ASSERTION TRAINING AND IN VIVO EXPOSURE
AS TREATMENT FOR AGORAPHOBIA,

by

Kathleen A. Brehony

Dissertation submitted to the Graduate Faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Psychology

APPROVED

E. Scott Geller, Chairperson

Richard M. Eisler

Betsey A. Benson

John C. Hall

George A. Clum

Ronald J. Nurse

May, 1981
Blacksburg, Virginia
Acknowledgments

I would like to thank and for their invaluable assistance in the preparation of this manuscript. Special thanks to my co-therapists and , and to my research assistants

Thanks also to , , and his students at Tougaloo College, at WBRA-TV, at Virginia Tech Information Services, and my colleagues at Arthur Young and Company's Washington office.

I especially appreciate the long and enlightening conversations with and . Both have challenged me to think and have provided excellent feedback in shaping my ideas. I thank for her stubborn insistence that I demonstrate the courage to say what I believe to be true. I thank my family and friends for their loving support in all of my efforts,

and and My heartfelt love and appreciation goes especially to my parents, and , for their continuous emotional support throughout my graduate education, indeed, throughout my life.

Finally, I wish to thank all of the individuals who
shared their most personal experiences with me in an effort to further understand agoraphobia. The courage and trust of the ten women who participated in this treatment study fills my heart and will always inspire me.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments.</td>
<td>ii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>vi</td>
</tr>
<tr>
<td>List of Figures.</td>
<td>vii</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>Definitions</td>
<td>1</td>
</tr>
<tr>
<td>Behavioral Description</td>
<td>2</td>
</tr>
<tr>
<td>Natural Course</td>
<td>11</td>
</tr>
<tr>
<td>Incidence</td>
<td>14</td>
</tr>
<tr>
<td>Sex Differences</td>
<td>16</td>
</tr>
<tr>
<td>Interpersonal Interactions</td>
<td>25</td>
</tr>
<tr>
<td>Theories of Etiology</td>
<td>32</td>
</tr>
<tr>
<td>A Model for the Development and Maintenance of Agoraphobic Behaviors.</td>
<td>46</td>
</tr>
<tr>
<td>Review of Literature</td>
<td>69</td>
</tr>
<tr>
<td>Critique of Published Studies</td>
<td>69</td>
</tr>
<tr>
<td>Systematic Desensitization</td>
<td>70</td>
</tr>
<tr>
<td>Flooding</td>
<td>77</td>
</tr>
<tr>
<td>Modeling</td>
<td>102</td>
</tr>
<tr>
<td>Cognitive Strategies</td>
<td>104</td>
</tr>
<tr>
<td>Interpersonal Interventions</td>
<td>110</td>
</tr>
<tr>
<td>Summary and State-of-the-Art</td>
<td>112</td>
</tr>
<tr>
<td>Concluding Remarks and Directions for Research.</td>
<td>137</td>
</tr>
<tr>
<td>Statement of Purpose</td>
<td>142</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Factor Loadings for Agoraphobic Patients (Roth et al., 1965)</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Factor Analysis of Self-Reported Agoraphobic Symptoms (Marks, 1967)</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Proportion of Agoraphobic Females from Published Reports</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>Reported Family Income</td>
<td>157</td>
</tr>
<tr>
<td>5</td>
<td>Severity of Physical Symptoms</td>
<td>159</td>
</tr>
<tr>
<td>6</td>
<td>Circumstances at Symptom Onset</td>
<td>161</td>
</tr>
<tr>
<td>7</td>
<td>Respondent's Perceptions of Family Attitudes and Behaviors</td>
<td>164</td>
</tr>
<tr>
<td>8</td>
<td>Means and Standard Deviations on Self-Report Measures for All Respondents on Initial Survey</td>
<td>167</td>
</tr>
<tr>
<td>9</td>
<td>Correlation Coefficients for Self-Report Measures</td>
<td>168</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>A Model for the Development and Maintenance of Agoraphobic Behaviors</td>
<td>47</td>
</tr>
<tr>
<td>2</td>
<td>Assertion Inventory - Response Probability Scores for Assertion Training and Flooding Subjects at Pre-, Post- and Follow-up</td>
<td>171</td>
</tr>
<tr>
<td>3</td>
<td>Fear of Negative Evaluation Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-up</td>
<td>174</td>
</tr>
<tr>
<td>4</td>
<td>Social Avoidance and Distress Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-up</td>
<td>175</td>
</tr>
<tr>
<td>5</td>
<td>Extent of Fear Ratings for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-up</td>
<td>176</td>
</tr>
<tr>
<td>6</td>
<td>Symptom Ratings for Assertion Training and Flooding Subjects at Pre-, Post- and Follow-up</td>
<td>177</td>
</tr>
<tr>
<td>7</td>
<td>Internal Sensation Ratings for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-up</td>
<td>178</td>
</tr>
<tr>
<td>8</td>
<td>Agoraphobia Research Questionnaire Scores for Assertion Training and Flooding Subjects at Pre-, Post, and Follow-up</td>
<td>179</td>
</tr>
<tr>
<td>9</td>
<td>Degree of Discomfort (Assertion Inventory) Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-up</td>
<td>180</td>
</tr>
<tr>
<td>10</td>
<td>Response Probability (Assertion Inventory) Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-up</td>
<td>181</td>
</tr>
<tr>
<td>11</td>
<td>Extent of Fear Ratings at Pre-, Post-, and Follow-up by Treated and Control Subjects</td>
<td>185</td>
</tr>
<tr>
<td>12</td>
<td>Symptom Ratings at Pre-, Post-, and Follow-up by Treated and Control Subjects</td>
<td>187</td>
</tr>
<tr>
<td>13</td>
<td>Internal Sensation at Pre-, Post-, and Follow-up by Treated and Control Subjects</td>
<td>189</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>14</td>
<td>Fear Survey Ratings at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>191</td>
</tr>
<tr>
<td>15</td>
<td>Schizophrenic Symptom Ratings at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>192</td>
</tr>
<tr>
<td>16</td>
<td>Fear of Negative Evaluation Scores at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>194</td>
</tr>
<tr>
<td>17</td>
<td>Social Avoidance and Distress at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>196</td>
</tr>
<tr>
<td>18</td>
<td>Agoraphobia Research Questionnaire at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>198</td>
</tr>
<tr>
<td>19</td>
<td>Degree of Discomfort (Assertion Inventory) at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>200</td>
</tr>
<tr>
<td>20</td>
<td>Response Probability (Assertion Inventory) at Pre-, Post- and Follow-up by Treated and Control Subjects.</td>
<td>202</td>
</tr>
<tr>
<td>21</td>
<td>Number of Symptoms (Self-Monitoring Data) for All Treatment Subjects at Pre-, Post- and Follow-up</td>
<td>204</td>
</tr>
<tr>
<td>22</td>
<td>Mean Daily Anxiety Rating (Self-Monitoring Data) for All Treatment Subjects at Pre-, Post- and Follow-up</td>
<td>205</td>
</tr>
<tr>
<td>23</td>
<td>Number of Medications (Self-Monitoring Data) for All Treatment Subjects at Pre-, Post- and Follow-up</td>
<td>206</td>
</tr>
<tr>
<td>24</td>
<td>Mean Severity of Symptoms (Self-Monitoring Data) for All Treatment Subjects at Pre-, Post- and Follow-up</td>
<td>207</td>
</tr>
<tr>
<td>25</td>
<td>Time Spent in Shopping Mall Pre- and Post- Treatment Onset by Treatment Group.</td>
<td>208</td>
</tr>
<tr>
<td>26</td>
<td>Heart Rate in Shopping Mall Pre- and Post- Treatment Onset by Treatment Group.</td>
<td>210</td>
</tr>
<tr>
<td>27</td>
<td>Anxiety Rating in Shopping Mall Pre- and Post- Treatment Onset by Treatment Group.</td>
<td>212</td>
</tr>
</tbody>
</table>
INTRODUCTION

OVERVIEW

A. DEFINITIONS

The term "phobia" is derived from the Greek "phobos" meaning panic, fear, dread, or flight, and generally a diagnosis of phobia is made when an individual avoids specific stimuli that are objectively viewed as posing no real threat. The phobic individual usually realizes the irrationality of his/her behavior, yet continues to avoid these fear-provoking situations which elicit anxiety and panic states. The concomitant physiological symptoms of anxiety (e.g., hyperventilation, tachycardia, tremor, sweating) usually accompany acute phobic reactions, although there is a great deal of individual variation as to which physiological symptoms predominate (e.g., Malmo & Shagass 1949).

Agoraphobia is the most pervasive and serious of all the phobic responses. Whereas, the earliest case history of a phobic patient is generally attributed to Hippocrates (translated by Farr, 1780), the term "agoraphobia" was introduced as early as 1871 by Westphal to describe fear of
wide streets and open spaces. Arguing against theories of attacks of dizziness and epilepsy as etiological factors in agoraphobia, Westphal (1871) described agoraphobia as being determined by a "psychologically unmotivated" fear; that is, "an idea of danger which appears irrational and strange to the individual, but which dominates his behavior as he approaches the feared area" (cited in Friedman & Goldstein, 1974, p. 111).

B. BEHAVIORAL DESCRIPTION

The term phobia is usually applied to describe a fear or avoidance response to a relatively discrete stimulus (e.g., heights, closed-in spaces, small animals). However, this conceptualization is somewhat misleading in understanding agoraphobia. Many sources compound this definitional problem by describing agoraphobia as the fear of open spaces. More recently, however, behavioral scientists have questioned this standard description of agoraphobia noting that the term "agoraphobia" is derived from the Greek word "agora" meaning marketplace or public place of assembly (e.g., Fodor, 1974; Marks, 1970) which suggests a broadly defined fear-eliciting stimulus. The term thus construed implies not a specific phobic stimulus (e.g., an open field) but, rather, a generalized fear or avoidance response to leaving one's place of refuge (almost without exception the home) and entering into the outside world.
This linguistic distinction is more than a semantic issue. The conceptualization of agoraphobia as fear of an open field suggests a relatively discrete evoking stimulus. However, this is not the case. Aoraphobic symptoms tend to be very diffuse. Golstein and Stein (1977) noted that "agoraphobics tend to be more generally anxious and, at times, may appear undifferentiable from such clinical syndromes as anxiety states, affective disorders or obsessive neuroses" (p. 173).

Marks (1970) noted that agoraphobic individuals have fears not only of going out into open spaces but also of being in closed spaces, and of shopping, traveling and entering social situations especially when alone. There is much fear generalization to additional stimuli throughout the course of the disorder, and numerous other symptoms are commonly present, including panic attacks, tension, dizziness, frequent depression, depersonalization and obsessions. Furthermore, it is often observed that once the syndrome has persisted for more than one year it tends to run a fluctuating course, with partial remissions and relapses over a long period of time. Indeed, Snaith (1968) observed that agoraphobics were more anxious, had a more remitting course and a different distribution of fears than individuals with other phobias.
More recently, British researchers Buglass, Clarke, Henderson, Kreitman and Presley (1977) noted that 93% of the agoraphobic subjects (N = 30) reported fear of heights and enclosed places like elevators and subways. In addition to these environmental stimuli, other consistently reported fears included: fears of acting out hostile impulses, of being alone, and of experiencing a panic reaction ("fear of fear").

In addition to fear of external stimuli, Goldstein and Chambless (1978) noted that agoraphobics appear to be hyperalert to bodily sensations and interpret feelings of mild to moderate anxiety as signs of oncoming panic states. This is similar to Razran's (1961) description of interoceptive conditioning in which the conditioned stimuli are internal body sensations. Thus, the client carries the phobic stimuli with her or him always, so that this "fear of fear" is not situation bound. It is truly a "portable" phobia. Agoraphobia tends to generalize widely, and clients often have high levels of, so called "free-floating" anxiety. Goldstein and Chambless (1978) noted "external situations themselves become anxiety provoking for these phobics as higher order conditioned stimuli" (p. 55). This notion is important in understanding the high relapse rate following behavior therapy. Desensitization may produce some lessening of anxiety in the fear-eliciting, external
situation (e.g., a shopping mall), but the more basic fear of the interoceptive stimuli remains. Since the chain of (1) mild anxiety, (2) fear of disaster, and (3) panic has been left undisturbed, as soon as the person has a fearful experience, as is inevitable, relapse is likely to occur. The emphasis on the importance of internal signals as the phobic stimulus in agoraphobics is consistent with Weekes (1976) observations of 1200 agoraphobics in Britain and Australia.

Because of the diffuse symptoms, many agoraphobic individuals with less than "classic" symptoms, are diagnosed as "anxiety neurotic" or some other classification. In fact, Marks (1970) mentioned several labels that have been applied when symptoms are not clear, including: anxiety hysteria (Freud, 1919); locomotor anxiety (Abraham, 1948); street fear (Miller, 1953); anxiety syndromes or phobic-anxious states, severe mixed psychoneurosis, pseudoneurotic schizophrenia and borderline states (Klein, 1964); and nonspecific insecurity fears (Snaith, 1968). Clearly, there appears to be some diagnostic differences between the United Kingdom and the United States with regard to classifying agoraphobia, the British showing a greater propensity for the "agoraphobia" diagnosis.
In spite of problems with identifying agoraphobia, Marks (1970) suggested that there is little doubt from clinical and statistical evidence that agoraphobia is a coherent clinical syndrome with a well-defined cluster of behaviors that can vary over long periods of time. In fact, agoraphobia (with and without recurrent panic attacks) has been recently assigned a specific category in the DSM-III (APA Task Force on Nomenclature and Statistics, 1980).

One might conceive of the behavioral features of agoraphobia (e.g., fear of leaving home, fear of being in closed-in spaces) as members of the same response class. Skinner (1953) suggested that responses which have different topographies but which satisfy a common contingency of reinforcement be considered in the same response class. A functional analysis as to what common contingency of reinforcement supports what class of behaviors is imperative if we are to develop an accurate definition of agoraphobia. However, it does appear to be the case that certain behaviors and more specific fears occur frequently with the fear of leaving one's home. In describing the configuration of behaviors that describe agoraphobia, Marks (1970) wrote:

The term (agoraphobia) is chosen because the commonest and most constricting elements of this condition are fears of going out into public places of various kinds. The syndrome is not
characterized by fears of cats, dogs, thunderstorms, driving a car, running water, or of having venereal disease. But simply knowing that a patient has fears of going out into the street and crowded places enables one to predict that most of the other features of the syndrome will be present in that patient, including that fact that he may indeed be claustrophobic, be afraid of fainting, dying, going mad or losing control. (p. 539).

Marks (1970) admitted that the term "agoraphobia" is not an "altogether happy one" to describe the behavioral syndrome, since agoraphobic individuals have fears not only of going into public spaces but also of shopping, crowds, closed spaces and even of choking (Weekes, 1976). However, since the fear of leaving one's home is the most frequent symptom, the term offers advantages over other suggested labels, e.g., phobic anxiety state (Klein, 1964), and locomotor anxiety (Abraham, 1948).

Research has shown that the clinical symptoms of agoraphobia are similar in reports from Europe, America, and Australia. Roth, Garside and Gurney (1965) were able to differentiate a group of agoraphobic patients by factor analysis of clinical features of 275 neurotic patients. Roth et al. found robust factor loadings for the agoraphobic patients as shown in Table I.
### Table 1
Factor Loadings for Agoraphobic Patients (Roth et al., 1965)

<table>
<thead>
<tr>
<th>Factor Loadings</th>
<th>Symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td>.80</td>
<td>Situational phobias (agoraphobia)</td>
</tr>
<tr>
<td>.76</td>
<td>Panic Attacks</td>
</tr>
<tr>
<td>.70</td>
<td>Depersonalization &amp; Derealization</td>
</tr>
<tr>
<td>.56</td>
<td>Temporal Lobe Features</td>
</tr>
<tr>
<td>.48</td>
<td>Precipitating Event Prior to Symptoms</td>
</tr>
<tr>
<td>.44</td>
<td>Sudden Onset</td>
</tr>
<tr>
<td>.40</td>
<td>Dizzy Attacks</td>
</tr>
</tbody>
</table>
The Roth et al. data is supported by results of a factor analysis of answers to 239 questions of the Tavestock Phobic Inventory and the Cornell Medical Index given to a group of 72 phobics at the Maudsley Hospital in England (Marks, 1967). An agoraphobic factor emerged which included similar complaints and correlated well with the clinical diagnosis made independently. Specifically, those items which loaded on the "agoraphobic factor" are shown in Table 2.

On the basis of the factor analytic data, autobiographies, psychiatric accounts and clinical impressions, Marks (1970) argued for a central cluster of clinical features with physiological and prognostic correlates. Physiological correlates have included an increased number of spontaneous fluctuations of the galvanic skin resistance (GSR) at rest, slowed habituation of the GSR to successive auditory stimuli and increased forearm blood flow (Lader, Gelder & Marks, 1967). Additionally, Shepherd and Watts (1964) observed that agoraphobic patients were significantly less successful than patients with specific phobias at reducing heart rate under both conditions of feedback about heart rate and no feedback.

Many descriptions of the agoraphobic syndrome appear in the literature and these descriptions show impressive agreement about clinical features (e.g., Buglass et al., 1977; Emmelkamp, 1979, Klein, 1964; Goldstein & Chambless, in press;
Table 2
Factor Analysis of Self-Reported Agoraphobic Symptoms (Marks, 1967)

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.73</td>
<td>Diagnosis of agoraphobia</td>
</tr>
<tr>
<td>.70</td>
<td>I sometimes have a fear of fainting in public.</td>
</tr>
<tr>
<td>.59</td>
<td>I feel nervous when I have to go on a train journey.</td>
</tr>
<tr>
<td>.51</td>
<td>I am nervous when I'm left alone.</td>
</tr>
<tr>
<td>.48</td>
<td>I am uneasy when alone in a large open space.</td>
</tr>
<tr>
<td>.36</td>
<td>The thought of a surgical operation would terrify me.</td>
</tr>
<tr>
<td>.26</td>
<td>It generally makes me uneasy to cross a bridge or a street.</td>
</tr>
</tbody>
</table>
Marks, 1969; Marks, 1978; Marks & Gelder, 1965; Marks & Herst, 1969; Roberts, 1964; Roth, 1959; Terhune, 1949; Tucker, 1956; Snaith, 1968; Weekes, 1976). Additionally, it is important to note that many clinicians have observed a marked short-term variability in the severity of symptoms (e.g., Buglass, Clarke, Henderson & Kreitman, 1977). For example, Buglass et al noted that agoraphobic subjects reported that they could vary from being completely house-bound to an ability to move around with only minimal discomfort over a period of a month's time or even on successive days. Similarly, agoraphobic subjects reported that they recognized days as "good" or "bad" in terms of the severity of symptoms, and claimed to sense "increased nervousness" early in the morning on "bad" days. (Brehony, Johnson, & Fairbank, 1980.)

This daily variability of symptoms has not, as yet, been addressed in the research literature regarding agoraphobia, although it, perhaps, implicates cognitive or physiological factors as possible antecedent cues to phobic avoidance behavior. What is important is that none of the existing theoretical formulations of agoraphobia extend an adequate explanation for these clinical findings.

C. NATURAL COURSE

Marks (1969) noted that animal phobics have the best prognosis for treatment and agoraphobics the worst. Animal phobics show the lease generalization and the highest level
of physiological indicants or fear. On the other hand, agoraphobics show the most generalization and the highest level of physiological arousability (e.g., Lader, Gelder & Marks, 1967; Shepherd & Watts, 1974).

Agras, Chapin & Oliveau (1972) interpreted these observations as suggesting that generalization and fearfulness are prognostic indicators for both treated and untreated phobias. Agras et al. studies the natural course of 30 untreated phobic individuals over a five-year period, and noted that children's phobias improved over this period of time (i.e., 100% either recovered or were significantly improved). Over the same 5-year period 43% of the adults improved, 20% remained unchanged and 33% became worse. Severity of the phobia was not predictive of outcome, whereas fearfulness and degree of generalization (determined by counting the number of fear items comprising the main phobia) were associated with poor outcome. Specifically, agoraphobic subjects showed worse outcomes than individuals with more specific phobias. Agras et al. concluded that the similarity of these findings to follow-up studies of treated phobias suggest a similar prognosis in both treated and untreated cases. Furthermore, they noted that these results did not confirm Eysenck's (1966) observation that 72% of adult neurotic patients improved without intervention by the end of two years and that 90% improved within five years. Agras
et al. concluded that "either phobia has a worse prognosis than other neuroses, or the studies examined by Eysenck are inadequate" (p. 317). Although the results of Agras et al. (1972) are consistent with Marks (1969) earlier finding of a relatively poor prognosis for agoraphobia, several methodological problems serve to attenuate the strength of their conclusions. First, only 30 subjects were studied. In addition to this relatively small sample, only six subjects were diagnosed agoraphobic. Perhaps a more serious flaw, however, is the lack of behavioral data. Agras et al. did not evaluate behavioral improvement or decrement over the five-year period and consequently their conclusions were based entirely on self-report, questionnaire data.

Roberts (1964) looked at case records of married women who had been admitted as psychiatric inpatients at a British hospital from 1946 until 1962. The author selected as subjects those cases in which it was clearly recorded that the individual was unable to leave her house alone because of phobic anxiety symptoms. Follow-up interviews were given to 38 subjects, and the period of time since hospitalization ranged from 1.5 to 16 years. Roberts reported that 84% improved with in-patient treatment, but only 55% were found to be no longer restricted in traveling from home alone. The results of this study relied on self-report data given in an interview, and the author failed to explain any details
regarding the assessment of the subjects. For example, Roberts wrote "Of the 31 patients personally interviewed, 27 were overtly tense" (p. 193). He gave no further explanation as to what behaviors the subjects exhibited that caused him to view them as "overtly tense".

Marks (1970) described agoraphobia as having fluctuating characteristics over a period of years. In an early survey of 1200 agoraphobics in Britain, Marks and Herst (1969) noted that respondents reported a mean of 13 years duration of symptoms. Again, this survey relied upon self-report by the individual. Marks (1970) noted that while prognosis is generally poor for agoraphobia, multiple panic attacks and obsessions appear to be associated with an even poorer prognosis.

D. INCIDENCE

Agras, Sylvester and Oliveau (1969) noted that the prevalence of agoraphobia was estimated to be 6.3 per thousand in a Vermont sample (N = 325). Terhune (1961) and Hare (1965) suggested that in psychiatric practice the incidence of phobias, as the major presenting symptom, is 2-3% in both the United Kingdom and the United States. The literature suggests that better than half of all phobic patients manifest the agoraphobic syndrome (e.g., Goldstein & Stein, 1977; Marks, 1970). Additionally, Marks (1969) pointed out that the total incidence is likely to be greater.
than current estimates because many agoraphobic individuals never seek help from a psychologist, psychiatrist, or other mental health professional. The incidence issue is further clouded by frequent misdiagnosis by family physicians and other medical specialists (e.g., diagnosing depression or hypochondriasis).

The literature consistently reports that most individuals who come to treatment for agoraphobia are female. Marks (1970) reported that the majority develop symptoms after puberty, onset generally occurring between the ages of 15 and 35. Marks and Herst (1969) found that 95% of the 1200 respondents to their survey of the Open Door (a self-help club for agoraphobics) were women, although these authors suggested that this sex difference may have been inflated by the fact that publicity concerning the club appeared in magazines and television programs that may have appealed more to women than to men. Although this incidence estimate of female agoraphobics may be inflated, the Marks and Herst observation is consistent with the bulk of literature which shows better than 70% of agoraphobics to be female. Additionally, these researchers noted that 80% of the respondents were married. Fewer agoraphobic women were employed than in the general population. Compared to unemployed agoraphobics, agoraphobic subjects who were employed tended to be more extraverted, more sociable,
younger, poorer, living in larger towns, single, and raising fewer children. These observations are not surprising since a young single woman (with no other source of financial support) would face considerable financial problems were she not working. Thus, practical contingencies alone might help to explain the relationship between agoraphobic features and employment.

E. SEX DIFFERENCES

The preponderance of married women among identified agoraphobics caused Roberts (1964) to refer to the disorder as "House-bound Housewives". Interestingly, however, Marks and Herst (1969) observed that 60% of the respondents to their survey indicated that they would prefer to work outside the home. These authors identified this group as "discontented housewives" and noted that this group reported more severe symptoms of agoraphobia than women content with not working outside their home. Compared with agoraphobia women who reported being content at home the "discontented housewives" reported more severe phobias and other psychiatric symptoms, their phobias affected them more, were worse when they were alone, and they had more fears of being alone. They needed more help because of their phobias and more often did not receive it. They were also more depressed, had more neurotic symptoms, were more exhausted, more irritable and more agoraphobic. It was surprising, however
that this same group of "discontented housewives" described their personality prior to the onset of symptoms as significantly more sociable, less anxious, and more independent than did those women content with working only in the home.

Several issues are of importance here. First, Marks and Herst have presented data that is correlational rather than causal. That is to say, it is unclear whether the "discontented housewives" experienced more pathological symptoms because they did not work (thus having fewer contacts outside the home) or whether they did not work because their more severe symptoms prevented them from doing so. Secondly, all of the data were based on self-report and are subject to the criticism that no actual behaviors were measured. The discrepancy between what people say they do via questionnaires and their actual behavior in various situations is well documented in the literature (e.g., La Pierre, 1934; Wicker, 1969). Thirdly, the survey was conducted among members of the Open Door (a self-help club for agoraphobics), and it is not known to what extent members of such an organization may differ from the indigenous agoraphobic population who did not join this group.

More recently, Buglass et al. (1977) found that their agoraphobic subjects (N = 30; females) were not significantly different from a carefully screened control
group, in terms of frequency of non-phobic psychiatric disorders since age sixteen. Additionally, physical illness requiring hospital treatment (both in-patient and out-patient) did not differ between agoraphobic women and matched controls. Interestingly, there was an exception for gynecological disorders for which 66% of the agoraphobic subjects had required in-patient treatment compared to only 40% of the control subjects.

The observation that most agoraphobics are female (e.g., Marks & Herst, 1969; Marks, 1970; Roberts, 1964) is noteworthy. Fodor (1974) found that, on the average, 84% of agoraphobics seen by clinicians were female (ranging from 64% to 100%). The data depicted in Table 3 illustrate the marked predominance of females reported as demonstrating agoraphobic behaviors.

The marked predominance of females among agrophobics is startling in view of the absence of such clear sex differences in certain other "neurotic" disorders such as anxiety neurosis and social anxieties (e.g., Hare, 1965; Marks & Gelder, 1965). The possibility that females admit more fears than males does exist (cf., Katkin & Hoffman, 1976), but this does not adequately explain the differential sex ratios for the various phobic disorders. Indeed, the data suggest that animal phobias and agoraphobias are the phobias of women, whereas, other specific and social phobias appear
Table 3  
Proportion of Agoraphobic Females From Published Reports  

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Total N</th>
<th>Percent Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tucker (1956)</td>
<td>100</td>
<td>.89</td>
</tr>
<tr>
<td>Bignold (1960)</td>
<td>10</td>
<td>1.00</td>
</tr>
<tr>
<td>Warburton (1963)</td>
<td>53</td>
<td>.89</td>
</tr>
<tr>
<td>Snaith (1963)</td>
<td>27</td>
<td>.63</td>
</tr>
<tr>
<td>Klein (1964)</td>
<td>32</td>
<td>.81</td>
</tr>
<tr>
<td>Roberts (1964)</td>
<td>41</td>
<td>1.00</td>
</tr>
<tr>
<td>Marks and Gelder (1965)</td>
<td>84</td>
<td>.89</td>
</tr>
<tr>
<td>Marks and Herst (1969)</td>
<td>1200</td>
<td>.95</td>
</tr>
</tbody>
</table>
more equally in men and women (e.g., Fodor, 1974; Marks, 1970). Analyses of the behavioral characteristics of agoraphobics, as described by various clinical researchers, raises an interesting issue with regard to social sex-role stereotypes. That is, the agoraphobic individual has frequently been described as soft, passive, anxious, shy, and dependent (e.g., Marks, 1970; Roberts, 1964; Terhune, 1949; Tucker, 1956).

The similarity of these agoraphobic characteristics with the stereotypic, feminine role seems clear. Stereotypically, women are viewed (by both men and women) as relatively emotional, submissive, excitable, passive, house-oriented, non-adventurous, and desiring security and dependency (e.g., Bem, 1974; Broverman, Broverman, Clarkson, Rosenkrantz & Vogel, 1970). Fodor (1974) suggested that phobic symptoms, particularly those of agoraphobia, are associated with extreme helplessness and dependency, and appear related to the stereotypic feminine role. Indeed, rigid stereotypic role expectations may lead to interpersonal "trappedness" with feelings of being dominated with no outlet for assertive behavior and may enhance the development of agoraphobia (Fodor, 1978).

Fodor further suggested that the agoraphobic response is an extreme and exaggerated, yet logical, extension of the stereotypic feminine role. Thus, it is far more acceptable
for a woman to remain house-bound than it is for a man. The role of "housewife" in this culture not only accepts many hours spent in the house but also encourages such behavior. Thus, social contingencies may actively reward "homebound" behaviors for women but not for men. Similarly, some women who have opted for non-home-oriented careers report that they have suffered some social punishment by family and friends for not meeting these traditional expectations.

To reiterate, the stereotypic feminine role is typified by qualities of dependency, submissiveness, passivity, fearfulness and non-assertiveness. In contrast, the stereotypic masculine role includes such characteristics as aggressiveness, assertiveness, independence and competency (cf., Bem, 1974). In light of this information, the conclusion of Andrews' (1966) extensive review of the phobia literature is extremely significant. He noted that phobic individuals are never described as self-assertive, independent or fearless. Furthermore, the phobic individual is not only characterized by dependency on others and fearfulness, of specific stimuli but appears to establish broad-based avoidance of most activities which involve self-assertion and independence in coping with stressful situations.

Evidence for the relationship between self-reports of fear and anxiety and adherence to a sex-role stereotype were presented by Benson and Brehony (1978). Subjects were 174
college students (87 females and 87 males) who completed a number of questionnaires including the Bem Sex Role Inventory (BSRI), the Wolpe-Lange Fear Survey Schedule (FSS), the Endler S-R Inventory of Anxiousness (S-R) and the Agoraphobia Research Questionnaire (ARQ). The ARQ is a new questionnaire being developed by these researchers and was designed to assess symptoms of agoraphobia. The ARQ was being tested in a college population as a preliminary to its use in clinical settings. Reliability and validity data are forthcoming. Subject sex and sex-role category designations (as measured by the BSRI) were employed as independent variables with the FSS, S-R, and ARQ scores serving as the dependent measures in analysis of variance. Additionally, subject sex and the separate masculinity and femininity mean scores were entered into a regression analysis using the same dependent measures. Results indicated that the ARQ was highly correlated with both measures of fear and anxiety (FSS and S-R). Furthermore, the data indicated that females scored higher than males and that androgynous and feminine subjects scored higher than masculine subjects on the ARQ. Masculinity was negatively correlated with total ARQ score. These data suggest a rather powerful relationship between adherence to a particular sex-role stereotype and self-reports of agoraphobic symptoms. The ARQ is currently being evaluated
with several clinical populations of agoraphobic individuals.

A number of hypotheses have emerged regarding mechanisms by which females may learn to emit agoraphobic behaviors. Fodor (1978) suggested the importance of modeling extreme feminine sex-role behaviors (often via media models) as a critical etiological factor in agoraphobia. She concluded that agoraphobia appears to be a "natural outcome of sex-role socialization rather than an illness" (BMA audiocassette). She presented strong evidence for agoraphobia-like behaviors among female characters in children's readers (NOW Task Force, 1975) and one might infer the salience of these kinds of models in influencing agoraphobic behaviors.

Female characters in these children's readers were consistently portrayed as helpless, home-oriented, passive, dependent, fearful, incompetent, and prone to a variety of mishaps when compared to male characters (NOW Task Force, 1975). Similarly, Sternglanz and Serbin (1974) evaluated sex-role stereotyping in children's television programs and demonstrated that female characters compared to male characters were shown to be significantly less behaviorally active and more deferent. Additionally, Brehony (1980) presented evidence from children's readers and other print media directed towards children (such as coloring books).
which substantiated the findings of the NOW Task Force (1975) and Sternglanz and Sergin (1974).

Most theorists about sex-role development (including Freud, 1933; Mischel, 1966; and Kohlberg, 1966) have emphasized the acquisition of sex-role appropriate behaviors via the observation of female and male role models. Among others, Bandura and Walters (1963) clearly demonstrated modeling to be a highly effective method of influencing the acquisition of behavior. Additionally, a number of research studies have demonstrated that parents and other adults tend to respond differentially to male and female children (e.g., Hoffman, 1972). Specifically, it appears that adults encourage more independent behaviors in male children whereas they are more likely to be tolerant of and reinforce (e.g., via attention and social support) dependent and helpless behavior in female children (e.g., Kagan and Moss, 1962). Thus, mechanisms of operant reinforcement as well as modeling appear to produce differential social learning histories for male and female children. The female's experiences appear to provide a history of encouragement for fearful and helpless behaviors that may provide an experiential background upon which agoraphobic avoidance behaviors are developed. A detailed discussion of this issue is presented by Brehony (in press).
F. INTERPERSONAL INTERACTION

It has been observed that most agoraphobics are married. For example, Marks and Herst (1969) found over 80% of their sample (N = 1,200) to be married. This observation created an impetus to discovering the potential characteristics of spouses of agoraphobics which may serve to maintain symptoms of the disorder. Adherence to an operant framework suggests that spouses may be an important reinforcer for agoraphobic symptoms in their partners.

