned questionnaires. 13 of the 26 treatment drop outs returned questionnaires. 6 of the 8 treatment relapsers returned questionnaires. None of the 6 treatment refusers returned questionnaires.

(Affirmative responses are graphically described in tables 16, 17 & 18.)
Two further cases, both of whom appeared to have responded to treatment, are worthy of note. Subject No. 2 seemed to be making good progress when seen for the last follow-up interview at one year after treatment.

However, 3 weeks after this interview she was referred to the Crisis Intervention Service at the author's Hospital, as she had threatened to murder her husband with a knife. She was subsequently diagnosed as suffering from an Endogenous depressive syndrome with paranoid ideas. She responded well to chemotherapy, and her homicidal feelings towards her husband disappeared with her recovery from depression. At the pre-treatment rating point both subject and spouse scored highly on the Marital Questionnaire (high scores indicating dissatisfaction). At the follow-up point, prior to the subject developing her new problem, both she and her spouse scored in the low range on the Marital Questionnaire (indicating greater marital satisfaction!).

The other subject of note was subject No. 107 who appeared to be making satisfactory progress at 3 months follow-up. Six months after this he too was referred to the Crisis Intervention Service, having been found tied up at home. He had apparently bound himself with rope, because of a fear of losing control, and doing something violent. After detailed psychiatric assessment he refused all further co-operation, and has failed to attend for any follow-up.
DISCUSSION

As Foa and Emmelkamp (1983) point out, treatment failures are indeed a challenge which need to be investigated systematically. As Rachman (1983) has indicated, although results of behavioural treatment with agoraphobia are good, there is no cause for complacency. Therefore, the current study seems somewhat overdue. It is the first to describe a systematic analysis of failures in the exposure treatment of agoraphobia. The one similar study by Emmelkamp reported on treatment failures in agoraphobia, but treatment consisted of a package of which exposure was but one part. Also, in contrast, Emmelkamp investigated 5 subjects categorized as treatment failures (19 in this study), 25 subjects who refused treatment (6 in this study), and 8 treatment drop outs (26 in this study). He did not study relapsers (9 in this study).

Thus, of the 132 agoraphobics fulfilling selection criteria, 60 subjects fulfilled the criteria for failure (32 by refusing or dropping out of treatment and 28 by failing or relapsing). Strictly speaking, the 9 relapsers were also treatment responders, in that they reached improvement criteria at the end of treatment. Thus for the purposes of some analyses they are included in the responder group. (In fact the pre-treatment mean scores for the relapsers were not significantly different from the other failure groups.)

Regarding the first hypothesis which predicted a difference in pre-treatment scores between responders and non-responders, only one of the measures showed such a difference. Therefore, neither initial
level of depression nor initial severity seem to have any predictive quality. Scrutiny of the raw scores of individual subjects shows that the subgroups of failure contained a range of subjects from very severe to less severe problem severity. However, the significant finding regarding the marital questionnaire scores clearly establishes a positive relationship between higher levels of marital satisfaction and better treatment response. This finding is in accord with the analysis reported in Chapter 2 regarding the correlation between marital satisfaction and outcome.

This finding does seem logical if one considers the implications of a behaviour change programme for an individual and their immediate family. It seems obvious that positive marital relationships are necessary to provide support and encouragement during what may be a harrowing treatment experience, and that in the absence of a positive marital relationship, drop out or failure become more likely.

The follow-up data of the drop out and failure groups confirms the second and third hypothesis. However, the data on the drop out group concerns only 13 of the 26 subjects, and therefore the findings need to be treated with caution. Of the 13 respondees, 8 dropped out after one session, and 5 after 2 or more sessions. It could be argued that the experience of exposure treatment was the important factor, and that subjects used the exposure principle after dropping out. The reduction of mean scores was certainly large (from 29.62 to 18.08 on the agoraphobic sub scale). However, this finding seems to conflict with the evidence of the questionnaire data of drop outs, of whom only 4 said that they had improved since treatment. Of course, a single session of
therapist aided exposure is used in Mathews et al's (1977) home based programme, with further sessions being self directed. Thus one could argue that the study findings can be explained by the subject using further self directed exposure. The alternative explanation for the improvement is that the change in scores may well be a reflection of the variability of the syndrome. While all current authorities (e.g. Mathews et al (1981), Thorpe & Burns (1983)) agree that agoraphobia is a condition which does not remit spontaneously, there is also agreement that it fluctuates in severity.

The findings regarding the failure group are based on 18 of the 19 treatment failures. The mean post treatment score of 20.17 on the agoraphobic sub scale indicates that as a group there is a significant change for the better from pre treatment levels (mean 29.00). However, the group comprises a spectrum of failure, from those whose scores remain unchanged on all measures, to those who only fail on one measure to achieve "responder" criteria. A score of 20 on the agoraphobic sub scale would probably mean that the subject would definitely avoid each of the agoraphobic situations listed on this scale of the fear survey. Therefore the group of subjects would remain, by any standards, severely handicapped. The lack of post treatment improvement demonstrates a treatment "ceiling" effect, possibly suggesting that further self directed exposure produces no further effect on the general agoraphobic state.

Regarding the fourth and fifth hypotheses there was no significantly greater frequency of failure in the group taking psychotropic medication.
However, medication taking was associated with a significantly greater rate of drop out. One must also consider here the finding reported in Chapter Two that, overall medication taking is associated with poor treatment response. It does seem that whether a subject is prescribed medication or not, is a decision taken somewhat idiosyncratically by the prescriber. There is no evidence from this study that subjects taking medication differ from those not taking medication, on severity or any other readily identifiable variables. Certainly in view of the range of referring doctors in the study (28 GP's and 8 Psychiatrists) there must be a range of attitudes to the prescription of psychotropic medication. The present study certainly suggests that psychotropic medication taking does not facilitate exposure, and probably detracts from treatment efficacy. There are probably several reasons for the negative effects of such medication. Certainly the impairment of learning (described in Kennedy (1979) may be a major factor in preventing exposure working to a maximum effect.

Medication taking is a variable not often reported in outcome studies, although certainly the taking of Benzodiazepines by agoraphobics is widespread. The present study findings suggest that future outcome studies should attempt to control for medication taking, or preferably withdraw subjects from medication before inclusion in a trial. This, however, is easier said than done. The author's current clinical experience is that periods of more than a year may be needed to withdraw subjects from some benzodiazepines. MIND has recently produced a fact sheet (MIND, 22 Harley St. W.1) compiled by eminent workers, which suggests a rule of thumb of 30 days of withdrawal symptoms for each year taking benzodiazepines. Since some subjects in the current study have taken such drugs for 15 years or more, the difficulties in this area are far from minor.
The questionnaire findings regarding drop out provide some indications for change in preparation for treatment. The most frequent reasons were that the subject thought the therapist did not understand, and that treatment was frightening. The reason regarding therapist understanding indicates that more attention should be given to solving this difficulty before the point when a subject is compelled to drop out because he/she feels that he/she is not understood. Obviously, the initial interview is of paramount importance, and it would therefore seem that subjects are presently given insufficient opportunity to feedback their feelings of treatment. Emmelkamp (1983) suggests that the complex relationship between therapist and subject be further investigated, but perhaps the simple mechanics of communication during assessment interviews should be the first candidate for investigation.

The fact that 8 of the 13 drop outs who responded to the questionnaire were frightened of treatment indicates the necessity of pre-therapy training and/or the use of coping models via films of treatment. Furthermore, the treatment procedure of the current study, like many clinical programmes run in psychology departments, commenced with a long session of exposure. Perhaps some subjects need more gradation, including preliminary imaginal exposure, or at least a preparatory session of discussion before exposure treatment commences.

The other important area cited by drop outs was that of discongruent treatment expectations. 6 of the 13 subjects responding wished for another treatment. It would therefore be useful to check this attitude routinely at assessment, or to use the type of expectancy questionnaire used in the author's M. Phil study (Gournay (1983)). Coupled with this
finding, is the apparently widely held belief (6 of 13 subjects) that one has to overcome fears on one's own. Again, this belief needs to be elicited at assessment and debated accordingly. In the treatment failure group, the most commonly reported reason was that sessions were too anxiety provoking. This obviously indicates the need to consider more graduation of tasks fitted to individual assessment. The fact that 5 of the 14 respondents in this group reported that the therapist was not understanding is important, and again feedback opportunity for the subject during sessions may be an important factor. Also, Emmelkamp (1983) has indicated that perceived strictness (by subject of therapist) may be important in this area. Therefore greater matching of subject and therapist seems to be indicated. However, even if such complex matching could be effected, current resource limitations would seem to be a considerable obstacle.

This study of failure gives rise to some considerable concern. 44.4% of the original cohort have been defined as failures. This quantification has been lacking in virtually all outcome studies to date, but there is no reason to suppose that this 44.4% figure is any better or worse than any of the published studies. Certainly mean scores pre, post and follow up of the study group as a whole, are of the same order of magnitude as those of other studies. There is evidence (particularly with drop outs) that this failure figure could be much reduced by attending to pre-therapy training, more feedback during assessment and treatment, and a more conservative approach to the prescribing of psychotropic medication. However, there are many other areas relating to failure which are completely unresearched. Such inquiry is long overdue.
### RESULTS

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RESULTS
### Mean Pre-Treatment Scores

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<th>Agoraphobic sub-scale score</th>
<th>Wakefield Inventory</th>
<th>Leeds Inventory</th>
<th>Symptom Check List</th>
<th>Marital Questionnaire (subject)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Failure Groups</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined</td>
<td>n = 51 *</td>
<td>n = 51</td>
<td>n = 13</td>
<td>n = 37</td>
<td>n = 51</td>
</tr>
<tr>
<td></td>
<td>30.71 (7.20)</td>
<td>23.23 (6.14)</td>
<td>12.86 (3.59)</td>
<td>24.12 (7.58)</td>
<td>27.29 (15.71)</td>
</tr>
<tr>
<td><strong>Treatment Responders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combined</td>
<td>n = 81 *</td>
<td>n = 13</td>
<td>n = 37</td>
<td>n = 51</td>
<td>n = 24</td>
</tr>
<tr>
<td></td>
<td>28.43 (6.99)</td>
<td>23.59 (5.27)</td>
<td>11.71 (4.19)</td>
<td>23.30 (6.71)</td>
<td>18.39 (12.98)</td>
</tr>
</tbody>
</table>

| t                    | 0.940 df 130               | 0.193 df 38         | 1.358 df 86    | 0.648 df 130      | 2.422 df 60                    |
| p **                | n.s.                        | n.s.                | n.s.           | n.s.              | <0.02                          |

* Subjects categorized as relapsers are included in the responder group.

** Value for two tailed test
### Agoraphobic Sub Scale Score

<table>
<thead>
<tr>
<th>DROP OUTS</th>
<th>PRE TREATMENT</th>
<th>29.62</th>
<th>t = 5.329</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 13</td>
<td></td>
<td>(SD 8.00)</td>
<td></td>
</tr>
<tr>
<td>(of 26 in all)</td>
<td>FOLLOW UP RATING POINT</td>
<td>18.08</td>
<td>d.f. 24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(SD 10.82)</td>
<td>p &lt; 0.001</td>
</tr>
<tr>
<td>TREATMENT FAILURES</td>
<td>IMMEDIATELY POST TREATMENT</td>
<td>20.17</td>
<td>t = 0.616</td>
</tr>
<tr>
<td>n = 14</td>
<td></td>
<td>(SD 6.20)</td>
<td></td>
</tr>
<tr>
<td>(of 19 in all)</td>
<td>FOLLOW UP RATING POINT</td>
<td>19.33</td>
<td>d.f. 34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(SD 9.71)</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

(Second follow-up ratings after further professional help for 3 of the failure subjects were not used.)

PRE TREATMENT AND FOLLOW UP SCORES (AGORAPHOBIC SUB SCALE) FOR TREATMENT FAILURES AND TREATMENT DROP OUTS

**TABLE 13**
<table>
<thead>
<tr>
<th></th>
<th>Not taking psychotropic medication</th>
<th>Taking psychotropic medication</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed treatment</td>
<td>56 (46.5)</td>
<td>40 (49.5)</td>
<td>96</td>
</tr>
<tr>
<td>Dropped out or refused treatment</td>
<td>6 (15.5)</td>
<td>26 (16.5)</td>
<td>32</td>
</tr>
<tr>
<td>TOTALS</td>
<td>62</td>
<td>66</td>
<td>128</td>
</tr>
</tbody>
</table>

Expected Frequencies in brackets

$\chi^2 = 15.05$ 1 d.f. (corrected for continuity)

$p < 0.001$

<table>
<thead>
<tr>
<th></th>
<th>Taking Benzodiazepines</th>
<th>Taking Combination of Benzodiazepines &amp; Antidepressants</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed treatment</td>
<td>29 (27.3)</td>
<td>11 (12.7)</td>
<td>40</td>
</tr>
<tr>
<td>Dropped out or refused treatment</td>
<td>16 (17.7)</td>
<td>10 (8.3)</td>
<td>26</td>
</tr>
<tr>
<td>TOTALS</td>
<td>45</td>
<td>21</td>
<td>66</td>
</tr>
</tbody>
</table>

$\chi^2 = 0.873$ 1 d.f. n.s. (corrected for continuity)

Chi square analyses of drug taking of subjects completed treatment or dropping out/refusing

TABLE 14
<table>
<thead>
<tr>
<th></th>
<th>Taking psychotropic medication</th>
<th>Not taking psychotropic medication</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful Outcome</td>
<td>33 (35.6)</td>
<td>48 (45.4)</td>
<td>81</td>
</tr>
<tr>
<td>Treatment Failure</td>
<td>11 (8.4)</td>
<td>8 (10.6)</td>
<td>19</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44</td>
<td>56</td>
<td>100</td>
</tr>
</tbody>
</table>

Expected Frequency in Brackets

\[ \chi^2 = 1.84 \] 1. d.f. (corrected for continuity)  

n.s.