Several early studies (e.g., Buck & Ladd, 1965; Fry, 1962; Symonds, 1971) looked at the relationship between martial partners and the expression of psychoneurotic behavior. However, the data in each of these reports were based on clinical interviews in uncontrolled case studies. A slightly more sophisticated attempt at looking at the development of neuroses in the wives of neurotic men (Ovenstone, 1973a, 1973b) also fell methodologically short of addressing the issue of reinforcement of agoraphobic symptoms. Specifically, the data relied on self-report questionnaire and interview data. Ovenstone investigated whether specific neurotic symptoms in wives were produced by husbands and postulated two potential mechanisms by which this transference may take place: (a) the wife models herself after the husband's symptoms (in this case one would expect a high correlation of specific symptoms between
husband and wife); and (b) the wife reacts to a stressful situation in the form of non-specific stimulus-response reactions (in this case, one would not expect a significant correlation of specific symptoms in the marital pair). Results did not support the general hypothesis that specific symptoms develop in the wives of neurotic men as a result of modeling, with the exception of irritability and nervous muscle tension on which married pairs did correlate significantly. Unfortunately, Ovenstone interpreted correlation as causality. It is just as reasonable to infer that wives choose husbands (and vice versa) on the basis of characteristics which are like their own or compliment them in some way. For example, irritable men may select irritable women as their wives and vice versa. Ovenstone's design and results offer little further understanding of the marital interaction in which one member exhibits pathological symptoms.

A number of theories have attempted to explain the higher incidence of psychiatric symptoms generally found in the spouses of diagnosed patients (e.g., Hagnell & Kreitman, 1974; Penrose, 1944). Slater and Woodside (1951) suggested that the high incidence of symptoms is a consequence of a selection process operating at the time of courtship (the assortive-mating hypothesis). Other researchers (e.g., Kreitman, 1964; Kreitman, Collins, Nelson & Troop, 1970; Kyle
& Hamilton, 1962;) have favored the "interaction theory", suggesting that the higher incidence of psychiatric symptoms develop as a result of the experiences of living with a neurotic spouse.

Agulnic (1970) observed from interviews that spouses of phobic patients are less "neurotic" than spouses of patients from the more general "neurotic" population. However, Hafner (1977a, 1977b) noted several methodological problems which attenuated these results. In using a heterogenous phobic population (agoraphobics as well as specific phobics) and analyzing the sample as a whole (N = 50), differences between agoraphobics and non-agoraphobics could not be examined. Additionally, Agulnic's sample consisted of 18 males and 32 females and their spouses, and no attempt was made to determine how spouses of male and female phobics differed.

The further understanding of the "interaction" vs. "assortive mating" issue holds important ramifications for treatment and for delineating what aspects of behavior may contribute to the maintenance of phobic symptoms. As Hafner (1977a) emphasized, the interaction theory implies that improvement in symptoms of one partner will lead to improvement in the other. On the other hand, assortive mating implies that improvement in one partner may be resisted by the other on the basis that it disturbs the balance of a
relationship in which mutual "overt psychopathology plays an important part" (p. 234). Hafner (1977a) studied 33 agoraphobic women and their spouses in an attempt to determine whether these marriages were best described from an assortive-meeting perspective or pathogenic interaction model. It is noteworthy that the mean duration of agoraphobic symptoms for this sample was 9.5 years and the mean duration of marriage was 12.7 years. Unfortunately, these means do not reveal whether each subject was married prior to the onset of symptoms. Hafner used several self-report scales and a semi-structured interview to assess the extent of phobic behaviors and hostility between spouses in his subjects.

On the basis of self-reported hostility and the Direction of Hostility Scale (Caine, Foulds & Hope, 1967), Hafner (1977a) isolated two distinct types of marital interaction among agoraphobic wives and husbands: 1) extrapunitive women with high total hostility scores married to relatively intrapunitive men with normal total hostility scores. (He labeled this group "Type I"); and 2) intrapunitive women with low total hostility scores married to extrapunitive men with relatively high total hostility scores (Type II). Consistent with Agulnic (1970), the results of this research suggested that husbands of female agoraphobics are not demonstrably "neurotic" themselves.
Furthermore, no significant relationship between husbands' symptoms and duration or severity of wives' symptoms was observed. Additionally, Type I wives (high total hostility married to men with normal hostility scores) revealed a relatively high incidence of general phobic and neurotic symptoms on other self-report measures, such as the Fear Survey Schedule.

On the other hand, Type II wives (low total hostility) married to men with high hostility scores reported only agoraphobic symptoms. Furthermore, results showed that wives' self-satisfaction was positively correlated with the total hostility scores of husbands. These data suggested that a rise in wives' self-satisfaction may invite a rise in husbands' total hostility scores. Hafner (1977a) noted "this probably means husbands becoming more aware of hostile and self-destructive thoughts, impulses and feelings which would be experienced as unpleasant and threatening to self-esteem. It may therefore lead some husbands to resist, initially, at least, further symptomatic improvement in their wives" (p. 238). Based on these data, it may be appropriate to include husbands of agoraphobic women in various aspects of treatment, with the hope of facilitating behavioral changes that may be necessary on the husbands' part in order to enhance symptomatic improvements in their wives.
While Hafner's study raises provocative ideas and questions, several problems emerge. First, as with so many studies in this area, results relied solely on self-report data. Clear, objective behavioral measures of husband-wife interactions are critical in specifying the effect of a husband's behavior on his wife's agoraphobic symptoms. For example, if the wife's symptoms prevent her from going to the store and the husband has to do the shopping then the wife's symptoms are potentially being reinforced and maintained by having the shopping done by her husband and hence avoiding the anxiety associated with leaving the home and entering a store. Indeed, Buglass et al. (1977) found that agoraphobic subjects were less frequently responsible for household shopping than were matched control subjects.

Finally, Hafner used no control group and, therefore, the design offered no data for determining how husband and agoraphobic wife interactions may differ from the interactions of other couples. In fact, Buglass et al. (1977) compared husbands of agoraphobic women and husbands of matched controls and found no significant differences on measures of psychological symptomology, early development and family history, work record, sexual development and activity, alcohol use, legal troubles, and extraversion.
Milton, Hafner and Phil (1979) examined treatment effects on both agoraphobic patients and spouses using self-report measures of symptoms and marital adjustment. Results showed that patients who rated their marriages as unsatisfactory before treatment improved less during treatment and were more likely to relapse during follow-up than were those subjects who rated their marriages as satisfactory prior to treatment. Over 50% of the marriages appeared to be adversely influenced by symptomatic improvement of the agoraphobic partner. Hafner (1979) presented a number of uncontrolled case studies and concluded that a significant number of female agoraphobics are married to "abnormally jealous men", that the husband's jealousy adversely influenced their wife's response to treatment, and that increased marital problems resulted from symptomatic improvement. While information based on uncontrolled case studies must not be regarded as empirical support for this interpersonal view, it is interesting to note the similarities of this report to clinical impressions of Hand and Lamontagne (1976), Hayley (1963), Lazarus (1972) and Shafar (1976). In particular, these authors observed exacerbation of interpersonal problems following symptom removal in agoraphobic and social phobic individuals. Additionally, Hudson (1974) observed that agoraphobics from more dysfunctional families improved less than those from
well-adjusted families following in vivo exposure. In contrast, Emmelkamp (1979) found no between-group differences following an in vivo exposure procedure when comparing individuals reporting low marital satisfaction. Symonds (1971) goes so far as to suggest that phobia development after marriage is really a "woman's declaration of dependence".

Although the data are equivocal and no consistent patterns of interaction have emerged, the interpersonal domain is an important focus for clinical researchers using controlled experimental methodologies. The data available at the present time are based wholly on clinical interviews, questionnaires, and other self-report indices. While these techniques offer important information regarding subjective experiences, the value of these data would be greatly enhanced with direct behavioral assessment. Systematic, functional analyses of these marital interactions can delimit the behaviors which serve to reinforce and maintain maladaptive phobic symptoms.

G. THEORIES OF ETIOLOGY

Marks (1970) noted that "the literature shows impressive agreement about the natural history and clinical features of agoraphobia. Disagreement appears only when the boundaries of the disorder have to be defined, and when etiology and treatment are considered." (p. 539) Various
theories have evolved regarding agoraphobia. However, since no longitudinal studies of agoraphobia have been published, most of the theories rely on inference from other areas of inquiry (e.g., the establishment of avoidance behavior in laboratory animals).

(1) EARLY THEORIES

One of the earliest theories regarding the development of phobic behavior is related to the writings of the philosopher, John Locke (circa 1690, republished 1913). Locke suggested that fears arise from associations of ideas and if such associations were established in childhood, the original causes may be forgotten. Essentially, Locke emphasized the importance of a phenomenon like classical conditioning in the development of phobias. Although predating Pavlov by several hundred years, he did not refer to the classical conditioning paradigm as such. Whereas Aristotle had talked about association by contiguity, Locke was one of the first writers to grasp clearly that an act (not just an idea) may be touched off by a signal which would not have the innate capacity to touch it off (Murphy & Kovach, 1972). Locke wrote:

The ideas of goblins and sprites have really no more to do with darkness than light, yet let but a foolish maid inculcate these often on the mind of a child, and raise them there together,
possibly he shall never be able to separate them
again so long as he lives, but darkness shall
ever afterwards bring with it those frightful
ideas, and they shall be so joined, that he can
no more bear the one without the other. (Locke,
1913; cited by Friedman & Goldstein, 1974,
p. 110).

Other pre-Freudian theories of phobic behavior have
included the notion of nervous system degeneration
(Kraepelin, 1903; Oppenheim, 1911); the idea that fears
represent vestigial traces of ancestral experience (Hall,
1897); and an emphasis on the functional significance of
avoiding unpleasant tasks (Janet, 1919, 1919).

(2) PSYCHODYNAMIC VIEW

Freud (1909) introduced the first dynamic conception
of phobia and sharply differentiated between obsessions and
phobias. Freud's theory of phobias relied heavily on the
case of "Little Hans" (a five year old boy with a phobic
response to horses). Freud described this phobic response
as a conflict between the boy's "instinctual strivings and
his ego demands." Friedman and Goldstein (1974) add:

His oedipal conflict and strong hostility toward
the father gave rise to intense fears of
punishment, that is to castration fears, which
became transformed into the phobic fear of being
bitten by a horse, as well as into the fear that
a horse pulling a heavy loaded vehicle will fall down. The horse was substituted for the father, an internal danger was changed into an external one, and the fear was displaced onto the substitute. It is easier to avoid an external danger than to cope with an inner danger that cannot be avoided. (p. 115).

The mechanisms of repression and displacement are critical in the psychodynamic interpretation of phobia. That is, the original object of fear is replaced by another object and the original source of the fear reaction becomes repressed. Criticism of this psychodynamic view abounds. Like most dynamic theory, the notion of the development of phobic behavior rested on one uncontrolled case study, and evokes high-level inferences about untestable constructs like repression.

Freud's interpretation of the case of "Little Hans" was reformulated in learning theory terms by Wolpe and Rachman (1960) and Bandura (1969). It is of interest to note however, that in spite of the diversity of these early explanations of phobia, several authors suggested interventions that seem decidedly behavioral in nature. For example, Oppenheim (1911) recommended that the physician accompany the agoraphobic in walking across the feared open places (in vivo exposure). (However, Oppenheim also advised interventions such as washing the head in cold water and the removal of nasal polyps!)
Freud himself seemed to recognize the need to expose the phobic patient to the fear-eliciting stimulus. He wrote:

One can hardly ever master a phobia if one waits till the patient lets the analysis influence him to give it up...one succeeds only when one can induce them through the influence of analysis to go about alone and to struggle with their anxiety while they make the attempt (Freud, 1924, p. 400; cited in Leitenberg, 1976, p. 133).

More recently, another major psychoanalytic thinker, Fenichel (1963) reiterated Freud's view of the importance of in vivo exposure in the treatment of agoraphobia.

A later proponent of the psychodynamic model explicitly addressed agoraphobia. Specifically, Waelder (1967) wrote: "In the case of the agoraphobic woman, for instance, who is likely to harbor rape fantasies, one would have assumed, according to the older theory (Freud's early theory of phobia), that her frustrated sexual desires had been transformed into anxiety, while the new viewpoint holds that she is afraid of her sexual desires and that this fear, always present, becomes greatly intensified in situations of opportunity, and, hence, of temptation" (p. 22). While one can argue that Waelder's view is, perhaps, overly simplistic, and narrowly sexual, a more appropriate criticism involves the lack of empirical support for his conclusions.
(3) LEARNING THEORIES

An early and highly regarded explanation for avoidance (phobic) behavior relied heavily on the observation of experimental animals. Mowrer (1947) and, later, Solomon and Wynne (1954) described the development of avoidance behavior according to a two-factor theory. Basically, this process involves: (1) the establishment of a classically conditioned association between a central motivational state of fear and some previously neutral stimulus, and (2) the performance of an instrumental response which reduces the fear by removing the fear-eliciting stimulus (drive reduction and contiguity notions of reinforcement). This reduction in fear is reinforcing (e.g., negative reinforcement) and in subsequent fear-eliciting situations the organism will be more likely to perform this response again. Mowrer's later version (1960) of his two-factor theory came to rely more heavily on classical conditioning as the most important learning component for the development of avoidance behaviors. The sequence of events required for fear acquisition, according to this theory, is well established in the experimental literature (e.g., See Mackintosh, 1974 for a review).

In recent years, however, conditioning theory has been the target of a great deal of criticism (cf., Herrnstein, 1969; Rachman, 1975, 1977). For example, Emmelkamp (1979)
noted that, while the classical conditioning paradigm is useful in describing the development of phobias after a traumatic experience, the "paradigm is inadequate in explaining the gradual development of phobias" (p. 57). This writer cites two lines of evidence to support this view. First, phobic patients do not usually recall traumatic experiences that led to their fears. Goldstein and Chambless (1978) and Lazarus (1971) among others, found that only a few patients could recall traumatic experiences. Buglass, Clark, Henderson, Kreitman, and Presley (1977) showed that less than 20% of their agoraphobic subjects could identify discrete or "specific" conditioning events at the time of fear onset. Emmelkamp suggested a conservative evaluation of these data, however, since such case reports rely on retrospective information and appropriate probing can sometimes cause subjects to "recall" discrete conditioning events.

It is important to point out, however, that the observation that many agoraphobic individuals cannot recall a single discrete event that marked the onset of their symptoms is not sufficient evidence to discount conditioning theory. Conditioning histories in agoraphobia are not likely to be limited to specific and discrete conditioning events. Levis and Hare (1977) noted that "laboratory evidence again has demonstrated quite convincingly that conditioning occurs
not simply to a discrete stimulus but to a stimulus complex" (p. 313). Thus, conditioning theory does not require a single conditioning event for the development of phobic avoidance behavior. Additionally, through the mechanisms of generalization and higher-order conditioning the topography of the phobic reaction may change over time.

A second criticism leveled against conditioning theory, according to Emmelkamp (1979), is the repeated failure to condition phobias in humans. He cites this as a major problem for the theory. Bregman (1934) and English (1929) among others were unable to condition phobias in infants using a paradigm similar to Watson and Rayner's (1920) classic study which demonstrated phobic conditioning in a young child (Little Albert). Furthermore, Emmelkamp noted that the "assumption of equal conditionability, as originally postulated in the conditioning theory of phobia acquisition, seems untenable. The preponderance of phobias such as agoraphobia, acrophobia, or snake phobias contrasts with the infrequency of phobias for sheep, pyjamas, hammers and electrical appliances (objects with which people are confronted daily)" (p. 57).

Seligman (1971) and Marks (1970, 1977) viewed phobias as highly "prepared" learning. That is to say, objects of natural importance to the survival of the species are more easily conditioned (e.g., heights, snakes). Some objects and
situations are likely to be "evolutionarily preprogrammed" in that humans may easily acquire phobias for potentially dangerous situations. Seligman presented evidence that such prepared learning, in contrast to laboratory conditioning behavior, is selective, highly resistant to extinction, can be acquired in one trial, and is probably non-cognitive for the most part. (For a discussion of this theoretical issue the reader is referred to De Silva, Rachman & Seligman, 1977; Emmelkamp, 1979; Kaloupek and Boyd, 1980; Marks, 1970, 1977; Rachman & Seligman, 1976; Heiss, 1980; Seligman, 1970, 1971). Moreover, experimental evidence with infrahuman subjects suggested that certain stimuli appear to condition more readily than others (e.g., Garcia & Koelling, 1966). Research investigating the stimulus content of phobias and preparedness theory with human subjects has been conducted by Ohman and his colleagues (e.g., Ohman, Fredrikson, Hugdahl & Rimmo, 1976; Ohman, Fredrikson & Hugdahl, 1978; Hodes, Ohman & Lang, 1979; Ohman, 1979; Ohman & Dimberg, 1979). For example, Hodes, Ohman and Lang (1979) used three types of stimuli as the CS in a fear conditioning paradigm, comparing (1) "evolutionary", fear-relevant stimuli (e.g., snakes and spiders); (2) "nonevolutionary" fear-relevant stimuli (e.g., firearms), and (3) neutral stimuli (e.g., household items). As predicted by preparedness theory, evolutionary fear-relevant stimuli showed superior resistance to extinction compared to the other two groups.
While Ohman and colleagues seem to present strong empirical evidence for the "preparedness" notion, it is important to note that this research suffers from some rather serious methodological problems. As Emmelkamp (1979) pointed out:

(1) all subjects were non-phobic college students; (2) aversiveness in all the studies was minimal and the subjects controlled the level of aversiveness; (3) the subjects could withdraw from the study at any time, hence affording greater personal control than is found in clinical phobias; and (4) the experimenters used only psychophysiological data as the dependent measure, in spite of the fact that phobic anxiety has been conceptualized as including three different response modalities: overt behavior, verbal reports and physiological responses (cf., Lang, 1971). Furthermore, these systems do not always covary (Rachman & Hodgson, 1974; Hodgson & Rachman, 1974). In fact, Mathews (1971) observed that reduction of physiological arousal temporally preceded lowering of self-reported anxiety following desensitization procedures in phobic individuals.

Actually conditioning theory can accommodate the notion that some stimuli may be more easily conditionable than others. Biologically significant or "prepared" stimuli may more easily condition, but phobia conditioning may still follow the basic two-factor paradigm (cf., Kaloupek & Boyd,
1980). Indeed, extensions of learning theory (e.g., serially ordered CS conditioning, memory redintegration, conservation of anxiety) enrich the conditioning view of the development of phobic avoidance behavior. Additionally, convincing evidence for conditioning theory has been accumulated in laboratory studies with infra-human subjects (e.g., Levis & Boyd, 1973, 1979) and, more recently, with human subjects (Malloy, 1979). However, evidence for the role of the two-factor conditioning process with respect to agoraphobia is, as yet, unclear. Certainly, the issue remains controversial. The reader is referred to Levis and Hare (1977) in Volume 4 of this series for an excellent discussion of the conditioning model in human phobic behavior.

Recently Reiss (1980) has articulated an expectancy model for human fear. In this paper, Reiss incorporates the work of Wagner and Rescorla (1972) into the human fear literature. Briefly, Reiss postulated that what is learned in Pavlonian conditioning is an expectation regarding the occurrence or nonoccurrence of the unconditioned stimulus (US). He noted that the "mediating expectancy process can become an elicitor of CRs, verbal reports of CS-US relations (awareness), and instrumental behavior". While the notion of highlighting cognitions and expectancies in the development of fear and phobias is critical, the lack of empirical support for this model precludes any conclusions.
In fact, Kaloupek and Boyd (1980), in a rejoinder to Reiss, presented a cogent argument for the parsimony of conditioning theory.

A more operant behavioral approach (e.g., Skinner, 1953) views avoidance as a freely emitted response whose incidence is increased or decreased by the consequences which follow. This model finds no need to posit any underlying drive state (e.g., classically conditioned fear) in order to account for avoidance behavior. However, the literature has not included any reports that specify the reinforcers which maintain agoraphobic behavior, specifically, in the natural environment. Goldstein and Chambless (1978) noted that possible contingencies supporting agoraphobia include social reinforcement, perhaps in the form of attention from others, and punishment by criticism or withdrawal of affection for attempts to emit more independent behaviors. Empirical support for the operant model in the etiology of agoraphobia is lacking at the present time.

That specific fear responses can be effectively learned via modeling is supported by a variety of sources in the behavioral literature. For example, Jones (1924), in an early classic study, found social imitation to be an important determinant of irrational fear in children. Hagman (1932) found a significant correlation between the kind and number of fears expressed by mother and child. Murphy, Miller and
Mirsky (1955) demonstrated the acquisition of a conditioned avoidance response in monkeys who had observed other monkeys receive shocks but had not received shock themselves.

Indeed, Solyom, Beck, Solyom and Hugel (1974) argued that vicarious learning or modeling is the most salient etiological factor in the development of agoraphobic behaviors. Their argument is based on their observation that mothers of agoraphobic patients (N = 47) had a significantly higher incidence of phobic neurosis than mothers of control subjects (31% versus 14%). While these conclusions are provocative, it is unfortunate that Solyom et al's experimental design (based wholly on self-report) could not discriminate between modeling, reinforcement contingencies or genetic factors as variables in the etiology of agoraphobia. Additionally, conflicting evidence was reported by Buglass et al. (1977) finding of no significant differences between parents of agoraphobic subjects and parents of matched control subjects on a number of measures of psychological health. However, this study is also based solely on self-report data and, thus, is subject to the usual criticisms applied to this methodology.

The powerful effects of modeling, however, are extremely well documented (e.g., Bandura & Walters, 1963). Similarly, data regarding sex-role stereotypes (cf., Bem, 1974) clearly suggest that the feminine stereotype consists of
characteristics such as dependency, fearfulness, passivity, and low assertiveness. Andrews (1966) among others had used almost identical language in describing the "phobic personality". The acquisition of a traditional feminine sex-role stereotype (through modeling and reinforcement for role consistent behaviors) may not be a necessary nor sufficient cause for the development of agoraphobic fears and behaviors. However, the feminine stereotype is very likely to play an important role, possibly in interaction with other variables, in the etiology of agoraphobia. Further research along these lines is needed.

In attempting to draw conclusions regarding the etiology of phobic disorders, Rachman (1977) speculated that, perhaps, some individuals are particularly prone to acquire fears by classical or operant conditioning, whereas others acquire fears by transmission of information or vicarious learning. As Emmelkamp (1979) pointed out, Rachman's arguments make good common-sense but empirical support for delimiting the etiology, or more likely the etiologies, for agoraphobia is not presently available. The determination of these factors are critically important for our further understanding of the development of phobic behavior, in general, as well as holding important implications for clinical interventions and, ultimately, prevention of these disorders.
H. A MODEL FOR THE DEVELOPMENT AND MAINTENANCE OF AGORAPHOBIC BEHAVIORS

Research regarding the etiological variables that result in agoraphobic behaviors are likely to be developed within a theoretical framework (e.g., classical conditioning, operant conditioning and social learning theories) and rely on inferences drawn from the animal and analog literatures to some extent. The model to be presented here is based, not on theory, but rather, on widely reported clinical observations from psychologists and psychiatrists throughout the United States and Europe who have worked with agoraphobic individuals. The model describes the complex interplay between physiological, cognitive, behavioral, and interpersonal factors in the development and maintenance of agoraphobic behaviors. It is not intended to provide a description for the etiology of this disorder, nor is it intended to supplant nor be antagonistic to any of these existing theories. Rather, the model attempts to explain how symptoms develop and are maintained given a particular set of characteristics that have been learned in any number of ways (e.g., through classical and operant conditioning, modeling, or transmission of information).

Therefore, the purpose of the model depicted in Figure 1 is to provide a formal conceptualization that integrates consistent clinical reports from a wide variety of sources.
Figure 1
A Model for the Development and Maintenance of Agoraphobic Behaviors
Some components of the model have been supported by research findings, whereas other aspects have simply not yet been addressed in the literature. However, all components are consistent with clinical reports and with generally accepted principles of the functional analysis of behavior (e.g., Antecedent - Response - Consequences). This model can be of value since it appears that the agoraphobia literature has not focused on critical variables which may serve to maintain symptoms. The majority of research effort has been directed towards the evaluation of treatment outcome. A more thorough, empirically-based understanding of cues and contingencies that maintain agoraphobic avoidance behaviors in the natural environment can be of considerable heuristic value and serve to stimulate innovative treatment approaches. To these ends, it is intended that the model may serve to organize and focus future research efforts. I shall now describe the model in some detail.

(1) SOCIAL LEARNING HISTORY

Based on clinical evidence, the model illustrated in Figure 1 assumes a social learning history in which the individual has learned to behave in a relatively consistent manner with regard to certain characteristics. Whether these are to be conceptualized as traits (cf., Mischel, 1968) or as frequently emitted behaviors is irrelevant. What is important is that these behaviors are frequently emitted,
although there is, of course, a great deal of situational specificity in the determination of these behaviors.

Clinical evidence suggests that agoraphobic individuals report a great deal of difficulty with the assertive expression of anger and negative feelings towards others, particularly family members. It is important to note that it does not appear to be the case that these individuals are unassertive in all situations. Quite conversely, several researchers have observed that many agoraphobics report being extraverted and popular in social situations prior to symptom onset (e.g., Marks & Herst, 1969). Additionally, research has shown that assertive behavior is determined by situational variables to a large extent (e.g., Eisler, Hersen, Miller & Blanchard, 1975). Thus, assertive behavior can take a variety of forms such as the ability to set limits, to make requests, to express both positive and negative feelings and to begin, continue and end conversations (Lazarus, 1973). There is no reason to suggest that agoraphobic individuals demonstrate anything but the normal distribution of assertive behaviors in these situations, with the exception of the expression of anger and negative feelings.

A second commonly reported characteristic of agoraphobic individuals is a low tolerance for stress, or, perhaps, ineffective strategies for coping with stress, leading to high levels of perceived tension and anxiety. In
fact, the agoraphobic individual has been described as almost constantly functioning at high levels of sympathetic nervous system arousal (e.g., Marks, 1969). Actually, Hallam (1978) goes as far as to suggest that agoraphobic should not be classified as a phobia at all. Instead avoidance behaviors are simply a variable feature of this "anxiety neurosis."

Lader (1967) and Gelder and Marks (1967) provided evidence for the existence of high levels of diffuse anxiety and arousal in agoraphobics by observing that skin resistance measures showed a significant increase in spontaneous fluctuations and significantly slowed habituation to repeated auditory stimuli. Additionally, there was a slight increase in forearm blood flow, another indicator of arousal.

Weakes (1976) referred to this diffuse anxiety state as "sensitization" and suggested that this high level of physiological arousal provides a backdrop against which any additional stressor may swiftly and alarmingly cause a major panic attack. Following panic, the individual becomes more aroused, anxious and fearful that panic will occur again, thus creating a cycle of "sensitization--fear--sensitization." Similarly, Marks (1969) noted that:

The features of general anxiety are closely linked to those of the phobias and are partly described together with them. The term denotes from floating anxiety experienced regardless of
the situation the patient is in forming a pervasive background of tension which might be constant or fluctuate considerably for no apparent reason. Lasting general anxiety merges into the more acute, abrupt, phasic disturbance of panic attacks which form the most distressing symptoms found with agoraphobia. (p. 137)

Both clinical and empirical evidence strongly suggest that high levels of stress accompany other agoraphobic symptoms and are exacerbated by periodic panic attacks.

The role of dependency in the "typical" agoraphobic is equivocal. For example, Bugless et al. (1977) presented evidence suggesting that agoraphobic women did not differ from matched controls on measures of dependency on their mothers (e.g., measures of a history of separation anxiety). In contrast, Solyom, Silberfeld and Solyom (1976) hypothesized that aographobia was a reactivation of early attachment behavior made excessive by an overprotective mother. However, results of their study were inconclusive. In spite of these data, clinical reports show marked consistency in describing agoraphobic individuals as dependent upon others in order to move comfortably throughout their environments (e.g., Marks, 1969). Dependency upon a significant other is reported so frequently that this person has frequently been referred to in the literature as the "phobic companion." It is quite typical for agoraphibics
to report that they are more mobile (e.g., eating at restaurants, going to a movie or church, shopping, driving) when accompanied by some trusted other person. Indeed, Marks and Herst (1969) found that about 65% of their agoraphobic sample felt more comfortable if accompanied while away from home. Marks (1969) wrote: "Agoraphobics generally feel easier in the presence of a trusted companion, be this human, animal, or inanimate, and in such cases become dependent upon the relative, pet or object for their peace of mind." (p. 133).

Fairbank, Brehony and Sanders (1980) asked a female agoraphobic client to go into a crowded shopping mall as a pre-treatment behavioral assessment of avoidance behavior. She returned much later and reported that she experienced no anxiety during the time spent in the mall. When asked to go back into the mall after the therapists left temporarily, she refused to go back into the mall "for even a minute." She reported that she felt "safe" as long as someone she trusted would be available to "take charge" in case she panicked and lost control over her behavior. Her response might be construed as one method of abdicating responsibility for her well-being to another person (in this case the therapists) in the event of a debilitating episode of panic. This case is in no way unique. In fact, this dependency on others to take care of them should a panic
attack occur is consistently reported by agoraphobic patients. Marks (1969) noted that frequently agoraphobics report that journeys outside the home are easier if they pass the home of friends, doctors or go by police or fire stations. These are all places where the individual feels help is at hand in the event of a panic attack.

It is clear that after the onset of symptoms, agoraphobic individuals become dependent upon others in order to leave their "safe" place with at least manageable anxiety (e.g., Washburne & Chambless, 1978). However, the role of dependency in the development of symptoms is not well documented in either clinical or empirical reports, although dependency as a factor in the maintenance of symptoms appears to be an important variable.

It is noteworthy that passive, dependent behavior is encouraged in females through rarely tolerated in males, and according to beliefs about social sex-role stereotypes, women are viewed as being more dependent than men (e.g., Bem, 1974). In light of the marked predominance of women experiencing the agoraphobic syndrome, it would be interesting to determine if agoraphobic women differ significantly from their non-phobic counterparts on measures of dependency. As Washburne and Chambless (1978) point out, dependent behaviors may set the occasion for the development of a sense of helpfulness that results in agoraphobia.
Considering the severity of agoraphobic symptoms, it is not surprising that it does not take long for an agoraphobic to experience diminished feelings of self-esteem and self-confidence. Most agoraphobics view themselves as weak and unable to fend for themselves. Similarly, most agoraphobics report that they emit a very low frequency of positive self-statements (e.g., "Nice job") which may result in a deficit in the expectations of personal competence. Instead, cognitions usually take the form of "awfulizing" or "catastrophizing" (cf. Ellis, 1979) with self-punitive messages such as, "You are so stupid you can't even go to the grocery store. Little children can do that. If you even tried to go you would probably faint from fright and people would know how stupid you are." This configuration of behaviors seriously undermines the individual's self-esteem which may lead to feelings of worthlessness and depression. In fact, these feelings of helpfulness might be construed as a form of learned helpfulness (cf. Seligman, 1972), though empirical evidence for describing the similarities between agoraphobia and learned helpfulness is not currently available. These feelings of low self-worth are particularly difficult for the agoraphobic, since most report that the positive opinions of others are critically important to them. For example, most agoraphobics acknowledge that a major component of their fears is the aversion to appearing
stupid or being embarrassed in front of other people. These individuals appear to emit a high frequency of approval-seeking behaviors as well as showing high levels of fear of negative evaluation.

This configuration of characteristics seems to predict that certain external or environmental situations might be associated with increased stress. For example, many patients report that situations requiring "formal", ritualized behavior (e.g., being a member of a wedding party, participating in a graduation ceremony, or leaving a church or reception area) are associated with high levels of anticipatory anxiety and are viewed as extremely aversive. Actually, it is not surprising that situations characterized as formal and ritualized and allowing for very little latitude in behavior are viewed as aversive to the individual who consistently seeks the approval of others but who has little confidence in his/her ability to perform adequately.

Most of the environmental cues associated with agoraphobic escape and avoidance behaviors are related to the perceived degree of difficulty in effectively escaping the situation. In other words, physical or social barriers which prevent or impede a successful escape response are viewed as fear-eliciting by agoraphobics. It is interesting that a similar "confinement" enhances the acquisition of fear responses and avoidance behaviors in laboratory
conditioning experiments with animals (cf., Marks, 1969). I will discuss a variety of cues which may elicit panic states and escape and avoidance behaviors. These cues include cognitive, physiological and environmental stimuli. I will first look at specific situational or environmental cues that are reported to cause both escape and avoidance responses.

(2) SITUATIONAL CUES

In addition to variable responses to spatial (e.g., wide, open spaces) and illuminating (e.g., bright lights) dimensions of the environment, some cues are consistently reported to create potent fear-eliciting situations. Clinical reports show great consistency regarding characteristics of situations that are regarded as phobic stimuli. Specifically, situations in which agoraphobics are alone are reported to be stressful (e.g., Liotti & Guidano, 1976; Marks 1969). The presence of the "phobic companion" or someone who could take over should the agoraphobic experience a panic attack serves to greatly attenuate such anxiety.

Agoraphobics report difficulty in situations in which they perceive themselves to be "trapped" or, in other words, situations in which escape is prevented or made difficult by physical or social barriers. Thus, most agoraphobics mention that they must sit near the door and on the aisle
in theatres, churches or classrooms in order to be able to make a quick escape if they begin to feel panicky. Similarly, waiting in lines of other crowded situations (e.g., boarding a bus or paying for groceries) are reported to be very anxiety arousing (e.g., Marks, 1969). In fact, clinicians have noted that anxiety can increase in these individuals simply by closing the office door or by observing someone move their chair into the "escape path." It is commonly reported that increased linear distance from a "safe place" increases anxiety. For example, to shop at a store that is only a block from home can prove to be considerably easier than shopping at a store located several miles from home for most agoraphobics.

In addition to the exacerbation of stress by physical distance and barriers which prevent escape, perceptions of "trappedness" due to social expectations are also cited as anxiety arousing stimuli. Thus, formal situations in which specific ritualized behaviors are expected are reported to be aversive. This makes sense when one recognizes that feelings of being cut off from an escape route are very disturbing to these individuals. In order to escape from a formal situation the agoraphobic might have to risk appearing inappropriate to the other participants at the event. These situations are reported to be even more difficult when the individual is to be the focus of group
attention. For example, a particular female agoraphobic reported that attending her daughter's wedding was the most stressful event she had ever encountered. In this situation, it was necessary for her to sit in the front of the church where she was "prevented" from escaping both by physical barriers (distance from the door) as well as social barriers (i.e., she told herself "the mother of the bride does not leave during the wedding ceremony under any circumstances"). Additionally, this woman rightly perceived that she was the center of a good deal of attention among the people attending the wedding (Brehony, Johnson, and Fairbank, 1980).

It appears that distance from a safe place, being the focus of attention, feeling crowded, and expectations of formal behavior are all factors which enhance the feelings of "trappedness", wherein escape is perceived to be quite problematical. Marks (1969) summarized this situation by noting that "many agoraphobics become afraid of being left alone or in any situation where they cannot reach safety with speed and dignity" (p. 133).

Perhaps, the most noteworthy, environmental factor associated with escape and avoidance behavior in agoraphobics has to do with the novel properties of the environmental events. While fear of novelty is found in many species (cf. Bronson, 1968) most humans show a variety of both approach and avoidance responses to novel stimuli.
Consider for example the individual who flies in an airplane for the first time. The sensations of flying would be novel and, perhaps, fear-eliciting for some. However, one person may describe their state of arousal in this situation as "excited" while another would describe their state as "fear."

Zuckerman and colleagues (1971, 1972) labeled this phenomenon "sensation-seeking" and developed a scale to measure this trait. The sensation-seeker was described as "a person who needs varied novel, and complex sensations and experiences to maintain an optimal level of arousal" (p. 308). While this definition may describe one endpoint of the sensation seeking continuum, clinical reports suggest that agoraphobic behavior may describe the other pole. It is clear that agoraphobic individuals consistently report fear and avoidance of novel stimuli and that increased arousal level is almost always perceived to be aversive.

One potential explanation for this phenomenon might lie in the attribution of arousal. Agoraphobics appear to label any arousal as aversive and regard these sensations as introceptive cues for anxiety and panic. Agoraphobics tend to have very poorly developed abilities to discriminate between arousal states such as excitement versus anxiety. Thus, they avoid most novel (and perhaps exciting) situations in order not to experience aversive feelings of arousal.
A second hypothesis suggests that familiar situations elicit predictable responses and/or set the occasion for operants that will successfully lead to positive reinforcement and avoid negative reinforcement or punishment. On the other hand, novel situations may elicit non-predictable respondents and/or require behaviors that are not available in the individuals' repertoire. Thus, lack of perceived control over reinforcement may help to describe the aversion to novel stimuli. Emmelkamp and Cohen-Kettenis (1975) found that external locus of control was correlated with phobic anxiety. These data suggested that while agoraphobic individuals may prefer to experience internal control, their real locus of control is decidedly external. Therefore, control over reinforcement is perceived by these individuals to be more a function of environmental control rather than dependent upon their own efforts.

It is important to note that since agoraphobic individuals do not stay in aversive, fear-eliciting situations long enough to extinguish their fears, they are frequently confronted with novel situations. In fact, all but the most mundane situations are likely to remain novel (for lack of exposure) and, hence, continue to hold fear-eliciting potential.
(3) ESCAPE

When the agoraphobic individual encounters situational cues which elicit fear, s/he experiences sympathetic arousal (e.g., increased breathing and heart rate) which is linked to negative cognitions (e.g., "I am going to lose control and faint and be embarrassed in front of all these people") in a closed-feedback loop. Whether physiological arousal elicits the cognitions, cognitions elicit the arousal, or the two occur simultaneously is not known. What is important, however, is that in the presence of the fear-eliciting stimulus physiological arousal mounts until a sympathetically innervated panic state accompanied by "catastrophic" cognitions ensues. These cognitions usually take the form of loss of control (e.g., fainting), embarrassment or negative evaluation by other people. At this point, the agoraphobic individual will usually escape from the situation. Generally, this escape is accomplished by actual physical departure from the fear-eliciting situation, although this is not always the case. Occasionally, individuals will physically remain in the presence of the situational cues but will avoid their aversive thoughts and feelings in a variety of ways including obsessional thinking and compulsive behavior (e.g., counting). It is interesting that Lader and Mathews (1970) observed that at the height of a panic attack an agoraphobic
subject reported feelings of depersonalization and her arousal level (as measured by GSR) rapidly decreased. It was as if this "cognitive avoidance" was an effective strategy to escape from the fear-eliciting situation.

The escape response provides for a reduction in arousal level (alternately referred to as "fear", drive, or a central motivational state). This reduction in arousal is perceived as very reinforcing thus increasing the likelihood that a similar response will be emitted in future fear-eliciting situations. Numerous researchers have shown fear reduction to be an effective reinforcer of instrumental responses with infrahuman subjects (for a review see MacKintosh, 1974, Chapter 6) and this appears to be the case in human phobic behavior as well.

In addition to the reinforcing properties of fear reduction, attention from others (e.g., in the form of social attention or secondary gain) often serves to reinforce the escape behavior. For example, it is quite common to find that family members respond to the agoraphobic's fearful behavior with social attention (e.g., "Are you O.K.? Let me take you home now so that you will feel better"). Indeed, Buglass et al (1977) found that husbands of agoraphobic women were significantly more often responsible for shopping and for other domestic chores than husbands of non-agoraphobic controls. Husbands of the agoraphobic subjects
reported that agoraphobic symptoms prevented their wives from carrying out these household responsibilities. Additionally, husbands of the agoraphobic women said that they were adversely affected by their wife's symptoms. They commonly reported that they spent less time working compared to the control group, in order to spend more time with their agoraphobic partners. Thus, it appears that symptoms may elicit a good deal of social attention and help from family members.

(4) AVOIDANCE

Data regarding avoidance learning is derived from experimental studies with animals for the most part. A variety of paradigms have been developed to study avoidance (e.g., discrete trial, signalled avoidance and free-operant, or unsignalled avoidance). Additionally, results of these experiments have led to a number of interpretations including the conceptualization of avoidance as a reduced latency escape response (e.g., Hull, 1929, 1943) and avoidance behaviors as responses that are naturally elicited by the aversive reinforcer (e.g., Pavlovian Theory). Additionally, controversy reigns as to what actually reinforces the avoidance behavior. Mowrer (1947) posited that avoidance responses are reinforced not because they avoid shock (or another aversive stimulus), but rather because avoidance produces escape from fear. Critics of this view (e.g.,
Herrnstein, 1969; Hilgard & Marquis, 1940; Sidman, 1962) argued for the more parsimonious notion that the avoidance of an aversive event reinforces the avoidance response.

However, Mackintosh (1974) pointed out:

The analyses of avoidance learning proposed by Mowrer (1947) and Herrnstein (1969) are undoubtedly quite different. But when two-factor theory is modified to incorporate assumptions about conditioned inhibition of fear, and when Herrnstein's analysis is modified to incorporate necessary assumptions about expectations of shock, the two analyses that emerge resemble each other at more points than they differ: both assume that avoidance responses are reinforced because they change the situation from one that is highly aversive to one that is less aversive (p. 309-310).

Extrapolating to the human case, it appears that avoidance behaviors in phobic individuals are difficult to extinguish (cf., Marks, 1969) and appear to be reinforced by eliminating contact with fear-arousing and aversive situations. The mechanisms of generalization and higher-order conditioning predict that other situations will be avoided to the extent that they are similar along some dimension to the originally avoided stimuli. Thus, an
agoraphobic individual may avoid a particular grocery store for fear of experiencing panic there. This avoidance response may then generalize to other grocery stores or, perhaps, to all stores and shopping situations. As the agoraphobic individual avoids more and more fear-eliciting situations s/he has learned to expect that certain situations "lead" to panic and are to be avoided.

The model summarized in Figure 1 presumes that these avoidance behaviors are extremely powerful in reducing an agoraphobic individual's ability to move freely throughout his/her environment. This serves to diminish opportunities for social reinforcement and support as well as stimulation in general (cf., Gelder, 1977). The individuals then begin to believe that there is something wrong with them, that they are "sick" or "crazy" and that they are generally weak and helpless. These thoughts frequently lead to feelings of depression and low self-worth; confidence is usurped; stress becomes more intense; assertiveness diminishes; and dependence upon others increases. In short, the individual's fears grow since they now view themselves as incapable of coping with stress or panic should they confront a fear-eliciting stimulus (e.g., a novel situation).

It is important to mention that fear-eliciting stimuli include not only environmental cues but physiological cues and cognitive cues as well (represented by the broken line
in Figure 1). For example, physiological arousal from any source (e.g., exercise, allergies, stimulants such as caffeine) is, almost always, perceived as introceptive cues for panic. One agoraphobic client reported that she became very anxious whenever she would perspire because that was associated with the way in which her body responded when she was about to experience a panic attack (Fairbank, Brehony, Sanders & Ethridge, 1980). Therefore, whenever she was in a warm environment she became anxious and often escaped from the situation. It is interesting that hot weather was reported to exacerbate symptoms by 35% of Marks and Herst's (1969) large sample of agoraphobics (N = 1200). Thus, it appears that any arousal, from heat or any other source, may be sufficient to elicit panic even in the absence of the previously mentioned situational or environmental stimuli.

Similarly, cognitions alone are sufficient to elicit a panic attack in agoraphobic individuals. Indeed, it is commonly reported that anticipatory anxiety is a major symptom of this syndrome. Most agoraphobics report that the weeks and hours prior to a feared event are often associated with greater anxiety that the actual event. Marks (1969) noted that:
Just as anticipation of pleasure can be better than its fulfillment so the converse applies in agoraphobia. For weeks before a planned journey a patient dies a thousand deaths from anticipatory anxiety - let the same journey be sudden and unexpected and the patient can do what she cannot if forewarned (p. 135).

Cognitions appear to very potent cues for anxiety and help create unpredictability for agoraphobics. In other words, they may frequently experience panic attacks in their homes where they had at one time felt "safe." Most report that this enhances their sense of not being able to predict panic attacks, and this is quite frightening and increases general anxiety.

In summary the model outlined in Figure 1 attempts to account for variables involved in the development and maintenance of agoraphobic behaviors. It is not intended to supplant any existing theories of etiology nor to describe the etiology of this disorder. Features of the model are consistent with clinical reports, with the laws of learning in general and the acquisition of avoidance responses in particular. Empirical investigations of the various components of the model are critical if we are to fully understand how agoraphobic behaviors are maintained in the natural environment. It is hoped that the model can organize and focus some of these research efforts, just as models of
avoidance behavior and extinction have served as a base for the development of intervention strategies. These treatment outcome studies are discussed next.
A. CRITIQUE OF PUBLISHED STUDIES

While many questions remain unanswered with regard to agoraphobia, a considerable amount of research has been directed towards treatment outcome. However, the efficacy of various treatment strategies has not been clearly demonstrated. Certainly, one problem is the low base rate of the disorder among individuals seeking help from mental health professionals.

Since the major symptom is an avoidance response to leaving the home, it is not surprising that this group is likely to be grossly underrepresented in samples from mental health programs. However, some data are available, primarily from the laboratories of British researchers. Much of this research has taken the form of uncontrolled case studies. Even the more methodologically sophisticated between-group designs often lack no-treatment control groups, and very few studies have employed anything but a modicum of follow-up data. Perhaps a more serious methodological criticism is the lack of actual behavioral measures employed in the various designs. Most of the data rests solely on rating scales with questionable (i.e., untested) reliability and
validity and on self-report information that can often be
more parsimoniously explained on the basis of social
desirability and demand characteristics (cf., Orne, 1962).

Despite considerable methodological problems, the
literature does contain some interesting behavioral
intervention studies. Most of the behavioral researchers
have investigated the therapeutic effects of systematic
desensitization, or flooding, or they have compared the two
treatment strategies. Other investigators have focused on
the efficacy of drug therapy with agoraphobics or explored
various intervention strategies such as cognitive
restructuring, modeling, reinforcement, group treatment and
home-based treatments.

B. SYSTEMATIC DESENSITIZATION

Wolpe (1973) summarized the procedure of systematic
desensitization with the statement:

A physiological state inhibitory of anxiety is
induced in the patient by means of muscle
relaxation, and he is then exposed to a weak
anxiety-arousing stimulus for a few seconds. If
the exposure is repeated several times, the
stimulus progressively loses its ability to
evoke anxiety. Then successively "stronger"
stimuli are introduced and similarly treated.
(p. 95).
Generally systematic desensitization has involved three steps: (1) the establishment of a hierarchy of feared stimuli ranging from least to most anxiety arousing; (2) training the individual in deep muscle relaxation; (3) pairing the feared stimuli (either in vivo or in fantasy) with relaxation. Various components of systematic desensitization have been attacked by other researchers and empirical evidence seems to suggest that neither relaxation (e.g., Allen, 1973; Bellack, 1973; Benjamin, Marks & Huson, 1977; Jacobs & Wolpin, 1971; Mathews, 1971; Wilkins, 1971) nor hierarchical ordering of fears (e.g., Cohen, 1966; Cohen & Dean, 1968; Suinn, Edie & Spinelli, 1970; Wilkins, 1971) contribute anything beyond simple exposure of the feared stimulus.

Although some studies have compared systematic desensitization in fantasy vs in vivo, conclusions as to which is most effective are difficult because of confounds like duration and gradient of exposure, accompanying relaxation and therapist reinforcement (Marks, 1975). However, many studies have shown greater fear reductions with real-life exposure compared to "exposure" in imagination (e.g., Leitenberg & Callahan, 1973; Sherman, 1972; Stern & Marks, 1973; Watson & Marks, 1971). In fact, Marks (1975) concluded that "real life exposure is the most powerful therapeutic factor so far identified" (p. 93).
Marks and Gelder (1965) analyzed retrospectively 32 phobic patients who had received behavior therapy, 21 of these had been diagnosed as agoraphobic. The behavior therapy for these subjects had consisted of graded exposure to the feared situation in imagination (similar to systematic desensitization). Eight of the 21 agoraphobics had received relaxation-hypnosis and six had been given desensitization in imagination (as described by Wolpe, 1958). However, the authors failed to specifically describe the intervention procedures. Additionally, thirteen of the subjects received sedatives, nine received anti-depressants, two electroconvulsive therapy (ECT), one abreaction, and one leucotomy (psychosurgical procedure involving the sectioning of tissue between the pre-frontal lobe and the thalamus). At least three patients received "other psychotherapy" (unexplained) at some stage. Matched controls were selected in order to assess the therapeutic effects of "behavior therapy." To confound matters even further, experimental subjects received a mean of 66 treatment sessions, whereas controls received only 27 sessions. The main dependent measure consisted of verbatim extracts from the psychiatric notes of each patient which were blindly scored for severity of symptoms by two independent assessors. These notes were rated immediately
after treatment and at one, three and twelve-month follow-up.

Results indicated that "agoraphobic patients who had behavior therapy did slightly better than controls at the end of treatment but this was related to more frequent and longer treatment" (p. 973). Individuals with specific phobias showed the greatest short-term improvement with this particular brand of systematic desensitization but the procedures did not appear to be particularly effective with the agoraphobic subjects.

In summary, there are a great many problems with the investigation by Marks and Gelder. First no behaviors of any kind were observed nor reported. Data relied solely on psychiatric notes which, one assumes, were based on self-report and interview responses. Additionally, the authors failed to report any inter-rater reliability for the assessment of these reports. Moreover, the authors were attempting to manipulate a single independent variable, behavior therapy vs. no behavior therapy. However, many other variables remained free to vary within treatment conditions (e.g., amount and type of medication, and therapies such as ECT, psychosurgery and other psychotherapy). It is impossible to determine, within the confines of the experimental design, the behavioral affects, for the target
interaction. In short, these methodological confounds prevent any empirical conclusions, in spite of the fact that this study is generally regarded as a classic in the agoraphobia literature and is cited in numerous subsequent articles. The fact that this was a retrospective study notwithstanding, there was certainly insufficient experimental control to attempt an interpretation of the between-group differences.

Gelder and Marks (1966), in a prospective study, randomly assigned severe agoraphobics to either a behavior therapy or control group upon their admission as in-patients or day-patients at a British hospital. Behavior therapy included graded retraining (Marks & Gelder, 1965) and systematic desensitization in imagination. Control patients received supervised psychotherapeutic interviews to control for the "psychotherapeutic effects of behavior therapy" (p. 310) and personal contact with therapists. Assessment consisted of symptom ratings which required quantitative answers to clinical questions regarding phobias, general anxiety, depression, obsessions, depersonalization, and social adjustment. Several other self-report measures were taken pre-, post- and at six and twelve month follow-ups. A potential confound in this study was that, approximately 30% of the subjects were receiving some kind of chemotherapy,
(i.e., sodium amytral and Librium). The results of the Gelder and Marks study indicated that 7 of 10 subjects in each group (control and experimental) improved symptomatically according to self-report. The greatest improvement occurred in the first month. These authors concluded that:

Behavior therapy can produce only limited changes in severe agoraphobia, although sometimes these can be worthwhile. Behavior therapy may be a useful additional technique which can form part of general psychiatric management but not replace conventional methods (p. 319).

Many of the criticisms applicable to Marks and Gelder (1969) are appropriate for this study as well. For example, again, no behavioral measures were taken, and amount and type of medication varied across subjects. While several design improvements were made (e.g., attempting to equate the time spent in therapy for both experimental and control subjects), the methodological drawbacks were, perhaps, even more salient in this case, since this was a planned experiment which should have offered greater experimental control than did their earlier retrospective design.
Gelder, Marks and Wolff (1967) reported that desensitization showed superior results when compared to both group and individual psychotherapy. However, serious methodological problems (e.g., no behavioral assessment, varying lengths of treatment for different groups) prevent firm conclusions. It did appear, however, that agoraphobic patients tended to improve less than patients with specific phobias.

Gillan and Rachman (1974) tested the components of systematic desensitization by comparing (1) pseudo-therapy: which combined relaxation and discussion of non-phobic topics; (2) hierarchies only; no training in relaxation; (3) conventional systematic desensitization; (4) psychotherapy: traditional insight therapy. This study (N = 12) evaluated treatment efficacy by self-report, psychophysiological assessment and behavioral avoidance tests. Results showed that desensitization (with or without relaxation) showed superior clinical outcome compared to psychotherapy or pseudotherapy.

Despite serious methodological problems several tentative conclusions may be drawn from the literature. First, desensitization has been found to be considerably less successful at treating agoraphobic clients than clients
with more specific phobias (e.g., Marks, 1970). Second, desensitization appears to offer superior clinical results when compared to pseudotherapy or psychotherapy with agoraphobics.

C. FLOODING

Stern and Marks (1973) wrote:

Flooding denotes confrontation of a patient with the stimuli that distress him until he gets used to them and may also include the evocation of intense section during treatment. This confrontation can take place in the patient's imagination (implosion) or in real life (p. 270).

These authors imply that exposure to the feared situation in imagination and flooding are synonymous. However, the distinction between implosion therapy and flooding appears to have less to do with whether such activity takes place in imagination or in vivo as it does with certain underlying theoretical assumptions. Stampfl and Levis (1967) noted that implosion theory is an attempt to integrate the principles of learning theory and traditional psychodynamic approaches to psychotherapy. Specifically, implosion, generally administered in imagination (though not exclusively) relies upon principles
of extinction and as such is compatible with a behavioristic position. However, Stampfl and Levis argue that once the symptom-contingent cues have been extinguished the "hypothesized sequential cues" are introduced. "These hypothesized cues relate to psychodynamic theory and are inferences made by the therapist about the patient regarding the expression of hostility and aggression directed toward parental figures, helpfulness, guilt, shame, sex, oedipal, anal, oral, sibling-rivalry, primal scene, and death with impulse themes" (p. 501).

However, because of some confusion in the literature regarding these terms the use of the term 'flooding in vivo' will be used, throughout this chapter, to refer to exposure to the actual feared stimulus in which subjects are instructed to stay regardless of their level of anxiety. Flooding in imagination will designate the exposure procedure when carried out in fantasy. The term implosion will only be used when procedures incorporated psychodynamic inferences and hypothesized sequential cues as Stampfl suggested.

Flooding, especially in vivo, has shown considerable promise as an intervention for agoraphobia. Stern and Marks (1973), in a relatively well-controlled Latin-Square Design, treated 16 chronically agoraphobic outpatients (seven males,
nine females) using long or short flooding procedures in imagination and in vivo. Treatment in imagination lasted two hours and was administered via a tape recording. "Long" flooding consisted of 80 minutes of flooding scenes followed by 40 minutes of neutral material. "Short" flooding consisted of a ten minute segment of anxiety-arousing material followed by five minutes of neutral material followed by the minutes of anxiety-arousing material and so forth until two hours had elapsed. Half the patients in each condition were exposed to flooding material first; the other half were exposed to the neutral material first. Within the flooding in vivo sessions, "long" sessions consisted of two hours of continuous exposure to the actual feared stimulus. "Short" exposure consisted of 30 minute exposure to feared stimuli separated by 30 minute rest periods.

Patients were assessed on the dependent measures immediately before and after each fantasy session and two days after the final in vivo exposure session. Assessment included rating scales completed by subjects and by an independent rater who was blind to the treatment conditions. Heart rate and GSR were continuously recorded during fantasy sessions. Heart rate during in vivo flooding was monitored continuously on a commercial pulsemeter carried by the
subject in a small briefcase. Another channel of the portable briefcase equipment monitored sounds and the experimenters could thus determine the ongoing activities of the subjects.

Results indicated the superiority of long-flooding sessions in vivo on clinical ratings of both subjects and the blind assessors. The physiological data showed no increased arousal during phobic imagery. The authors suggested that perhaps this was due to the instructions being delivered by tape recordings. They noted "patients may pay more attention to the normal voice of a nearby therapist than to a tape-recorded instruction using the same words" (p. 275). Heart rate data from in vivo sessions suggested that longer durations were more effective. Results indicated little decrement in subjective anxiety and in heart rate over the first hour, however, improvement was significantly greater during the second hour. Stern and Marks noted that this result with agoraphobics contrasted with observations of the early subsiding of tachycardia in patients with specific phobias (Watson, Gaind & Marks, 1971). Furthermore, these authors suggested that flooding may act via any number of mechanisms (e.g., by blocking the conditioned response, by changing cognitions, or by some combination of these).
The Stern and Marks study is one of the more sophisticated in the agoraphobia literature. Their use of the Latin Square Design allowed every patient to experience all treatment conditions. The design had limitations, however, in that differential long-term effects could not be evaluated. Additionally, this design prevented direct comparison of flooding in imagination and flooding in vivo, since the latter always followed the former. The authors wrote that:

This order was adopted because at the time this study was launched, we were afraid that many patients might refuse practice treatment (in vivo) unless it was preceded by improvement during fantasy treatment (p. 276).

The Stern and Marks study could have been improved by a more precise description of the specific behaviors which the assessors were rating. Moreover, follow-up measures, while not able to address the issue of which treatment demonstrated the best effects, could have illuminated whether the entire "treatment package" was able to demonstrate long-term positive effects in the subjects' natural environment.
Mathews, Johnston, Lancashire, Munby, Shaw and Gelder (1976) examined imaginal flooding and in vivo flooding with 36 female agoraphobic outpatients. Using these groups, patients were exposed to eight sessions of imaginal flooding, followed by eight sessions of in vivo flooding; 16 sessions of flooding in vivo and in imagination combined; of 16 sessions of in vivo flooding alone. The following measures were taken: symptom rating scales completed by both subjects and an independent psychiatrist, psychometric tests, physiological recordings (e.g., heart rate and GSR) during flooding in fantasy, and behavioral assessment in which a research assistant called on the subject at home and requested her to perform certain behavioral tasks arranged hierarchically according to how anxiety-arousing the task was to the subject. Therapists were counterbalanced across conditions although results showed a main effect for therapist regardless of treatment group. Results also demonstrated that there was an overall trend for subjects to improve over the treatment period. However, there were no significant differences between groups exposed to either flooding in vivo, in imagination or in some combination of the two at the end of eight sessions, sixteen sessions or six-month follow-up.
These results are in sharp contrast to the earlier Stern and Marks (1973) study which found clearly superior reductions in agoraphobic behavior using long sessions of flooding in vivo. In a subsequent analysis of these data Johnston, Lancashire, Mathews, Munby, Shaw and Gelder (1976) attempted to explain these discrepant results. These authors stated that while the Mathews et al. (1976) study found no differences between flooding in vivo and flooding in imagination, the conclusions were based on long-term outcome measures. That is, these measures were only sensitive to relatively long-term changes. The researchers also collected weekly measures of phobic attitudes and mood which were purportedly sensitive to shorter term changes. Analyses of the weekly measures of change supported earlier conclusions that treatments did not differ. However, on anxiety ratings of the immediate effects of treatment, exposure to the phobic situation had consistently positive effects in reducing self-reports of phobic anxiety; flooding in imagination has little or no detectable effects.

In general, flooding has been shown to be a relatively effective treatment for agoraphobia. However, a delineation of the specific elements of the flooding procedure that produce positive therapeutic affects has been seriously obscured by procedural and design problems in the
agoraphobia research. For example, Emmelkamp and Kessels (1975) indicated that many authors (e.g., Eversard, Hijen & Emmelkamp, 1973; Gelder, Bancroft, Hoith, Johnston, Mathews & Shaw, 1973; Marks, Boulougouris & Marset, 1971) have combined flooding in vivo and flooding in imagination in ways that make it impossible to determine the independent contribution of each procedure to positive therapeutic outcome.

Emmelkamp and Wessels (1975) compared flooding in vivo vs. flooding in imagination vs. a combination of the two procedures with 19 agoraphobic subjects (18 females and one male). Subjects were matched on duration of symptoms, and the amount of time they were able to walk around on the street alone (a therapist measured duration of time spent on the street). Three groups were generated; Group In Vivo received four sessions of flooding in vivo; Group Imagination received four sessions of flooding in imagination; Group Combination received four sessions of a combination of flooding in imagination plus flooding in vivo. Assessment included measurement in vivo during which the client was asked to go into the street and to stay outside until s/he began to feel anxious or tense. When the client began to feel anxious s/he was told to come back immediately. The experimenter recorded the amount of time spent outside, thus providing a quantitative duration
measure for each subject. Additionally, client, therapist and an independent observer rated five phobic situations on 9-point scales for phobic anxiety and phobic avoidance. A therapist and an independent observer rated the subject on 9-point scales of anxious mood and panic. At points pre-, intermediate, post-, and one-month follow-up to therapy subjects were also asked to rate how much they expected to gain from therapy on three separate expectancy scales. Other self-report measures were given at pre-, post-, and one-month follow-up.

Prolonged flooding in vivo consisted of the client leaving his/her home and walking alone outside uninterruptedly for 90 minutes. A prearranged route was agreed upon and the subject walked the route which was in a straight line in a direction away from the house and often included visits to department stores and rides on buses. Flooding in imagination consisted of 90-minute sessions of a live therapist asking the client to imagine as vividly as possible the situations described by the therapist and not to avoid imagining these scenes in any way. The authors emphasized that no psychodynamic cues were used in the scenes. The Combination Group was exposed first to phobic stimuli in imagination for 45 minutes, and then asked to go out into the street and walk a prearranged route for an additional 45 minutes.
To summarize, Emmelkamp and Wessels first pre-tested clients and then exposed them to one of the three treatment conditions. At the end of four sessions clients were given an intermediate test which included both behavioral and self-report measures. Immediately following the intermediate test all clients were treated with a procedure that Emmelkamp and Wessels describe as "self-observation," whereby subjects were gradually introduced into the actual feared situation with instructions to turn back upon experiencing anxiety. The client was asked to record the duration of time spent in the feared situation and mail the results to the experimenter. Emmelkamp and Wessels differentiated their procedure of "self-observation" from their procedure of "successive approximation" by noting that, in the latter, clients were asked to go into the feared situation and turn back whenever they become unduly anxious, but a therapist was present, and hence clients received both social reinforcement and feedback from the therapist with regard to the time they spent in the feared situation. While one cannot argue the cost-effectiveness of having clients serve as their own therapist as it were, it may be argued that the use of such techniques are closer to the notion of systematic desensitization and reciprocal inhibition (in terms of experiencing anxiety) than to flooding and
extinction since subjects could leave the situation when anxiety became unbearable. For this reason, the results of the Emmelkamp and Wessels study cannot be interpreted solely as effects of flooding procedures.

Results of the Emmelkamp and Wessels study indicated significant between-group differences on the phobic anxiety scale and on the phobic avoidance scale at pre-test, and for this reason the researchers evaluated the data with analyses of covariance, using the pretest as the covariate. At the intermediate test, results indicated that both prolonged in vivo exposure and flooding combined showed significant improvement on almost all indices, whereas flooding in imagination produced no significant change. Additionally, post-test data showed flooding in vivo to offer the greatest behavioral and self-report improvement. Comparison of post-test and one-month follow-up showed no significant changes. Thus, treatment effects were maintained at follow-up, though one might argue that one month is, perhaps, a minimum requirement for follow-up assessment. Anecdotally, Emmelkamp and Wessels noted that in addition to the superiority of the in vivo procedure, flooding in imagination led to an increase in anxious mood. Flooding in vivo was not without its difficulties, however, since the authors noted that one client "hid in the cellar out of fear of
being sent into the street for 90 minutes by the therapist!" (p. 14)

Since the technique of self-observation was theoretically similar to reciprocal inhibition in terms of the withdrawal from anxiety it is of import to compare this technique with extinction (i.e., flooding). Emmelkamp (1974) compared Self-Observation vs. Flooding vs. a Combination of the two with agoraphobic subjects ($N = 9$). This study also included a No-Treatment Control Group. Assessments (both duration of time spent on the street and self-report measures of phobic anxiety) were made pre-, during, and post-treatment, and at three-month follow-up. Results demonstrated that all three experimental groups (Flooding, Self-Observation, and Flooding plus Self-Observation) showed significant improvement compared to the No-Treatment controls. Additionally, the Continued Treatment Group proved to be more affective than either treatment in isolation. Improvement was measured by the duration of time spent in the presence of the phobic stimulus (e.g., walking around the street), and Emmelkamp reported this measure to be sensitive to group differences. For example, at the beginning of treatment, the subjects were able to walk outside without feeling tense for an average of 10.6 minutes: at the end of treatment, this period was 10 minutes for the
waiting-list Control Group, 46.9 minutes for the Flooding Group, 45.5 minutes for the Self-Observation Group and 65 minutes for the Flooding/Self-Observation Group. Within each treatment condition, Emmelkamp noted very large individual differences.

In the first place, this means that experiencing anxiety, such as occurs in flooding is not requisite for the successful treatment of agoraphobia as self-observation results in equal improvement. In the second place, it has been shown that agoraphobics can be helped with a minimum of intervention on the part of the therapist. (p. 236)

The cost-effectiveness of such procedures are critical (e.g., little therapist time was involved) and deserve further research attention. Additionally, since self-observation (unlike successive approximation) involves minimal intervention with the therapist, it is unlikely that feedback or social reinforcement were active components in facilitating observed changes. This notion is further supported with research by Emmelkamp and Ultee (1974) in which successive approximation and self-observation were compared using agoraphobic subjects. The results showed the two procedures to be equally effective.
The distinguishing characteristic between these two treatment interventions (e.g., self-observation and successive approximation) concerns social reinforcement and feedback from the therapist. The observation by Emmelkamp (1974) and Emmelkamp and Ultee (1974) that social reinforcement and feedback from the therapist adds nothing to treatment outcome is surprising. For example, Agras, Leitenberg, and Barlow (1968) observed, in a controlled A-B-A-B design, that social reinforcement, in the form of praise from the therapist, was found to significantly improve the severely agoraphobic behavior of three subjects.