CHI SQUARE ANALYSIS OF SUBJECTS TAKING MEDICATION AND THEIR TREATMENT OUTCOME

TABLE 15
<table>
<thead>
<tr>
<th>Symptom</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms better</td>
<td>6</td>
</tr>
<tr>
<td>Symptoms worse</td>
<td>2</td>
</tr>
<tr>
<td>Received further help</td>
<td>3</td>
</tr>
<tr>
<td>Too much anxiety in treatment sessions</td>
<td>7</td>
</tr>
<tr>
<td>Therapist not understanding</td>
<td>5</td>
</tr>
</tbody>
</table>

TOTAL NUMBER OF SUBJECTS RESPONDING = 14 (of 19 in total)

NUMBER OF SUBJECTS RESPONDING AFFIRMATIVELY TO QUESTIONNAIRE REGARDING TREATMENT FAILURE

TABLE 16
<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved since treatment</td>
<td>4</td>
</tr>
<tr>
<td>No longer troubled by phobia</td>
<td></td>
</tr>
<tr>
<td>Appointments inconvenient</td>
<td>4</td>
</tr>
<tr>
<td>Treatment not what was wanted</td>
<td>6</td>
</tr>
<tr>
<td>Medication more helpful</td>
<td>4</td>
</tr>
<tr>
<td>Frightened of treatment</td>
<td>8</td>
</tr>
<tr>
<td>Therapist did not understand</td>
<td>9</td>
</tr>
<tr>
<td>Didn't like the therapist</td>
<td>2</td>
</tr>
<tr>
<td>Treatment presents difficulty for family</td>
<td>3</td>
</tr>
<tr>
<td>You have to overcome fears on your own</td>
<td>6</td>
</tr>
<tr>
<td>I will get better in time</td>
<td>4</td>
</tr>
<tr>
<td>Treatment will make me worse</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL NUMBER OF SUBJECTS RESPONDING = 13
(OF 26 IN TOTAL)

NUMBER OF SUBJECTS RESPONDING AFFIRMATIVELY TO QUESTIONNAIRE REGARDING DROP OUT FROM TREATMENT

TABLE 17
<table>
<thead>
<tr>
<th>Symptom</th>
<th>Number of Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms better</td>
<td>0</td>
</tr>
<tr>
<td>Symptoms worse</td>
<td>4</td>
</tr>
<tr>
<td>Received further help</td>
<td>0</td>
</tr>
<tr>
<td>Too much anxiety in treatment sessions</td>
<td>2</td>
</tr>
<tr>
<td>Therapist not understanding</td>
<td>2</td>
</tr>
</tbody>
</table>

NUMBER OF SUBJECTS RESPONDING = 6  
(OF 9 IN TOTAL)

NUMBER OF SUBJECTS RESPONDING AFFIRMATIVELY TO QUESTIONNAIRE REGARDING TREATMENT RELAPSE

TABLE 18
CHAPTER 3

APPENDIX FOUR

QUESTIONNAIRES

Page

FOR SUBJEC TS WHO FAILED OR RELAPSED ...................... 241

FOR SUBJECTS DROPPING OUT OR REFUSING TREATMENT .......... 242
NAME: ..................................

1) How are your agoraphobic symptoms now?

2) Are they better or worse than when you undertook treatment?

3) Have you received further help (of any kind) with your problem?

4) If so, can you detail this help.

5) Were your treatment sessions involving going to various places and dealing with anxiety too much for you?

6) During the treatment sessions was the therapist understanding?

7) Any other comments about the therapist.

8) Did your family help or hinder you during treatment?

QUESTIONNAIRE GIVEN TO SUBJECTS WHO FAILED OR RELAPSED.
NAME: .....................................

Please read the statements on the left of the page and tick the response which best describes your feeling about the statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not Applicable</th>
<th>Somewhat Applicable</th>
<th>Is very much Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am improved since my last appointment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am no longer troubled by my fears and phobias.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The appointments were at an inconvenient time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The treatment was not what I wanted.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medication would be more helpful</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was frightened of treatment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The therapist did not understand my problem.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I did not like the therapist.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I thought that treatment would present difficulties for my family</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I was persuaded against my better judgement to seek treatment.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;You have to overcome your fears on your own&quot;.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I will get better in time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment will make me worse</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

QUESTIONNAIRE GIVEN TO SUBJECTS WHO DROPPED OUT OR REFUSED TREATMENT
CHAPTER 4

SOME ASPECTS OF AGORAPHOBIC FEARS

AND THEIR CHANGE DURING EXPOSURE TREATMENT
<table>
<thead>
<tr>
<th>Chapter Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>245</td>
</tr>
<tr>
<td>Review of the Literature</td>
<td>247</td>
</tr>
<tr>
<td>Summary of Experimental Design</td>
<td>256</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>257</td>
</tr>
<tr>
<td>Method</td>
<td>257</td>
</tr>
<tr>
<td>Results</td>
<td>261</td>
</tr>
<tr>
<td>Discussion of Results</td>
<td>263</td>
</tr>
<tr>
<td>Appendix Five - Results</td>
<td>270</td>
</tr>
<tr>
<td>Appendix Six - Rating Scales</td>
<td>321</td>
</tr>
</tbody>
</table>
INTRODUCTION

The research described in this Chapter was prompted by the findings of a pilot study which was reported in the author’s M. Phil thesis (Gournay (1983)). For sake of clarity this research is first summarized before reviewing the relevant literature and describing the experiment.

M. Phil Pilot Study

The first 44 subjects were asked about the central fear which arose when confronted with the feared/avoided situations. All subjects defined a central fear, and six subjects defined a second central fear. Details are shown in the table below.

<table>
<thead>
<tr>
<th>Central Fear</th>
<th>Number of Subjects</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fainting or Passing Out</td>
<td>23</td>
<td>52.27</td>
</tr>
<tr>
<td>Dying</td>
<td>10</td>
<td>22.72</td>
</tr>
<tr>
<td>Urinary or Faecal Incontinence</td>
<td>5</td>
<td>11.37</td>
</tr>
<tr>
<td>Losing Control</td>
<td>5</td>
<td>11.37</td>
</tr>
<tr>
<td>Vomiting</td>
<td>1</td>
<td>2.27</td>
</tr>
<tr>
<td>TOTAL</td>
<td>44</td>
<td>100</td>
</tr>
</tbody>
</table>

The various core fears and their relationship to outcome of exposure treatment was then investigated using a Chi square analysis, with 3 levels of outcome (low, medium and high). On this analysis, subjects...
with fears of incontinence and being sick had significantly poorer outcomes (p<5%). There were two main criticisms of this pilot study. Firstly there was no attempt made to measure the intensity of the belief in the central fear coming to fruition. Secondly these central fears were not studied over time, nor in relation to any other variables.

However, during the study the author and the other research therapists became aware that some subjects were more convinced than others that their fears would come to fruition. Also, and unexpectedly, some subjects showed a variation in the nature of their fears between situations. For example, one subject became panicky during her first exposure session in a supermarket, and stated her conviction that she was about to die. She had, at assessment, given this as her main fear, with no stated second main fear. During the second session spent on a bus journey, she again felt panicky, but this time stated that she thought she was about to collapse, and was very concerned that other passengers would stare at her. On closer questioning she revealed that, on this occasion at least, she was not particularly concerned about dying. There were many other similar examples in the study subjects, of different fears occurring in different situations. Furthermore, it was clear that the intensity of conviction that fears would come to fruition, varied considerably between subjects, both at assessment, and over the course of treatment. It was therefore concluded that any study examining the relationship of central agoraphobic fear to outcome should take into account the variation in both nature and intensity of belief regarding central fear. After reviewing the relevant literature such a study is described.
A Review of the Literature

It is only recently that the issue of detailed cognitive assessment in relation to the behavioural treatment of patients has been addressed. Kendall and Hollon (1983) argue convincingly that an analysis of the contribution of cognitive change to behavioural change is long overdue. They go on to indicate that there are considerable problems to effecting this. This same area of concern has been addressed by Merluzzi et al (1981) and Meichenbaum (1976). Kendall, in Kendall and Hollon (1981), sets out 4 primary purposes for cognitive assessment, and these are worth repeating in full. They are:-

1) To study the relationships among covert phenomena and their relationship to patterns of behaviour and expressions of emotion.
2) To study the role of covert processes in the development of distinct psychopathologies, and the behavioural patterns associated with coping.
3) To confirm the effects of treatment.
4) To check studies where cognitive factors have either been manipulated or implicated in the effects of the manipulation.

Very little attention has been paid to the specific cognitive processes of agoraphobics. However, some of the research carried out with anxious subjects may provide some indications of what these processes are. Beck et al (1974) gave an account of the cognitive components of subjects with general anxiety disorder, and proposed that certain kinds of stress activate schemata relative to "personal danger". This leads to a pattern of cognitive activity with the following characteristics:-
1) Systematic misconstruing of experiences along lines very similar to those observed in depression (arbitrary inferences, over generalisation, misinterpretation, etc.).

2) Specific thoughts or images which are often clearly related to past experience.

3) Cognitions generally preceding the onset or exacerbation of experienced anxiety.

4) The amount of anxiety being proportional to the degree of plausibility (to the patient) of the hypothetical danger, the patient's own notion of the severity of harm, and his estimate of the likelihood of the dreaded event to occur.

Hibbert (1984) was prompted by Beck et al's (1974) paper to study some aspects of cognitive function in general anxiety disorders. He studied 25 outpatients who had general anxiety disorder satisfying the research diagnostic criteria of Spitzer et al (1978). Patients with phobic disorder were excluded, as were subjects with other diagnoses. Patients were assessed using a standardized interview, and this was repeated in order to assess the reliability of the data on ideational content. Hibbert found that patients with panic attacks demonstrated the presence of a characteristic ideational component, with cognitions centering on the theme of personal danger. Patients without such panic attacks had less threatening fears, such as "I may be ill," "they will dislike me," "I am inadequate to deal with this." Patients with panic attacks had more dramatic thoughts, centering on themes such as death and heart attacks. Hibbert also reported that with severer levels of anxiety, thoughts tended to be more intrusive, more credible and harder to exclude. His findings in this regard were in accord with
those of Rachman (1981). Hibbert also concluded that his data supported
the findings of Teasdale et al (1980) and Clark and Teasdale (1982),
who demonstrated that there tends to be increasing accessibility of
negative thoughts with increasing dysphoric mood. However, Hibbert's
explanation of the cognitive content of these anxious subjects was
biological. He thought that many of his subjects were hyperventilators,
and that this cued faulty cognitions. Also, he cited the work of Frohlich
et al (1969) and Sheehan et al (1980) in suggesting that general anxiety
may be due to Beta-adrenergic overactivity, and thus be primarily an
organic problem.

Recently Butler and Mathews (1983) studied 3 groups of 12 subjects, i.e.
generalised anxiety, major depressive disorder and normal controls.
They examined how subjects estimated personal risk. The method used
questionnaires containing brief, ambiguous scenarios (e.g. hearing a
noise in the middle of the night). Subjects were then asked to rank
the likelihood of them thinking each of 3 alternatives in response to
the scenario. In turn subjects then rated subjective cost (value), and
subjective probability of alternative outcomes. The study demonstrated
that anxious subjects were more likely to interpret ambiguous material
as threatening, and that anxious subjects also rated subjective cost
(value) of threatening events higher than the control group. The
depressive group showed a similarity to the anxious group. In other
respects however, the study showed some differences between the anxious
and depressed subjects, and the authors commented that, at present,
there was a need to distinguish more clearly, anxious, from depressed
cognitions. In summary the study seemed to support an interaction
between anxiety and the availability of danger schemata.
There has been no systematic study with agoraphobics as with the anxious subjects, and only the sifting of isolated reports gives any indication of what processes may be important with agoraphobics. For example, Barlow and O'Brien (1984) reported the case of an agoraphobic who improved on behavioural, physiological and self report measures with exposure treatment, but who continued to think of avoidance. This patient later relapsed. This type of finding, which is commonly reported by experienced clinicians, is in accord with the argument of Hollon and Kriss (1984), who stated that permanent changes in schemata would have to be made in therapy to prevent relapse. Thus one should aim for the alteration of cognitive avoidance. It could also be argued that isolated exposures can do little in themselves to alter entrenched self schemata, and that exposure should be complemented by procedures designed to change cognitive "styles".

There are two papers worthy of note in setting the scene for hypothesis testing with agoraphobics undergoing exposure treatment.

As long ago as 1976 Beck observed that clients subjective estimates of harm would shift as a function of exposure to the feared situation. However, Beck's observation, while accepted by most clinicians as correct, has, until the present study, yet to be experimentally tested.