Since desensitization has been found to have little affect in the treatment of agoraphobia (cf. Marks, 1969) and self-observation has essentially caused subjects to experience anxiety in a similar way to desensitization (i.e., leave the situation when anxiety becomes uncomfortable) it is possible that some other aspect of the self-observation procedure is the critical therapeutic component. In fact, another component of the self-observation procedure that has been demonstrated to hold therapeutic properties is the act of monitoring one's own behavior. Ciminero, Nelson and Lipinski (1977) noted that the presence of a trained observer has been demonstrated to be reactive in that behavioral changes occur in the person being observed. This reactivity
is understandable since the presence of an observer alters the usual stimulus configuration, thereby affecting behavior. Along similar lines, when an individual begins to observe his/her own behavior, there is also a change in the usual stimulus situation. Indeed, the changes in the individual's behavior produced by self-monitoring have been referred to as the "reactive effects of self-recording" (Ciminero et al., 1977, p. 298).

Leitenberg, Agras, Thompson and Knight (1968) found that a claustrophobic subject increased the amount of time spent in a small dark room when she was allowed a stopwatch to calculate the amount of time per trial that she spent in the room. No such increases were found when the patient was not given a stopwatch nor asked to time duration spent in the feared situation. Other researchers have reported similar self-monitoring effects with psychotic behavior (Butner & Bugle, 1969); with lip and mouth biting (Ernst, 1973); with alcohol abuse (Sobell & Sobell, 1973) and with repetitive, unwanted behaviors (Maletzky, 1974). Further research is necessary to separate the reactive effects of self-monitoring from effects due to pure exposure to the feared stimulus, in order to illuminate which aspect of the "self-observation procedure" is responsible for the positive therapeutic affects reported by Emmelkamp (1974), Emmelkamp and Ultee (1974) and Emmelkamp and Wessels (1975).
In a paper reporting a four-year follow up of previous studies (N = 81), (i.e., from Emmelkamp, 1974; Emmelkamp and Emmelkamp-Benner, 1975; Emmelkamp and Ultee, 1975; and Emmelkamp and Wessels, 1975), Emmelkamp and Kuipers (1979) noted that "improvements manifested during treatment were found to be maintained and partly augmented" (p. 352). However, since the subjects were treated with a variety of exposure techniques, it is impossible to determine which treatment strategy proved most effective at long term follow up.

In a similar long-term, follow-up study McPherson, Brougham and McLaren (1980) noted continued maintenance of therapeutic gain at a four-year follow up for fifty-six agoraphobic patients who had shown initial clinical improvement following treatment. These patients had been treated by a variety of behavioral strategies (e.g., in vivo exposure and imaginal exposure). Thus, it was not possible to determine which treatment strategy showed the best long-term maintenance. In another four-year follow-up, Marks (1971) reported that agoraphobic patients treated by behavioral interventions and psychotherapy had maintained treatment gains. However, in marked contrast to these data, Hafner (1976) found that new symptoms had developed in 67% of the agoraphobics treated by group exposure in vivo. While
somewhat controversial, the majority of these follow-up studies suggest long-term maintenance of treatment gains. However, since the studies do not discriminate between treatment interventions it is impossible to determine from these data, which treatment strategies, or components of treatment interventions, are the most effective in the long run. For example, level of anxiety during exposure has been cited (e.g., Stampfl & Levis, 1967) as an important variable in treatment outcome although clear, unequivocal data are not presently available.

In comparing levels of anxiety during the exposure to the fear-eliciting stimulus it is important to point out that in systemic desensitization the subject is asked to approach the feared stimulus (either in imagination or in vivo) and subjects are free to withdraw with the anxiety level becomes too uncomfortable. In contrast, flooding procedures rely not on the theory of reciprocal inhibition, but rather on principles of extinction and, thus, subjects must remain in the presence of the feared object or CS (either in imagination or in vivo) while experiencing anxiety (CR). Marks (1975) suggested that it might be more appropriate to designate these two therapies as "slow exposure" (desensitization) and "fast exposure" (flooding). This difference suggests a critical theoretical debate.
Indeed, Goldstein and Chambless (1978) noted that the use of systematic desensitization implies the theoretical rationale that anxiety has been classically conditioned to certain stimuli, and the focus of therapy relies on the principle of reciprocal inhibition. The agoraphobic's avoidance of these stimuli is reinforced by the termination of the aversive anxiety state. While classical conditioning is critical for this model the resultant avoidance behavior necessarily involves operant mechanisms.

In contrast the operant model presumes that symptoms are best understood as emitted behaviors whose incidence is increased or decreased by preceding antecedent stimuli and/or by the consequences which follow. This model does not postulate classically conditioned anxiety nor any other underlying, hypothetical drive state. Many researchers have treated agoraphobia as an operant (e.g., Agras, Leitenberg, & Barlow, 1968; Crowe, Marks, Agras & Leitenberg, 1972; Emmelkamp, 1974; Emmelkamp & Ultee, 1974). Viewing agoraphobic behavior as purely operant suggests that extinction (e.g., flooding) would be the most effective intervention strategy. Thus, according to Goldstein and Chambless (1978), demonstration of the superiority of flooding versus desensitization may offer important information regarding mechanisms by which avoidance behavior is learned.
Several studies have attempted to directly compare systematic desensitization with flooding procedures as treatment for agoraphobia. Marks (1975) reported that the comparison between these two intervention strategies is difficult to interpret since studies are often confounded by several factors including the initial anxiety level, the level of the hierarchy at which phobic approach began during treatment, and the spacing of the approach trials. Additional problems appear to include lack of control for the duration of time that subjects are exposed to the two interventions, and the fact that one treatment depended on imagination while the other occurred in vivo. However, several studies are noteworthy.

Boulougouris, Marks and Marset (1971) compared flooding and desensitization in 16 phobic patients (nine agoraphobics and seven specific phobias). Subjects were randomly assigned to either six sessions of desensitization in imagination followed by six sessions of flooding in imagination or vice versa in a cross-over design. Each imaginal session lasted 50 minutes and then subjects were exposed to the feared situation in vivo for 70 minutes (either flooding or desensitization as determined by their experimental group). Evaluation consisted of clinical assessment (scales completed by patient, therapist and independent medical
assessor) and physiological measures (heart rate and GSR). The first of the six sessions of desensitization was employed in teaching patients deep-muscle relaxation, and hierarchy construction. During the next five sessions, subjects participated in systematic desensitization (cf., Wolpe, 1958). The first flooding session trained subjects to use vivid visual imagery, and the next five sessions involved subjects in visualizing their most frightening phobic images continuously without relief for 90 minutes as the therapist spoke about their phobias.

Results of the Boulougouris et al. study showed flooding to result in significantly more improvement then desensitization on physiological measures, self-report and clinical assessment. One unexpected finding was the observation that flooding produced greater improvement with agoraphobics than with specific phobics. The reverse was true for subjects treated with desensitization, in which specific phobics showed greater improvement than agoraphobics. In a one-year follow up subjects and their relatives were interviewed by the experimenters. Follow-up results indicated continued improvement and "no relapses."

Several methodological problems limited the analysis and the external validity of the follow-up data collected by Boulougouris et al. First, no actual behavioral measures
were observed. For example, at follow up, these researchers included no actual observation of time spent in the feared situation but rather relied wholly on self report and report of relatives. Demand characteristics alone (cf., Orne, 1962) could account for the follow-up findings. Additionally, some of the subjects received various other treatments between the conclusion of the study and the one-year follow up (including further flooding in vivo, desensitization in imagination and in vivo and electro-conclusive shock therapy). The heterogeneity of the subject population makes interpretation difficult since, among other problems, this resulted in unequal cell sizes for the various groups.

Finally, the use of the cross-over design, so popular among British researchers in the agoraphobia literature, precluded analysis of differential treatment effects of follow up, since every subject had been exposed to every level of the independent variable. Also the design did not control for delayed or carry over effects from one phase of treatment to another. The cross-over design does offer certain ethical advantages since no patient can complain that s/he did not receive the "best" treatment, but it has slowed the course of progress as to the identification of cost effective therapy. In fact, one might argue that, at this point, there is no "best" treatment for agoraphobia since outcome results are quite equivocal.
Crowe, Marks, Agras and Leitenberg (1972) used a cross-over design, to compare (1) systematic desensitization (in imagination), (2) implosion (in imagination including some psychodynamically-based "hypothesized sequential cues") and (3) shaping with reinforced practice. The shaping procedure required the subject to approach the actual feared situation in graduated steps. The instructions were to turn back as soon as s/he became anxious. The therapist delivered social reinforcement in the form of praise for improved performance. (Emmelkamp and Ultee (1974) later referred to this exposure procedure as "successive approximation").

Crowe et al. noted that systematic desensitization has been shown to be relatively ineffective in the treatment of agoraphobia and was used (for these subjects) as a control condition against which to compare the other two interventions. Assessment consisted of both self-report measures and in vivo behavioral avoidance tests. These measures involved asking the subjects to approach the feared object (or in the case of the agoraphobic subjects, to walk along a mile route) until they felt "undue anxiety" and then were to return.

No significant differences were observed between the interventions according to the symptom rating scales (i.e., self report). However, the behavioral tests showed the
shaping procedure to be significantly superior to desensitization. Results for the implosion procedure were in an intermediate position which did not differ significantly from either of the other interventions.

In spite of the use of real behavioral measures, the study has several serious methodological problems. First, the behavioral assessment tests were, in almost every case, identical to the tasks used in the shaping procedure. Secondly, it is not surprising that shaping produced more impressive results since it was the only intervention that was administered in vivo and the literature suggests that in vivo exposure is more successful than exposure in imagination (cf., Marks, 1975). Thirdly, only four of the fourteen subjects were agoraphobic and criticisms applicable to heterogeneous subject populations fully apply. Finally, the use of the cross-over design in which each subject received every level of the independent variable precludes comparison of the effects of treatment at follow up.

In a similar cross-over study, Everaerd, Hijken and Emmelkamp (1973) compared flooding (combined treatment of in vivo and in imagination procedures) and successive approximation with fourteen agoraphobic subjects. Successive approximation (cf., Emmelkamp & Ultee, 1974) was like the shaping procedure used by Crowe et al. (1972) in
that subjects were asked to go into the feared situation and stay as long as possible until they felt uncomfortable or tense. Likewise, the therapist provided verbal reinforcement for progressively greater durations of time spent in the feared situation. Assessment consisted of in vivo behavioral and self-report measures. Both methods resulted in significant improvement on the behavioral and self-report indices.

Watson, Mullett and Pillay (1973) noted that even if flooding techniques prove to be an effective intervention, the relative costliness of such procedures for individual clients would certainly limit the use of this treatment strategy. Their research investigated the potential efficacy of group flooding (both in vivo and in imagination) with agoraphobic subjects. Again using the cross-over design, 19 female agoraphobics were exposed to imaginal and real public stimulation in groups. Self-report and behavioral measures were taken before and after each facet of treatment and at a five-month Follow Up. In vivo flooding was associated with greater improvement than flooding in imagination. However, the lack of control subjects treated individually prohibits any clear comparison between the effectiveness of treatment in groups vs. the effectiveness of treatment administered individually.
Similarly, Hand, Lamontagne and Marks (1974) treated 25 agoraphobic outpatients (nine males) in six groups of four to five subjects. Treatment consisted of group flooding in vivo (12 total hours). Three of the groups were structured to increase social cohesion during in vivo exposure. The remaining groups were unstructured so that members were exposed to the phobic stimulus with a minimum of group cohesion. Analysis of a behavioral avoidance test and self-reports of phobic anxiety indicated that patients treated in groups demonstrated the same symptom reduction as patients treated individually. One interesting note was that the group exposure unexpectedly produced additional gains in social skills and assertive behavior. However, the observation that increased assertiveness might be related to therapeutic outcome was a serendipitous finding and hence was not analyzed nor controlled for by the experimental design.

Teasdale, Walsh, Lancashire and Mathews (1977) replicated the earlier study by Hand et al. (1974). Their replication did not include unstructured groups, and they failed to report the continuing improvement during follow up which had been reported by the earlier authors. However, Teasdale et al. did conclude that subjects exhibited sufficient improvement to confirm the usefulness of the
group exposure procedure as a highly cost-effective intervention strategy.

Because of the diversity of findings and the serious methodological problems found in the agoraphobia literature regarding flooding and desensitization, it is unclear that the research has delineated any treatment of choice. While the research does suggest that flooding, especially in vivo and perhaps with the added component of self-monitoring appears to be the most effective therapy for agoraphobia, the data are surely equivocal. Similarly, Goldstein and Stein (1977), in their review of treatment outcome literature, stated, "no one form of therapy has been demonstrated to be reliably effective in relieving agoraphobia" (p. 173).

D. MODELING

Although the bulk of the agoraphobia treatment outcome literature has focused on flooding and desensitization, several researchers have studied other behavioral interventions. For example, Emmelkamp and Emmelkamp-Benner (1975) observed the effects of "historically portrayed" modeling via video-tape (in which ex-clients related their experiences with the same treatment) on agoraphobic behavior. In a well-controlled study, subjects were treated
by self observation. The following independent variables were manipulated: (1) subjects were treated either individually or in groups; (2) subjects were exposed to the modeling procedure or not. Results supported the earlier studies (e.g., Hand, Lamontagne & Marks, 1974) that group treatment was as effective as individual treatment. The observation of the modeling videotape by the subjects did not benefit treatment outcome.

Modeling approaches have been effective interventions for treating dog phobias in children (Bandura & Menlove, 1968), for decreasing avoidance of swimming activities by college students (Sherman, 1972) and for eliminating snake phobias in adults (Blanchard, 1970) and in children (Hitter, 1968). However, the efficacy of modeling as an intervention for agoraphobia, specifically, has not been investigated with the exception of the aforementioned study. Although Marks (1978) extrapolated from research with other phobic populations and concluded that "interactional exposure without modeling produces fear reduction, but modeling without interactional exposure does not" (p. 505). Thus, Marks believes that modeling is, at best, a moderating variable in the management of phobias and not necessary for effective clinical treatment. Further research is certainly necessary regarding the utility of modeling procedures in the treatment of agoraphobia.
E. COGNITIVE STRATEGIES

Orwin (1973, 1974, 1975) attempted in vivo desensitization using respiratory relief as a reciprocal inhibitor with agoraphobic subjects. In an early study (1973), using a technique he referred to as "the running treatment," agoraphobics were made to run measured distances designed to bring on shortness of breath. Orwin suggested that this approach is sound on theoretical grounds in that:

Firstly, in that an instinctive response, i.e., rapid movement would be utilized to overcome the induced panic reaction. Secondly, the unusually rigorous and self-induced physical activity would give, at a cognitive level, a clearly perceptible cause for physiological responses. Finally, it was presented that, as well as breathlessness, the general increase in autonomic activity would compete with and inhibit the phobic anxiety provoked by the external environment, as simple respiratory relief appeared to do following presentation of a feared object. (p. 175-176).

While Orwin's results showed rather equivocal effects for his "running" treatment, he raised an interesting approach to the treatment of agoraphobia. Specifically,
early attribution research (e.g., Schachter & Singer, 1962, Valins, 1966) demonstrated the very powerful affects of an individual's attributions to external events in labeling their own states of physiological arousal. Heattribution might hold significant implications particularly if it is true that agoraphobics tend to label even signs of slight anxiety as signals for an impending attack of panic as several researchers suggest (e.g., Goldstein & Chambless, 1978; Weekes, 1976).

The present author treated a 28 year old chronically agoraphobic, female patient (Brehony & Geller, 1978) and noticed that her symptoms of panic and anxiety were more severe (measured both by self-report measures and the duration of time spent in the feared situation) when she was asked to go to the third and fourth floors of phobically avoided buildings then when she was asked to go to the first or second floors. The subject stated that she felt worse on these floors because she noticed that she felt a tightness in her chest, had difficulty catching her breath, and noticed her heart pounding. Simply pointing out to the client that most people experience symptoms like this after rapidly climbing several flights of steps was sufficient to cause marked increases in the duration of time spent on these higher floors. The client herself, noted that she was less
anxious on these higher floors after she began telling herself that everybody's heart pounds from running up steps and her own pounding heart was simply a function of "exercise" rather than a signal that panic was inevitable. While these observations are in need of further empirical validation, the notion of reattribution as treatment for agoraphobia is a provocative one and needs further research.

The importance of cognitive factors in maladaptive behavior is suggested by the effectiveness of interventions such as covert conditioning (e.g., Cautela, 1970). The technique of covert conditioning and thought stopping was applied to the treatment of a severe case of an agoraphobic having additional fears of going insane (Flannery, 1972). This author instructed the subject in muscle relaxation (Wolpe & Lazarus, 1966) and instructed her to "thought stop" to her obsessional thoughts of going insane. Results showed that the undesirable covariants were eliminated in six weeks (after a duration of 36 years) and did not reoccur. Similarly, covert conditioning was administered in vivo during which the client rode the subway with the therapist and covertly reinforced herself after each stop. Results showed that not only did the client improve in terms of the duration of time that she was able to spend in previously feared situations, but she appeared to exhibit more adaptive
coping behaviors when she was faced with surgery. It is impossible to draw firm conclusions from the research since it involved only a single subject and the experimental design did not offer adequate controls. For example, it is quite possible that therapeutic effects were due to the in vivo exposure to the feared stimulus alone. A more recent study (Mathews & Shaw, 1977) found that thought stopping, an intervention aimed directly at changing cognitions associated with anxiety, was not particularly effective in reducing anxiety.

Emmelkamp, Kuipers, and Eggeraat (1978) compared cognitive restructuring and prolonged in vivo exposure in a cross-over design with 21 agoraphobic subjects. Treatment results were assessed by self-report and behavioral indices. The cognitive restructuring intervention consisted of three phases: (1) relabeling, (2) the discussion of irrational beliefs, and (3) self-instructional training. This intervention package was based on techniques from Ellis (1962), Goldfried and Goldfried (1975) and Meichenbaum (1975). Prolonged in vivo exposure lasted for 90 minutes and a therapist accompanied the subject. Each treatment intervention lasted for five sessions. Results showed in vivo exposure to be superior to cognitive restructuring on both the behavioral avoidance task and phobic anxiety and avoidance rating scales.
In a well articulated rejoinder to Emmelkamp et al. (1978), Ellis (1979) noted that these results could, in fact, be explained in terms of cognitive restructuring. Specifically, Ellis showed that:

During treatment with prolonged exposure in vivo clients notice, for example, that their anxiety diminishes after a time and that the events which they fear, such as fainting or having a heart attack, do not take place. This may lead them to transform their reproductive self-statements into more productive ones: there you are, nothing will go wrong with me. (p. 162).

A number of clients reported that their thoughts changed a great deal during prolonged in vivo exposure. Ellis concluded that it is possible that a more powerful cognitive modification takes place through prolonged exposure in vivo rather than through restructuring procedures directly focused on changing cognitives. While Ellis' arguments may be intuitively appealing there are no empirical data (at the present time) to verify this view.

It is worth considering that the human fear response is multimodal in nature (including behavioral, cognitive and physiological components) and interventions aimed at changing cognitions in agoraphobics are important. Beck,
Laude and Bohnert (1972) studied the relationship between cognitions and anxiety in 32 patients diagnosed as "anxiety neurotics." Thoughts and fantasies related to arousal were usually related to anticipation of physical harm (e.g., being attacked, having an accident, or becoming sick) or anticipation of rejection, humiliation, or social ostracism. Beck et al. found that the degree of anxiety was related to the credibility of the fears (to the subject) and the severity of anticipated aversiveness. Ninety-two percent of the subjects reported experiencing typical fantasies of being in danger prior to and during anxiety attacks. Verbal cognitions related to danger were reported in all cases. Most behaviorists recognize the need to include cognitive variables as targets for therapeutic interventions. The issue for the future appears to have less to do with whether to include cognitive variables as a focus for intervention as it does with how to measure cognitive changes accurately. The assessment of cognitive variables in agoraphobia is relatively unexplored but it is likely to hold tremendous implications for successful treatment of these difficult clients. Further research in this area is clearly needed.
F. INTERPERSONAL INTERVENTIONS

Another potentially fruitful area for clinical research concerns the interpersonal environment surrounding the agoraphobic. There has been very little systematic research in this area. For example, little is known about husbands' behavior as it relates to agoraphobic symptoms in their wives. It is probable that these women are receiving some type of social reinforcement for avoidance behavior. However, the nature of the reinforcers which maintain the avoidance behavior, is a matter of conjecture. Similarly, whereas agoraphobic women have been described as shy, passive and anxious (cf., Marks, 1970) no research has been directed at the effects of social skills and assertiveness training as interventions with this population. Most theoretical systems have regarded anxiety as the major antecedent to pathological and maladaptive avoidance behavior. As such anxiety may be a response to a lack of social skills in various interpersonal situations, thus causing the individual to avoid such situations (e.g., expressing negative feelings). Hence interventions which do not take account of the whole of this "behavior chain" are likely to show only partial success. In other words, unless clients are taught new coping behaviors (e.g., appropriate social skills) to substitute for the anxiety response, they are likely to revert back to their prepotent (anxious)
responding in time. This view is given support by the observations of Hand, Lamontagne and Marks (1974). These researchers reported the unpredicted result that structured group activity seemed to increase social skills and assertive behavior with agoraphobics. These results suggest that unplanned assertion "training" may have been occurring. This appears to be important since a number of researchers (i.e., Bornstein, Bellack & Hersen [1977]; Eisler, Miller, Hersen & Alford, 1974; Foy, Miller, Eisler & O'Toole, 1976; Frederiksen, Jenkins, Foy & Eisler, 1976; Hersen & Bellack, 1976) have demonstrated a wide variety of positive behavioral effects across a diversity of subject populations through assertion and social skills training.

Clinical evidence suggests that most agoraphobic individuals appear to have more than adequate social skills. In fact, many agoraphobics report that they were popular and outgoing prior to the onset of symptoms (e.g., Marks and Herst, 1969). However, it is a common clinical observation that these individuals may have difficulty in expressing anger, negative feelings, and setting limits with others. Thus, assertion training for these specific behaviors might prove to be an important treatment intervention.
G. SUMMARY AND STATE-OF-THE-ART

The treatment outcome literature (with some exceptions) has suffered from serious methodological problems. Critical among these have been the following: (1) the absence of multi-modal dependent variables, including a lack of behavioral measures and a heavy reliance on subjective self-report and rating scales of unconfirmed reliability and validity. Assessment of agoraphobic behavior should include cognitive, physiological and behavioral indices (cf., Lang, 1971); (2) a lack of long-term follow-up assessment wherein the relative efficacy of several intervention strategies can be determined; (3) inadequate descriptions of treatment intervention so that other investigators can replicate what was done. This issue is further confused by the use of esoteric titles for treatment interventions (e.g., self-observation); (4) violations of the integrity of the independent variable by subjects participation in various other treatment regimens (e.g., chemotherapy, ECT, other behavioral treatments) during the course of the study; (5) inadequate descriptions of how treatment drop-outs differ from those who remain; (6) little emphasis placed on analysis of variables which can predict treatment outcome using, for example, linear regression strategies; (7) mistaking statistical significance for clinical significance in
describing treatment outcome; and (8) drawing conclusions about causality from correlational data.

It is understood, of course, that agoraphobia is an extremely complex clinical problem and exerting careful laboratory-like scientific controls is a difficult task. Thus, the present paper is not intended to be overly critical of those clinical researchers who have explored this area. Rather, the purpose is to focus attention on how the literature might be improved. We might look to the rationale for factorial designs, provided by Kiesler (1970), among others, which reflects the complexity of human behavior and therapeutic interventions, and ask not what treatment works, but rather which treatment works best with which clients under that set of circumstances. Because the syndrome of agoraphobia appears so similar from clinical report to clinical report, it is possible that we are in danger of accepting a "uniformity myth" (Kiesler, 1970), if you will, suggesting that all cases of agoraphobia reflect identical etiologies, maintaining factors, and responses to treatment. Clearly, we have much yet to accomplish in understanding the rich complexities of agoraphobic individuals and their behavior.
In spite of the many methodological weaknesses, there has emerged a frequently described "state-of-the-art" for interventions with agoraphobics (e.g., Boulougouris & Rabavilas, 1977; Emmelkamp, 1977, 1979; Marks, 1978, Mathews, 1977, 1978). First and foremost, the majority of authors agree that exposure to the fear-eliciting stimulus is the critical component of effective treatment interventions for agoraphobia (e.g., Benjamin & Kincey, 1977; Emmelkamp, 1979; Greist, Marks, Berlin, Gourney & Noshirvani, 1980; Marks, 1978). Marks (1978) writes:

Once situations repeatedly produce discomfort, as in phobias and obsessions, than sufferers usually lose this discomfort by agreeing to remain exposed to those situations until they feel better about them. (p. 499).

Research directed towards defining the parameters of exposure to the feared stimuli is far from conclusive. However, some important issues have emerged and these include:

(1) Arousal Level During Exposure. Wolpe (1958) had suggested that responses (e.g., relaxation) that could compete with sympathetic arousal and the experience of anxiety need to be evoked during exposure to the fear-eliciting stimulus. In this way reciprocal inhibition of
the competing anxiety response would lead to a decrease in anxious responding. Furthermore, Lader and Mathews (1968) suggested that relaxation would produce optimal (low arousal) conditions for extinction. However, a number of researchers (e.g., Benjamin, Marks & Hudson, 1972; Gillan & Rachman, 1974; Kazdin & Wilcoxon, 1978) have provided evidence that training in relaxation adds nothing to treatment outcome measures. Thus, according to these data, relaxation appears to be a redundant and unnecessary component of the exposure process.

Recently, however, Borkovee and Sides (1979) have suggested that relaxation is an important component of imaginal exposure procedures with speech anxious subjects supporting Mathews (1971) conclusion that relaxation enhances extinction by increasing the vividness of imaginal cues. In fact, relaxation appeared to increase initial arousal responses to phobic cues presented in imagination as well as contributing to more rapid decline in responding over repeated presentations. These researchers suggested that relaxation enhances the emotional processing of the imaginal cue, thus increasing the functional exposure to the feared image. (More complete CS exposure provides better conditions for extinction). Whether or not this effect of relaxation holds for in vivo exposure procedures is not clear.
The critical nature of arousal level during exposure was initially articulated by Stampfl and Levis (1966, 1967, 1968, 1969, 1973). These researchers have argued that it is critical for the phobic individual to experience the conditioned response (e.g., anxiety) in the presence of the conditioned stimuli. Thus, according to this view, maximal arousal of anxiety during exposure is necessary for the extinction of the response to occur. Supporting data are based almost wholly on uncontrolled case studies, as Marks (1972) pointed out. Additionally, Marks (1978) noted that several controlled studies (e.g., Hafner & Marks, 1976; Mathews, 1977; Marks, Boulougouris & Marset, 1971; Stern & Marks, 1973) have demonstrated that arousal level during exposure does not appear to be critically related to treatment outcome. Thus, agoraphobic symptoms improve with exposure to the fear-eliciting stimulus equally well regardless of whether the patients are anxious or relaxed during the process.

The issue of arousal level during flooding, however, continues to remain a controversial cue. For example, Goldstein and Chambless (1970) suggested that since agoraphobic symptoms are based on a fear of introceptive stimuli, the exposure to these "anxiety cues" is necessary during flooding procedures. In support of this argument,
Watson and Marks (1971), observed that flooding to both relevant cues (e.g., shopping centers) or irrelevant cues (e.g., being chased by a raging tiger) led to improvement of agoraphobic symptoms. Improvement with the irrelevant cues was correlated with amount of anxiety experienced during the flooding process. Goldstein and Chambless (1978) offered the explanation that "the cues provided by anxiety itself are important so that even clients who are ostensibly flooded with 'irrelevant' stimuli were experiencing and being extinguished to the very relevant stimuli of the interceptive cues" (p. 56). However, this conclusion is in contrast to another research study (Foa, Blau, Prout & Latimer, 1977) with rat phobic college students. Results of this study suggested that the presentation of horrifying (anxiety arousing) scenes was not necessary to obtain a favorable outcome with flooding procedures. These authors concluded that "prolonged exposure to the feared object, even under relatively pleasant conditions is sufficient" (p. 397).

In a more recent study, Chambless, Foa, Groves and Goldstein (1979) tested hypotheses regarding the relative efficacy of flooding procedures in which the patient experienced high arousal versus low arousal. Twenty-seven agoraphobic outpatients were randomly assigned to one of
three groups: (a) non-drug flooding group; (b) drug flooding group; (c) attention-control group. The drug administered was methohexitone sodium (Brevital), a short-acting barbiturate intended to reduce symptoms of anxiety during the flooding procedure. Dependent measures were assessed according to a repeated measures design and included client ratings, therapist ratings, behavioral task and psychophysiological measures. Results indicated that, on measures of fear and avoidance, the experience of anxiety during flooding enhanced treatment effects with these agoraphobic subjects. These authors concluded "for agoraphobics who fear both fear and the places in which they expect to experience fear, exposure to both endogenous and exogenous stimuli maximizes the treatment effects of flooding" (p. 250).

Chambless et al. noted that results of studies in which anxiolytic drugs are administered during flooding have produced conflicting results (e.g., Easton & Sherman, 1971; Hafner & Marks, 1976; Hafner & Milton, 1977; Hussein, 1971; Johnston & Gath, 1973; Marks, Viswanathan, Lipsedge & Gardner, 1972; Zitrin, Klein & Woerner, 1978). Discrepancies in findings are, perhaps, related to inadequate controls over both the degree of anxiety experienced and the intensity of the exposure, in addition to differential state-dependent learning aspects of the various chemicals.
Finally, attributions regarding responsibility for improvement in symptoms have been shown to differ in drug and non-drug conditions with other populations (e.g., insomniacs; Storms & Nisbett, 1970). This cognitive process has not been investigated with agoraphobics. But, as Mathews (1978), pointed out, these studies demonstrated that there appears to be more effective maintenance of therapeutic gains when subjects attributed symptomatic improvement to their own efforts rather than attributing improvement to drug effects. In summary, the role of arousal level during exposure sessions remains a controversial issue.

(2) In Vivo Versus Fantasy Exposure. It is frequently difficult to compare fantasy exposure with in vivo exposure because of "confounding influences such as duration and gradient of exposure, or accompanying relaxation, praise or modeling" (Marks, 1978, p. 902). Emmelkamp (1979), noted, however, that analog studies with volunteer subjects have shown in vivo exposure to be superior to imaginal procedures (e.g., Bandura & Adams, 1977; Blanchard, 1970; Levis, 1970).

Several studies have directly compared exposure in vivo versus exposure in imagination with agoraphobics. Stern and Marks (1973) found flooding in vivo to be significantly better than flooding in imagination. However, as Emmelkamp (1979) pointed out, flooding in imagination always preceded
flooding in vivo. Delayed effects of the imaginal component may partly explain the superiority of the in vivo procedure. Indeed, Mathews (1977) suggested that, perhaps, imaginal rehearsal in some way encourages patients to attempt exposure in vivo. Additionally, imaginal flooding was presented by tape recording rather than by a live therapist and, thus, may not have constituted a fair test of the imaginal procedure.

Emmelkemp and Wessels (1975) compared flooding in vivo versus in imagination versus a combination of the two procedures. At follow up the data showed that exposure in vivo resulted in the greater improvement on nearly all the dependent measures. In contrast, Mathews et al. (1976) compared imaginal versus in vivo exposure and a combination treatment and found no between-group differences at the end of treatment (16 sessions). In attempting to account for these divergent results, Emmelkemp (1979) attempted to explain differences in the Mathews et al. (1976) procedure compared to Emmelkemp and Wessels (1975). Specifically, in the Mathews et al. study subjects experienced less anxiety during exposure, and subjects were asked to practice in vivo exposure between sessions whereas they were not asked to do this in the Emmelkemp and Wessels study. Johnston et al. (1976), reporting on the same subjects from Mathews et al.
(1976) observed that the analysis of data regarding the immediate effects of treatment showed that exposure in vivo had consistently positive effects, whereas imaginal exposure had little or no effect. These data suggest that, perhaps, the long-term effectiveness of the imaginal flooding procedure was due to in vivo exposure between treatment sessions (Zimmelmemp, 1979).

Although the experimental data from these studies suggested that in vivo exposure is superior to imaginal procedures, it is important to note that a major component of the agoraphobic syndrome is not tied to environmental features which allow for in vivo exposure. Clinical evidence clearly suggests that agoraphobic individuals report high levels of fear of negative evaluation, of being embarrassed, or of appearing stupid in front of other people. Similarly, fears of "losing control" or "going insane" are commonly reported and most effectively presented in imagination, providing that the individual has the capacity to image the presented cues.

Fairbank, Brehony, Sanders, and Ethridge (1980) treated a 46-year old woman with a 20-year history of agoraphobic symptoms and chronic, severe mixed headaches which appeared to be functionally related to high stress and phobic avoidance. Hypothesized cues regarding low assertiveness
and an inability to express anger towards family members were presented in imagination by a live therapist. Results showed precipitous improvement following the sixth session, at which time physiological arousal (e.g., EMG, GSR, HR) reached their highest points during treatment. Immediate improvement in headache pain was reported (according to self monitoring of pain levels and requests for medication by the patient) and for the first time during treatment the patient agreed to go alone to a local shopping mall. While these data are far from conclusive they suggest that imaginal flooding may reduce the resistance to in vivo exposure, as Mathews (1977) has suggested.

To the extent that a classically conditioned fear response is related to phobic avoidance behavior, presentation of the historical CS complex must be presented in imagination since the complex cannot be recreated in vivo. Finally Mathews (1977), Rachman (1979, 1980) and Grey, Sartory and Rachman (1979) have noted a "return of fear" following successful in vivo exposure procedures. It appears that these procedures reduce phobic fear to a great extent, but may not entirely eliminate it. Imaginal exposure may add critical fear-eliciting cues (e.g., fear of going insane or introceptive cues) that could not be easily accomplished in vivo. Further research is needed to determine what
combinations of exposure strategies are most effective in eliminating the complex environmental, cognitive, and physiological cues that elicit agoraphobic avoidance behavior.

(3) Cognitions During Exposure. Although the importance of cognitions during exposure procedures has not been systematically investigated, it makes sense to believe that altering cognitions (e.g., through self-statements) would be an important contributor to symptom reduction. That cognitive cues are related to anxiety is not in question. Indeed, Beck et al. (1974) observed that patients suffering from diffuse or generalized anxiety can report specific cognitions associated with anxiety. Commonly reported cognitive cues include concern over traumatic events such as social rejection or ostracism and illness, death or physical collapse. Similarly, Mathews and Shaw (1979) found cognitions related to anxiety to include somatic cues that might indicate impending illness or death. Wade, Malloy and Proctor (1977) noted that reports of aversive imagery and thoughts were found to be significantly correlated with both fear and avoidance behavior in snake-phobic subjects.

Weekes (1976), in her popular book about agoraphobia, stressed the importance of cognitions in the panic state. She described a "two-fear" process of panic. "First fear"
is, according to Weekes, reflexive to perceived danger and, for most people, is moderate in intensity and passes with the danger. However, agoraphobic individuals are "sensitized" (a state of high sympathetic arousal) and "first fear" to these individuals is intense and out of proportion to the danger causing it. "Second fear", the fear that leads to a panic attack, is prefixed by cognitions such as "What if things really get bad now. I'll make a fool of myself if I panic. I have to get out of here." With each thought like this one, tension and panic mount until the individual escapes the situations. These negative cognitions ("awfulizing" in Ellis' words) exacerbate arousal levels and vice versa in a closed-feedback loop fashion. While Weekes' First-Fear/Second-Fear conceptualization has not been verified empirically, it is consistent with clinical observations and, according to reports from patients, accurately describes their experience with panic attacks.

Emmelkrempe, Kuipers and Eggeraat (1978) attempted to reduce agoraphobic symptoms by cognitive restructuring. While this procedure proved less powerful than an in vivo exposure procedure, these authors suggested that the effects of cognitive restructuring might be enhanced if combined with in vivo exposure in real-life situations. Ellis (1962) and Ellis and Grieger (1977) noted that in vivo homework
assignments are generally an important component of Rational Emotive Therapy, Ellis' own brand of cognitive restructuring. Ellis (1979) noted that pure cognitive restructuring works poorly with any phobics since it is necessary for these individuals to experience the fact that their worst fears (e.g., heart attack) do not take place during exposure to the fear-eliciting stimulus. This observation during exposure may lead them to change their irrational self statements into more rational ones.

While empirical support for the role of cognitive change in reducing agoraphobic symptoms is lacking at present, the issue has been included in a "state-of-the-art" for several reasons. First, clinicians generally recognize the need to change the cognitive component of the fear response. Secondly, most in vivo exposure strategies involve instructions which request changes in cognitions but are not systematically analyzed as part of the treatment intervention. While recognizing the tremendous difficulty in assessing the cognitive components of agoraphobia, it is important to begin to empirically evaluate such interventions with regard to planned cognitive change. This is viewed as a critically important area for research.
(4) Duration of Exposure Sessions. An extensive animal analog literature suggests that long exposure sessions are more effective than short exposure sessions (for reviews see Marks, 1975, pp. 30-84; and Marks, 1979). However, there are less empirical data with agoraphobic populations. Stern and Marks (1973) compared short (i.e., four, one-half hour) sessions with longer (two-hour) sessions. Results showed little reduction in heart rate or subjective anxiety during the first hour, but improvement on these measures was substantial during the second hour. Thus, the data supported the superiority of long sessions over short sessions. However, these data conflict with the results from cases of specific phobias (Watson, Gaind & Marks, 1972). These researchers observed physiological habituation to continuously presented phobic stimulation, and showed that heart rate and skin conductance habituated steadily during treatment although subjective anxiety did so more slowly.

Habavilas, Boulougouris and Stefanis (1976), conducted a research study with obsessive-compulsive patients. Results of this study showed that long practice sessions were significantly superior to short practice sessions. Foa and Chambless (1978) observed the habituation of subjective anxiety during flooding in imagery for eleven obsessive-compulsive and six agoraphobic patients. Results indicated
that the majority of subjects showed a curvilinear pattern of subjective anxiety. However, three subjects showed a linear decelerating pattern. It is noteworthy that flooding sessions for the agoraphobic subjects lasted 90 minutes and all these subjects showed the curvilinear pattern of habituation. Thus, it appeared that subjective anxiety increased over the first hour and then decreased. Foa and Chambless noted that this curvilinear pattern of habituation is not reflected in the in vivo exposure literature. They suggested that the curvilinear form may be due to their use of imaginal procedures, and reflected the time required by subjects to fully image the presented cues. During in vivo exposure the phobic cues are immediately present and potent from the outset. Data derived from in vivo exposure procedures usually demonstrate linear decrement in patterns of habituation of heart rate and subjective anxiety (e.g., Nunes & Marks, 1975; Stern & Marks, 1973).

These data hold critical implications for treatment interventions. Premature termination of exposure sessions may cause the patient to leave at a higher level of physiological arousal and/or subjective anxiety that when s/he entered the exposure session. Thus, rather than serving to extinguish the anxiety response in the presence of the fear-eliciting stimulus, the therapist may, in fact,
exacerbate anxiety. Additionally, insufficient time spent in the feared situation may offer only a slight linear decrease in arousal level and subjective anxiety if not carried out for a sufficient length of time. Patients may not improve symptomatically from such experiences and lose their motivation to continue with "ineffective" procedures.

(5) Spacing of Exposure Sessions. Relatively little attention has been devoted to the issue of spacing exposure sessions for agoraphobics. As Turner and Foa (1979) pointed out, this is surprising in light of the fact that behavioral intervention techniques rely heavily on animal studies where inter-trial intervals (ITI) have been extensively studied and found to influence extinction. For example, Mackintosh (1974) among others, observed that massing of extinction trials increases the rates of extinction for both operant and classical conditioning procedures.

Turner and Foa (1979) investigated the effects of inter-session interval of in vivo exposure in the treatment of agoraphobia (keeping the length and number of sessions constant). The working hypothesis was that, based on the animal learning literature and equating treatment sessions with extinction trials, massing trials should result in faster and more complete extinction than spacing trials. Eleven agoraphobic subjects were randomly assigned to one
of the treatment groups in a cross-over design. One group met for ten daily sessions followed by ten once-weekly sessions. A second group met for ten once-weekly sessions followed by ten daily sessions. Each treatment session consisted of one-half hour of group discussions and two hours of group in vivo exposure. Data supported the hypothesis that massed practice resulted in greater reduction of avoidance and anxiety. Unfortunately, the dependent measures consisted only of assessment by interview and ratings of (1) intensity of anxiety experienced during contact with fearful stimuli, and (2) degree of avoidance (the rating scales had been developed by Watson & Marks, 1971). Ratings were assigned by an independent rater who, presumably, was blind to the experimental conditions. (The manuscript does not indicate whether or not the rater was blind to treatment conditions). In spite of questions as to the adequacy of the dependent measures, this study suggested that the spacing of treatment sessions is an important variable in exposure techniques. Turner and Fox attributed the superiority of the massed session procedures to the following:

- Increased probability of accidental exposure between sessions in the spaced procedures will increase the likelihood of spontaneous recovery
of anxiety that had been decreased during the session, thus retroactively inhibiting the learning which had previously occurred. Moreover, it will proactively interface with the learning to occur in the proceeding session as accidental exposure provides opportunity for escape which is negatively reinforced by the concomitant reduction in anxiety. Massed practice provides less opportunity for accidental exposure and for the reinforcement of avoidance behavior associated with it (p. 7).

Thus massed practice affords less opportunity to engage in avoidance or escape responses between treatment sessions. Further research is needed to determine the optimal intersession interval, as well as total number of treatment sessions associated with positive treatment outcomes.

(6) Group Exposure Sessions. Group in vivo exposure has been an effective procedure that may enhance cost-effectiveness as well as provide additional therapeutic advantages over individual in vivo exposure sessions. Watson, Mullet and Pillay (1973) found significant improvement for agoraphobics treated by in vivo exposure in groups. Similarly, Hand, Lamontagne and Marks (1974) compared structured versus unstructured group in vivo exposure with agoraphobic subjects. Members of structured
groups practiced together, whereas members of the unstructured groups practiced exposure alone. Data immediately following treatment showed group exposure to be as effective as individual exposure for both structured and unstructured groups. However, six-month follow-up results suggested that symptomatic improvement was enhanced for the members of the structured group. Additionally, it was noted that structured groups showed greater social cohesion and had fewer drop-outs and relapses. Moreover, Hand et al. observed that both group conditions appeared to increase social skills and assertiveness in group members. Teasdale, Walsh, Lancashire and Mathews (1977) replicated the Hand et al. study, but omitted the unstructured comparison group. Data showed that immediate effects of treatment were similar to the Hand et al. results. However, while improvement was maintained or the six-month follow-up, no further treatment gains were made during this period of time.

Hafner and Marks (1976) randomly assigned 57 agoraphobic subjects to an individual or group in vivo exposure treatment condition. Both interventions included four, three-hour sessions of in vivo exposure delivered during a two-week period. Results showed no significant between-groups differences. Additionally, and contrary to
expectations, the group-treated subjects experienced more panic attacks during the treatment process that did subjects treated individually. Emmelkemp and Emmelkemp-Benner (1975) treated agoraphobics individually or in groups with instructions to turn back upon experiencing uncomfortable anxiety and to self-record the duration of time spent with the feared stimulus. Results showed no between group differences, indicating the group procedure to be as effective as the individual procedures.

Group procedures may offer additional important therapeutic ingredients not found in individual therapy. For example, Yalom (1975) pointed out that group process can foster the installation of hope, impart information and provide an opportunity to recognize that others are experiencing similar problems. Group members may develop a sense of altruism by sharing experiences and helping others, resulting in enhanced self-esteem and feelings of self-worth. Group cohesion can offer important feedback and reinforcement components not available in individual therapy. Finally, groups may allow for the observation of coping models that can effectively motivate and teach members. Emmelkemp (1979) noted that some negative group experiences (e.g., non-coping models) suggest that we must develop criteria and establish predictors as to who will do
well with what kind of group rather than rely on random assignment. However, the therapeutic advantages of groups coupled with an enhanced cost-benefit ratio for treatment effectiveness argue strongly for group treatment procedures. Although initial evidence is encouraging, further research is currently needed in this domain.

(7) Home-Based Exposure. Home-based treatment programs, if demonstrated to be effective methods of intervention, can be of significant value for several reasons. First, home-based treatments have the capabilities of systematically structuring variables favorable to generalization of treatment effects to the natural environment. Thus, treatment gains may be maintained and enhanced. Secondly, home-based interventions encourage patient responsibility for treatment outcome, thereby allowing for the development of confidence and pride in viewing oneself as a competent and able individual. Moreover, attributions of responsibility for positive effects would be assigned to the patient's own efforts rather than to the therapist. Finally, home-based therapy may decrease the amount of professional time needed and thus demonstrate enhanced cost effectiveness.
Although no study has compared specifically home-based exposure programs with more conventional exposure strategies, there are several studies in the literature that have offered provocative results. For example, Mathews, Teasdale, Munby, Johnston and Shaw (1977) treated twelve married female agoraphobic outpatients in a home-based therapy program. Patients and spouses were given a detailed manual emphasizing the importance of regular graded exposure and the management of panic attacks. A therapist visited the home six times over the four-week treatment period. The lack of any control conditions in this study precluded any firm conclusions, but the authors reported that all but one of the twelve subjects made behavioral gains. Furthermore, they noted "in comparison with the clinic-based treatments used earlier, the home groups produced at least equivalent change with a reduced expenditure of therapist time, and most patients went on to make further gains during the follow-up period." (p. 915).

Jannoun, Munby, Catalan and Gelder (1980) attempted to follow up the Mathews et al. (1977) research, increasing experimental control with 28 agoraphobic women. Subjects were randomly assigned to one of two treatment groups: (1) programmed practice in entering feared situations; or (2)
treatment aimed at anxiety reduction by the resolution of life problems. Treatment was carried out in the patient's home and involved the spouse. Results demonstrated the superiority of programmed practice over the problem-solving intervention. However, the authors pointed out that treatment gains for the practice solving conditions were unexpectedly large and, in fact, one therapist obtained results comparable to those obtained with programmed practice.

McDonald, Sartory, Grey, Cobb, Stern and Marks (1979) compared self-exposure instructions versus a control procedures with 19 agoraphobic outpatients. The self-control subjects met individually with a therapist for one-half hour on each of four occasions over a six-week period. Therapists discussed and planned the patient's self-exposure tasks. The control subjects met for the same amount of time (i.e., an attention-control group) and discussed general life difficulties. The therapist made general suggestions regarding strategies for handling these problems. Results showed a slight but significant effect at post-test and at one-month follow-up indicating the superiority of the self-exposure intervention.
While empirical support is unavailable at present, these innovative and creative methods of "self-help" intervention are exciting. Currently, several variations of self-exposure strategies are being investigated in the United States. Brehony, Johnson and Fairbank (1980) are assessing treatment effects for an intervention program in which 21 agoraphobic women and men are participating. In addition to graded self-exposure tasks, treatment components include: education about agoraphobia, practice in relaxation, exercise and reattribution of arousal, group support and spouse reeducation. Participants met as a group for one hour a week over an eight-week period and completed a variety of homework assignments (self-exposure tasks) during this time. Data are currently being evaluated.

Similarly, Benson, King, Schotte and Brehony (1980) are developing a peer support and self-help program for agoraphobia in which more functional agoraphobic individuals are learning skills necessary to becoming paraprofessional helpers for less functional agoraphobic individuals. Educational sessions led by clinical psychologists offer training in empathy and listening skills and thereby augment the self-exposure instructions of these "helpers" and the less functional "clients." Data from this project are currently being evaluated. Further research of this type,
using controlled experimental designs, will be a prerequisite for the development of the most cost-effective treatment for agoraphobia.

H. CONCLUDING REMARKS AND DIRECTIONS FOR RESEARCH

It is quite clear from the foregoing review, that agoraphobic behavior reflects a complex interplay of behavioral, physiological, cognitive, and interpersonal factors. The data show impressive agreement regarding the clinical features of the syndrome. These reports come from a variety of countries and cover a considerable period of time. Frequently noted characteristics of agoraphobia include fear of leaving home, panic attacks, depersonalization, generalized anxiety, fear of enclosed spaces, fear of fainting and fear of "losing control." It is important to recognize that agoraphobia is best conceptualized as a continuum of behaviors, with some individuals functioning at fairly high levels while others remain literally housebound. Fluctuations in the severity of symptoms is frequently noted within individuals and over short as well as long periods of time. Numerous researchers have observed the marked predominance of women who experience agoraphobia, and some writers have evoked the
feminine sex-role stereotype as an explanatory variable. Indeed, from the current review it was concluded that there is a good deal of commonality between the symptoms of agoraphobia and stereotypically feminine behavior. Additionally, it was noted herein that modeling (including media portrayed role models) appears to be important in the acquisition of these stereotypic behaviors. Furthermore, it was suggested that interpersonal interactions are likely to hold critical ramifications for the etiology, development and maintenance of agoraphobic behaviors.

We noted that fears and phobias may be acquired through classical and operant conditioning, vicarious learning (modeling) and the transmission of information. These theories of etiology were discussed and it was concluded that further research is necessary to illustrate the relative contribution of these learning mechanisms to agoraphobia. A model for the development of agoraphobia was presented as a means of focusing attention on variables that may serve to maintain the agoraphobic behavior pattern. While the model is consistent with general laws of learning and accurately reflects widespread clinical reports, supportive evidence for components of the model is lacking at the present time. It is hoped that this model can serve to direct future research efforts.
The treatment outcome literature was critically evaluated and included reports on systematic desensitization, flooding, modeling, and cognitive interventions. It was noted that serious methodological problems prevent unequivocal conclusions. However, the evidence does strongly point to exposure to the feared stimuli as the clinically relevant treatment component. Furthermore, a "state-of-the-art" was presented and this appears to be, essentially a description of the parameters of exposure to the feared stimuli that provide for the greatest treatment gains. These exposure issues include: arousal level, in vivo versus imaginal, role of cognitions, home- versus clinic- based, and duration and spacing of exposure sessions.

It appears that several lines of research could add immeasurably to our understanding of agoraphobic behavior. First of all, the establishment of significant etiological variables is critical if we are ever to learn to prevent this clinical syndrome. The present paper argued against the acceptance of "uniformity myths" and suggested that open-mindedness and strong empirical methodologies guide our search.
Secondly, variables responsible for the maintenance of symptomatic behavior must be isolated if they are to become targets for our clinical treatments. It is clear that escape and avoidance responses are considered to be the most important and legitimate focus for our interventions. While this may be true, it is also possible that other behaviors, perhaps those that occur earlier in the response chain leading to avoidance, might also be considered as strategic intervention targets. For example, according to several clinical reports assertion or social skills training in the expression of anger or negative feeling might be an important focus of intervention. Similarly, available empirical and clinical evidence suggests that reattribution of arousal affects (perhaps through exercise) appears to hold considerable promise as an intervention for agoraphobia.

Finally, our interventions must be assessed according to stricter rules of evidence. Dependent variables must include stringent behavioral and physiological indices, as well as self-report measures since it is clear that human phobic behavior incorporates all three modalities and these do not necessarily covary (e.g., Hudgson & Rachman, 1974; Lang, 1971; Rachman & Hudgson, 1971). Although some research has accomplished this tri-model assessment strategy, these studies are very much in the minority. Creativity and
innovative thinking must be brought to the fore if we are to solve the great difficulties inherent in applying laboratory-like experimental control to the study of real people in the real world. This is acknowledged to be a Herculean task. Nonetheless, efforts in this direction are likely to be rewarded with an enhanced understanding of a complex clinical problem.
The present study sought to provide information on two important issues evident in the agoraphobia literature. The first goal was to provide for demographic and self-report data for a large sample of agoraphobic individuals. The only large-scale survey in the literature was conducted by Marks and Herst (1969) in England. There are no data from an American sample and the present research project could provide topical census-type information regarding agoraphobia.

The Marks and Herst (1969) sample was derived from a series of media activities that focused on a market segment that was largely female (e.g., articles in women's magazines, TV shows directed to a female audience). Thus, their finding that 95% of agoraphobics responding to their outreach efforts were women is potentially an artifact of their sampling procedures. The present study attempted to utilize broad-based outreach strategies that would not be biased towards any subset of the agoraphobic population.
The second goal of the present study was to evaluate assertion training as an intervention for agoraphobia. Hand, Lamontague and Marks (1974) observed that group in vivo exposure procedures with agoraphobic clients unexpectedly produced additional goals in social skills and assertive behavior. However, this observation was serendipitous and was not analyzed or controlled for by their experimental design. Clinical observations of agoraphobic behavior patterns clearly suggest that these individuals have high anxiety and difficulty in emitting assertive responses, particularly with regard to the expression of anger or other negative feelings.

Thus, it was felt that assertion training could provide new skills for dealing with interpersonal conflicts, afford greater personal control and allow for the development of new behaviors that would be incompatible with anxiety and panic states. Since in vivo exposure is generally regarded as the state-of-the-art for treatment in vivo this intervention served as the control condition against which assertion training was evaluated.

These two goals of this study, the establishment of a broad-based data set regarding agoraphobic characteristics and the evaluation of assertion training as an intervention for this disorder, are described as Study #1 and Study #2 in the following chapters.
METHOD

The present research incorporated two separate phases. The first was a large-scale demographic and questionnaire survey of an agoraphobic population identified through a variety of media outreach efforts. The second was a treatment evaluation experiment comparing the efficacy of assertion training versus in vivo exposure as treatment for agoraphobia. These two phases of this project will be described as Study 1 and Study 2.

Study 1: Large-Scale Questionnaire Survey

Subjects

Respondents to the questionnaire survey were 70 (64 females, 6 males) self-referred agoraphobic individuals who responded to a television, radio and newspaper media outreach campaign. This outreach effort is described in the following section.

Procedure

A broad-based and widely focused media communication effort was used to generate responses from the greatest possible sample of agoraphobic individuals without creating a sampling bias by focusing on one or two media modes that
might be directed to some subsample of the agoraphobic population. The media campaign included the following: a one-hour special about agoraphobia on Public Broadcasting television (aired at 10:00 pm); a half-hour CBS television show (aired at noon); fifteen minutes and half-hour radio shows distributed to a number of radio stations throughout the Commonwealth of Virginia; and several newspaper articles circulated throughout the southwestern part of Virginia.

The format for all of these media activities included a description of the agoraphobic syndrome and the research and treatment project being conducted through Virginia Tech. Individuals were instructed to call or write in order to receive a booklet describing agoraphobia and participate in the questionnaire survey. The media campaign generated 125 responses. Seventy individuals completed the survey. Respondents were informed that all responses would remain confidential and that they could complete the questionnaire anonymously if they preferred.

Survey Instrument

A copy of the questionnaire survey is shown in Appendix A and included a number of self-report measures and questions eliciting demographic information (e.g., sex, age, race, marital status, etc.). The self-report measures were selected on the basis of their theoretical and/or clinical
relevance to the agoraphobic syndrome. A spouse evaluation form was developed to be completed by the respondent's spouse assessing his/her perception of the respondent's agoraphobic behavior (See Appendix B for a copy of the Spouse Evaluation Form).

A brief description of such of these self-report measures follows. Copies of each scale are shown in Appendix A.

(1) **Fear of Negative Evaluation Scale (FNE)** - This scale was developed by Watson and Friend (1969) to measure anxiety experienced in social situations. The scale consisted of 30 true-false questions assessing the fear of negative evaluation from other people. Scores may range from 0 to 30 with the higher score representing greater fear. Watson and Friend (1969) report the test-retest reliability at one month to be .78.

(2) **Social Avoidance and Distress Scale (SAD)** - This scale was developed by Watson and Friend (1969) to measure self-reported social avoidance and perceived distress. The scale consisted of 28 true-false questions evaluating the extent to which a respondent reported experiencing anxiety and avoidance in social situations. Scores may range from 0 to 28 with the higher score representing greater anxiety and avoidance behavior. Test-retest reliability at one month was .68.
(3) Agoraphobia Research Questionnaire (ARQ) - This scale is currently in the development stage by Benson and Brehony (1978). The questionnaire consisted of 21 questions organized on a 7-point Likert-type scale anchored by the terms "never or almost never true" (1) and "always or almost always true" (7). The questionnaire asked respondents to indicate their personal experiences with agoraphobic symptoms (e.g., I have a fear of fainting in public) by indicating a number on the 1-7 point scale. Twenty items contributed to the agoraphobia symptom scale and one item inquires as to their views about traditional roles for men and women. Items were worded to be counterbalanced such that for approximately half the items the higher the number the more severe the symptoms and for half the items the higher the number the less severe the symptoms. Scores on the ARQ may range from 7 to 140 where the higher the score the more severe the self-reported agoraphobic symptoms.

(4) Personal Reaction Inventory (PRI) - This scale is a 33 item true-false inventory developed by Crowne and Marlow (1964) to measure social desirability. Scores may range from 7 to 33 with the higher score reflecting greater endorsement of socially desirable characteristics.
(5) **Health Locus of Control Scale** - Wallston, Wallston, Kaplan and Maides (1976) developed the Health Locus of Control Scale as an area-specific measure of expectancies regarding locus of control for prediction of health related behaviors. The scale is scored in the external direction for each item. The scores on this 11-item inventory may range from 11 to 66. The higher the score the more external the reported locus of control.

(6) **Internal-External Scale (I-E)** - Rotter, Liverant and Crowne (1961) developed the 23-item questionnaire (plus 6 buffer items) to measure an individual's perceived locus of control. The I-E scale is a fixed choice inventory in which the subject reads a pair of statements and indicates which of the two statements he/she more strongly agrees with. The scores may range from 0 to 23 with higher scores representing greater externality.

(7) **Assertion Inventory** - Gambrill and Richey (1976) developed the Assertion Inventory as a 40 item questionnaire designed to assess the degree of discomfort and the response probability of emitting an assertive response in a variety of situations. For each item the respondent is requested to indicate the degree of discomfort or anxiety typically experienced in a specific situation (e.g., asking someone for a date) on a five-point scale which ranges from 1 (none) to
5 (very much). Thus, the higher the score the greater the reported discomfort. The response probability of engaging in assertive behavior is scored on a five-point scale where 1 is "always do it" and 5 is "never do it." Thus, the lower the score the greater the likelihood of engaging in an assertive response.

(8) **Bem Sex-Role Inventory (BSRI)** - The Bem Sex Role Inventory (Bem, 1974) is a 60-item self-report inventory that included masculinity, femininity, and neutral scales. Each scale consisted of 20 characteristics that describe traits "more desirable for a man" or "more desirable for a woman." Neutral items were those traits which were not more desirable for either sex. Respondents were asked to endorse these adjectives on a 7-point Likert-type scale in terms of how much that adjective described them. The higher the score on each scale the greater the self-endorsement of masculine and feminine characteristics.

(9) **Evaluation Questionnaire (EQ)** - The Extent of Fear Rating, Symptom Rating, Internal Sensations, Fear Survey, Schizophrenia Scale and Obsessiveness Scale are all Likert-type scales in which a respondent was asked to indicate the extent to which an item described his/her feelings or behaviors. All of these scales are based on an assessment inventory developed by Hardy (1973) in his clinical
practice. In each area, the higher the score the greater the number or intensity of symptoms endorsed.

Study #2: Evaluation of Assertion Training and In Vivo Exposure as Treatment for Agoraphobia

Subjects

Subjects were 10 married white females residing in the Roanoke-Salem-Vinton area of Virginia who were currently experiencing symptoms of agoraphobia, and were willing to attend treatment sessions and complete the behavioral and self-report assessment requirements. These subjects were identified by the large-scale questionnaire survey. All respondents to the survey had been invited to participate in the treatment intervention phase of this study.

The mean age of this subject population was 45 and the mean duration of symptoms was 16.1 years. This group did not differ on any major demographic variables or self-report measures from the other questionnaire respondents who wanted to participate but lived too far from the Roanoke area to participate in the treatment and assessment procedures.

Experimental Design

The originally planned between groups design was not possible due to the limited number of subjects interested in participating in the treatment procedure (N=10). Therefore, the effects of treatment were assessed according
to a multiple baseline design across subjects. Subjects were randomly assigned to one of three treatment conditions (Assertion Training #1, In Vivo Exposure, Assertion Training #2). Treatment was introduced to Assertion Training #1 and the In Vivo Exposure Group while baseline assessment continued for Assertion Training #2. Continuing to collect baseline data for the Assertion Training #2 group while treatment was in progress for the Assertion Training #1 and In Vivo Exposure groups allowed for a comparison of the behavior during baseline versus treatment. Thus, this experimental design allowed for the evaluation of treatment effects without requiring a no-treatment control group since each group eventually receives the treatment intervention. Three subjects were assigned to Assertion Training #1, four to the In Vivo Exposure Group, and three to Assertion Training #2.

Procedure

Subjects exposed to the Assertion Training Intervention met five times over a two week period for two hours per session. Training included the discussion of various components of assertive behavior, recording of assertive behaviors in a daily diary, role-playing and modeling. The training model followed the assertion training program outlined by Cottler and Guerra (1976). Two graduate students in clinical psychology led each of the groups.
Subjects exposed to the In Vivo Exposure procedure met five times over a two week period in a local shopping mall (Crossroads Mall, Roanoke, Virginia). Treatment sessions lasted for two hours. The group met with two therapists (clinical psychology graduate students). Subjects were asked to stay in this feared situation in spite of high anxiety levels. Verbal and group support was contingent upon staying in the mall. Group members were encouraged to talk about their feelings while in the mall.

Treatment Outcome was assessed by self-report and self-monitoring measures, and an in vivo assessment procedure that incorporated behavioral, physiological, and self-report variables. These assessment procedures are as follows.

1. **Self-Report Measures** - The Self-report measures were administered pre-treatment, post-treatment and at a 3-month follow-up. These questionnaires were identical to those used in the large-scale questionnaire survey described in Study #1. See Appendix A for copies of the Self-Report measures.

2. **Self-Monitoring Measures** - Subjects were asked to report the frequency of leaving their homes and the duration of time spent outside the home in a daily dairy. Specifically, subjects were asked to record when they left home, who they were with if anyone, the reason for leaving
home, how long they stayed out, and anxiety level (7-point Likert-type scale where 7 is most anxious).

Subjects were asked to respond to a list of physical stress-related symptoms (e.g., headaches, fatigue) and rate symptoms on a 10-point Likert-type scale (where 10 is most severe). The subjects were also asked to monitor the number of psychotropic medications that they had taken during the day. Subjects were asked to complete this information in a Nightly Information Form before bedtime and to mail this information along with the Daily Diary each morning. By having a daily return rate of this self-monitoring information non-compliance could be immediately detected. See Appendix C for copies of the self-monitoring forms.

(3) In Vivo Behavioral Assessment - Subjects were asked to go to a local shopping center (Tanglewood Mall) between the hours of 6:00 and 6:30 each Monday, Wednesday, and Friday evening throughout the course of the study (a total of 21 times). Subjects were instructed to enter and exit the mall by a specific exit. Upon entering the mall, subjects were asked to record their anxiety level (7 point Likert-type scale where 7 was most anxious) and their pulse rate and record this information on a data sheet (See Appendix D for a copy of this form). Subjects were instructed to stay in the shopping mall for as long as they were feeling
comfortable but to leave as soon as they felt anxious. As the subject was leaving the mall, she was asked to rate her anxiety again, record her pulse rate and rate the duration of time that she had spent in the mall. She was then to deposit the data sheet in a box marked "Shopper's Survey" located in the mall. A research assistant, blind to the subject's treatment condition, unobtrusively recorded the duration of time spent in the mall by the subject. This procedure provided a reliability check on the behavioral duration measure. Reliability was assessed on 70% of the assessment sessions. Since some subjects could not leave their homes to get to the mall they were instructed to complete the data sheet and describe how far they progressed in getting to the mall (e.g., pulling the car out of the driveway). They were requested to mail this data sheet with their self-monitoring forms the next morning.

(4) Control Sample - Respondents who completed the initial large-scale questionnaire survey (described in Study #1) were asked to complete the questionnaire survey at the same times (pre-treatment, post-treatment, and follow-up) as the treatment subjects. Eight individuals who wanted to participate in treatment but lived too far away to attend treatment sessions completed the self-report measures and served as an untreated control group with which to compare the treatment subjects (N=10) on the self-report measures.
RESULTS

Results from the large-scale questionnaire administration described in Study #1 will be presented in the first section of this chapter. Results from the Treatment intervention experiment (Study #2) will be described in the following section of this chapter.

Study #1 - Results of the Large-Scale Questionnaire Survey

The results of the large scale questionnaire survey are based upon the responses of 70 individuals who completed the questionnaire material (56% return rate). These data will now be described:

Sex of Respondent - The majority of this sample was female (91%).

Age - The mean age for the sample was 40.9 years.

Race - Of the 67% of the sample that responded to the question regarding race, the majority (98%) reported being white. Only 2% were Black and no one reported themselves as being of Hispanic, Native American or other ethnic background.

Occupation - Sixty percent of this sample reported their occupation as "homemaker."
Marital Status - The majority (76%) of the respondents reported their marital status as "married or engaged."

Years Married - For those individuals who reported themselves as married, the mean time married was 18.2 years.

Number of Children - The majority of this sample reported that they had at least one child (74%). The mean number of children was 1.7.

Religion - Seventy-nine percent of the respondents reported their religious preference to be one of the Protestant denominations. Six percent noted their religious choice to be Roman Catholic, 1% reported being Jewish, and 6% reported no religious preference.

Eight percent did not respond to the question and no respondent reported a religious preference other than Protestant, Roman Catholic, or Jewish.

Income - Income was assessed according to a categorical description, thus, the data are not able to be expressed by mean or medium income levels. Table 4 illustrates these categorical income levels indicating that there was great variability in reported family incomes.