Secondly, in Rachman's (1983) paper which reviewed the possibility of using some fresh approaches to modify agoraphobic avoidance, he pursued the same line of argument as Beck. Rachman reviewed the work of
Seligman and Johnston (1973), pointing out that an essential part of their cognitive theory of avoidance was that avoidance behaviour is most effectively weakened by repeated disconfirmations. Thus, technically speaking, a disconfirmation is the discrepancy between the expected outcome and the actual outcome. Rachman suggested that probability estimates be systematically used prior to exposures. Rachman felt that such a therapeutic procedure could be extended to disorders other than agoraphobia. One obvious disorder which would lend itself to such an approach would be obsessional neurosis, particularly where there were specific cues such as contamination. One area of measurement which was only briefly mentioned by Rachman, but which seems important in such an approach, is the issue of the value attached to the outcome. Obviously, whether one performs a particular behaviour, is determined not only by the probability of a particular outcome occurring, but by the value attached to that outcome. For a recent review of this area see Azjen and Fishbein (1980). Obviously the relationship of value and subjective probability of outcomes needs further investigation with regard to exposure treatments.

Measurement of Cognitive Variables During Treatment

Lang's three system model of fear (e.g. Lang (1968)) has been accepted as a useful model for operationalising a rather difficult concept. However, within the area of measurement, little justice has been done to comprehensive measures of change within these three systems. Physiological measures of anxiety are rarely used during exposure (only three studies with agoraphobics between the years 1967 and 1980
used physiological measures). Although such measures have been used in a few studies since 1980, notably by Barlow and Mavissakalian in America; a single measure i.e. heart rate, has been used in the quite specific circumstances of a "behavioural walk". (This is a specific 1000 yard course running from the treatment centre to the local shopping area.) Regarding the behavioural measures, there have been many attempts to measure different aspects of behaviour, either by behavioural testing or self report, and more indirectly, by questionnaires. This area is the most comprehensively covered of the three response systems. With regard to the area of cognitions, the only measure used until recently, has been to ask the subject to rate their subjective units of distress, and thus try to quantify the more global cognitive aspects of their fear. More recently some workers have used Bandura's (1977(a)(b) Concept of Self Efficacy, and asked subjects to make efficacy estimates (e.g. Elliott (1981)).

One promising area of investigating change in cognitions would be to examine belief in the possibility of the central fear coming to fruition. This was used in the study of cognitive processing and anxiety described above (Butler and Mathews (1983)), but not in clinical agoraphobic populations during treatment programmes. When one examines the general attitude literature, it is clear that not only is the probability of an event occurring important, but also the value attached to such an event. For a recent discussion see Azjen and Fishbein (1980).

Coleman (1981) suggested that an important part of assessment should be
to ask the agoraphobic to make a daily record of dysfunctional thoughts. This type of monitoring procedure has since been advocated by other workers e.g. Thorpe and Burns (1983).

Recently Chambless and her colleagues (1985) described a questionnaire designed to measure agoraphobic cognitions. The scale is comprised of 13 items (e.g. I will not be able to control myself, I will have a heart attack), which are rated on a five point scale (i.e. 1 = thought never occurs through to 5 = thought always occurs). The scale was demonstrated to have good reliability, and to fare well on tests of discriminant and construct validity. The authors suggested using such a scale to investigate treatment process. This suggestion has already been taken up by the present author in the research presented below, although the assessment of cognitions follows a somewhat different procedure.

Finally, Sherling (1985) has designed a questionnaire to quantify cognitive avoidance with agoraphobics, and her pilot study shows some promise of this measure having clinical utility.

Studies of Cognitive Treatment with Agoraphobics

In the area of treatment, there has been a recent trend to treating agoraphobia with strategies involving manipulation of cognitions while carrying out exposure treatment. However, evaluative research in the clinical area is confined to four published studies with agoraphobic subjects.

Emmelkamp et al (1978) studied the comparative effectiveness of cognitive
restructuring and exposure in vivo, in a group of agoraphobics, and
demonstrated that exposure in vivo was clearly superior. However, the
cognitive therapy lasted only 5 days (2 hours per day), and one could
argue that this was insufficient time to assimilate and practice new
strategies. In a later study, Emmelkamp (1979) used a between group
design to compare exposure in vivo with cognitive restructuring and a
combined treatment of exposure in vivo and cognitive restructuring.
Emmelkamp concluded that exposure in vivo was a superior treatment with
respect to anxiety and avoidance, and that cognitive restructuring did
not add to outcome. Again this study used only a brief time period
(2½ weeks) for the cognitive treatment. Emmelkamp has stated elsewhere
(Emmelkamp 1982), that cognitive modification should be reserved for
subjects whose cognitions did not change with exposure treatment.

In the third study, Williams and Rappoport (1983) used a combination of
exposure in vivo and cognitive therapy on the driving fears of agoraphobics.
Again the cognitive addition did not seem to produce any additional effect.

In the best designed and controlled experiment of this group of studies,
Mavissakalian et al (1983) compared Self Statement training and Paradoxical
Intention in a group of agoraphobics who all had concurrent self directed
exposure in vivo. Treatment lasted 3 months and the duration, in the
authors' view, allowed adequate time for the strategies to be "learned,
integrated and practiced". The study demonstrated no difference between
treatments, and the order of change on the outcome measures seemed much
the same as studies using exposure alone. Cognitive changes were marked
by a decrease in self defeating statements, but there was no parallel
increase in coping statements. Perhaps the greatest flaw in this, and the other studies reviewed, was that there was no attempt to control for the nature and variability of "faulty" cognitions; and consequently treatment was given in blanket fashion to (cognitively) heterogeneous samples.

Finally Sherling (1985) carried out an interesting pilot study of exposure treatment. She measured cognitive avoidance and self efficacy estimates. While, as expected, cognitive avoidance decreased with successful treatment, high levels of cognitive avoidance did not prevent clinical improvement taking place. However, there was no long follow-up, and the issue of relapse was not considered.

In summary, there is an obvious need to investigate further the issue of cognitive processes in agoraphobic subjects. Obviously detailed assessment of agoraphobics not receiving treatment is a priority. However, as this was not possible within the current design, it was felt desirable to investigate some hitherto unresearched areas of cognitive change during treatment. It is hoped that such a study will help differentiate between subjects for whom exposure in vivo will suffice, and subjects who will need additional cognitive therapeutic endeavour.
Summary of Experimental Design

As the pilot study previously reported (Gournay (1983)), there was the indication that there are a wide range of fears linked to cognitive processes with agoraphobics. Therefore the most appropriate experimental enquiry seemed to be a study of single cases. This could then be augmented by dividing the cases according to treatment response, in order to look for differing patterns of cognitive change.

The issue of a control group was considered. However, the nature of agoraphobic fears e.g. becoming incontinent, collapsing with a heart attack, have been shown to be so dominating and severe (e.g. Marks (1969)) that a comparison with normal subjects would fulfil no particular function. Certainly with simple phobics Volans (1974) showed that their ratings of subjective probabilities of harmful outcomes was much higher than a normal control group. This finding was confirmed in the study by Butler and Mathews (1983).

Two measures of cognition (i.e., subjective probability and value of negative outcomes) were made before exposure treatment, before and after each session of exposure treatment, and after treatment (at post and follow-up intervals) on 12 agoraphobic subjects. They were also assessed using the dependent measures described in Chapter Two. The measures of cognition were made with regard to six target behaviours reflecting a wide range of circumstances.
HYPOTHESES

As this area of research is so new, only the most general predictions are made. The strategy of using a number of single cases has been employed in order to collect information which will form the basis of further experiments.

1) Subjects will, before treatment, rate highly the probability of negative outcomes occurring.

2) Subjects will, before treatment, rate highly the value (subjective cost) of negative outcomes.

3) The ratings of subjective probabilities of negative outcomes will decrease during successful treatment.

4) Subjects ratings of value of negative outcomes will decrease during successful treatment.

5) Unsuccessful outcomes and relapses will be generally characterised by unchanged ratings of subjective probability and value.

METHOD

Subjects

The subjects were 12 agoraphobics fulfilling the inclusion criteria of the main treatment trial (see Chapter 2). The 12 subjects comprised 10 women and 2 men, mean age 38.08 years (SD 9.86). The mean problem duration was 10.17 years (SD 5.22).

Allocation

Subjects were allocated randomly to therapists as in the main trial.

Therapists

These were, for this group of patients, a research psychologist with 3
years experience of using exposure in vivo, a nurse therapist with 7 years experience of using exposure in vivo, a first year probationer clinical psychologist naïve to behavioural methods, and a third clinical probationer clinical psychologist with a small amount of experience of exposure in vivo.

Measures

A) General Outcome

1) Phobic Problem Severity
2) Fear Survey Schedule
3) Leeds Depression Inventory
4) Behavioural Avoidance Test
5) Work/Home management/Social Leisure/Private Leisure
6) Maudsley Marital Questionnaire.

Rating Points

All the above were completed at the same intervals as in the main trial, i.e. Pre treatment, post treatment and at follow-up.

B) Cognitive Change

1) Target Behaviour
2) Subjective Probability (of outcomes)
3) Value (subjective cost) (of outcomes)

Target Behaviours

Six target behaviours were elicited from each subject by asking "What
would you like to be able to do at the end of treatment?" The response was then operationally defined. For example, a subject may respond that she wished to "go shopping". This would then be defined after mutual negotiation, in unambiguous terms, also defining the role of safety signals or modifying factors. Therefore the shopping example may be:

"To shop alone in Tesco's (Finchley Central) for a 20 minute period in the afternoon (without using a walking stick as a support in case of feeling faint). Also, a feature of the exercise should be queuing and browsing for items, rather than buying the first available item."

These targets are then entered on to the target rating form (see appendix 6, p322). Six targets are elicited for each subject, each subject would therefore have a range of target behaviours from, in their terms, the easiest to the most difficult items.

Expected Outcomes of Performing a Target Behaviour

Subjects were asked to state the negative outcomes for each target. For example: "if you went into Tesco's tomorrow for a 20 minute period without a walking stick, etc... what would be the worst thing to happen?". This would yield the negative outcome.

In this way a list of targets with negative outcomes was compiled.

The subject was then asked to rate the outcomes in terms of subjective
probability and value on the rating scales shown below (see appendix 6, pages 323-4).

Before and after each session of exposure subjects were asked to rate outcomes for each of the six target behaviours.

NOTE
I wish to extend my grateful thanks to Professor Andrew Mathews who helped me devise the rating scales for subjective probability and value. I thank him for his encouragement to carry out this particular research.

Treatment
Treatment was as described for the main trial (see Chapter 2). To recap, this consisted of 6 x 2 hour sessions of therapist aided exposure in real life. A range of situations were used, including travelling by bus and tube, shopping centres and other situations commonly a problem for the agoraphobic. The six sessions took place over a period of approximately 21 days. There were no additions to treatment such as spouse involvement, instruction manuals or any anxiety management training. Subjects were simply instructed in staying in the situation until they felt better, and told that repeated exposures to their feared situations would lead to a decrease in fear.
RESULTS

For each subject the ratings of subjective probability and value, together with the ratings on the central dependent measures are demonstrated in graph form (appendix 5, pages 273 to 320).

Each set of data is preceded by a brief account of the subjects central fears, their target behaviour and relevant treatment information.

Table 19 shows the mean ratings of subjective probability and value for six targets for each subject.

Of the 12 subjects, 3 met the criteria for failure (fully described in Chapter 3). These were subjects No. 2, 3 and 6. Two of these subjects (No. 2 and 6) however, made significant improvement during the follow-up period, and no longer met failure criteria. Neither of these subjects had any further treatment of any kind. One subject (No.12) dropped out of treatment at the end of the second session of treatment. Two subjects (Nos 5 and 8) met criteria for relapse, although one of these subjects relapsed on a single measure only. However, this was the Behavioural Avoidance Test, which is arguably the only direct measure of agoraphobic avoidance. The remaining six subjects (Nos 1, 4, 7, 9, 10 & 11) had successful treatment outcome which was maintained to follow-up.

Table 20 shows that when the groups were divided into treatment responders and non-responders, that there was no significant difference between subjective probability rating pre treatment. However, there was a highly significant difference in the ratings between these two groups at follow-up.
Regarding ratings of value, there were no significant differences at either pre treatment or post treatment between the group of responders and the group of non responders.
DISCUSSION OF RESULTS

The subjects in this study would seem typical of populations of agoraphobics in general. Their level of handicap pre-treatment was severe and long standing. They had a range of central agoraphobic fears; indeed 11 of the 12 subjects had more than one central fear. The subjects, overall, selected targets which were common to the study subjects and indeed to agoraphobics in general. However, the precise definition of target behaviour made at assessment showed considerable individual difference. Thus, for example, many subjects chose shopping in a supermarket as a target, but subjects differed considerably in what factors modified the situation to make it more or less frightening. This would seem to be a reflection of the variations of fear in agoraphobic populations. This factor thus prevented using standard targets for the population of subjects under study.

Regarding the first hypothesis concerning subjective probability ratings, 10 of the 12 subjects had a mean subjective probability rating of a negative outcome occurring if they performed a target as specified, of over 80%. During exposure treatment there was a reduction in these ratings for all subjects (see tables 19, 20). This confirms Beck's (1976) hypothesis that subjective probability estimates change as a function of exposure to the fear stimulus. However, there are clear differences in subjective probability ratings at post treatment between responders and non-responders, as the t-test results show. Furthermore, there was no significant difference between pre-treatment subjective probability estimates for responders and non-responders. Thus this
measure seems to have no predictive quality.

Scrutiny of individual data demonstrates that subjective probability ratings change not only between assessment and treatment, but within and between exposure sessions. Because most agoraphobics continue to go out, it is extremely difficult to control between session exposure. It therefore becomes impossible to quantify the "carry over" effect of exposure treatment sessions with regard to reduction in subjective probability estimates.

One very interesting observation from the individual data is the way in which individual sessions of exposure seem to influence subjective probability estimates of all targets simultaneously. There are, however, exceptions to this. For example, for subject No. 9 target No. 1 was travelling by car on a motorway. While the other targets showed a parallel change in subjective probability ratings, the ratings for this target were unaffected until session 5, when the exposure trip consisted of a motorway drive. After this session there was a dramatic drop in ratings for this target.

Scrutiny of individual treatment responders shows no net change between the end of treatment and follow-up in subjective probability ratings. It is interesting to note that despite very significant change on the dependent measures of agoraphobia for the responder group, the mean follow-up subjective probability ratings were ranged from 10 to 45. Thus at post treatment these subjects apparently still had a significant estimation of something aversive occurring if they attempted a target behaviour. This
personal estimation of an aversive outcome would seem to be a factor in maintaining avoidance behaviour, or at least performance of certain behaviours only under specified conditions. For example, subjects would go shopping, but only in the company of a trusted companion.

Regarding Rachman's (1983) point that repeated disconfirmations will lead to reduction of fear and avoidance in agoraphobics, the experimental data support this assertion (i.e. the high correlation between pre to post change in agoraphobic avoidance and change in subjective probability estimates). However, it does seem that other variables are responsible for maintaining a conviction on the part of the agoraphobic that her/his fears will come to fruition. One hypothesis would be that the evidence for maintaining a conviction comes from continuing physiological disturbance. Thus, if the agoraphobic continues to be highly aroused, with tachycardia, hyperventilation, etc., she/he will continue her/his high estimation of an aversive outcome occurring. This hypothesis would be in accord with the view that agoraphobia is caused and maintained by a mixture of organic and psychological processes. Specifically an anomaly of physiological arousal such as beta adrenergic over-activity would continue to provide the physiological cues of anxiety. Another way of viewing the continuing over-estimation of risk would be to say that the agoraphobic subject continued to scan the environment for danger signals at a greater rate than would a normal subject. Alternatively, it could be argued that incoming information was incorrectly processed or that both these factors contributed to this over-estimation. These hypotheses would be in accord with the view of Butler and Matthews (1983) in the discussion of their experiment with generally anxious subjects.
The view of the cognitive theorists does not exclude organic factors, but of course the weighting of the importance of these cognitive factors varies considerably between different workers. The measurement of the variable of value attached to outcome, in this study, gives an additional perspective of the cognitive processes involved in agoraphobia and its treatment. Scrutiny of individual and grouped data demonstrate, that prior to treatment, all of the study subjects attached an extremely negative value to their feared outcomes. Interestingly, 3 of the 6 treatment responders (subjects 1, 4 and 9) maintained virtually the same value to the feared outcome at post treatment follow-up as at pre-treatment, despite significant change in subjective probability and the other dependent measures. Furthermore, all three failures showed no change in mean ratings of value between the three rating points. Certainly the value rating would seem to have no predictive quality regarding outcome, and the indication is that any change in value is independent of the behavioural change reflected in the dependent measures. Indeed the value attached to outcome is theoretically independent of the probability estimate.

It would be tempting to argue that in order to reduce or cease avoidance behaviour, a subject would need not only to see an aversive outcome as less likely, but to attach a lesser value to such an outcome. This relationship, is of course well known in social psychology, and some authors would argue (e.g. Ajzen and Fishbein (1980)) that both variables if properly measured and considered together would predict very accurately the likelihood of performing (or not performing) a behaviour.

It would thus seem to be important to change the extreme view of the
agoraphobic towards these feared outcomes. The two routes to this would seem to be either exposure to the outcome or some form of rational persuasion. Exposure could be effected by imaginal rehearsal of the various aversive outcomes. Exposure to these outcomes would continue until the subject habituated. Persuasion that such an outcome may not be as bad as is thought, could be systematically effected by Rational Emotive Approaches (Ellis 1961, 1970). Indeed workers such as Ellis would argue (e.g. Ellis, 1979) that exposure is an integral part of such cognitive restructuring.

The results of this study indicate that, in the subjects there was a modification of faulty cognitive function occurring over treatment. There was however, no evidence to suggest that any radical change in such function which would amount to a "cure" of agoraphobia, took place. This result could be explained by arguing that the exposure given to subjects was primarily to situations which were avoided, rather than feared outcomes. This issue seems of central importance.

If one examines the method of imaginal exposure used in the various outcome studies, there is little indication of what specifically the subjects were exposed to. The evidence concerning imaginal exposure which was reviewed by James (1985) is overall rather ambiguous. The varying findings can be explained thus; in some of the studies there may have been emphasis on exposure to aversive outcomes, rather than to situations. This exposure would then possibly lead to a significant reduction in the aversive values attached to such outcomes.

Conversely, imaginal exposure to the situation would lead only to minimal,
If any, change in the value attached to the outcome. Thus James' (1985) reviewed studies may contain both methods of exposure described above or varying mixtures of the methods.

It would be tempting therefore to suggest that exposure should be carried out by preparing the subject by exposure to outcome. This would effect the value attached to this outcome. Secondly, the subject would be exposed to the situation and undergo the experience of repeated disconfirmation and a lessening of perceived risk. However, a trial of comparing exposure in imagination to the aversive outcomes with exposure in imagination to the situations avoided would seem to be a research priority.

The study attempted to measure only two attitude variables, and it could be that additional variables not measured are responsible for some of the rather ambiguous results. Certainly as Azjen and Fishbein (1980) argue, behaviour is crucially influenced by social belief factors. Therefore if, as Hallam (1985) argues, Agoraphobia is part of a general staying at home behaviour, the social influences of important others may be central to the behaviour change, or otherwise, of agoraphobics in treatment. Specifically if one's family believes that avoidance of anxiety where possible, is the best method of coping, then the social pressure from a family may prove stronger than the advice of the therapist to confront fear.

The current study has attempted to investigate some cognitive variables during exposure treatment, but does not pretend to provide other than
preliminary data. The call for more experimental analyses of agoraphobia (Rachman (1983)) seems particularly relevant in the area of agoraphobic cognitions.
CHAPTER FOUR

APPENDIX FIVE

RESULTS

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<td>COMPARISON BETWEEN RESPONDERS AND NON RESPONDERS ON RATINGS OF SUBJECTIVE PROBABILITY AND VALUE</td>
<td>20</td>
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<td>MAIN SUBJECT AND TREATMENT CHARACTERISTICS (for each)</td>
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<tr>
<td>SUB NO</td>
<td>MEAN RATING* OF SUBJECTIVE PROBABILITY FOR SIX TARGETS</td>
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<td>8</td>
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* The mean of 6 ratings per subject (these ratings refer to those made using the scales shown on pages)

MEAN RATINGS OF SUBJECTIVE PROBABILITY AND VALUE OF OUTCOMES

| TABLE 19 |
## Table 20

<table>
<thead>
<tr>
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<th>Pre Treatment</th>
<th>Follow up</th>
<th>Value</th>
<th>Probability</th>
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<tr>
<td>Follow up</td>
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</table>

*Note: All subjects are balanced on sex and subjective probability ratings.*
SUBJECT No.1 - was a 36 year old married female whose problem was of 14 years duration.

Central Fears - having a panic attack and/or going mad.

Summary of Targets

1) Driving alone.
2) Being carried as a passenger in a car.
3) Going to the cinema.
4) Using a lift.
5) Travelling by tube.
6) Taking a bicycle ride alone.

Relevant Information about Treatment

Session 1 and 2 of treatment were successful, in that the subject coped with some previously avoided situations without panic. During session 3 (in a large shopping centre) she had a panic attack while away from the therapist and needed much encouragement to stay in the situation. She eventually felt less anxious and continued with another task alone. Sessions 4, 5 and 6 included a range of exposure tasks. During these the subject accomplished tasks she had long avoided.

Outcome on Dependent Measures

Successful outcome at post treatment, maintained to follow-up.
SUBJECT No.2 - was a 32 year old single female whose problem was of 14 years duration.

Central Fears - Passing out, making a fool of herself.

Summary of Targets
1) Shopping alone (small shops)
2) Eating in restaurants.
3) Going to cinema.
4) Shopping in supermarket.
5) Visiting the library.
6) Travelling by tube.

Relevant Information about Treatment
The subject co-operated fully with each treatment session. While she did not experience any panic attacks, she reported that it took a long time during each session to feel less anxious.

Outcome on Dependent Measures
Failure at post treatment, but improved on measures at follow-up. No longer meeting criteria for failure.
SUBJECT No. 3 - was a 36 year old divorced female whose problem was of 2 years duration.

Central Fears - Being mugged (A particularly violent mugging had coincided with the commencement of agoraphobic avoidance.) She also feared having a panic attack.

1) Shopping (in the centre where she was mugged)
2) Shopping in smaller shops.
3) Travelling by tube.
4) Visiting friends.
5) Going swimming.
6) Going to the cinema.

Relevant Information about Treatment

The therapist was unable to persuade the subject to expose herself to being alone in the shopping centre where she was mugged. However, the 6th session was spent in that area, but in the company of the therapist. The subject co-operated with all the other exposure exercises, tackling a range of situations she had long avoided.

Outcome on Dependent Measures

Met failure criteria at post treatment and follow-up.
SUBJECT No. 4 - was a 31 year old married female whose problem was of 13 years duration.

Central Fears - Vomiting, making a fool of herself, passing out and having a panic attack.

Summary of Targets

1) Travelling by tube.
2) Going to a restaurant.
3) Going to the cinema.
4) Being alone at home at night.
5) Travelling by bus.
6) Standing in a queue.

Relevant Information about Treatment

Sessions 1 and 2 were spent spending time alone in previously avoided situations. Session 3 was spent making a long tube journey. Travelling by tube had been avoided since the problem commenced. The subject stated that she was amazed that she had been able to accomplish this feat without any harmful outcomes.

Outcome on Dependent Measures

Successful outcome at post treatment, maintained to follow-up.
SUBJECT No. 5 - was a 38 year old divorced female whose problem was of 15 years duration.

Central Fears - having a panic attack, fainting.

Summary of Targets
1) Shopping in local shops.
2) Walking alone.
3) Using a lift.
4) Being carried as a passenger in a car.
5) Staying alone at home.
6) Going to a bingo hall.

Relevant Information about Treatment
The subject progressed through a range of exposure situations over the treatment sessions. She was able to perform a number of activities, that she had long avoided. No particular problems were encountered.

Outcome on Dependent Measures
Successful outcome at post treatment. Relapsed at second follow-up point.

Note
Subject reported that she began experiencing panic attacks and that these caused her to avoid various situations once more.
Subject No. 6 was a 31 year old married female whose problem was of 10 years duration.

Central Fears - Passing out, having a panic attack.

Summary of Targets

1) Shopping alone (local shops)
2) Standing in a queue.
3) Going to the theatre.
4) Going swimming.
5) Going to a friends for coffee.
6) Walking alone.

Relevant Information about Treatment

The subject co-operated during all treatment sessions. It appeared that it took a long period of time for her anxiety to reduce in the treatment sessions. She did however, face a range of situations that she had been unable to enter for a long period of time.

Outcome on Dependent Measures

Failure at post treatment, but improved on measures at follow-up, no longer meeting criteria for failure.
SUBJECT No. 7 - was a 36 year old single female whose problem was of 10 years duration.

Central Fears - having a panic attack, doing something which could be considered socially inappropriate.

Summary of Targets

1) Travelling by train.
2) Shopping (in a large shopping centre)
3) Driving alone.
4) Visiting a cinema.
5) Visiting a restaurant.
6) Shopping in a supermarket.

Relevant Information about Treatment

Sessions were uncomplicated. The subject faced a range of situations that she had avoided for many years apparently with little difficulty.

Outcome on Dependent Measures

Successful outcome at post treatment. Maintained to follow-up.
SUBJECT No. 8 - was a 66 year old married female whose problem was of 20 years duration.

Central Fears - passing out.

Summary of Targets

1) Going to a concert hall.
2) Going to a party.
3) Shopping (in a large shopping centre)
4) Travelling by bus.
5) Driving alone.
6) Going to the hairdresser.

Relevant Information about Treatment

Sessions were uncomplicated. The subject faced a range of situations that she had avoided for many years apparently with little difficulty.

Outcome on Dependent Measures

Successful outcome at post treatment. At first follow-up point met failure criterion on an isolated measure (The Behavioural Avoidance Test). However, at 2nd follow-up point, met success criteria again.
SUBJECT NO. 9 - was a 34 year old single male whose problem was of 6 years duration.