Education Levels - The mean educational level was 12.5 years. The majority (74%) of the respondents reported that their grade point average for their most recent educational experience was in the B to C range (using a 5-point grading scale A,B,C,D,F where A is the highest grade).
Table 4
Reported Family Income

<table>
<thead>
<tr>
<th>Family Income</th>
<th>Percent Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $5,000</td>
<td>7.1</td>
</tr>
<tr>
<td>$5,001-$10,000</td>
<td>7.1</td>
</tr>
<tr>
<td>$10,001-$15,000</td>
<td>11.4</td>
</tr>
<tr>
<td>$15,001-$20,000</td>
<td>11.4</td>
</tr>
<tr>
<td>$20,001-$25,000</td>
<td>8.6</td>
</tr>
<tr>
<td>$25,001-$30,000</td>
<td>8.6</td>
</tr>
<tr>
<td>$30,001+</td>
<td>11.4</td>
</tr>
<tr>
<td>No Response</td>
<td>34.3</td>
</tr>
</tbody>
</table>

N = 70
In addition to standard demographic characteristics, the evaluation questionnaire was also designed to assess agoraphobic symptoms and related health behaviors. Data regarding these dependent measures are presented below.

Health Issues and Behaviors - As suggested in the Introduction to the present study, agoraphobics appear to attribute any non-normative physiological states as a predictor that a panic attack is imminent. Thus, the present study assessed a variety of health problems that present symptomology that might be perceived as being similar to those symptoms of sympathetic arousal associated with panic and anxiety states. Respondents were asked to report the severity of these physical symptoms on a series of 7-point Likert-type scales where 7 represented the most severe pole. These data are presented in Table 5 and suggest that, with the possible exception of allergies and sinus-related problems, this sample did not report severe medically-based symptoms that might be confused with panic states. Since normative data are not available, it is impossible to determine if the severity of allergy and sinus symptoms reported significantly differs from the general population of Southwest Virginia.
Table 5
Severity of Physical Symptoms

<table>
<thead>
<tr>
<th>Physical Symptoms</th>
<th>Mean Severity*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypoglycemia</td>
<td>.7</td>
</tr>
<tr>
<td>Ear Infection</td>
<td>1.3</td>
</tr>
<tr>
<td>Tinnitus (Ringing in Ears)</td>
<td>1.7</td>
</tr>
<tr>
<td>Diabetes</td>
<td>.5</td>
</tr>
<tr>
<td>Light Sensitivity</td>
<td>1.8</td>
</tr>
<tr>
<td>Sinus Problems</td>
<td>3.0</td>
</tr>
<tr>
<td>Allergies</td>
<td>2.4</td>
</tr>
<tr>
<td>Other Medical Problems</td>
<td>1.7</td>
</tr>
</tbody>
</table>

* Range = 1 to 7 where 7 is most severe
N = 70
Duration of Agoraphobic Behaviors and Circumstances at Onset -
The mean duration of symptoms was 15.1 years based upon the self-report of these respondents. However, spouses of these respondents (N=26) who completed questionnaires, reported the mean duration of symptoms to be .9 years. Since the mean number of years married was 18.2 years, it is likely that these spouses were married to the agoraphobic respondents while they were experiencing symptoms of agoraphobia according to their report.

Approximately one-third of this sample reported that they did not recall the circumstances surrounding the onset of symptoms. Thirty-nine percent reported that they had just been married, moved, or lost a significant other at the time they first noticed the panic attacks and avoidance behaviors characteristic of agoraphobia. The relationship between these separation events and symptom onset is consistent with other reports on the literature (e.g., Marks and Herst, 1969). Table 6 illustrates the data related to the self-reported circumstances at the onset of symptoms. Respondents were almost equally divided in their report as to whether symptoms appeared suddenly or were characterized by a more gradual onset. Fifty-one percent reported that symptoms appeared suddenly and 49% reported a gradual onset of fears and avoidance behaviors.
Table 6
Circumstances at Symptom Onset

<table>
<thead>
<tr>
<th>Circumstances</th>
<th>Percent Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>None Recalled</td>
<td>31.4</td>
</tr>
<tr>
<td>Marriage</td>
<td>17.1</td>
</tr>
<tr>
<td>Moved</td>
<td>15.7</td>
</tr>
<tr>
<td>Problems with Relatives</td>
<td>10.0</td>
</tr>
<tr>
<td>While Driving</td>
<td>5.7</td>
</tr>
<tr>
<td>Illness</td>
<td>5.7</td>
</tr>
<tr>
<td>Loss of Significant Other</td>
<td>5.7</td>
</tr>
<tr>
<td>Birth of Child</td>
<td>4.3</td>
</tr>
<tr>
<td>War Experiences</td>
<td>2.9*</td>
</tr>
<tr>
<td>Funeral</td>
<td>1.4</td>
</tr>
</tbody>
</table>

* Male Respondents only
N = 70
Sought Professional Help - Slightly more than half of the sample (54%) reported that they had sought out professional help during the course of their agoraphobic symptoms. The majority (60%) reported that the professional response to their problem behaviors was the prescription of minor tranquilizers (most commonly Librium or Valium).

The Evaluation questionnaire asked respondents to report their perceptions of their family history for a number of variables thought to be theoretically or clinically relevant to the development of agoraphobia. It is important to note that these data are based upon self-reported retrospective information and are subject to criticism. Nonetheless, the perceptions of these individuals, understood as perceptions, appears to be a legitimate and important source of information.

Family Members Experiencing Symptoms - Twenty-six percent of the respondents reported that they believed their mothers demonstrated symptoms of agoraphobia. Twenty percent reported siblings who experienced similar fears and avoidance behaviors and fourteen percent perceived that their fathers experienced these symptoms.

Family Interactions - Respondents were asked to rate a number of family interaction patterns on a 7-point Likert-type scales where 7 represented the most intense role. These
variables were based upon similar questionnaire items developed by Hardy (1973) through clinical inferences about family interaction patterns. These data, shown in Table 7 suggest that the majority of respondents reported their families as being quite worrisome, overly sensitive, critical, fearful, experiencing conflicts, and desirous of pleasing others.

Respondents were queried on variables thought to be related to the theoretical conditioning model of avoidance behavior. These data include:

**Conditioning Events** - The most commonly reported specific fear of agoraphobic individuals is fear of fainting. The clinical literature attests to this and this sample supports their observation. Ninety-seven percent of the sample reported at least some fear of fainting. This question was assessed on a 7-point Likert-type scale where 7 was most fearful. The mean for this fear or fainting variable was 3.3. However, the majority (67%) reported that they had never had any experience or fainting. Similarly, 81% reported that they had never been seriously ill and 94% reported that they had not experienced any serious injury that might be related to their avoidance behaviors.
Table 7
Respondents' Perceptions of Family Attitudes and Behaviors

<table>
<thead>
<tr>
<th>Attitude or Behavior</th>
<th>Mean*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical</td>
<td>4.3</td>
</tr>
<tr>
<td>Fearful</td>
<td>4.2</td>
</tr>
<tr>
<td>Pleasing Other People</td>
<td>4.7</td>
</tr>
<tr>
<td>Demanding</td>
<td>3.6</td>
</tr>
<tr>
<td>Perfectionistic</td>
<td>4.1</td>
</tr>
<tr>
<td>Worrisome</td>
<td>5.1</td>
</tr>
<tr>
<td>Experiencing Many Conflicts</td>
<td>4.5</td>
</tr>
<tr>
<td>Overly Sensitive</td>
<td>5.0</td>
</tr>
</tbody>
</table>

* Range = 1 to 7 where 1 is very little and 7 is very much.

N = 70
Intensity of Escape Behavior - Respondents were asked to rate how frequently they were able to remain in a situation when they were experiencing a panic state. This variable was assessed by a 7-point Likert-type scale asking how frequently they were able to stay in a panic situation anchored by the terms "never or almost never" (1) to "always or almost always" (7). The mean rating on this measure was 2.8 indicating a low probability of remaining in panic situations.

Reinforcement of Avoidance Behaviors - Seventy-four percent of the spouses reported that they accompanied their agoraphobic partner on shopping trips or were totally responsible for family shopping. Fifty-two percent reported that they engaged in this behavior because the agoraphobic spouse needed them to do so. Thirteen percent reported that this shopping arrangement was more convenient, 7% noted that they preferred to do the shopping, and 3% cited other reasons. Twenty-six percent of the spouses reported that the agoraphobic spouse was able to shop alone. In addition to difficulties in shopping alone, agoraphobics typically cited driving as difficult and avoided the situation. Eighty-seven percent of the spouses reported that they drove whenever the couple went out. Ten percent reported that the agoraphobic spouse drove when they went out together and 3% noted that both drove depending upon other circumstances.
Self-report Measures

The means and standard deviations for the self-report measures are presented in Table 8. These data suggest that this sample reported greater fear of negative evaluation and social avoidance and distress, greater difficulty in engaging in assertive behavior and a lower response probability in engaging in assertive behavior than other groups upon which normative data are based (generally college students). Scores on the Internal-External scale suggest that this sample is no more external or internal than the general norm for this measure.

The correlation matrix presented in Table 9 suggests that a number of measures were highly correlated suggesting either an extremely integrated disorder or major redundancy in the self-report measures chosen for this study.

The distribution of scores on the Bem Sex Role Inventory showed very little variability. Respondents tended to score very high on the feminine scale and quite low on the masculine scale. Within each of these scales there was a very limited range of scores. Because of the shape of the distribution of scores on this measure interpretations of correlations with other measures are difficult to describe.
Table 8
Means and Standard Deviations on Self-Report Measures
for All Respondents on Initial Survey

<table>
<thead>
<tr>
<th>Measure</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear of Negative Evaluation</td>
<td>21.3</td>
<td>8.6</td>
</tr>
<tr>
<td>Social Avoidance and Distress</td>
<td>18.9</td>
<td>7.1</td>
</tr>
<tr>
<td>Agoraphobia Research Questionnaire</td>
<td>4.4</td>
<td>.8</td>
</tr>
<tr>
<td>Personal Reaction Inventory</td>
<td>14.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Health I-E</td>
<td>38.9</td>
<td>9.8</td>
</tr>
<tr>
<td>Internal-External Scale</td>
<td>10.9</td>
<td>4.7</td>
</tr>
<tr>
<td>Assertion Inventory - Degree of Distress</td>
<td>124.5</td>
<td>26.0</td>
</tr>
<tr>
<td>Assertion Inventory - Response Probability</td>
<td>121.9</td>
<td>18.4</td>
</tr>
<tr>
<td>BSRI - Feminine Scale</td>
<td>101.2</td>
<td>14.6</td>
</tr>
<tr>
<td>BSRI - Masculine Scale</td>
<td>74.8</td>
<td>20.7</td>
</tr>
<tr>
<td>Extent of Fear Scale</td>
<td>3.5</td>
<td>.9</td>
</tr>
<tr>
<td>Symptoms Rating Scale</td>
<td>3.1</td>
<td>.8</td>
</tr>
<tr>
<td>EQ Fear Survey</td>
<td>3.1</td>
<td>.6</td>
</tr>
<tr>
<td>Schizophrenia Scale</td>
<td>2.0</td>
<td>.6</td>
</tr>
<tr>
<td>Obsessiveness Scale</td>
<td>2.9</td>
<td>.8</td>
</tr>
<tr>
<td>Internal Sensation Scale</td>
<td>3.1</td>
<td>.9</td>
</tr>
</tbody>
</table>

N = 70
Table 9
Correlation Coefficients for Self-Report Measures

<table>
<thead>
<tr>
<th></th>
<th>SYMP</th>
<th>INT</th>
<th>EQ</th>
<th>FEAR</th>
<th>SCHIZO</th>
<th>OBSESS</th>
<th>FNE</th>
<th>SAD</th>
<th>ARQ</th>
<th>PRI</th>
<th>HEALTH</th>
<th>I-E</th>
<th>I-E</th>
<th>ASSERT</th>
<th>ASSERT</th>
<th>ASSERT</th>
<th>BSRI</th>
<th>BSRI</th>
<th>FEM</th>
<th>FEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEAR</td>
<td>.61</td>
<td>.46</td>
<td>.74</td>
<td>.47</td>
<td>.42</td>
<td>.30</td>
<td>.42</td>
<td>.82</td>
<td>-.24</td>
<td>.08</td>
<td>.30</td>
<td>.38</td>
<td>.27</td>
<td>-.10</td>
<td>-.28</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SYMP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INT.</td>
<td>.61</td>
<td>.58</td>
<td>.56</td>
<td>.36</td>
<td>.14</td>
<td>.49</td>
<td>-.40</td>
<td>.03</td>
<td>.18</td>
<td>.13</td>
<td>.18</td>
<td>-.12</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEN</td>
<td>.80</td>
<td>.67</td>
<td>.82</td>
<td>.37</td>
<td>.31</td>
<td>.44</td>
<td>-.46</td>
<td>.03</td>
<td>.19</td>
<td>.37</td>
<td>.32</td>
<td>-.06</td>
<td>-.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EQ</td>
<td>.87</td>
<td>.51</td>
<td>.43</td>
<td>.48</td>
<td>.11</td>
<td>.12</td>
<td>.36</td>
<td>.43</td>
<td>.36</td>
<td>-.16</td>
<td>-.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCHIZO</td>
<td>.70</td>
<td>.45</td>
<td>.32</td>
<td>.48</td>
<td>-.41</td>
<td>.16</td>
<td>.47</td>
<td>.40</td>
<td>.42</td>
<td>-.08</td>
<td>-.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OBSESS</td>
<td>.59</td>
<td>.54</td>
<td>.38</td>
<td>.44</td>
<td>.29</td>
<td>.32</td>
<td>.67</td>
<td>.42</td>
<td>-.13</td>
<td>-.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SAD</td>
<td>.34</td>
<td>-.20</td>
<td>.20</td>
<td>.30</td>
<td>.51</td>
<td>.46</td>
<td>-.26</td>
<td>-.43</td>
<td>.16</td>
<td>.13</td>
<td>.27</td>
<td>.42</td>
<td>.32</td>
<td>-.06</td>
<td>-.08</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ARQ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRI</td>
<td>-.06</td>
<td>-.32</td>
<td>-.22</td>
<td>-.19</td>
<td>.36</td>
<td>.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEALTH</td>
<td>.31</td>
<td>.11</td>
<td>.07</td>
<td>.04</td>
<td>.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I-E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASSERT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEG DIFF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASSERT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RESP. PROB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSRI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BSRI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* < .05
** < .01
*** < .001
**** < .0001
Study #2 - Evaluation of Assertion Training and In Vivo Exposure as Treatment for Agoraphobia

Self-report data comparing the treatment groups were analyzed by a 3 (Treatment Group: Assertion Training #1, In Vivo Exposure, Assertion Training #2) X 3 (Assessment Period: Pre-treatment, Post-treatment, Follow-up) analysis of variance procedure. If the results indicated that this ANOVA revealed no difference between Assertion Training #1 and Assertion Training #2 then these groups would be combined and compared to the In Vivo Exposure group in a 2 X 3 analysis of variance.

Similarly, data from the three treatment groups were combined and compared to the no-treatment control group for pre-treatment, post-treatment and follow-up assessment periods.

Self-monitoring data (e.g., Nightly Information Form and the Daily Diary) were analyzed by repeated measures analysis of variance. Behavioral data (including heart rate and anxiety ratings) were displayed according to the multiple baseline design and interpreted by visual inspection.
The three treatment groups (Assertion Training #1, Assertion Training #2, and In Vivo Exposure) were compared by a 3 (Group) X 3 (Assessment period: Pre-treatment, post-treatment, follow-up) analysis of variance for all the self-report measures. Results indicated a significant main effect for assessment period on a number of measures. These significant main effects for assessment period included: Fear of Negative Evaluation Scale, $F(2,14) = 5.10, p<.05$; Social Avoidance and Distress Scale, $F(2,14) = 4.42, p<.05$; Extent of Fear Rating, $F(2,14) = 7.43, p<.01$; Symptoms Rating, $F(2,14) = 7.23, p<.01$; Internal Sensations, $F(2,14) = 5.23, p<.05$; Agoraphobia Research Questionnaire, $F(2,14) = 13.76, p<.001$; Assertion Inventory - Degree of Discomfort, $F(2,14) = 4.43, p<.05$; Assertion Inventory - Response Probability, $F(2,14) = 21.01, p<.001$. For each of these measures, the main effect for assessment period suggested improved functioning across time. No other main effects for assessment period were observed on the other self-report measures (all $p$s>.10).

A significant assessment period X group interaction was observed for the variable Assertion Inventory - Response Probability, $F(4,14) = 3.45, p<.05$. These data are illustrated in Figure 2 and suggest that the Assertion
FIGURE 2
Assertion Inventory — Response Probability Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up, (The Lower the Score the Greater the Reported Probability of Engaging in an Assertive Response.)
Training #2 and In Vivo Exposure groups reported a greater likelihood of engaging in assertive behavior at post-treatment and follow-up compared to the Assertion Training #1 group. It is possible that these results indicate a therapist effect since one clinical graduate student therapist (the present author) was co-leader of the Assertion Training #2 and the In Vivo Exposure groups. However, simple effects analysis (using the error term from the overall analysis) revealed no significant group differences at pre-treatment, post-treatment or follow-up (all ps>.05).

The analysis of variance procedure indicated a significant main affect for treatment group on the Health I-E scale, $F(2,6) = 6.25, p<.05$. This result is confounded by the observation that the three groups differed considerably at pre-treatment on this variable (Pre-treatment means: Assertion Training #1 = 23.5; Assertion Training #1 = 51.5; In Vivo Exposure = 39.7).

No other significant main effects or interactions were observed in the 3 X 3 analysis of variance comparing the three treatment groups (all ps>.10). Because there were no significant differences observed between the two Assertion Training Interventions these two groups were combined in a 2 (Group: Assertion Training versus In Vivo Exposure) X 3
(Assessment period: pre-treatment, post-treatment, follow-up) analysis of variance. Results of this procedure revealed no significant main effects for assessment period on the following measures: Fear of Negative Evaluation Scale, $F(2,16) = 3.83, p<.05$; Social Avoidance and Distress Scale, $F(2,16) = 4.61, p<.05$; Extent of Fear Ratings, $F(2,16) = 6.10, p<.01$; Symptoms Rating, $F(2,16) = 6.51, p<.01$; Internal Sensations, $F(2,16) = 5.40, p<.05$; Agoraphobia Research Questionnaire, $F(2,16) = 12.14, p<.001$; Assertion Inventory - Degree of Discomfort, $F(2,16) = 4.27, p<.05$; Assertion Inventory, $F(2,16) = 15.27, p<.001$. For each of these variables the main effect of assessment period suggested improved functioning across time. No other significant main effects for assessment period, main effects for group, or assessment period X group interactions were observed on the other self-report measures (all $p s>.10$). Data for the main effects for assessment period are illustrated in Figures 3 through 10.

**Self-report Data - Treatment Versus Control Subjects**

All respondents to the large scale questionnaire survey (Study #1) were offered the opportunity to participate in the treatment evaluation experiment (Study #2). Ten individuals agreed to participate, lived in the Roanoke-Salem-Vinton area and attended treatment and assessment
FIGURE 3
Fear of Negative Evaluation Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
FIGURE 4
Social Avoidance and Distress Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
FIGURE 5
Extent of Fear Ratings for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
*Figure 6*
Symptom Ratings for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
Internal Sensation Ratings by Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
FIGURE 8
AQR Scores for Assertion Training and Flooding Subjects at Pre, Post, and Follow-Up
PRE-
POST-
FOLLOW-UP

FIGURE 9
Degree for Discomfort (Assertion Inventory) Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
Figure 10
Response Probability (Assertion Inventory) Scores for Assertion Training and Flooding Subjects at Pre-, Post-, and Follow-Up
sessions. Twenty respondents were interested in participating but lived too far away to attend treatment sessions. Forty individuals did not wish to participate in the treatment program.

An analysis of variance procedure was conducted (using the Duncan post-hoc correction) on the questionnaire survey self-report measures. This procedure compared Group 1 (individuals who agreed to participate in treatment and did), Group 2 (individuals who did not want to participate in treatment), and Group 3 (individuals who wanted to participate in treatment but could not because they did not live in close proximity to Roanoke-Salem-Vinton).

The data revealed that Groups 1 and 3 did not significantly differ on any of these pre-treatment self-report measures (all ps>.10). However, Group 2 differed significantly from groups 1 and 3 on a number of measures. These measures were: Extent of fears rating, F (2,66) = 4.35, p<.05; Symptom Rating, F (2,66) = 12.94, p<.0001; Internal Sensations, F (2,66) = 4.99, p<.01. Schizophrenic Symptoms, F (2,66) = 3.32, p<.05; Fear Survey, F (2,65) = 4.23, p<.05; Personal Reaction Inventory, F (2,67) = 4.18, p<.05. In each case, scores for Group 2 showed less severe symptomology than the scores for Groups 1 and 3.
The data suggested that Group 3 (individuals who wanted to participate in treatment but could not) constituted the most empirically comparable control group for the evaluation of the efficacy of treatment on the self-report measures. T-tests were conducted on all continuous demographic variables and chi-square analysis was performed on all the categorical demographic and background variables. The results of these procedures showed only one significant effect. Subjects in Group 3 reported significantly more ear infections than the treatment group (Group 1). Group 1 (treatment subjects) and Group 3 (control subjects) did not differ on any other dependent measure at pre-treatment assessment including occupation, marital status, number of children, religion, history of serious illness of injury, use of medication, educational level, symptoms of relatives or previous experience with fainting episodes (all ps>.10).

Because of the relatively small size of treatment groups (Assertion Training #1 = 3, In Vivo Exposure = 4, Assertion Training #2 = 3) and because no major differences were observed between treatment groups on treatment outcome measures, the data were analyzed by combining all treatment subjects into one group and comparing these subjects to the untreated control subjects (individuals who wanted to participate in treatment but did not) who had completed the
self-report measures at pre-treatment, post-treatment, and follow-up assessment periods. The treatment group consisted of 10 subjects and the control group consisted of 8 subjects. Thus, self-report measures were subjected to a 2 (Group: Treatment versus Control) X 3 (Assessment Period: pre-treatment, post-treatment, follow-up) factorial analysis of variance procedure.

The results of this analysis are as follows:

**Extent of Fear Rating** - the 2 X 3 analysis of variance showed a significant main effect for assessment period, $F(1,16) = 4.40, p<.05$ and a significant time by group interaction, $F(1,16) = 5.51, p<.01$. Figure 11 illustrates these data.

Simple affects analysis (using the error estimate from the overall analysis) showed that the treatment group reported significantly greater extent of fears than did the control group at the pre-treatment assessment, $F(1,32) = 3.94, p<.05$. The treatment group reported less fears at post-treatment compared to the control group, $F(1,32) = 7.39, p<.05$. The treatment and control group did not significantly differ at follow-up, $p>.10$.

Simple affects analysis indicated that the scores for the treatment group were significantly lower from pre-treatment to post-treatment, $F(1,32) = 18.39, p<.001$ and that differences between post-treatment and follow-up assessment
FIGURE 11
Extent of Fear Ratings at Pre-, Post-, and Follow-Up by Treated and Control Subjects
was not significantly different, \(p > .10\). Differences between pre-treatment and follow-up assessment achieved significance for the treatment group, \(F(1,32) = 9.03, p < .01\). No significant differences between pre-treatment, post-treatment and follow-up assessment were observed for the control group (all \(p > .10\)).

**Symptoms Rating** - The 2 X 3 analysis of variance showed a significant main effect for assessment period, \(F(2,32) = 4.63, p < .05\) indicating that both control and treatment subjects reported fewer or less severe symptoms across the repeated measures. A marginal interaction \((p < .06)\) was observed for assessment period X group, \(F(2,32) = 2.99, p < .06\). These data are shown in Figure 12.

**Internal Sensations** - The 2 X 3 analysis of variance showed a significant main effect for assessment period, \(F(2,32) = 3.62, p < .05\), and a significant assessment period by group interaction, \(F(2,32) = 3.54, p < .05\).

Simple effects analysis (using the error estimate from the overall analysis) showed that the treatment and control subjects did not significantly differ at the pre-treatment assessment \((p > .10)\). Treatment subjects, compared to control subjects reported significantly fewer or less symptoms at post-treatment, \(F(1,32) = 10.44, p < .01\), and at follow-up,
Symptom Ratings at Pre-, Post-, and Follow-Up by Treated and Control Subjects

FIGURE 12

- Treatment
- Control
F (1, 32) = 5.95, p<.05.

Simple effects analysis indicated that treatment subjects reported significantly fewer or less intense internal sensations at post-treatment compared to pre-treatment, F (1, 32) = 11.10, p<.01. No significant differences were observed from post-treatment to follow-up (p>.10).

No significant differences from pre-treatment to post-treatment or post-treatment to follow-up assessments were observed for control subjects (all ps>.10) Figure 13 illustrates these data.

Fear Survey - The 2 X 3 analysis of variance showed a significant main effect for assessment period, F (2, 32) = 3.50, p<.05 and a significant assessment period by group interaction, F (2, 32) = 3.70, p<.05.

Simple effects analysis showed that the treatment and control subjects did not significantly differ at pre-treatment (p>.10). Treatment subjects reported significantly lower scores on this measure at post-treatment, F (1, 32) = 4.20, p<.05 and at follow-up, F (1, 32) = 6.90, p<.05 compared to control subjects.

Simple effects analysis indicated that treatment subjects reported significantly fewer or less intense fears at post-treatment compared to pre-treatment, F (1, 32) = 4.90, p<.05. No significant differences were observed from post-
FIGURE 13
Internal Sensation Ratings at Pre-, Post-, and Follow-Up by Treated and Control Subjects
treatment to follow-up ($p>.10$). No significant differences from pre-treatment to post-treatment or post-treatment to follow-up assessments were observed for control subjects (all $p$s>.10). Figure 14 illustrates these data.

**Schizophrenic Symptoms** - The 2 X 3 analysis of variance showed a significant main effect for assessment period, $F(2,32)=4.36$, $p<.05$ and a significant assessment period by group interaction, $F(2,32)=5.55$, $p<.01$.

Simple effects analysis indicated that treatment subjects scored significantly higher than control subjects on this measure at pre-treatment, $F(1,32)=6.00$, $p<.05$. There were no significant differences between the groups at post-treatment ($p>.10$) but the treatment group scored significantly lower on this measure at follow-up, $F(1,32)=5.38$, $p<.05$ compared to the control group.

Simple effects analysis indicated that treatment subjects scored significantly lower on this measure at post-treatment compared to pre-treatment, $F(1,32)=13.38$, $p<.001$. No significant differences were observed from post-treatment to follow-up ($p>.10$). No significant differences from pre-treatment to post-treatment or post-treatment to follow-up assessments were observed for control subjects (all $p$s>.10). Figure 15 illustrates these data.
FIGURE 14
Fear Survey Ratings at Pre-, Post-, and Follow-Up by Treated and Control Subjects
Schizophrenic Symptom Ratings at Pre-, Post-, and Follow-Up by Treated and Control Subjects

FIGURE 15
Fear of Negative Evaluation Scale - The 2 X 3 analysis of variance showed a significant main effect for assessment period, $F(2,32) = 3.49, p<.05$ and a significant time by group interaction, $F(2,32) = 4.31, p<.05$.

Simple effects analysis indicated that treatment and control subjects did not significantly differ on pre-treatment scores ($p>.10$). The treatment group scored significantly lower on this measure at post-treatment, $F(1,32) = 17.91, p<.001$ and at follow-up, $F(1,32) = 11.49, p<.01$ compared to the control group.

Simple effects analysis indicated that treatment subjects scored significantly lower on this measure as post-treatment compared to pre-treatment, $F(1,32) = 16.00, p<.001$. No significant differences were observed from post-treatment to follow-up for treatment subjects ($p>.10$). No significant differences from pre-treatment to post-treatment or post-treatment to follow-up assessments were observed for control subjects (all $p>.10$). Figure 16 illustrates these data.

Social Avoidance and Distress Scale - The 2 X 3 analysis of variance showed a significant main effect for Group $F(1,16) = 5.87, p<.05$ and a significant main effect for assessment period, $F(2,32) = 3.51, p<.05$. 
FIGURE 16
FNE Scores at Pre-, Post-, and Follow-Up by Treated and Control Subjects
Simple effects analysis indicated that treatment subjects scored significantly lower on this measure at the pre-treatment assessment, $F(1,32) = 5.60$, $p<.05$ at post-treatment assessment, $F(1,32) = 28.52$, $p<.001$, and at follow-up assessment, $F(1,32) = 22.26$, $p<.001$ compared to control subjects.

Simple effects analysis indicated that treatment subjects scored significantly lower on this measure at post-treatment compared to pre-treatment, $F(1,32) = 10.80$, $p<.01$. No significant differences were observed from post-treatment to follow-up for treatment subjects ($p>.10$). No significant differences from pre-treatment to post-treatment or post-treatment to follow-up assessments were observed for control subjects (all $p>.10$). Figure 17 illustrates these data.

Agoraphobia Research Questionnaire – The 2 X 3 analysis of variance showed a significant main effect for assessment period, $F(2,32) = 5.13$, $p<.05$ and a significant assessment period by group interaction, $F(1,32) = 7.61$, $p<.01$.

Simple effects analysis indicated that treatment and control subjects did not differ at pre-treatment assessment ($p>.10$). Treatment subjects scored significantly lower on this measure at post-treatment, $F(1,32) = 6.42$, $p<.05$ and at follow-up, $F(1,32) = 13.17$, $p<.01$ compared to control subjects.
FIGURE 17
SAD Scores at Pre-, Post-, and Follow-Up for Treated and Control Subjects
Simple effects analysis indicated that treatment subjects scored significantly lower at post-treatment compared to pre-treatment, $F(1,32) = 20.70, p<.001$. No significant differences between post-treatment and follow-up scores were observed ($p>.10$). No significant differences from pre-treatment to post-treatment to follow-up assessments were observed for control subjects (all $ps>.10$). Figure 18 illustrates these data.

**Assertion Inventory - Degree of Difficulty** - The 2 X 3 analysis of variance showed a significant main effect for assessment period, $F(2,28) = 5.07, p<.05$. No significant main effect for group and no significant group by assessment period interaction.

Simple effects analysis indicated that there were no significant differences between treatment and control subjects at pre-treatment or post-treatment (all $ps>.10$). The treatment subjects compared to control subjects, scored significantly lower on this variable at follow-up, $F(1,32) = 12.05, p<.01$.

Simple effects analysis showed that treatment subjects reported significantly less discomfort in assertive situations at post-treatment relative to their pre-treatment scores, $F(1,28) = 11.58, p<.01$. There were no significant differences between scores at post-treatment and follow-up
FIGURE 18
ARQ Scores at Pre-, Post-, and Follow-Up for Treated and Control Subjects
for the treatment group (p>.10). There were no significant differences in pre-treatment to post-treatment to follow-up scores on this measure for control subjects (all p>.10). Figure 19 illustrates these data.

Assertion Inventory - Response Probability - (The lower the score the greater the response probability of emitting an assertive response).

The 2 X 3 analysis of variance indicated a significant main effect for assessment period, F (2, 28) = 14.83, p<.001 and a significant time by group interaction, F (2, 28) = 4.16, p<.01.

Simple effects analysis indicated that there were no significant differences between treatment and control subjects at pre-treatment (p>.10). Treatment subjects reported a significantly greater response probability for assertive behavior at post-treatment, F (1, 28) = 4.20, p<.05 and at follow-up, F (1, 28) = 26.14, p<.001 compared to control subjects.

Simple effects analysis indicated that treatment subjects reported greater response probability for assertive behavior at post-treatment compared to pre-treatment, F (1, 28) = 23.81, p<.001. There were no significant differences between post-treatment and follow-up scores (p>.10).
Degree of Discomfort (Assertion Inventory) at Pre-, Post-, and Follow-Up for Treated and Control Subjects
The control subjects reported a significantly greater response probability or post-treatment compared to pre-treatment, $F(1,28) = 9.48, p<0.01$ and significantly lower response probability at follow-up compared to post-treatment assessment, $F(1,28) = 8.56, p<0.01$. There were no significant differences in scores on this measure for control subjects when pre-treatment and follow-up scores were compared ($p>0.10$). Figure 20 illustrates these data.

**Other Self-Report Measures** - No other significant main effects or interactions were revealed by this 2 X 3 analysis of variance on the other self-report measures. These included: Personal Reaction Inventory, Health I-E, Internal-External Scale, the Bem Sex-Role Inventory, and the Obsessiveness Scale.

**Self-Monitoring Data – Treatment Subjects Only**

Self-monitoring data regarding the number of physical stress-related symptoms, severity of physical symptoms, amount of daily medication and mean anxiety ratings from the Daily Dairy were analyzed by repeated measures analysis of variance.

The results of this analysis showed a significant main effect for assessment period, $F(2,18) = 9.19, p<0.01$, suggesting that the number of symptoms was significantly reduced from pre-treatment to post-treatment to follow-up.
FIGURE 20
Response Probability (Assertion Inventory) at Pre-, Post-, and Follow-Up for Treated and Control Subjects
for all three treatment groups. These data are illustrated in Figure 21.