Central Fears - having a heart attack, passing out, losing control and becoming violent.

Summary of Targets

1) Travelling by car on a motorway.
2) Travelling by tube.
3) Going to a pub.
4) Using a lift.
5) Eating in restaurants.
6) Shopping (in a large shopping centre).

Relevant Information about Treatment

Sessions were uncomplicated. The subject faced a range of situations that he had avoided for many years, apparently with little difficulty.

Outcome on Dependent Measures

Successful outcome at post treatment, maintained at follow-up points.
Agamphobic Sub Scale

Behavioral Avoidance Test

Phobic Problem Severity

PRE POST FU 1 FU 2

SUBJECT 9
SUBJECT No. 10 - was a 35 year old married male whose problem was of 7 years duration.

Central Fears - having a panic attack, having a heart attack.

Summary of Targets

1) Being at sea in an open boat.
2) Walking on a beach.
3) Walking along a street.
4) Using a lift.
5) Travelling by bus.
6) Travelling by tube.

Relevant Information about Treatment

Sessions were uncomplicated. The subject faced a range of situations that he had avoided for many years, apparently with little difficulty.

Outcome on Dependent Measures

Successful outcome at post treatment, maintained at follow-up points.
Subject No. 11 was a 34 year old married female whose problem was of 4 years duration.

Central Fears - Having a panic attack, becoming incontinent.

Summary of Targets

1) Travelling by bus.
2) Travelling by tube.
3) Shopping (in a supermarket).
4) Travelling by train.
5) Travelling by car (as a passenger)
6) Visiting the cinema.

Relevant Information about Treatment

Sessions were uncomplicated. The subject faced a range of situations that she had avoided for a long time, apparently with little difficulty.

Outcome on Dependent Measures

Successful outcome at post treatment, maintained at follow-up points.
SUBJECT NO. 12 - was a 48 year old married female whose problem was of 7 years duration.

Central Fears - having a panic attack, fainting.

Summary of Targets

1) Walking alone.
2) Queueing.
3) Driving alone.
4) Travelling by tube.
5) Travelling by bus.
6) Visiting the hairdresser.

Relevant Information about Treatment

During the first and second session the subject refused to try to do anything alone. She did however, manage to spend the sessions with the therapist in some shopping situations. She refused to commence the third session under any circumstances.

Outcome on Dependent Measures

Improved at follow-up 3 months later (without any further treatment.)
<table>
<thead>
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<th>RATING SCALES</th>
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<td>TARGET RATING FORM</td>
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<tr>
<td>SUBJECTIVE PROBABILITY OF OUTCOMES</td>
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<tr>
<td>VALUE (SUBJECTIVE COST) OF OUTCOMES</td>
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Below are the agreed definitions of the target(s) you will work towards.
Read through and sign them if you agree.

Date of Agreement ........
Signature .................

Below rate your actual progress towards achieving each target regularly without difficulty. Using the scales below, write your chosen scores in the appropriate boxes at the foot of this page.

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TARGET RATING FORM
**TARGET OUTCOME**

**THE PROBABILITY OF THIS OUTCOME OCCURRING IS:**

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**RATING**  

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**SUBJECTIVE PROBABILITY OF OUTCOMES**  
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VALUE (SUBJECTIVE COST) OF OUTCOMES
(NEGATIVE AND POSITIVE)
CHAPTER 5

MALE AND FEMALE AGORAPHOBICS - OUTCOME

DIFFERENCES AND SEX ROLE STEREOTYPING.
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A striking feature of the literature on agoraphobia is the preponderance of female sufferers. Thorpe and Burns (1983) examined 10 of the major studies conducted prior to 1981, and found that the percentage of female sufferers varied between 66% and 90%, with an average of about 80%. In their own large study of agoraphobics (963 subjects), the female percentage was 88.2%. Whether these figures give an indication of the true prevalence is uncertain but they do draw attention to the importance of sex roles on the problem, and differential treatment effect between the sexes.

The reasons for writing the literature review and conducting the research reported in this chapter are twofold. Firstly, there is surprisingly little specific information in the area of sex roles, with regards to agoraphobia. Secondly a clinical lore is emerging, which states that male agoraphobics are more difficult to treat, although the evidence for this is sparse.

A REVIEW OF THE RELEVANT LITERATURE

The development of behaviour appropriate to gender is a much researched area, and it has long been assumed that certain psychological disorders are sex linked. Dwyer (1984), in a comprehensive review of the historical aspects of psychological disorder and gender, argues convincingly that the particularly one sided sex specific theories of mental illness, developed in the 19th century, continue to influence current thinking. She argues that there is an acceptance of a central notion of female
instability influencing psychopathological processes. In the past, female instability was deemed to be caused, for example, by disorders of the uterus and menstruation. While most of these myths are no longer widely prevalent, there tends to be an overall popular view that women are prone, by virtue of "innate weakness," to succumb to life stresses. This attitude was reflected in a study by Broverman et al (1970). They investigated a group of mental health professionals, and found that these workers associated masculine, rather than feminine attributes, with psychological health.

It is certainly true that women are relegated to inferior roles, and that this process begins very early in development. Weinraub and Brown (1983) reviewed the development of sex role stereotypes in children, and give a very gloomy picture of how females' expectations are limited at a very early age. They reviewed research regarding children's awareness of sex differences in possessions and toys, and in adult occupations and household tasks. They concluded overall that there is evidence of the acquisition of sex typed behaviour prior to the age of 2, and that even among pre-school children, girls choose nurturing roles more often than boys. The authors go on to elaborate their arguments, and suggest major changes in education to help prevent the perpetuation of extreme sex role stereotypes.

There are many studies demonstrating how children acquire stereotyped roles. For example, Kagen and Moss (1962) showed that adults tend to reinforce dependent and helpless behaviour in female children, while encouraging
male children to be more independent. Bandura (1969) demonstrated that behavioural contingencies differentially reinforce stereotyped behaviour in boys and girls, and that cross-typed behaviour is generally punished. Hoffman (1972) summed up the developmental literature by stating that girls get less encouragement for independence than boys. Moreover they are more protected than boys, and less independent in exploring their environment. Consequently they develop less skills and confidence, and continue to be more dependent on others.

Sex Differences in the Incidence of Fear

In the general developmental literature there is no evidence that male and female children up to the age of eight differ in incidence of fears (Maccoby and Jacklin 1974). However, in a recent study of older children, girls had a greater incidence of fears. In this study, Abe and Masui (1981) looked at a group of school children and students, aged 11-23, to obtain prevalences of various fears in normal adolescents. Their group could be considered as being composed of fairly unbiased samples representing each age group in the particular area of Japan where the study was carried out. They reported that boys in the study showed greater prevalence of fear of talking and psychogenic frequency of micturition. This could be accounted for by the slower development of speech and bladder control in boys. Despite the greater prevalence of fears in girls, there was an equal prevalence of anxiety symptoms. This supported the assertion of Marks, that anxiety states occur with equal frequency in both sexes (Marks 1969). Girls and boys both experienced fears
of blushing and being looked at, but the peak age in girls was two years earlier than boys. The authors concluded by stating that the most important set of factors accounting for sex differences are composed of experiential and psychological factors. However, the sex difference in prevalence, and in time of the prevalence peak, suggested physiological factors as necessary conditions for the development of such symptoms.

The findings of this study suggesting that sex differences seemingly become more apparent with increasing age, were reinforced by a more recent study.

Kirkpatrick (1984) carried out an investigation of common intense fears in an adult population of 345 women and 200 men, and showed that males and females had different patterns of fear as the ages increased. The data suggested that in common intense fears, males and females were potentially equally vulnerable at earlier ages, but that the higher numbers of females with intensive fears in older populations were due to cultural and experiential influences. While this particular study did not look at agoraphobia as an entity, the Fear Survey used included items common to agoraphobics in the clinical population.

The results of these findings should however be treated with some caution. It does seem that women will more readily admit their fears (Rachman 1978). However, Rachman qualifies this finding by suggesting that male/female differences in phobias do seem to hold up when subjects are tested by behavioural and physiological methods.
Differences in Incidence of Agoraphobia between Males and Females

With regard to Agoraphobia there is apparently conflicting evidence regarding such differences.

The earliest descriptions of agoraphobia were based, as Mathews et al (1981) point out, on descriptions of male sufferers. Westphal (1871) in his description reported the cases of 3 male agoraphobics, and Legrand du Saule (1885), concluded that agoraphobia was uncommon in females. The contemporary scene however, seems quite different. As was indicated earlier (Thorpe and Burns (1983), the percentage of female sufferers presenting for treatment averages about 80%. However, there are several papers which cast doubt on this figure. Boulougouris, cited by Thorpe and Burns (1983), reports that in his Athens Clinic, males predominate among patients coming for treatment. This report is substantiated somewhat by anecdotal evidence from workers in other Mediterranean countries, and Latin and South America (personal communications 2nd. World Congress of Behaviour Therapy, Washington D.C. December 1983).

In the only properly conducted study of incidence of Agoraphobia, Agras and his colleagues (1969) in the U.S.A. reported equal incidence between the sexes. However, it should be pointed out that their relatively small population sample (325 subjects), may cast some doubt on their findings. Likewise, Mullaney and Trippett (1979) provided evidence from the thorough investigation of 100 newly admitted alcoholics, that the incidence of agoraphobic symptoms in males was much higher proportionally than the average of 20% in the studies reviewed by Thorpe and Burns.
Studies of Male Agoraphobics

There has been very little research conducted specifically on male agoraphobics. However, many clinicians hold the view that male agoraphobics are different in some ways from female agoraphobics, and that male agoraphobics respond differently to treatment than their female counterparts. Despite these assumptions virtually all the outcome research reports on either mixed samples of males and females (with no reported attempt to consider the sexes separately) or samples composed of exclusively female subjects.

Liotti and Guidano (1976) reviewed the records of a sample of 21 agoraphobic men, and reported that they did not respond as well to behaviour therapy as agoraphobic women. They felt that this poor response was more likely if the subject had an intolerance of being left alone, or had a hypochondriacal preoccupation. The main problems with this research were that it was retrospective, and dealt with subjective impression, couched in rather general terminology.

Hafner (1983) provided the first account of a comparative systematic study of outcome of male and female agoraphobics. From his sample of 18 men and 49 women, males showed a higher rate of treatment refusal or drop-out (8 males compared with 6 females). Hafner then matched for age the remaining 10 men with 10 women. The main differences were that the women experienced significantly more panic attacks during exposure treatment. Hafner also reported that the males had fears predominantly of losing control of aggressive impulses. With regard to treatment,
Hafner found that the outcome of male and females was broadly comparable, using data collected to 12 month follow-up.

Hafner concluded that males found exposure treatments less acceptable than women, and recommended the modification of treatment programmes to accommodate this problem.

The most recent experimental comparison of male and female agoraphobics was carried out by Mavissakalian (1985). He could find no differences in symptomatology, personality or attributional styles between his male and female subjects. However, in a matched comparison the females did significantly better than the males. The study had only data to 1 month follow-up, and no data on drop-outs or refusers of treatment. However, these findings, together with those of Hafner, would back Mavissakalian's assertion that it would be wise to ensure counterbalancing the randomization of male agoraphobics to different treatment conditions when conducting research.

Factors relating to apparent sex differences

Biological Factors

Several writers have suggested that the male/female difference in phobias may be biologically caused. Zitrin et al (1976) indicated that endocrine disorders, and in particular oestrogen fluctuation, account for the acquisition of phobic avoidance. Marks (1970(b)) has also pointed to the fact that because testosterone is linked to dominance behaviour, and women are lower in testosterone than men, that men will more likely face
situations rather than avoid them. Further, Asso and Beech (1975) found evidence to suggest that women are more likely to be conditioned to anxiety responses when their levels of oestrogen and progesterone drop in the pre-menstrual week. However as Chambless and Goldstein (1982) point out, the issue of expectancy was not controlled for. This factor is important, and in menstrual cycle research needs to be considered as a confounding variable which may considerably influence the individual's response(s) to events occurring at different points of her cycle (Sommer (1973)).

Emmelkamp (1979) has argued that hormonal fluctuations may account for the excess of females in agoraphobic populations, but he does not give any specific data to back his assertions. However, Buglass et al (1977) specifically asked their sample whether their agoraphobia increased in severity during the pre-menstrual phase of their cycles. Only 6 of the 18 subjects who were having menstrual cycles reported such an increase. This data, and the other work cited above, does tend to disconfirm any simple relationship between hormonal factors and the genesis and maintenance of the syndrome.

SEX ROLES

Differences in the way that men and women are perceived, and indeed perceive themselves, seem to offer much to explain the differences in male and female agoraphobics. With regard to the differing incidence of agoraphobia in males and females, social roles offer two sets of explanations to explain this phenomenon. Firstly, as Rachman has
pointed out, males are more likely to hide or deny their fearfulness, and there is some evidence that males who have agoraphobia may in fact attempt to compensate by seeking solace in alcohol, (Mullaney and Trippett (1979)). These factors of denial or hiding of the problem, may be unwittingly reinforced by GP's who hold a conventional stereotype of agoraphobia as a female problem. Thus, they may not diagnose agoraphobia, but "home in" on a secondary feature of the problem such as anxiety or depression, and diagnose that and treat accordingly with drugs. These patients will therefore probably never be referred to specialist help. The other social factors which may reduce the amount of agoraphobia found in male populations would be that males who have a nascent agoraphobia, are, by virtue of their social and occupational roles, more likely to have to face their feared situations, and thus they reduce their phobia by repeated exposures. Certainly when one looks at the wide ranging symptoms of agoraphobia, it would be reasonable to speculate that males forced to expose themselves daily to travelling may well habituate to such situations, but retain some of the other features of the agoraphobic syndrome. Thus if they present for treatment they may be labelled as suffering from a general anxiety state or one of the other related symptoms of the syndrome, and show little phobic avoidance per se.

Within the psychiatric field there has, for a long time, been a view of agoraphobia as a stereotyped female response. One of the most authoritative workers of his day, in considering factors relating to the evolution of the agoraphobic syndrome, stated, "women have been brought up soft" (Terhune (1949)).
The stereotyping of the agoraphobic as a dependent female was reinforced by Andrews' review (1966), which at that time was a most influential piece of writing. He said 'had never heard of a phobic who had been described as self assertive, independent or fearless', and went on to say that 'the phobic individual is characterised by dependency relationships, and avoids activities involving self-assertion and independence in coping with stressful situations.'

Fodor (1974) has argued that women who become stereotyped as helpless and dependent, are susceptible to developing phobias. Fodor saw agoraphobic women as exhibiting an extreme stereotype of female behaviour. She argued that such conditioning processes begin in childhood, and continue unremittingly. She further argued that agoraphobic women choose complimentary spouses. Fodor went on to conclude in her 1978 paper, that agoraphobia appeared to be "a natural outcome of sex role socialisation, rather than an illness". However, rather than basing her assertions on objective data, Fodor's arguments were rather based on clinical anecdote.

Wolfe (1984) has recently reviewed the issue of gender ideology and phobias in women. He cites wide ranging evidence to suggest that much of the time we are hardly recognisant of the extent to which our behaviour is controlled by gender imperatives, but that such influences account for the development of phobias. Wolfe points to the literature on sex role socialisation to provide convincing evidence that the rearing of male and female children, and the differences of such rearing, correlate with
the differences between males and females in personality characteristics and behavioural styles. While Wolfe's stance is to view the issue of sex roles behaviourally, he looks not only at social learning and behavioural prospectives, but also cognitive developmental theory and psychoanalysis. He argues that with regard to developing an anti phobic style, females are particularly disadvantaged. Wolfe goes on to review the extension of gender imperatives and the connection between agoraphobia and women's marital imperative. He cites the work of writers such as Chambless and Goldstein (1981), Fodor (1974) and Simmons (1971), to argue that many agoraphobic women develop their problems at a time when they feel trapped in a marital situation, especially when there are young children demanding care and attention. From there Wolfe goes on to describe the work of writers who suggest an extension of this basic entrapment into a number of conflicts which in turn produce the agoraphobic syndrome. This line of thinking is interesting, but one is again drawn to the rather conflicting evidence of both descriptive studies (e.g. Buglass (1977), and outcome studies (e.g. Cobb et al (1984) and Hafner (1977(a)(b)) which seem to deny a simple cause and effect explanation of agoraphobia and the marital state. Again, many of the arguments reviewed by Wolfe rest on unsubstantiated psychodynamic explanations of the phobia, which use a conflict/symptom production model. Wolfe describes the various limitations to the gender imperative model, and particularly draws attention to the fact that women are more vulnerable to depression, and therefore more prone to phobias. Lastly he states what is probably the greatest limitation of the gender imperative model; this is that as we are all exposed
to the ideology of gender, there should in fact be far more phobics than one actually sees. Of the minority of males who are agoraphobic, Wolfe points out that we know very little about the backgrounds of male phobics, and the information he suggests as being relevant are descriptions of male phobics as over protected, dependant and avoidant. However, it could be argued that such constructs are rather vague and lacking definition.

The Modification of Extreme Sex Typed Behaviour

In discussing the consequences of extreme sex role stereotyping, Kelly (1983) suggests 3 broad approaches to modifying such behaviour, which may in itself contribute to various forms of psychopathology.

These are firstly, increasing the skill repertoire of the client. Such examples would include in women, assertion training, problem solving, decision making, and the development of athletic pursuits. In men examples would be training in commendatory assertion, emotional tenderness and "feeling oriented" communication styles. Secondly, he suggests that cognitive techniques could be used to expand the client's perception of possible response options. The argument implicit in this suggestion is that rigid sex role stereotyping limits the behavioural repertoire because of limited social expectation. Further, the individual believes that only certain responses are acceptable for her or his gender.

Thirdly, Kelly argues that while clinical treatment may be effective in changing certain behaviours, rigid sex role stereotypes can only be lastingly and generally changed by the use of non-sexist language, media
portrayal of women in non-traditional roles, change in vocational guidance, and greater input into the educational field.

Measurement of Femininity and Masculinity

The measurement of the constructs of masculinity and femininity has long formed an important part of personality testing. Non-conformity with an appropriate gender role was, and to an extent still is, viewed as constituting an abnormality. A turning point in the way that sex roles were construed came with the critique of Constantinople (1973), who reviewed the various psychological scales purporting to measure masculinity and femininity. He argued that such scales treated masculinity and femininity as bipolar opposites which were, in effect, mutually exclusive. Further, a subject who scored responses on both of these scales would, using most criteria, be far from the ideal for males and females. Further to this, Bem and co-workers (Bem (1974, 1975), Bem and Luny (1976), Bem et al (1976)) argued convincingly that ideal adjustment was characterized by the possession of behaviours of both sex types i.e. androgynous behaviour. Bem (1974) subsequently developed her now widely accepted sex-role inventory. The various authors pointed out that while people with a high level of one sex typing will be highly competent in situations requiring responses consistent with such typing, that they will be deficient in responses in situations calling for oppositely typed responses. Therefore, subjects with high levels of male and female typing i.e. androgynous individuals, will be effective in a range of situations, and will demonstrate behavioural flexibility. Bem (1977) was among several workers who have shown a high correlation
between high self esteem, and subjects who possess androgynous and masculine typed sex roles. Conversely subjects with low self esteem tend to have feminine typing, or be low on both masculine and feminine typing (i.e. undifferentiated sex typing). (A description of Bem's Sex Role inventory follows below.)

The Bem Sex Role Inventory (BSRI)

The BSRI (Bem (1974)) was one of several measures published after Constantinople's (1974) critique of the use of masculinity and femininity as mutually exclusive constructs. It is the most widely used measure of sex role stereotyping, and is similar in general principle to the Personal Attributes Questionnaire (Spence et al (1975)) and the PRF ANDRO scale (Berzin et al (1978)). It consists of 60 items, 20 masculine, 20 feminine and 20 neutral, scored by the subject on a 7 point scale (see appendix). The inventory gives masculinity and femininity scores which are simple sums of item responses. Androgyny has been scored in two ways. Originally Bem (1974) devised the following method. The androgyny score is defined as student's t ratio for the difference between a person's masculinity and femininity scores. Thus the closer to zero, the closer was the person to androgyny. However, this did not differentiate between subjects with very high or very low scores on masculinity and femininity. Spence et al (1975) therefore suggested that this differentiation could be effected by using a median split in a group for each scale. Subjects scoring high on both scales (Androgynous subjects) are therefore differentiated from subjects scoring low on both scales (undifferentiated). Bem (1976) subsequently accepted this
revised method. This method of scoring is used in the current study.

Research using the BSRI and Shortcomings of the Scale

There are two main criticisms of the BSRI. Firstly, and this is not confined to the BSRI, there is the well known problem of whether self description correlates with behaviour in real life. Secondly, the feminine items of the scale have a rather negative tone when compared with the masculine items. Despite these two criticisms the BSRI has been widely used in research. However, there is only one study of direct relevance to Agoraphobia. Brehony (1983) used a new agoraphobia research questionnaire (ARQ) and a fear survey (among other measures), with a group of college students. These students also completed a B.S.R.I. The data showed that females scored more highly on the ARQ, and that subjects typed as masculine (using the BSRI) scored lower on the ARQ. This finding, suggesting a relationship between adherence to a sex role stereotype, and self report of agoraphobic symptoms, must be tempered with some caution, as the ARQ had not been validated at the time of the research being carried out.

One other isolated finding should also be mentioned, Jasin (1981) used the Minnesota Multi Phasic Personality Inventory (MMPI) to look at the relative masculinity and femininity of agoraphobics. She found that agoraphobic women were not excessively feminine, but that male agoraphobics tended to score high on femininity according to clinical norms.
Summary of Experimental Design

Various statistical analyses were used to compare all male and female agoraphobic subjects and their treatment outcome.

The second part of the study concerned the Bem Sex role inventory (BSRI) and was commenced after the allocation of the first 44 subjects. Therefore this experimental group contained 88 subjects. BSRI's were given to these subjects at pre and post treatment and control data was collected from an equal number of normal subjects. Various statistical analyses were performed to investigate relationships between scores on the BSRI and treatment response and to examine how agoraphobics differed from normal controls.
HYPOTHESES

1) That male subjects will drop out or refuse treatment at a significantly greater rate than female subjects.

2) That the groups of male and female subjects will not differ significantly on the dependent measures at the pre-treatment rating point.

3) That the groups of male and female subjects will not differ significantly in their treatment outcome.

4) That male subjects will differ from normal male controls with regard to their scores on the Bem Sex Role Inventory (BSRI) in the following respects:
   a) Male subjects will have significantly lower M scores than normal male controls.
   b) Male subjects will have significantly higher F scores than normal male controls.

5) That female subjects will differ from normal female controls with regard to their scores on the BSRI in the following respects:
   a) Female subjects will have significantly lower M scores than normal female controls.
   b) Female subjects will have significantly higher F scores than normal female controls.

6) That for male and female subjects poorer response to treatment (as measured by the change in agoraphobic sub scale score) will be associated with lower M scale scores (on the BSRI) at pre-treatment.

7) That for male and female subjects there will be no relationship between outcome (as measured by the change in agoraphobic sub scale score) and F scale scores (on the BSRI) at pre-treatment.
8) That for both male and female groups of subjects, those who score above the median for the group, on both the M and F scales of the BSRI will have a significantly better treatment outcome than the other groups of subjects.

9) That for both male and female groups of subjects, those who score below the median for the group on both the M and F scales of the BSRI will have a significantly poorer treatment outcome than the other groups of subjects.
METHOD

Subjects were given the BSRI at the pre and post treatment rating points with the dependent measures used in the rest of the outcome study.

Treatment

This is fully described in Chapter Two.

Control Subjects

Control subjects were collected from out-patients attending a fracture clinic in a District General Hospital and from a range of non medical staff working in non psychiatric departments of two District General Hospitals. They were told that some research on personality variation was being conducted and were reassured regarding anonymity.

Questionnaires were numbered so that equal numbers of control subjects were used in the analyses. Higher number questionnaires over the numbers of agoraphobic subjects were discarded.

The mean age of the male controls was 50.65 (SD 17.21) compared with 36.95 (SD 10.40) for the male subjects. This age difference was significant $t = 3.047$ (df 38) $p < 0.001$.

The mean age of the female controls was 41.46 yrs (SD 13.28) compared with 41.02 yrs (SD 13.30) for the female subjects. This difference was not significant.
RESULTS

Comparison between Male and Female subjects on all measures at pre-treatment (see table 21)

The scores for the groups were broadly comparable across all measures, with some striking similarities on central measures such as Problem Rating (Therapist) ($\bar{x} = 6.84$ males vs $6.85$ females), and agoraphobic subscale ($\bar{x} = 30.22$ males vs $28.92$ females). There was also a very similar mean change score on the agoraphobic subscale for all subjects (including drop outs) with follow-up data ($15.93$ vs $15.81$). Therefore in view of the uneven numbers it was decided to match subjects on pre-treatment agoraphobia subscale score (which correlated highly with outcome ($0.456$, $p < 0.001$) and age (which was used in one of two comparable studies (Mavissakalian (1985)). Results of this matching are shown in table 23.

Male and Female Drop outs and Refusers of Treatment (see table 22)

A chi-square analysis of frequency of dropping out or refusing treatment demonstrated no significant difference in the rate for male and female subjects.

Comparison of outcome of Male and Female Subjects (table 23)

A very close match ($31.00$ vs $30.95$) was obtained on the initial agoraphobic sub scale score. The groups of male and female subjects so matched were not significantly different in age. There was no significant difference in change on the agoraphobic sub scale score between the two groups, neither was there any other significant difference in other measures post treatment.
Male subject and Male control BSRI Scores (see Table 24)

Male subject scores did not change significantly from pre to post treatment on either of the M or the F scales of the BSRI. On the M scale of the BSRI subjects mean scores were lower than controls mean scores. This however, did not reach significance ($p < 0.1$). There was no significant difference on the F scale of the BSRI between subjects and controls.

Female subjects and Female control BSRI scores (see table 25)

Female subject scores did not change significantly from pre to post treatment on either the M or the F scales.

On the M scale subjects' mean scores were significantly lower than controls' mean scores ($p < 0.001$). There was no significant difference on the F scale of the BSRI between subjects and controls.