Data from the Daily Dairy (asking subjects to record their anxiety level when out of their homes) showed a significant main effect for assessment period, F (2,18) = 8.30, p<.01, indicating that reported daily anxiety was significantly reduced at follow-up compared to pre-treatment and post-treatment levels. Figure 22 illustrates these data.

No significant differences were observed with regard to pre-treatment, post-treatment and follow-up changes on the number of medications used or the severity of symptom rating although non-significant trends were observed on both these dependent measures. These results are shown in Figures 23 and 24.

**In Vivo Behavioral Assessment**

Data derived from the behavioral assessment paradigm were arrayed for visual inspection according to the multiple baseline design.

Duration of time spent in the shopping mall is shown in Figure 25. The lack of a stable pre-treatment baseline makes interpretation difficult. Additionally, baseline duration measures were very high (e.g., subjects were able
FIGURE 21
Number of Symptoms (Self-Monitoring Data) for all Treatment Subjects at Pre-, Post-, and Follow-Up
Mean Daily Anxiety Rating (Self-Monitoring Data) for all Treatment Subjects at Pre-, Post-, and Follow-Up

**FIGURE 22**
FIGURE 23
Number of Medications (Self-Monitoring Data) for all Treatment Subjects at Pre-, Post-, and Follow-Up
FIGURE 24
Mean Severity of Symptoms (Self-Monitoring Data) for all Treatment Subjects at Pre-, Post-, and Follow-Up
A (Assertion)  
N = 3

B (Flooding)  
N = 4

C (Assertion)  
N = 3

FIGURE 25  
Time Spent in Shopping Mall Pre- and Post- Treatment Onset by Treatment Group
to spend quite a long time in the shopping mall) obscuring the results of the treatment intervention.

Reliability checks were performed on 70% of the assessment trials by research assistants blind to the treatment condition of the subjects. Reliability was assessed according to the formula: agreement divided by agreements plus disagreements times 100. The research assistants’ timing of the duration of time that a subject remained in the mall was operationally defined as an agreement if it did not differ by more than three minutes from the duration of time spent in the mall as indicated by the subject on her data sheet. Reliability for the duration measure was computed to be 94%.

Heart rate data are presented in Figure 26. These data are difficult to interpret since they are quite variable. Reliability checks on this measure were believed to be too intrusive and, thus, the reliability of this measure may be questionable. Additionally, heart rate is responsive to physical activity and may not be the most accurate measure of physiological arousal due to fear or anxiety under these conditions. There is no way to determine, for example, whether elevated heart rate is a measure of increased fear or increased physical activity while in the shopping mall.
FIGURE 26
Heart Rate in Shopping Mall Pre- and Post-Treatment Onset by Treatment Group
Self-report of anxiety level while in the shopping mall are presented in Figure 27. There does not appear to be any effect of treatment intervention on this measure.
FIGURE 27
Anxiety Rating in Shopping Mall Pre- and Post- Treatment Onset by Treatment Group
DISCUSSION

Study #1: Large-scale questionnaire survey

The results of the large-scale questionnaire administration (N = 70) appears to confirm the earlier findings (e.g., Marks and Herst, 1969) that the vast majority of agoraphobic individuals are married females. In the present study the majority of the respondents reported their occupation as that of "homemaker." Roberts (1964) referred to agoraphobia as the "housewives syndrome" and these data affirm the term as a valid descriptor of this disorder.

The striking sex difference between males and females reporting agoraphobic experiences found in the present study is consistent with most clinical and research findings on this topic. This issue was discussed at length in the Introduction, and there the relationship between the feminine sex-role stereotype and symptoms of agoraphobia was emphasized. The present data derived from the Bem Sex Role Inventory are limited in that empirically determined norms for a similar age group for this scale are not available. It is interesting to note, however, that this sample of
agoraphobic individuals scored similarly to a college population on the feminine scale (agoraphobics = 101.2: college students = 98.0). However, this sample scored considerably lower on the masculine scale than the student population (agoraphobics = 74.8: college students = 97.6). For both the masculine and the feminine scale the higher the score the greater the endorsement of masculine or feminine characteristics. The present data from the Bem Sex Role Inventory demonstrated a very limited range of variability. That is to say, respondents scored very high on the feminine scale and very low on the masculine scale with a very compacted range of scores within each scale. Thus, this distribution of scores limited correlations with other self-report measures. However, an earlier study (Benson and Brehony, 1978) found evidence for a strong relationship between femininity (as measured by the Bem scale) and self-reports of agoraphobic symptoms. High masculinity scores, on the other hand, were negatively correlated with self-reports of agoraphobic symptoms.

The empirical literature in support of the hypothesized relationship between sex-role stereotypes and symptoms of agoraphobia has not matured to the state of allowing for unequivocal conclusions. Nevertheless, logical inference from an understanding of the sex-role expectations for
women's behavior and clinical observations of agoraphobics support the general view, initially voiced by Fodor (1974), that cultural expectations for women's behavior and the symptoms of agoraphobia do not qualitatively differ.

Clinicians working with agoraphobic women are frequently impressed by the unwillingness of these individuals to take responsibility for their own well-being and by their lack of confidence in themselves as competent coping adults. For example, Fairbank, Brehony, Sanders and Ethridge (1980) asked a female agoraphobic client to enter a crowded shopping mall as pre-treatment behavioral assessment of avoidance behavior. She returned much later and reported that she had experienced very little anxiety during the time spent in the mall. When asked to go back into the mall while the therapists left temporarily she refused to return to the mall "for even a minute." She reported that she felt "safe" as long as someone she trusted would be available to "take charge" in case she panicked and lost control over her behavior. This response might be conceptualized as one method of abdicating responsibility for one's well-being to another person (the therapist) in the event of an overwhelming panic attack. This dependency on others to take care of them is consistently reported by agoraphobic clients. This dependency is also commensurate with sex-role expectations for women in this culture.
The data derived from the present study seem to support this view of agoraphobic women as highly dependent. For example, approximately 52% of the spouses of this sample reported that they accompanied their agoraphobic partner on shopping trips because the partner was dependent upon them to do so.

Agoraphobia may be construed, as Fodor suggested, as a logical, albeit extreme, extension of the cultural sex-role stereotype for women, it appears that females are encouraged to behave in a manner that "predisposes" them to develop agoraphobic behaviors by virtue of their social conditioning and education. For example, escape from threatening situations and reliance upon others for help characterizes both the agoraphobic syndrome and the feminine sex-role stereotype. Thus, it is not surprising that the present sample reported an inability to remain in fearful situations (mean of 2.6 on a 1-7 point scale where 7 is "always or almost always able to stay in a panic situation"). Additionally, the majority of subjects noted that they felt more secure in the presence of a trusted other person (generally their husband).

One interesting finding that suggests that the overt behavior of agoraphobic women is not remarkably different from other women in their cohort group is the observation
that the mean duration of symptoms was 15.1 years based upon the self-report of the agoraphobic respondents (91% female), while the spouses noted the duration of symptoms to be .9 years. These data suggest that fearful, avoidant and dependent behaviors of the agoraphobic subjects may not have been "noticed" by their spouses. Since the mean duration of years married was 18.2 years it is unlikely that the spouses were not married to the subjects for the duration of the agoraphobic symptoms. It is quite possible that these serious phobic behaviors were easily camouflaged within the expected behavioral patterns of middle-aged married housewives. However, the lack of a non-agoraphobic control group matched on significant variables (e.g., sex, age, occupation) prohibits comparisons. Future research efforts should evaluate similarities and differences between agoraphobic women and non-agoraphobic women in order to isolate variables that discriminate these two groups. If, in fact, Fodor (1974) is correct in her hypothesis that agoraphobic behavior represents an extension of the feminine stereotype than agoraphobic and non-agoraphobic women should differ only in the intensity of fearful and avoidant behaviors.
The potential etiological significance of the feminine sex-role stereotype is strengthened by the lack of support for competing hypotheses regarding etiology. For example, this sample was evenly divided between a sudden onset of symptoms and a more gradual and insidious onset of fears and avoidance behaviors (51% versus 49%, respectively). One-third of this sample did not recall a specific conditioning event which is consistent with what is reported for other phobic disorders (Marks, 1969). Interestingly 97% reported at least some fear of fainting though the majority (67%) reported that they had never had any experience with fainting. Thus, the purely operant view than an individual has an aversive experience (e.g., fainting or losing control) in a discriminable environment (e.g., shopping mall) which results in escape and subsequent avoidance behaviors does not seem to characterize the experience of this sample.

In summary, Study #1 provided informative data regarding the agoraphobic syndrome. Thus, it compliments and confirms, in many respects, findings presented in the literature based upon surveys conducted in Great Britain. However, two major methodological problems restrict the usefulness of these data. First, since no control sample was generated it is unclear how the demographic and historical characteristics of this sample differed from
their non-agoraphobic counterparts. Second, the lack of normative data for most of the self-report measures prohibits comparisons between this sample of agoraphobics and empirically-derived norms. Even when norms are available for self-report measures they are generally based upon responses of college students, a questionable control sample for middle-aged women. Future research focused on characteristics of agoraphobic individuals is urgently needed if we are to understand this syndrome and generate empirically valid theories regarding etiology.

**Study #2: Treatment Intervention**

Results of the treatment intervention must be cautiously interpreted, since the limited number of subjects prohibited a between-group design to control for non-specific or placebo treatment variables. Similarly, the use of the multiple baseline design may not have been the methodology of choice since this design seems most appropriate for behaviors in which a researcher might expect a rather precipitous change in frequency, duration, or intensity of behavior following treatment onset (e.g., application or withdrawal of a token economy). Neither the behavioral, physiological or self-report measures collected in the shopping mall appeared to change immediately following treatment onset. Nevertheless, the limited number
of treatment subjects restricted the design options and reflected the difficulty with which sound empirical designs may be utilized in applied clinical research.

Results of the multiple baseline data are difficult to interpret. The long duration of time spent in the mall during the baseline phase was confusing since subjects were staying in the shopping mall for long periods of time in spite of their verbal reports that they could not stay in the mall for more than a few minutes. This inconsistency between duration in the mall and self-reports of "everyday" behavior is, however, consistent with the experiences of a number of researchers in the agoraphobia field (e.g., Chambless, Foa, Groves and Goldstein, 1980; Barlow (1978). For example, Chambless et al wrote:

Tasks were designed to be highly threatening situations that could be carried out from 0 to 30 minutes, with time spent in the situation as the dependent measure. Despite instructions to the contrary, clients appeared to approach these tasks in an all-or-none fashion, either refusing them entirely or forcing themselves to endure 30 minutes despite extreme anxiety. (p. 4)
Observations of the present data arrayed by individual subject mirrors this "all-or-none" finding by Chambless et al. Subjects who were able to stay in the mall for a long time were asked how this was possible since they had reported this to be impossible only days earlier. The standard reply was "as long as I know that I am in your study, I know that you will not let anything bad happen to me." This reflects the finding of Fairbank et al. reported earlier and suggests, perhaps, an abdication of responsibility to the researchers for the subjects' own well being and safety.

The data derived from the multiple baseline design failed to demonstrate the impact of the treatment interventions on the behavioral, cognitive, and physiological measures. Therefore, the treatment effects evidenced by the self-report measures must be interpreted with caution. For example, the observation that treated subjects (both assertiveness training and flooding) showed greater improvement than control subjects on a number of critical self-report measures may have been a result of positive clinical effects of the treatment interventions. However, the failure of the multiple baseline design to demonstrate treatment effects allows for competing hypotheses of demand characteristics (e.g., Orne, 1962) and subject expectancies to also serve as explanations for the
positive changes seen in the treated subjects self-report measures. Orne (1962) referred to any cues in a situation which generate non-planned hypotheses as demand characteristics. For example, when a questionnaire is administered pre- and post- some intervention even the dullest subject is likely to be aware that some change is expected. The subject need only guess the direction of the expected change and express it through his/her endorsement of questionnaire items.

Kazdin and Wilcoxon (1976), among others, have evaluated the effects of expectancy (credibility of the intervention and expectancy for improvement) as a non-specific treatment variable that may be associated with treatment outcomes attributed to the independent variable (e.g., treatment intervention). In the present study, treatment subjects were given information that, presumably, enhanced the expectancy for improvement. That is, it was suggested that the treatment intervention could be effective in reducing their agoraphobic symptoms. Control subjects (e.g., those who wanted to participate in treatment but did not) had no such expectancy.

These rival hypotheses cannot be ruled out in describing the results of the present study. However, it is important to point out that the state-of-the-art of the
agoraphobia treatment literature suggests that exposure procedures (e.g., flooding, Implosion) show more positive treatment effects than control groups (e.g., Gillan and Rachman, 1974). However, methodological problems and an inability to determine whether subjects in attention-control groups actually experienced the same expectancies as treatment subjects precludes firm conclusions.

Finally, it is important to point out that fear is best assessed according to three basic response systems: behavioral, self-report and physiological. A number of researchers (e.g., Hodgsdon and Rachman, 1979; Lang, 1971; Rachman and Hodgsdon, 1974) have presented compelling evidence that these three indices of fear do not necessarily covary. Thus, the "Desynchrony" of these three response systems is the most typical finding in the treatment outcome literature.

According to all the dependent measures, there appeared to be no significant differences as a result of type of treatment intervention (flooding versus assertion training). However, the assertion training procedure incorporated significant aspects of in vivo flooding since the subjects were required to meet in an office setting (outside their homes) as a group. Since the significant fear-eliciting situations appear to be leaving a place of
safety (e.g., the home) rather than the specific environmental cues of a shopping center, it is difficult to ascertain the relative potency of in vivo flooding in a shopping mall versus an office setting. Thus, the assertion training procedure may actually be construed as an in vivo flooding procedure in an office setting.

This issue raises an important question in agoraphobia research. The cues associated with the agoraphobic panic and avoidance behaviors are frequently diffuse and extremely complex. Thus, any intervention may contain aspects of in vivo exposure. For example, even if a therapist would travel to the agoraphobic's home and perform therapy at that location, the presence of the therapist necessarily introduces a novel stimulus. Novel stimuli are reported to be fear-eliciting by most agoraphobics.

Similarly, behavioral avoidance tasks that are viewed as observable and quantifiable dependent variables are also in vivo exposure procedures. Thus, any behavioral measurement procedures (e.g., like those employed in the present study) may be thought of as treatment (e.g., exposure) procedures. This serious confound prohibits clear-out behavioral measurement that is independent of characteristics of in vivo exposure.
Brehony, Fairbank, Sanders, and Ethridge (1980) are in the process of developing a behavioral in-lab assessment paradigm that circumvents the issue of in vivo exposure as a component of a behavioral assessment of agoraphobic avoidance behavior. Briefly, the procedure consists of presentation of images of neutral (e.g., soft colors) and agoraphobic stimuli (e.g., shopping center) on slides to a subject. The subject is instructed to visualize him/herself in these situations and to keep the slide on the screen until she/he feels anxious enough to want to leave the situation. The subject is provided with a control switch to change the slide. Thus, the procedure allows for an analog duration measure of avoidance behavior. This behavioral measure is complimented by physiological and self-report measures. This procedure was applied to a single subject pre- and post-treatment intervention (in vivo and imaginal flooding). The initial data suggested that pre-treatment duration of exposure to agoraphobic stimuli was significantly shorter than to the neutral stimuli. The results of the behavioral, physiological, and self-report measures suggested that this slide viewing paradigm was sensitive to treatment effects. Changes in slide viewing duration, indices of physiological arousal (HR and GSR) and self-report of anxiety (10-point Likert-type scale) all
indicated a positive treatment outcome. The inclusion of the neutral stimuli controlled for the competing hypothesis of habituation to the testing environment as an explanatory variable for pre/post changes on these measures.

In addition to the behavioral assessment, the present study incorporated a self-monitoring assessment procedure that could augment the behavioral data. These data suggested that treatment subjects reported significantly less anxiety (e.g., as measured by the daily dairy) at follow-up compared to pre- and post- levels. Additionally, the number of stress related physical symptoms (e.g., headaches, gastrointestinal disturbances) was significantly reduced from pre- to post- to follow-up. These findings are consistent with the clinical impressions of the therapists working with these subjects.

Though the data must be interpreted with caution, the treatment subjects appeared to show significantly greater improvement than control subjects on a number of self-report measure. These included: Fear Ratings, Symptom Ratings, Internal Sensations, Fear Survey, Schizophrenic Symptoms, Fear of Negative Evaluation, Social Avoidance and Distress, Agoraphobia Research Questionnaire, and the Assertion Inventory. Changes reflected in these self-report measures were confirmed by clinical follow-up evidence showing that
a number of treatment subjects acquired full-time jobs, one subject disengaged herself from an oppressive marital situation, and the majority reported that they were able to go places (e.g., the Civic Center for a concert) with much less anxiety than had previously been possible. Several individuals appeared on television programs and openly discussed their agoraphobic experiences, a feat, they noted, that would have been impossible in the past.

While the self-report data, self-monitoring data, and clinical impressions suggest positive treatment outcome, methodological constraints in the present study prohibited unequivocal conclusions. Demand characteristics and subject expectancies cannot be ruled out as explanatory variables for the observed results. Future research should provide for a between-group design that affords control for these and other non-specific treatment effects. Creative and empirically sound dependent measures must be developed that are respectful of the complex behavioral, physiological and cognitive events that define the agoraphobic syndrome.
REFERENCES


Benjamin, E., Marks, I. M., & Huson, J. Active muscular relaxation in desensitization of phobic patients. Psychological Medicine, 1972, 2, 381.


Borkovec, T. D., & Sides, J. K. The contribution of relaxation and expectancy to fear reduction via graded, imaginal exposure to feared stimuli, Behaviour Research and Therapy, 1979, 17, 529-540.


Boulougouris, J. C., Marks, I. M., & Marset, P. Superiority of flooding (implosion) to desensitization for reducing pathological fear. Behaviour Research and Therapy, 1971, 9, 7-16.


Ellis, A. A note on the treatment of agoraphobics with cognitive modification versus prolonged exposure in vivo. *Behaviour Research and Therapy, 1979, 17, 162-64.*


Emmelkamp, P. M. G., & Cohen-Kettenis, P. J. Relationship or locus control to phobic anxiety and depression. *Psychological Reports, 1975, 36 (2), 390.*


English, H. These cases of the conditioned fear reports. *Journal of Abnormal and Social Psychology*, 1929, 34, 221-225.


Foy, D. W., Miller, P. M., Eisler, R. M., & O'Toole, D. Social skills training to teach alcoholics to refuse drinks effectively. *Journal of Studies on Alcohol, 1976, 37, 1340-1345.*


Liotti, G., & Guidano, V. Behavioral analysis of marital interaction in agoraphobic male patients. Behaviour Research and Therapy, 1976, 14 (2) 161-162.


Penrose, L. Mental illness in husband and wife. Psychiatric Quarterly, 1944, 18, 161.


Rachman, S. The passing of the two-stage theory of fear and avoidance: fresh possibilities. Behaviour Research and Therapy, 1976, 14, 125-134.


Watson, J. P., Gaind, R., & Marks, I. M. Physiological habituation to continuous phobic stimulation. *Behaviour Research and Therapy*, 1972, 10, 269-278.


APPENDIX A:

QUESTIONNAIRE SURVEY
Dear Friend,

We certainly appreciate your response to the Agoraphobia Project's information campaign. We hope that whether you have heard about the project from TV, radio, or newspapers, that we have given you some valuable information about agoraphobia.

One of the difficulties in understanding agoraphobia or developing effective treatments for this problem is that relatively little information is available at the present time. One of the goals of the Agoraphobia Project is to learn more about the people who suffer from agoraphobia. You can be very helpful to us in learning more about this problem.

We have enclosed a number of questionnaires that we would like for you to fill out and return to us. All of the information will be kept confidential and only people involved with the Agoraphobia Project will see your responses to the questions. Additionally, you may answer the questionnaires anonymously if you wish. That is, you may leave the questions asking for your name, address, and phone number blank. It is very important to fill out the questionnaires as accurately and honestly as you can. We realize that the questionnaires are rather lengthy and may take you some time to complete. However, all of the information that you can provide will be very valuable in increasing our understanding of the agoraphobic experience.

The last questionnaire is designed to be completed by your spouse. Again, this information is very important to us but if you do not feel that you want your spouse to fill out the questionnaire do not feel obligated to do so. Simply return the uncompleted questionnaire with your own completed ones. Please read all of the directions carefully and write or print very clearly. Answer all questions as honestly and accurately as you can.

You will also find a booklet about agoraphobia enclosed in this envelope. This is yours to keep. Please fill out all the questionnaires before reading the booklet.

When you have completed all of the questionnaires please fold them in half and place them in the stamped self-addressed envelope and mail them back to us.

We appreciate all of your time and effort in this project. By sharing your experiences with us we hope to grow in our understanding of agoraphobia.

PLEASE RETURN THE QUESTIONNAIRES AS SOON AS POSSIBLE. THANKS.

Sincerely,

Kathleen A. Brehony
Agoraphobia Project
QUESTIONNAIRE CONSENT FORM

I understand that all of the information contained in these questionnaires will remain confidential and that only individuals working with the Agoraphobia Project will see my responses.

I understand that the information from the questionnaires will be reported as group information and my name will not be associated with any of the responses.

I understand that I may complete the questionnaires anonymously if I so desire. That is, I may leave the spaces for name, address, and phone number blank if I want to.

I agree to complete these questionnaires as accurately and honestly as I can and return them to the Agoraphobia Project.

__________________________  __________________________
Date                        Print Name

_________________________
Signature
Another goal of the Agoraphobia Project is to evaluate several types of clinical interventions for agoraphobia. Please read the following information carefully and indicate whether or not you are interested in participating in this phase of the Agoraphobia Project. Even if you are not interested in participating in this second phase we would still like you to complete these questionnaires.

Since we have no idea as to how many people will be interested in participating in this second phase of the project we cannot guarantee that everyone who would like to participate will be able to. However, if you are interested in help with your agoraphobia problem we will offer you assistance even if you are not selected to participate in the treatment evaluation phase of the project. The Agoraphobia Project intends to offer the following even to individuals who do not choose to participate in treatment evaluation or are not selected to participate: (1) information concerning the findings of the project; (2) Two large group workshops for advice on how to deal with agoraphobia; (3) information concerning a list of agencies and individuals in the mental health field who can offer assistance and treatment for agoraphobia; (4) Consultation and assistance in the development of a self-help program for agoraphobics.

Treatment Evaluation Phase of the Agoraphobia Project

The research that you will be participating in is concerned with further understanding the characteristics of individuals who suffer anxiety when leaving their home alone and going out into public places. This research will investigate several clinical interventions that we feel may offer productive behavioral changes for individuals who are afraid of leaving their homes.

As a participant in this research you will be asked to respond to several questionnaires, to leave your home on several occasions with a research assistant who will observe your behavior in terms of how long you can stay out of your home and/or how far you can walk out of your home before experiencing anxiety. You will be asked to go to a local store daily and to purchase some low-cost item (e.g., a pack of gum or an apple) and a research assistant may or may not record how long you stayed in the store. Your spouse will be asked to record when you leave your home and how long you stayed out of your house on those occasions when he/she is around when you leave or come home.

It is important to realize that very little is known about the fear of leaving one's home but from what is known we believe that no harm will come to you as a result of your participation in the Agoraphobia Project. The research is aimed at further understanding ways to help you reduce your anxiety and fears associated with leaving your house and going into shopping malls and stores. However, since this is a research study we cannot guarantee that you will become less afraid of leaving your home.
In addition to the questionnaires and the behavioral observation you will be asked to view slides of shopping centers and grocery store lines and other situations that agoraphobic individuals report as being anxiety arousing. We may record physiological measures (for example, heart rate, blood pressure) at that time.

Your participation in this project is completely voluntary and you can terminate your participation at any time.

If you have any questions at any time you may contact: Kathleen Brehony or E. Scott Geller, Ph.D. in the Department of Psychology at Virginia Tech; The Human Subjects Committee at the Department of Psychology at Virginia Tech; The Institutional Review Board of the College of Arts and Sciences at Virginia Tech; or any of the research assistants that you will be working with.

Thank you for your help.

_________________________  _________________________
Date                                      Signature

CHECK ONE:

_____ Yes, I am interested in participating in the treatment evaluation phase of the Agoraphobia Project.

_____ No, I am not interested in participating in the treatment evaluation phase of the Agoraphobia Project.

If you answered "Yes, I am interested in participating in the treatment evaluation phase of the Agoraphobia Project" please answer the following.

Name: ________________________________________

PLEASE PRINT VERY CLEARLY.

Address: _______________________________________

______________________________________________

Phone: ________________________________
FNE Scale

Please read the following questions very carefully and circle T if the question is true or almost always true for you or circle F if the question is false or almost always false for you. Please answer every question.

CIRCLE ONE

1. I rarely worry about seeming foolish to others.
2. I worry about what people will think of me even when I know it doesn't make any difference.
3. I become tense and jittery if I know someone is sizing me up.
4. I am unconcerned even if I know people are forming an unfavorable impression of me.
5. I feel very upset when I commit some social error.
6. The opinions that important people have of me cause me little concern.
7. I am often afraid that I may look ridiculous or make a fool of myself.
8. I react very little when other people disapprove of me.
9. I am frequently afraid of other people noticing my shortcomings.
10. The disapproval of others would have little effect on me.
11. If someone is evaluating me I tend to expect the worst.
12. I rarely worry about what kind of impression I am making on someone.
13. I am afraid that others will not approve of me.
14. I am afraid that people will find fault with me.
15. Other people's opinions of me do not bother me.
16. I am not necessarily upset if I do not please someone.
17. When I am talking to someone, I worry about what they may be thinking about me.
18. I feel that you can't help making social errors sometimes, so why worry about it.
19. I am usually worried about what kind of impression I make.
20. I worry a lot about what my superiors think of me.

CONTINUED ON NEXT PAGE.
CIRCLE ONE

T F 21. If I know someone is judging me, it has little effect on me.
T F 22. I worry that others will think I am not worthwhile.
T F 23. I worry very little about what others may think of me.
T F 24. Sometimes I think I am too concerned with what other people think of me.
T F 25. I often worry that I will say or do the wrong things.
T F 26. I am often indifferent to the opinions others have of me.
T F 27. I am usually confident that others will have a favorable impression of me.
T F 28. I often worry that people who are important to me won't think very much of me.
T F 29. I brood about the opinions my friends have about me.
T F 30. I become tense and jittery if I know I am being judged by my superiors.
ARQ Scale

In this short inventory you will be shown a few questions. We would like you to use these situations in order to describe yourself. That is, we would like you to indicate on a scale from 1 to 7, how true these various situations are for you. Please do not leave any questions blank.

1 2 3 4 5 6 7

Never or Usually Sometimes Occasion-
almost never not true but infre-
true quently true true

CIRCLE ONE

1 2 3 4 5 6 7 1. I do not like to leave my house to go out unless I really have to.

1 2 3 4 5 6 7 2. I am nervous when I have to go out alone.

1 2 3 4 5 6 7 3. I do not feel shy and uncomfortable when I am with people that I have just met.

1 2 3 4 5 6 7 4. Waiting in line to check out in a store or supermarket makes me feel nervous.

1 2 3 4 5 6 7 5. I have a fear of fainting in public.

1 2 3 4 5 6 7 6. I do not feel nervous when I have to go on a plane or train journey.

1 2 3 4 5 6 7 7. I am not nervous when I am left alone.

1 2 3 4 5 6 7 8. I am not uneasy when alone in a large open space.

1 2 3 4 5 6 7 9. The thought of undergoing a surgical operation would terrify me.

1 2 3 4 5 6 7 10. It generally makes me uneasy to cross a bridge or street.

1 2 3 4 5 6 7 11. I do not like the feeling of being closed in (like in a small room or an elevator).

1 2 3 4 5 6 7 12. I do not experience attacks of dizziness.

CONTINUED ON NEXT PAGE
1234567 13. I feel like I do not know who I am and feel strangely separated from my body and things going on around me.

1234567 14. I feel panicky when I'm home alone.

1234567 15. I feel panicky when I'm at a social gathering in someone else's home.

1234567 16. I believe in traditional sex-role attitudes for men and women. That is, certain behaviors are appropriate for men and not for women and vice versa.

1234567 17. I would rather be with other people than alone.

1234567 18. I feel comfortable when talking with strangers.

1234567 19. I am often afraid I will choke on food.

1234567 20. I enjoy social gatherings.

1234567 21. I do not like to drive anywhere by myself.
SAD Scale

Please read the following questions very carefully and circle T if the question is true or almost always true for you or circle F if the question is false or almost always false for you. Please answer every question.

CIRCLE ONE

1. I feel relaxed even in unfamiliar social situations.
T F

2. I try to avoid situations which force me to be very sociable.
T F

3. It is easy for me to relax when I am with strangers.
T F

4. I have no particular desire to avoid people.
T F

5. I often find social occasions upsetting.
T F

6. I usually feel calm and comfortable at social occasions.
T F

7. I am usually at ease when talking to someone of the opposite sex.
T F

8. I try to avoid talking to people unless I know them well.
T F

9. If the chance comes to meet new people, I often take it.
T F

10. I often feel nervous or tense in casual get-togethers in which both sexes are present.
T F

11. I am usually nervous with people unless I know them well.
T F

12. I usually feel relaxed when I am with a group of people.
T F

13. I often want to get away from people.
T F

14. I usually feel uncomfortable when I am in a group of people I don't know.
T F

15. I usually feel relaxed when I meet someone for the first time.
T F

16. Being introduced to people makes me tense and nervous.
T F

17. Even though a room is full of strangers, I may enter it anyway.
T F

18. I would avoid walking up and joining a large group of people.
T F

19. When my superiors want to talk with me, I talk willingly.
T F

20. I often feel on edge when I am with a group of people.
T F

CONTINUED ON NEXT PAGE
<table>
<thead>
<tr>
<th></th>
<th></th>
<th>21. I tend to withdraw from people.</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>F</td>
<td>22. I don't mind talking to people at parties or social gatherings.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>23. I am seldom at ease in a large group of people.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>24. I often think up excuses in order to avoid social engagements.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>25. I sometimes take the responsibility for introducing people to each other.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>26. I try to avoid formal social occasions.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>27. I usually go to whatever social engagements I have.</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>28. I find it easy to relax with other people.</td>
</tr>
</tbody>
</table>
PERSONAL REACTION INVENTORY

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true (T) or false (F) as it pertains to you personally.

CIRCLE ONE

T  F  1. Before voting I thoroughly investigate the qualifications of all the candidates.

T  F  2. I never hesitate to go out of my way to help someone in trouble.

T  F  3. It is sometimes hard for me to go on with my work if I am not encouraged.

T  F  4. I have never intensely disliked anyone.

T  F  5. On occasion I have had doubts about my ability to succeed in life.

T  F  6. I sometimes feel resentful when I don't get my way.

T  F  7. I am always careful about my manner of dress.

T  F  8. My table manners at home are as good as when I eat out in a restaurant.

T  F  9. If I could get into a movie without paying and be sure I was not seen, I would probably do it.

T  F  10. On a few occasions, I have given up doing something because I thought too little of my ability.

T  F  11. I like to gossip at times.

T  F  12. There have been times when I felt like rebelling against people in authority even though I knew they were right.

T  F  13. No matter who I'm talking to, I'm always a good listener.

T  F  14. I can remember "playing sick" to get out of something.

T  F  15. There have been occasions when I took advantage of someone.

T  F  16. I'm always willing to admit it when I make a mistake.

T  F  17. I always try to practice what I preach.

CONTINUED ON NEXT PAGE.
T  F  18. I don't find it particularly difficult to get along with loud-mouthed, obnoxious people.

T  F  19. I sometimes try to get even, rather than forgive and forget.

T  F  20. When I don't know something, I don't at all mind admitting it.

T  F  21. I am always courteous, even to people who are disagreeable.

T  F  22. At times I have really insisted on having things my own way.

T  F  23. There have been occasions when I felt like smashing things.

T  F  24. I would never think of letting someone else be punished for my wrongdoings.

T  F  25. I never resent being asked to return a favor.

T  F  26. I have never been irked when people expressed ideas very different from my own.

T  F  27. I never make a long trip without checking the safety of my car.

T  F  28. There have been times when I was quite jealous of the good fortune of another.

T  F  29. I have almost never felt the urge to tell someone off.

T  F  30. I am sometimes irritated by people who ask favors of me.

T  F  31. I have never felt that I was punished without cause.

T  F  32. I sometimes think when people have a misfortune they only got what they deserved.