Subjects outcome and BSRI scores (see table 26)

Correlations between the pre-treatment M and F scale scores of Male and Female subjects with change in agoraphobic sub scale score revealed no significant values.
Outcome of Subjects according to their classification on their BSRI scores (see tables 27 and 28)

Subjects were classified according to their scores on the M and F scales of the BSRI by consideration of whether they were above the median score for the group (see literature review for background). Therefore subjects were classified as predominantly male, female, androgynous or undifferentiated.

a) Male subjects (see table 27)

Of the 7 drop outs from treatment, 4 belonged to the group classified as undifferentiated. No subject in this group completed treatment.

The highest mean change score (on the agoraphobic sub scale) belonged to the group classified as predominantly female. Numbers of male subjects when divided up into the 4 BSRI classification sub-groups were too small for any meaningful analysis to be conducted.

b) Female subjects (see table 28)

Of the 10 drop outs, 8 were from the groups classified as female or undifferentiated. A chi square analysis (see table 29) showed that there was a significantly greater drop out rate from these two groups than the predominantly male and predominantly androgynous sub groups.

Comparisons of the mean change in agoraphobic sub scale scores for the BSRI sub groups showed no significant differences.
DISCUSSION OF RESULTS

The drop out rate for the male subjects in the study was higher than that for the female subjects, but this did not reach significance \( \chi^2 = 3.263 \) \( p < 0.10 \). In view of the already reviewed evidence that males tend to hide or deny their fearfulness (Rachman 1978) it would seem judicious to plan preparation for treatment to accommodate the possibility of a greater male drop out rate. Practically, the pre therapy training package of videos of successful treatment suggested in Chapter 3, should contain material on at least one male agoraphobic. This would thus provide a valuable model for prospective subjects.

Regarding the second and third hypotheses, there were no significant differences in either pre-treatment scores or in outcome between male and female subjects. These findings need to be considered together with the two published studies of agoraphobic men. The pre-treatment similarity between males and females was in accord with the Mavissakalian (1985) study, but contrary to Hafner's (1983) study, which showed a number of pre-treatment differences including various fear survey and symptom measures. The similarities on the measures between males and females in the current study and that of Mavissakalian could be due to the highly selective nature of inclusion criteria (this point is made in Mavissakalian's consideration of his data). To complicate matters further, Hafner's study showed differences on personality measures, while Mavissakalian's study showed a similarity on a (differing) set of personality measures.

With regard to the equivalent outcome between males and females, the current study results are in accord with Hafner's data, but different from
the poorer outcome of male subjects in Mavissakalian's group. However, Hafner's group of males relapsed slightly at follow-up, while the male group in the current study changed only by a mean of 0.16 on the agoraphobic sub scale score from post treatment to follow-up (see table 23). This change was not significantly different to that of the female group who changed by a mean of 0.06 from post treatment to follow-up (t = 0.061 df 36).

Although the results of the current study show a remarkable similarity for males and females in both pre-treatment scores and outcome to 1 year follow-up, and the sample size was equal to both the Hafner and Mavissakalian studies combined (n = 19), there are enough differences in the studies of Hafner and Mavissakalian, between male and female sub groups, to follow Mavissakalian's suggestion that data for male and female subjects needs some separation. Of particular importance is the high drop out rate of male subjects, which probably contributes to samples of males and females being made equivalent. Hafner (1981) argued that certain fears found in male subjects (such as being alone or those of hypochondriasis) led to a poorer outcome. While these observations are helpful, they are of a most general nature. The observations need to be considered with Mavissakalian's 1985 findings that cognitive attributional styles seem to be similar in clinical populations of male and female agoraphobics.

With regard to the third and fourth hypotheses, both male and female subjects showed remarkable similarity to control subjects on the F score of the Bem Sex Role Inventory. Jasins (1981) study which used the MMPI
is the only comparable study, and in this she found that agoraphobic women were not excessively feminine on the F scale, but that agoraphobic males had high F scores. Thus, with regard to agoraphobic women there is no evidence to demonstrate that the disorder is an extreme of stereotyped feminine behaviour. This notion has been expounded by many writers, most notably Fodor (1974, 1978). Her writings are most often quoted in reviews of the area (e.g. Chambless and Goldstein (1982), Thorpe and Burns (1983)). This view of agoraphobia has become clinical lore and is perhaps analogous to the notions that agoraphobics have bad marriages or that they are underassertive. (Both these notions have been shown, convincingly, to be erroneous.)

Although it has been argued that the female items of the BSRI inventory have a rather negative tone (see Brehony (1983)) the F scale items (of the BSRI) are self-descriptions of expressive and nurturant behaviour. The feminine items of the BSRI are somewhat different from the descriptions by, for example, Fodor (1974, 1978) & Terhune (1949) who used words such as dependent and helpless to describe female agoraphobics. Thus it seems clear that the BSRI does not measure the rather negative constructions of femininity as defined by these influential writers. If one examines the writings of Fodor more closely, and considers the comprehensive review of Wolfe (1984), these descriptions of the typical agoraphobic female are elaborated to encompass avoidance of independence, avoidance of assertiveness and avoidance of autonomy. Perhaps, therefore, this commonly held view of agoraphobia as an extreme female stereotype is in fact more correctly a lack of stereotyped male behaviours. Certainly the current study demonstrates a significantly lower M score for female agoraphobics versus
female controls. The male agoraphobics Mean M score was lower than male controls, but this did not quite reach significance. The male items of the BSRI are arguably agentic or instrumental, and certainly a low score on these self descriptions of behaviour is congruent with the clinical picture of agoraphobia. Whether in fact this tells us anything of the premorbid personality, is of course open to debate. It would seem logical to suggest that anyone suffering widespread anxiety symptoms who engaged in avoidance behaviour would, as a consequence of such a state, rate themselves lower on the rather positive instrumental items of the BSRI. However, with both male and female agoraphobics there was no significant change in mean scores over treatment, while scores on the various measures for the populations changed very significantly. Thus the BSRI does not seem to be sensitive, in the short term at least, to change in agoraphobic behaviour. Certainly with regard to the sixth and seventh hypothesis, there was no evidence that scores on either the M or F scale of the BSRI predicted treatment response.

When the groups were divided using the "median split" into the four subtypes (i.e. predominantly male, female, androgynous or undifferentiated) there was only one finding of any note. All four of the male subjects classified as of undifferentiated sex stereotype, dropped out. However, the small number of subjects involved preclude generalizations, and certainly there was no such clear cut finding with the female subjects (the combined group of female subjects typed as feminine or androgynous showed a significantly higher drop out rate). Contrary to expectation, subjects classified as androgynous, and arguably (according to research using the BSRI) with more positive psychological adjustment, did no better than the
other subjects on the outcome measure.

In conclusion the use of the Bem Sex Role Inventory provided little helpful information regarding the nature and treatment outcome of agoraphobia.

The one major point of interest was that agoraphobic subjects are no more stereotypically feminine than their normal counterparts, using the BSRI as a means of measuring the construct. The central point of caution is, as previously stated, that scores on measures such as the BSRI may only indicate the consequences of the problem rather than give any information regarding the pre morbid nature of the sufferer.

In conclusion the current study would seem to give support to the view that the sex of the agoraphobic is a variable which needs some consideration, but is probably no more or less important than whether the subject has a high or low level of marital satisfaction. Certainly social and political changes may well, over the years, produce considerable change in female/male differences in the syndrome.
CHAPTER FIVE

APPENDIX SEVEN

RESULTS

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<th>Table</th>
<th>Page</th>
</tr>
</thead>
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<td>21</td>
</tr>
<tr>
<td>Analysis of male and female drop outs</td>
<td>22</td>
</tr>
<tr>
<td>Comparison of outcome of male and female subjects</td>
<td>23</td>
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<td>Male subjects and male controls - BSRI scores</td>
<td>24</td>
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<tr>
<td>Female subjects and female controls - BSRI scores</td>
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<tr>
<td>Correlations between pre-treatment REM scores and outcome</td>
<td>26</td>
</tr>
<tr>
<td>Classification of male subjects according to BSRI scores and outcome</td>
<td>27</td>
</tr>
<tr>
<td>Classification of female subjects according to BSRI scores and outcome</td>
<td>28</td>
</tr>
<tr>
<td>Female drop outs according to their classification on BSRI scores</td>
<td>29</td>
</tr>
</tbody>
</table>
### PRE TREATMENT SCORES

<table>
<thead>
<tr>
<th></th>
<th>Fear Survey Total</th>
<th>Agoraphobic Sub Scale Score</th>
<th>Symptom Check list</th>
<th>Wakefield Inventory</th>
<th>Leeds Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALE SUBJECTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 32</td>
<td>69.81 (20.24)</td>
<td>30.22 (6.49)</td>
<td>25.50 (7.28)</td>
<td>23.43 (4.86)</td>
<td>12.24 (4.52)</td>
</tr>
<tr>
<td><strong>FEMALE SUBJECTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 100</td>
<td>67.15 (19.27)</td>
<td>28.92 (6.80)</td>
<td>22.92 (6.80)</td>
<td>23.51 (5.72)</td>
<td>12.18 (3.77)</td>
</tr>
</tbody>
</table>

**COMPARISON OF PRE TREATMENT SCORES OF ALL MALE AND ALL FEMALE SUBJECTS**

**TABLE 21**
## PRE TREATMENT SCORES

<table>
<thead>
<tr>
<th></th>
<th>PROBLEM RATING ASSESSOR</th>
<th>PROBLEM RATING THERAPIST</th>
<th>PROBLEM RATING SUBJECT</th>
<th>WORK HOME SOCIAL PRIVATE</th>
<th>MARITAL QUEST. SUBJECT</th>
<th>MARITAL QUEST. SPOUSE</th>
<th>BEHAVIOURAL AVOIDANCE TEST</th>
<th>CHANGE IN AG. SUB SCALE (PRE - POST)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALE SUBJECTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 32</td>
<td>5.80 (0.84)</td>
<td>6.84 (1.00)</td>
<td>7.19 (1.20)</td>
<td>21.17 (6.31)</td>
<td>17.93 (12.14)</td>
<td>16.92 (12.68)</td>
<td>2.52 (1.44)</td>
<td>15.93 (7.10)</td>
</tr>
<tr>
<td><strong>FEMALE SUBJECTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 100</td>
<td>6.00 (1.27)</td>
<td>6.85 (0.98)</td>
<td>7.01 (1.11)</td>
<td>18.73 (5.62)</td>
<td>22.63 (15.17)</td>
<td>18.44 (13.09)</td>
<td>2.02 (1.15)</td>
<td>15.81 (8.42)</td>
</tr>
</tbody>
</table>

* All subjects completing follow-up (including drop outs)

Comparison of Pre Treatment Scores of All Male and All Female Subjects (Continued)

Table 21 (Continued)
<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Completed Treatment</strong></td>
<td>81</td>
<td>19</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>(77.3)</td>
<td>(22.7)</td>
<td></td>
</tr>
<tr>
<td><strong>Dropped Out/Refused</strong></td>
<td>21</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>(24.7)</td>
<td>(7.3)</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>102</td>
<td>30</td>
<td>132</td>
</tr>
</tbody>
</table>

*Expected Frequencies in Brackets*

\[ \chi^2 = 3.263 \quad \text{l.d.f. (corrected for continuity)} \]

*Chi Square Analysis of Male and Female Subjects Completing Treatment or Dropping Out/Refusing*

**Table 22**
<table>
<thead>
<tr>
<th></th>
<th>Initial Agoraphobia Sub Scale Score</th>
<th>Initial Symptom Checklist Score</th>
<th>Age</th>
<th>Change in Agoraphobia Sub Scale Score (pre - post)</th>
<th>Change in Agoraphobia Sub scale score (post - 1 yr FU)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 19</td>
<td>31.00 (5.87)</td>
<td>23.21 (6.67)</td>
<td>36.47</td>
<td>17.68 (7.07)</td>
<td>0.16</td>
</tr>
<tr>
<td><strong>Female</strong></td>
<td>30.95 (5.84)</td>
<td>22.01 (6.40)</td>
<td>39.42</td>
<td>14.47 (7.72)</td>
<td>0.06</td>
</tr>
<tr>
<td><strong>t</strong></td>
<td>0.027 df 36 n.s.</td>
<td>0.970 df 36 n.s.</td>
<td>0.82</td>
<td>1.33 df 36 n.s.</td>
<td>t = 0.061 df 32 n.s.</td>
</tr>
</tbody>
</table>

( ) = Standard Deviation

COMPARISON OF MATCHED MALE AND FEMALE SUBJECTS WHO COMPLETED TREATMENT

**TABLE 23**
### TABLE 24

**MALE AGORAPHOBIC SUBJECTS n = 20**

<table>
<thead>
<tr>
<th>PRE TREATMENT</th>
<th>POST TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M Scale</strong></td>
<td><strong>F Scale</strong></td>
</tr>
<tr>
<td>score</td>
<td>score</td>
</tr>
<tr>
<td>87.80 (SD 18.23)</td>
<td>91.15 (SD 11.87)</td>
</tr>
<tr>
<td>96.30 (SD17.84)</td>
<td>88.20 (SD11.43)</td>
</tr>
</tbody>
</table>

Related t tests between

**Male subjects' scores pre - post:**

- M scale $t = 0.186$ d.f. 38 n.s.
- F scale $t = 0.306$ d.f. 38 n.s.

Independent t tests between

**Male subjects' scores (pre) and Male control subjects' scores:**

- M scale $t = 1.490$ d.f. 38 $< 0.1$ (1 tailed)
- F scale $t = 0.806$ d.f. 38 n.s.

**MALE SUBJECTS AND MALE CONTROLS BEM SCORES**
### FEMALE AGORAPHOBIC SUBJECTS  
\( n = 54 \)

<table>
<thead>
<tr>
<th></th>
<th>PRE TREATMENT</th>
<th>POST TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M Scale score</strong></td>
<td>72.77 (SD 19.59)</td>
<td>72.80 (SD 19.29)</td>
</tr>
<tr>
<td><strong>F Scale score</strong></td>
<td>97.77 (SD 11.57)</td>
<td>99.00 (SD 11.61)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>PRE TREATMENT</th>
<th>POST TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>M Scale score</strong></td>
<td>85.56 (SD 17.20)</td>
<td>98.65 (SD 9.76)</td>
</tr>
<tr>
<td><strong>F Scale score</strong></td>
<td>97.77 (SD 11.57)</td>
<td>99.00 (SD 11.61)</td>
</tr>
</tbody>
</table>

**Related t tests between**

Female subjects' scores pre - post:

- M scale \( t = 0.763 \) df 106 n.s.
- F scale \( t = 0.007 \) df 106 n.s.
  (1 tailed)

**Independent t tests between**

Female subjects' scores (pre) and
Female control subjects' scores:

- M scale \( t = 3.601 \) df 106 \(< 0.001\)
  (1 tailed)
- F scale \( t = 0.422 \) df 106 n.s.
<table>
<thead>
<tr>
<th></th>
<th>M SCALE SCORE WITH CHANGE IN AGORAPHOBIC SUB SCALE SCORE</th>
<th>F SCALE SCORE WITH CHANGE IN AGORAPHOBIC SUB SCALE SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MALE</strong></td>
<td>r = 0.048</td>
<td>r = 0.303</td>
</tr>
<tr>
<td>AGORAPHOBIC</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>SUBJECTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FEMALE</strong></td>
<td>r = -0.160</td>
<td>r = 0.203</td>
</tr>
<tr>
<td>AGORAPHOBIC</td>
<td>n.s.</td>
<td></td>
</tr>
<tr>
<td>SUBJECTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>n = 44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 26**

PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN BEM SCORES (PRE TREATMENT) AND OUTCOME (MEASURED BY CHANGE IN AGORAPHOBIC SUB SCALE SCORE).
**Table 27**

<table>
<thead>
<tr>
<th>Classification of Male Subjects According to Their Scores on the BSRI and Their Treatment Outcome</th>
<th>(Asp 8.60)</th>
<th>(Asp 6.90)</th>
<th>(Asp 6.70)</th>
<th>(Asp 9.20)</th>
<th>Mean change score (asphrophilo)</th>
</tr>
</thead>
</table>
| Undercontrolled + Antisocial | 4 | 1 | 0 | 2 | 7 = N dropped out
| Antisocial | 0 | 5 | 5 | 3 | N = 35 completed treatment
| Impulsive | 4 | 6 | 5 | 5 | TOTAL N = 20

**Males**
### Table 26

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Classification of Female Subjects According to Their Scores on the BSRI and Their Treatment Outcome**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Mean change score (4.78 and above)**
- **Mean change score (4.77 and below)**
- **Dropped out**
- **Completed treatment**
- **Female**
- **Male**

Dataset as Production
Female Subjects Classified as Predominantly Male and Female and Androgynous Undifferentiated

<table>
<thead>
<tr>
<th></th>
<th>Male and Androgyous</th>
<th>Female and Undifferentiated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed Treatment</td>
<td>26 (22.8)</td>
<td>18 (21.2)</td>
<td>44</td>
</tr>
<tr>
<td>Dropped out of Treatment</td>
<td>2 (5.2)</td>
<td>8 (4.8)</td>
<td>10</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28</td>
<td>26</td>
<td>54</td>
</tr>
</tbody>
</table>

( ) = Expected Frequency

\( \chi^2 = 4.064 \) 1 d.f. (corrected for continuity)

\[ p < 0.05 \]

FEMALE DROP OUTS ACCORDING TO THEIR CLASSIFICATION ON BSRI SCORES

TABLE 29
CHAPTER FIVE

APPENDIX EIGHT

RATING SCALE

BEM SEX ROLE INVENTORY

PAGE

366
Please indicate how well each of the following personality characteristics describes you, by drawing a circle around a point on the corresponding scale.

<table>
<thead>
<tr>
<th>Number</th>
<th>Personality Trait</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Self reliant</td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td>Yielding</td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td>Helpful</td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td>Defends own beliefs</td>
<td></td>
</tr>
<tr>
<td>5)</td>
<td>Cheerful</td>
<td></td>
</tr>
<tr>
<td>6)</td>
<td>Moody</td>
<td></td>
</tr>
<tr>
<td>7)</td>
<td>Independent</td>
<td></td>
</tr>
<tr>
<td>8)</td>
<td>Shy</td>
<td></td>
</tr>
<tr>
<td>9)</td>
<td>Conscientious</td>
<td></td>
</tr>
<tr>
<td>10)</td>
<td>Athletic</td>
<td></td>
</tr>
<tr>
<td>11)</td>
<td>Affectionate</td>
<td></td>
</tr>
<tr>
<td>12)</td>
<td>Theatrical</td>
<td></td>
</tr>
<tr>
<td>13)</td>
<td>Assertive</td>
<td></td>
</tr>
<tr>
<td>14)</td>
<td>Flatterable</td>
<td></td>
</tr>
<tr>
<td>15)</td>
<td>Happy</td>
<td></td>
</tr>
<tr>
<td>16)</td>
<td>Strong Personality</td>
<td></td>
</tr>
<tr>
<td>17)</td>
<td>Loyal</td>
<td></td>
</tr>
<tr>
<td>18)</td>
<td>Unpredictable</td>
<td></td>
</tr>
<tr>
<td>19)</td>
<td>Forceful</td>
<td></td>
</tr>
<tr>
<td>20)</td>
<td>Feminine</td>
<td></td>
</tr>
<tr>
<td>21)</td>
<td>Reliable</td>
<td></td>
</tr>
<tr>
<td>22)</td>
<td>Analytical</td>
<td></td>
</tr>
<tr>
<td>23)</td>
<td>Sympathetic</td>
<td></td>
</tr>
</tbody>
</table>

**BEM Sex Role Inventory**
<table>
<thead>
<tr>
<th>Item</th>
<th>Never or almost never true</th>
<th>Very rarely true</th>
<th>Not often true</th>
<th>Sometimes True</th>
<th>Often True</th>
<th>Usually True</th>
<th>Always/ almost always true</th>
</tr>
</thead>
<tbody>
<tr>
<td>24) Jealous</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>25) Has leadership abilities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>26) Sensitive to needs of others</td>
<td>1</td>
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<td>27) Truthful</td>
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<td>28) Willing to take risks</td>
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<td>29) Understanding</td>
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<td>30) Secretive</td>
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<td>31) Makes decisions easily</td>
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<td>32) Compassionate</td>
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<td>33) Sincere</td>
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<td>34) Self-sufficient</td>
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<td>35) Eager to soothe hurt feelings</td>
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<td>36) Conceited</td>
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<td>37) Dominant</td>
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<td>38) Softly spoken</td>
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<td>39) Likeable</td>
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<td>40) Masculine</td>
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<td>41) Warm</td>
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<td>42) Solemn</td>
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<td>43) Willing to take a stand</td>
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<td>44) Tender</td>
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<td>45) Friendly</td>
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<td>46) Aggressive</td>
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<td>47) Gullible</td>
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<td>48) Inefficient</td>
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BSRI (cont'd)
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<td>49</td>
<td>Acts as a leader</td>
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<td>50</td>
<td>Childlike</td>
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<td>51</td>
<td>Adaptable</td>
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<td>52</td>
<td>Individualistic</td>
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<td>53</td>
<td>Does not use harsh language</td>
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<td>54</td>
<td>Unsystematic</td>
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<td>55</td>
<td>Competitive</td>
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<td>56</td>
<td>Loves children</td>
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<td>57</td>
<td>Tactful</td>
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<td>58</td>
<td>Ambitious</td>
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<td>59</td>
<td>Gentle</td>
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<td>60</td>
<td>Conventional</td>
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BSRI (Cont’d)
CONCLUSIONS

AND

DIRECTIONS

FOR

FUTURE

RESEARCH
CONCLUSION

In this thesis the author has attempted to cover three main areas of work. Firstly, a comprehensive set of literature reviews have been provided, which cover all major published studies to the Autumn of 1985. The previous major work (Thorpe & Burns (1983)) covered studies to mid 1981 and used a somewhat different, arguably narrower perspective. Secondly, the study has assessed the relevance for treatment of a range of variables. Specifically, the experiments (containing the largest single group in the English speaking literature) give clear indications of the optimum base for exposure and offer practical solutions to the problem of drop out and refusal. There is also the clear indication that exposure treatment should precede any attempt to modify marital dysharmony in our agoraphobic patients. The results regarding tranquilizer consumption indicate the necessity of weaning patients from their medication prior to using exposure treatment.

Thirdly, the study has provided results which are of theoretical interest. The findings regarding sex role stereotypes and attitude to aversive outcomes, are relevant to theories of the nature of the syndrome. Furthermore, the data on attitude to aversive outcomes during treatment illuminate the cognitive processes which accompany behaviour change.

Overall, the results of the study demonstrate a very positive response to treatment in most subjects. On the other hand, most, if not all, of the study subjects would still consider themselves to be agoraphobic. This simple, rather depressing fact, provides the impetus for future
In summary, the study has attempted a wide ranging view of the syndrome and its treatment. The concluding paragraphs are devoted to the future research into this fascinating but distressing syndrome.
Directions for future research

PREVENTION OF DROP OUT/REFUSAL

Both the current study and Emmelkamp's (1983) study of failure suggest that a pre(exposure) therapy training package might be useful in preventing premature drop out and refusal of treatment. Such a package needs to be evaluated to determine whether this treatment response is improved and whether treatment drop out and refusal are, in part at least, preventable.

TRANQUILLIZERS

In view of the very large number of agoraphobics who consume tranquillizers it is of major importance to assess anxiety and agoraphobic avoidance before, during, and at points after, benzodiazepine tranquillizer withdrawal. The current study suggests that benzodiazepine consumption seems to have negative effects on exposure treatment. It therefore seems important to study in greater detail the effect of chronic tranquillizer use in agoraphobics.

COGNITIVE PROCESSES

The study has provided some preliminary information regarding cognitive processing. It would, therefore, be reasonable to extend the methods of enquiry reported in this thesis to other treatment methods for agoraphobia. In particular, the imaginal approaches need to be evaluated using ratings which are more specific than the very general ratings used in outcome research so far. This mode of enquiry would, hopefully, differentiate those subjects who would benefit from imaginal exposure, in addition to in vivo methods, from those who derive maximum benefit from in vivo methods.
alone. It would also be of considerable theoretical value to use ratings of subjective probability and value of outcomes in different mood states in agoraphobic subjects. This would test the hypotheses set forth by Lang (1984) who argued that in anxiety states and perhaps in phobic disorders, the accessing of certain cognitions was mood dependent. This mechanism is of course analogous to that described by Teasdale et al. (1980) with depressive states. Indeed the information processing model of agoraphobia in particular lends itself to experimental analysis.

With regard to the routine clinical measurement of cognitive processes, the current study indicates the need to refine a set of reliable cognitive assessment procedures to monitor change. This development would also aid the clinician in formulating her/his treatment strategy. Certainly the global ratings of distress which are used in the majority of outcome studies do not suffice, for either clinical practice or research.

LONG TERM FOLLOW-UP

The current study population continues to be followed up, and at the time of writing the first study subjects are being seen for 4 year follow-up. Although three studies (reviewed in Chapter 2) have reported follow-up to eight years, such studies have usually reported on only a narrow set of measures. It would, therefore, seem valuable to continue to follow up the study subjects, and in particular the treatment failure group, looking at a wider range of measures such as long term usage of psychiatric facilities, psychotropic medication and attributional styles.
FAMILY AND MARITAL ISSUES

As long ago as 1973, Hudson called for research on familial behaviour and agoraphobia. This call has apparently gone unheeded. The reason for this is probably that measurement of family behaviour is a most complex task. However, the importance of family attitude and behaviour in maintaining agoraphobic avoidance seems central. The obvious first method of enquiry would be to ask all family members to keep diaries to establish their role in maintaining agoraphobic avoidance. Secondly, it would be necessary to investigate the attitude of family members to agoraphobia, staying at home behaviour etc. This data, if systematically collected, would provide a comprehensive picture of contingencies which could be manipulated during treatment.

In conclusion future research into agoraphobia should follow three main routes. Firstly, there is a need for work primarily aimed at refining our treatment method. Secondly, as Mathews et al (1981) suggest, there is a need to carry out long term prospective research which may answer aetiological questions. Finally, experimental analyses of agoraphobia may provide us with answers to psychopathological puzzles concerning not only the agoraphobic syndrome but neurotic behaviour in general.
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