T  F  33. I have never deliberately said something that hurt someone's feelings.
Health I-E

Directions: This questionnaire has to do with beliefs that people have about their health. The questionnaire consists of a series of statements followed by a 6-point rating scale. Next to each statement circle the number that most closely agrees with your own beliefs. The higher the number the more you agree with it. Please answer every item and do not spend too much time thinking about any one. Since this is a measure of belief, there is no right or wrong answer.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>CIRCLE ONE</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If I take care of myself, I can avoid illness.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>2. Whenever I get sick it is because of something I've done or not done.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>3. Good health is largely a matter of good fortune.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>4. No matter what I do, if I am going to get sick I will get sick.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>5. Most people do not realize the extent to which their illnesses are controlled by accidental happenings.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>6. I can only do what my doctor tells me to do.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>7. There are so many strange diseases around that you can never know how or when you might pick one up.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>8. When I feel ill, I know it is because I have not been getting the proper exercise or eating right.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>9. People who never get sick are just plain lucky.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>10. People's ill health results from their own carelessness.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
<tr>
<td>11. I am directly responsible for my health.</td>
<td>1 2</td>
<td>3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>
PLEASE PRINT OR WRITE VERY CLEARLY

EVALUATION QUESTIONNAIRE

NAME ____________________________ DATE ____________
ADDRESS ____________________________ SEX ______ AGE ______

City State Zip OCCUPATION ____________________________

TELEPHONE ____________________________ MARITAL STATUS ____________________________

Area Code NO. OF CHILDREN ____________________________

RELIGIOUS PREFERENCE ____________________________ BIRTHDATE ____________________________

HOW DID YOU HEAR ABOUT THE AGORAPHOBIA PROJECT?

____ Television (Which show ____________ )

____ Radio (Which Station ____________ )

____ Newspaper (Which one ____________ )

____ Friend

____ Other (Please describe ____________ )

Statement of Problem:

1. Give the date or approximate date of the onset of your fearful behaviors.

2. Where and under what circumstances did your fears begin? In other words, what was going on in your life at the time the fears began. Please be specific.

3. Did your problem start with a sudden panic attack? If yes, describe.
4. Have you had any symptoms similar to these prior to your present difficulties?

5. How has your condition changed since the original onset? Please be specific.

6. How restricted are you when alone? In other words, what activities can you do by yourself. Please be specific.

7. How restricted are you when you are with someone else? Please be specific.

8. Describe your reaction if you ever venture alone beyond your limits. Be specific.

9. Please describe what you feel like when you are feeling fearful. What do you think about and what does your body feel like. Please be specific.
Medical History:

10. List childhood diseases you know you had. Note any complications incurred as a result of these illnesses.

11. List any serious illness you have had and explain any complications.

12. List all serious injuries, period of unconsciousness, or head injuries.

13. Have you ever fainted, or have you ever had any seizures of any kind?

14. Have you ever been hospitalized? Explain.

15. List all operations you have had.

16. List all drugs you are taking, their dosages and tell how often you take them.
17. Have you smoked within the last 7 days? ___ Yes ___ No
   If so, what have you smoked? (Check appropriate box(es) below)
   
   Amount/Day  Brand
   cigarettes
   cigars
   pipe

18. Have you used alcohol within the last 7 days? ___ Yes ___ No
   If so, what have you consumed in the last 7 days?
   
   Amount/Week
   beer
   wine
   liquor

19. Have you consumed any beverages containing caffeine in the last 7 days?
   If so, please specify.
   
   Amount/Week
   coffee
   Sanka or decaffinated coffee
   Tea
   Coke/Pepsi

20. Did you exercise within the last 7 days? ___ Yes ___ No
    If so, please describe______________________________________________

21. Do you suffer from any of the following problems and how much discomfort do they cause you?
    
    DISCOMFORT
    very little  1  2  3  4  5  6  7
    very much    1  2  3  4  5  6  7
    
    Sinus Problems
    Allergies
    Hypoglycemia
    Ear Infections
EQ - 5

Tinnitus (Ringing or buzzing in the ears) very little very much

Diabetes

Other Medical Problem

Describe

22. If you suffer from allergies please list the allergic substances:

23. Explain the circumstances at the time of the onset of your fearful condition. — such as marital situation, family relationship, employment situation, in-law relationship, any upsetting or emotional events that were happening at the time. For example, financial problems, moving, separation from loved ones, death in the family etc. (Use the back of this page if space here is insufficient).

Educational Background:

24. List the highest grade you completed in school.

25. Were you on the average an:

<table>
<thead>
<tr>
<th>Grade School</th>
<th>A Student</th>
<th>B Student</th>
<th>C Student</th>
<th>D Student</th>
<th>F Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>A Student</td>
<td>B Student</td>
<td>C Student</td>
<td>D Student</td>
<td>F Student</td>
</tr>
</tbody>
</table>
26. Are you aware of any learning difficulties, or difficulties in paying attention, or difficulties in understanding written material or instruction, or difficulties in hearing, or reading? If so, please explain.

27. Please indicate on the scale 1 to 6 below the degree to which you are affected by the following situations. Add comments on the back of this page if you would like.

1. No problem
2. Prefer not to
3. Can with someone
4. Can but am uncomfortable
5. Can but very apprehensive
6. Cannot without producing panic

**CIRCLE ONE**

1. Can you sit in the middle of a row of people such as in a movie or church?  1 2 3 4 5 6

2. Can you go into unfamiliar places?  1 2 3 4 5 6

3. Can you use elevators?  1 2 3 4 5 6

4. Can you allow yourself to get into a situation where you feel trapped?  1 2 3 4 5 6

5. Do you fear having a reaction in public?  1 2 3 4 5 6

6. Can you eat in restaurants?  1 2 3 4 5 6

7. Can you stand crowds?  1 2 3 4 5 6

8. Can you tolerate heights?  1 2 3 4 5 6

9. Can you tolerate closed-in places?  1 2 3 4 5 6
REMINDER:

1. No problem:
2. Prefer not to
3. Can with someone
4. Can but am uncomfortable
5. Can but very apprehensive
6. Cannot without producing panic

10. Can you cross bridges?  
    1. 2 3 4 5 6

11. Can you fly in airplanes?  
    1. 2 3 4 5 6

12. Can you go to parties?  
    1. 2 3 4 5 6

13. Can you go through the line in supermarkets?  
    1. 2 3 4 5 6

14. Can you sign your name in front of someone?  
    1. 2 3 4 5 6

15. Can you drive the highways alone?  
    1. 2 3 4 5 6

16. Can you shop in a department store?  
    1. 2 3 4 5 6

17. Can you stand being alone?  
    1. 2 3 4 5 6

18. Can you talk about your problem with others?  
    Who can you talk about your problems with:

--------------------------------------------------------------------------------

Writing below on any other fears or situations not mentioned here:
Symptoms:

28. Some of the following symptoms occur during a fearful state. Please evaluate them according to their effect when you are having feelings of anxiety or panic. Indicate your answers on the scale 1 to 5 below. Add comments on the bottom of this page or the back of this page if you would like.

1. No effect
2. Mild effect
3. Medium effect
4. Strong effect
5. Severe effect

<table>
<thead>
<tr>
<th>CIRCLE ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fluttery stomach</td>
</tr>
<tr>
<td>2. Sweaty palms</td>
</tr>
<tr>
<td>3. Warm all over</td>
</tr>
<tr>
<td>4. Rapid or heavy heartbeat</td>
</tr>
<tr>
<td>5. Tremor of the hands</td>
</tr>
<tr>
<td>6. Weak or rubbery knees or legs</td>
</tr>
<tr>
<td>7. Shaky inside and/or out</td>
</tr>
<tr>
<td>8. Dry mouth</td>
</tr>
<tr>
<td>9. Lump in throat</td>
</tr>
<tr>
<td>10. Tightness in chest</td>
</tr>
<tr>
<td>11. Hyperventilation</td>
</tr>
<tr>
<td>12. Stiff neck</td>
</tr>
<tr>
<td>13. Headache</td>
</tr>
<tr>
<td>14. Dizzy or light-headed</td>
</tr>
<tr>
<td>15. Nausea or vomiting</td>
</tr>
<tr>
<td>16. Diarrhea</td>
</tr>
<tr>
<td>17. A feeling of being unable to move</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Internal Sensations and Feelings:

29. These are various sensations that some agoraphobics have. Very few people have all of these sensations. Indicate on the scale of 1 to 5 below how severe or frequent these sensations are for you. Make comments on the bottom of the page of the back of this sheet if you would like.

1. None
2. Mild
3. Moderate
4. Severe
5. Intense

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Urge to run or scream or jump.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Feelings of doom or apprehension.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Feelings of numbness in arms or legs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Sensations of disintegration or going to pieces.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Fear of going crazy.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Feelings of being different from others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Feelings that you do not see, hear, taste, feel things as other people do.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. Feelings of being cut off or withdrawn from others.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. Colors, tastes or sounds have changed.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. Depression.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. Feelings that you are the only one like yourself in the world.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. Are you sensitive to rejection?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. Do you worry about getting help away from home?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. Do you fear losing control of yourself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Comments:
30. Have you seen a mental health professional for your agoraphobic problems? _____ Yes _____ No.
   If so, please tell what kind of therapy you received and how much benefit you feel that you derived from it. Please be as specific as possible.

31. Have you tried self-help by reading psychology books? _____ Yes _____ No
   If so, what books have you read and have they helped you.

32. Have you turned to religion for help? _____ Yes _____ No
   If so, how much has it helped you.

33. Do you carry a security symbol: Pills, tranquilizers, gum, water, candy, alcohol? _____ Yes _____ No
   If so, what?
34. If you are married, what is the attitude of you spouse toward your problem?

35. Comment below about your reaction to being alone or cut off, separated from those close to you.

36. Give a brief statements of family: mother, father, brothers, sisters. Tell of their culture, family standards, morals, ambitions, religion etc. Have you or has anyone in your family had a "nervous breakdown"? Use the back of this sheet to respond to this question if necessary.

37. Have there been other family members who have had similar fearful experiences to the best of your knowledge? Be as specific as you can.

38. Is your family or are you:

<table>
<thead>
<tr>
<th>Highly critical of self or others?</th>
<th>very little</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fearful of what other think?</th>
<th>very little</th>
<th>very much</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6</td>
<td></td>
</tr>
</tbody>
</table>
Desirous of pleasing others? | CIRCLE ONE | very little | 1 | 2 | 3 | 4 | 5 | 6 | very much |
Demanding? | 1 | 2 | 3 | 4 | 5 | 6 |
Perfectionistic? | 1 | 2 | 3 | 4 | 5 | 6 |
Inclined to excessive worry? | 1 | 2 | 3 | 4 | 5 | 6 |
Likely to take on problems of others? | 1 | 2 | 3 | 4 | 5 | 6 |
Overly sensitive? | 1 | 2 | 3 | 4 | 5 | 6 |

39. The items on this questionnaire refer to things and experiences that may cause fear or other unpleasant feelings. Circle the number that best describes how much you are disturbed by it nowadays.

1. Not at all
2. A little
3. A fair amount
4. Much
5. Very much

<table>
<thead>
<tr>
<th>CIRCLE ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Open Wounds</td>
</tr>
<tr>
<td>2. Being alone</td>
</tr>
<tr>
<td>3. Being in a strange place</td>
</tr>
<tr>
<td>4. Loud voices</td>
</tr>
<tr>
<td>5. Dead people</td>
</tr>
<tr>
<td>6. Speaking in public</td>
</tr>
<tr>
<td>7. Dentists</td>
</tr>
<tr>
<td>8. Thunder</td>
</tr>
<tr>
<td>9. Sirens</td>
</tr>
<tr>
<td>10. High places</td>
</tr>
<tr>
<td>11. Strangers</td>
</tr>
<tr>
<td>12. Recieving injections</td>
</tr>
</tbody>
</table>
REMINDER:

1. Not at all
2. A little
3. A fair amount
4. Much
5. Very much

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. Journeys by train, bus, or car</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. People in authority</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. Crowds</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. Large open spaces</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. Sick people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. Being criticized</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. Being in an elevator</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. Witnessing surgical operations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>21. Angry people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>22. Blood</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>23. Enclosed spaces</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>24. Prospect of a surgical operation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>25. Feeling rejected by others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>26. Airplanes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>27. Being ignored</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>28. Darkness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>29. Premature heart beats (missing a beat)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>30. Nude men or women</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>31. Lightening</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>32. Making mistakes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
REMINDER:  

1. Not at all  
2. A little  
3. A fair amount  
4. Much  
5. Very much  

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>33. Looking foolish</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Losing control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Fainting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Wetting your pants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Defecating in your pants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Vomiting in public</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Choking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. Animals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

40. Please answer each question by circling the appropriate number. Work quickly and do not think too long about the exact shade of meaning of each question. There are no right or wrong answers and no trick questions. Answer each question please.

1. Never  
2. Infrequently  
3. Sometimes  
4. Frequently  
5. Only when I am very nervous  

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I hear strange voices in my head speaking to me.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Sometimes the world becomes very bright as I look at it.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. There are some people trying to do me harm.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. When I look at people they seem strange.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I sometimes feel that I have left my body.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
REMINDER:

1. Never
2. Infrequently
3. Sometimes
4. Frequently
5. Only when I am very nervous

<table>
<thead>
<tr>
<th></th>
<th>CIRCLE ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. My hands or feet sometimes feel far away.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. I have felt that there was another voice in my head.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. My thinking gets all mixed up when I have to act quickly.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. I get more frightened now when I am driven in a car by others.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. I feel rays of energy upon me.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11. Foods smell different than they used to.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>12. Strange people or places frighten me.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>13. I can no longer tell how much time has gone by.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>14. I often become scared of sudden movements or noises at night.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>15. Pictures appear to be alive and to breathe.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>16. I know that most people expect a great deal of me.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>17. My sense of hearing is now more sensitive than it has ever been.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>18. I am very painfully shy.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>19. I am constantly keyed up and jittery.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>20. Now and then when I look in the mirror my face changes and seems different.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>21. When I look at things like tables and chairs they seem strange.</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>22. Sometimes the world seems unreal.</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
41. Please rate the following questions as they apply to you.

1. Never
2. Infrequently
3. Sometimes
4. Frequently
5. Constantly

1. Do unpleasant or frightening thoughts or words ever keep going over and over in your mind? 1 2 3 4 5
2. Do you ever get tunes, numbers, or words running through your mind that you can't get out? 1 2 3 4 5
3. Do you ever have persistent imaginings that your children or family might have an accident or that something bad might happen to them? 1 2 3 4 5
4. Do you feel that contact with germs, dirt, or body secretions will contaminate you and require frequent washings? 1 2 3 4 5
5. Are you compulsively neat and clean? 1 2 3 4 5
6. Do you ever have to do things over and over again before they seem just right and you can stop? 1 2 3 4 5
7. Are you super-punctual? 1 2 3 4 5
8. Do you ever count things over and over in your mind? 1 2 3 4 5
9. Do you have to turn things over and over in your mind for many times before you are able to decide about what to do? 1 2 3 4 5
10. Do you have doubts about a lot of things you do and have trouble making decisions? 1 2 3 4 5
11. Do you try to avoid changes in your house or work or the way you do things? 1 2 3 4 5
12. Do you often get afraid that you might be developing some sort of serious illness? 1 2 3 4 5
13. Do you have any other thoughts that are like obsessions or things you are compelled to do? 1 2 3 4 5

You may comment on any of your responses to these questions on the back of this page.
42. When was the last time you went out of your house alone?

(a) Where did you go?

(b) How long were you out?

(c) How did you feel?

(d) How anxious were you: Please circle one.

1 2 3 4 5 6 7
Not at all
Extremely anxious

(e) What were you thinking about?

(f) How important was it that you went out?

1 2 3 4 5 6 7
Not at all
Extremely Important

(g) Did you finish what you went out to do or did you return home before you could finish?

Completed what I went out to do __________

Came home early __________

PLEASE USE THE BACK OF THIS SHEET FOR ANY ADDITIONAL COMMENTS YOU MIGHT HAVE.
42. Please describe a typical day for you. Please be very specific.

<table>
<thead>
<tr>
<th>TIME</th>
<th>WHERE ARE YOU</th>
<th>WHO ARE YOU WITH</th>
<th>WHAT ARE YOU DOING</th>
<th>WHAT ARE YOU THINKING</th>
<th>HOW ANXIOUS ARE YOU*</th>
<th>OTHER SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 a.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00 noon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6:00 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bedtime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* How anxious are you: Please rate on a 1 to 7 point scale where 1 is NOT AT ALL ANXIOUS and 7 is EXTREMELY ANXIOUS

Additional Comments about your typical day:
IE Scale

This is a questionnaire to find out the way in which certain events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously, there are no right or wrong answers.

Please answer these items carefully, but do not spend too much time on any one item. Be sure to find an answer for every choice. Circle either a or b to indicate your choice.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

REMEMBER: Select that alternative which you personally believe to be more true.

CIRCLE EITHER a OR b.

I more strongly believe that:

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run, people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he/she tries.

5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try, some people just don't like you.
   b. People who can't get others to like them, don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they're like.

CONTINUED ON NEXT PAGE
9. a. I have often found that what is going to happen will happen.
    b. Trusting to fate has never turned out as well for me as making a
decision to take a definite course of action.

10. a. In the case of the well-prepared student there is rarely if ever such
    a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that
studying is really useless.

11. a. Becoming a success is a matter of hard work; luck has little or nothing
to do with it.
    b. Getting a good job depends mainly on being in the right place at the
right time.

12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much
the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out
to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case, getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in
the right place first.
    b. Getting people to do the right thing depends upon ability; luck has little
or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces
we can neither understand nor control.
    b. By taking an active part in political and social affairs the people can
control world events.

18. a. Most people don't realize the extent to which their lives are controlled
by accidental happenings.
    b. There is really no such thing as "luck".

19. a. One should always be willing to admit his/her mistakes.
    b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
    b. How many friends you have depends upon how nice a person you are.

21. a. In the long run, the bad things that happen to us are balanced by the
good things.
    b. Most misfortunes are the result of lack of ability, ignorance, laziness
or all three.

CONTINUED ON NEXT PAGE
22. a. With enough effort we can wipe out political corruption.
    b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
    b. There is a direct connection between how hard I study and the grade I get.

24. a. A good leader expects people to decide for themselves what they should do.
    b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
    b. It is impossible for me to believe that chance or luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
    b. There's not much use in trying too hard to please people; if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
    b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
    b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I can't understand why politicians behave the way they do.
    b. In the long run the people are responsible for bad government on a national as well as local level.
The Assertion Inventory

Many people experience difficulty in handling interpersonal situations requiring them to assert themselves in some way, for example, turning down a request, asking a favor, giving someone a compliment, expressing disapproval or approval, etc. Please indicate your degree of discomfort or anxiety in the space provided before each situation listed below. Utilize the following scale to indicate degree of discomfort:

1 = none
2 = a little
3 = a fair amount
4 = much
5 = very much

Then, go over the list a second time and indicate after each item the probability or likelihood of your displaying the behavior if actually presented with the situation.**. For example, if you rarely apologize when you are at fault, you would mark a "4" after that item. Utilize the following scale to indicate response probability:

1 = always do it
2 = usually do it
3 = do it about half the time
4 = rarely do it
5 = never do it

**NOTE. It is important to cover your discomfort ratings (located in front of the items) while indicating response probability. Otherwise, one rating may contaminate the other and a realistic assessment of your behavior is unlikely. To correct for this, place a piece of paper over your discomfort ratings while responding to the situations a second time for response probability.

<table>
<thead>
<tr>
<th>Degree of Discomfort</th>
<th>Situation</th>
<th>Response Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Turn down a request to borrow your car.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Compliment a friend.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Ask a favor of someone.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Resist sales pressure.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Apologize when you are at fault.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Turn down a request for a meeting or date.</td>
<td></td>
</tr>
</tbody>
</table>
The Assertion Inventory  page 2

<table>
<thead>
<tr>
<th>Degree of Discomfort</th>
<th>Situation</th>
<th>Response Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7. Admit fear and request consideration.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Tell a person you are intimately involved with when he/she says or does something that bothers you.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Ask for a raise.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Admit ignorance in some area.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Turn down a request to borrow money.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. Ask personal questions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>13. Turn off a talkative friend.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15. Initiate a conversation with a stranger.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16. Compliment a person you are romantically involved with or interested in.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17. Request a meeting or a date with a person.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18. Your initial request for a meeting is turned down and you ask the person again at a later time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19. Admit confusion about a point under discussion and ask for clarification.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20. Apply for a job.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21. Ask whether you have offended someone.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22. Tell someone that you like them.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23. Request expected service when such is not forthcoming (e.g. in a restaurant).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24. Discuss openly with the person his/her criticism of your behavior.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25. Return defective items, e.g. store customer.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26. Express an opinion that differs from that of the person you are talking to.</td>
<td></td>
</tr>
<tr>
<td>Degree of Discomfort</td>
<td>Situation</td>
<td>Response Probability</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td>27. Resist sexual overtures when you are not interested.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28. Tell the person when you feel he/she has done something that is unfair to you.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29. Accept a date.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30. Tell someone good news about yourself.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31. Resist pressure to drink.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32. Resist a significant person's unfair demand.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>33. Quit a job.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>34. Resist pressure to &quot;turn on&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>35. Discuss openly with the person his/her criticism of your work.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>36. Request the return of borrowed items.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>37. Receive compliments.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>38. Continue to converse with someone who disagrees with you.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>39. Tell a friend or someone with whom you work when he/she says or does something that bothers you.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40. Ask a person who is annoying you in a public situation to stop.</td>
<td></td>
</tr>
</tbody>
</table>

Lastly, please indicate the situations you would like to handle more assertively by placing a circle around the item number.
In this inventory you will be shown a large number of personality characteristics. We would like you to use those characteristics to describe yourself. That is, we would like you to indicate on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristic unmarked.

**EXAMPLE:** Sly

Circle a 1 if it is **NEVER OR ALMOST NEVER TRUE** that you are sly.
Circle a 2 if it is **USUALLY NOT TRUE** that you are sly.
Circle a 3 if it is **SOMETIMES BUT INFREQUENTLY TRUE** that you are sly.
Circle a 4 if it is **OCCASIONALLY TRUE** that you are sly.
Circle a 5 if it is **OFTEN TRUE** that you are sly.
Circle a 6 if it is **USUALLY TRUE** that you are sly.
Circle a 7 if it is **ALWAYS OR ALMOST ALWAYs TRUE** that you are sly.

Thus, if you feel it is sometimes but infrequently true that you are "sly", never or almost never true that you are "malicious", often true that you are "carefree", and always or almost always true that you are "irresponsible", then you would rate these characteristics as follows:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sly</td>
<td>3</td>
</tr>
<tr>
<td>Malicious</td>
<td>1</td>
</tr>
<tr>
<td>Carefree</td>
<td>5</td>
</tr>
<tr>
<td>Irresponsible</td>
<td>7</td>
</tr>
</tbody>
</table>

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Never or almost not true</td>
<td>Usually</td>
<td>Sometimes</td>
<td>Occasionally</td>
<td>Often</td>
<td>Usually</td>
<td>Always or almost always true</td>
</tr>
<tr>
<td>never true</td>
<td></td>
<td>but infrequently true</td>
<td>true</td>
<td></td>
<td>true</td>
<td>true</td>
</tr>
</tbody>
</table>

**CIRCLE ONE**

1. Self Reliant
2. Yielding
3. Helpful
4. Defends own beliefs
5. Cheerful
6. Moody

CONTINUED ON NEXT PAGE
<table>
<thead>
<tr>
<th></th>
<th>BSRI - 2</th>
<th>CIRCLE ONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Independent</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>8.</td>
<td>Shy</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>9.</td>
<td>Conscientious</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>10.</td>
<td>Athletic</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>11.</td>
<td>Affectionate</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>12.</td>
<td>Theatrical</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>13.</td>
<td>Assertive</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>14.</td>
<td>Flatterable</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>15.</td>
<td>Happy</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>16.</td>
<td>Strong Personality</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>17.</td>
<td>Loyal</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>18.</td>
<td>Unpredictable</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>19.</td>
<td>Forceful</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>20.</td>
<td>Feminine</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>21.</td>
<td>Reliable</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>22.</td>
<td>Analytical</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>23.</td>
<td>Sympathetic</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>24.</td>
<td>Jealous</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>25.</td>
<td>Has leadership abilities</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>26.</td>
<td>Sensitive to the needs of others</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>27.</td>
<td>Truthful</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>28.</td>
<td>Willing to take risks</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>29.</td>
<td>Understanding</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>30.</td>
<td>Secretive</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
31. Makes decisions easily
1 2 3 4 5 6 7
32. Compassionate
1 2 3 4 5 6 7
33. Sincere
1 2 3 4 5 6 7
34. Self-sufficient
1 2 3 4 5 6 7
35. Eager to soothe hurt feelings
1 2 3 4 5 6 7
36. Conceited
1 2 3 4 5 6 7
37. Dominant
1 2 3 4 5 6 7
38. Soft-spoken
1 2 3 4 5 6 7
39. Likable
1 2 3 4 5 6 7
40. Masculine
1 2 3 4 5 6 7
41. Warm
1 2 3 4 5 6 7
42. Solemn
1 2 3 4 5 6 7
43. Willing to take a stand
1 2 3 4 5 6 7
44. Tender
1 2 3 4 5 6 7
45. Friendly
1 2 3 4 5 6 7
46. Aggressive
1 2 3 4 5 6 7
47. Gullible
1 2 3 4 5 6 7
48. Inefficient
1 2 3 4 5 6 7
49. Acts like a leader
1 2 3 4 5 6 7
50. Childlike
1 2 3 4 5 6 7
51. Adaptable
1 2 3 4 5 6 7
52. Individualistic
1 2 3 4 5 6 7
53. Does not use harsh language
1 2 3 4 5 6 7
54. Unsystematic
1 2 3 4 5 6 7
55. Competitive
1 2 3 4 5 6 7
56. Loves children
1 2 3 4 5 6 7

CONTINUED ON NEXT PAGE
<table>
<thead>
<tr>
<th></th>
<th>Tactful</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>57.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambitious</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>58.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gentle</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>59.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Conventional</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>60.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BSRI - 3

CIRCLE ONE
BOOKLET EVALUATION

PLEASE COMPLETE THIS QUESTIONNAIRE AFTER YOU HAVE FINISHED READING THE BOOKLET "YOU ARE NOT ALONE: THE AGORAPHOBIC EXPERIENCE".

The Agoraphobia Project wants to provide helpful information. We are constantly evaluating our program so that we can learn more about this problem. After reading the booklet please answer the following questions so that we can continue to improve this booklet. Thank you.

Please circle a number from 1 to 7 below that best fits your response to the booklet:

A. 1 2 3 4 5 6 7
Not at all Informative
Extremely Informative

B. 1 2 3 4 5 6 7
Not at all Helpful
Extremely Helpful

C. 1 2 3 4 5 6 7
Poorly Written
Well Written

D. 1 2 3 4 5 6 7
Boring
Interesting

E. 1 2 3 4 5 6 7
Poor Overall
Excellent Overall
<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>F.</td>
<td>Inaccurate</td>
<td><strong>Extremely Accurate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G.</td>
<td>Did not describe MY experiences</td>
<td><strong>Accurately described MY experiences</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Best thing about the booklet:**

**Worst thing about the booklet:**

**Additional Comments:**

THANK YOU SO VERY MUCH FOR YOUR TIME IN COMPLETING ALL OF THESE QUESTIONNAIRES.
APPENDIX B:

SPOUSE EVALUATION FORM
**SPOUSE EVALUATION FORM**

Name: ___________________________  Date: ________________
Address: _________________________  Age: ________________

1. As best you can recall, how long has your spouse experienced fears associated with leaving your home alone.
   
   _______ Years  _________ Months

2. Based on your observations please indicate on the scale of 1 to 6 below, the degree to which you believe your spouse is affected by the following situations.

   1. Does it often.
   2. Can do it but not often.
   3. Can do it with someone else.
   4. Can but appears to be uncomfortable
   5. Can but appears very apprehensive.
   6. Cannot without producing panic.

   CIRCLE ONE

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can sit in the middle of a row of people such as in a movie or church.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Can go into unfamiliar places.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Can use elevators.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Can allow him/herself to get into a situation where he/she feels trapped.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Can eat in restaurants.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Can go into crowds.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Can tolerate heights.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Can go to parties.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Can go through the line in supermarkets.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. How often do your spouse's problems disrupt your (or your family's) activities. For example, how often are family outings, dinner at a restaurant, movies etc. cancelled because your spouse fears going. Please circle one number that best reflects the situation as you see it.

1 2 3 4 5 6 7

Never Sometimes Frequently Often Usually Almost Always

4. To what extent do your spouse's problems upset you. Please circle one number that best estimates your feelings of being upset.

1 2 3 4 5 6 7

Not at all

Extremely Upsetting

5. Do you go shopping with your spouse often. ____ Yes ____ No

Do you go because:

____ He/she needs for you to go along.

____ It's more convenient.

____ You like to shop.

____ Other reason (describe) ___________________________
6. Who usually drives the car when you and your spouse go out together.

   _____ You drive.
   _____ Spouse drives.

Please add any additional comments that you feel will be helpful to us in understanding your perspective on your spouse's problem. Please comment as to whether you personally experience any similar fears as those of your spouse.

Please complete the rest of the Spouse Evaluation Form by responding to the characteristics as they pertain to you. Please follow the directions carefully. Thank you very much.
APPENDIX C:

SELF-MONITORING FORMS
AGORAPHOBIA PROJECT

NIGHTLY INFORMATION FORM: Please fill this questionnaire out each night just before you go to bed. Please be as accurate and honest as you can. Place this form in the envelope provided and mail one to the Agoraphobia Project each day.

NAME ____________________________ Subject Number: ____________

Date: (If you fill this out after midnight please use the date of the just completed day. For example, if you go to bed at ten minutes after midnight on Friday May 4, list the date as May 4th although technically it is May 5th.)

1. Have you smoked today?  ___yes  ___no
   If so, what have you smoked? (Check appropriate box(es) below)
   AMOUNT BRAND
   ___ cigarettes ___
   ___ cigars ___
   ___ pipe ___

2. Have you used alcohol today?  ___yes  ___no
   ___ beer ___ cans/bottles
   ___ wine ___ glasses
   ___ liquor ___ drinks

3. Have you consumed any beverages containing caffeine today?  ___yes  ___no
   AMOUNT
   ___ coffee ___ cups
   ___ Sanka (Decafinated) ___ cups
   ___ Tea ___ cups
   ___ Coke/Pepsi ___ glasses/bottles/cans
   (circle one and note size e.g., 12 oz. can)

4. List any and all medications you took today (including tranquilizers aspirin, Rolaids etc.)
   MEDICATION  DOSAGE  TIME TAKEN
5. Did you exercise today? ____yes ____no

If yes, please list specific activities (e.g., jogging, walking, bowling, tennis, calisthenics, dancing, yoga etc.) and how long you spent doing each activity.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>TIME SPENT</th>
</tr>
</thead>
</table>

6. Of the symptoms listed below, please indicate the severity of the symptoms that you have experienced today. CIRCLE ONE NUMBER FOR SYMPTOMS YOU EXPERIENCED TODAY.

_____fatigue

| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |

_____insomnia

| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |

_____headaches (Migraine____, Tension____)

| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |

_____backache

| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |

_____muscle pain

| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |

_____skin disorder

| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |

_____gastrointestinal disorder

<p>| Very Mild | 1 2 3 4 5 6 7 8 9 10 Very Severe |</p>
<table>
<thead>
<tr>
<th>Condition</th>
<th>Very</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>
<th>9</th>
<th>10</th>
<th>Severe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flu and/or cold</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accident</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual dysfunction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ulcer pain</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menstrual distress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dizziness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ringing or buzzing in ears</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earache</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colitis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergy attack</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Sinus Problems

| Very | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Very Severe |
| Mild |

### Anxiety Attack (Panic Attack: How many where were you)

| Very | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Very Severe |
| Mild |

### General Feelings of Tension

| Very | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 10 | Very Severe |
| Mild |

### Hyperventilation

| Very | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 1 | 10 | Very Severe |
| Mild |

### Other

| Very | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Very Severe |
| Mild |

Any additional comments as to how your day went:
AGORAPHOBIA PROJECT
Daily Diary
Name: ________________________________

PLEASE PRINT VERY CLEARLY AND ANSWER EACH CATEGORY VERY SPECIFICALLY. THANKS.

<table>
<thead>
<tr>
<th>Date</th>
<th>How did you travel (car, foot, etc.)</th>
<th>Where you went and How long you stayed.</th>
<th>How important was it that you went out? (circle one)*</th>
<th>Who were you with? Who drove (if applicable)</th>
<th>What did you do?</th>
<th>How did you feel?</th>
<th>Anxiety Rating (circle one)**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ADDITIONAL COMMENTS:

<table>
<thead>
<tr>
<th>*</th>
<th>**</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Not at</td>
<td>Not at</td>
</tr>
<tr>
<td>Extremely</td>
<td>Extremely</td>
</tr>
<tr>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Important</td>
<td>Important</td>
</tr>
<tr>
<td>Anxious</td>
<td>Anxious</td>
</tr>
</tbody>
</table>
APPENDIX D:

BEHAVIORAL IN VIVO ASSESSMENT PROCEDURE

DATA FORM
DATA FORM

Name________________________ Date________________ Number________________

1. Did you drive to the store? Yes_______ No__________

2. Are you alone? Yes_______ No__________ If no, who are you with? ____________________________________________

3. How important was it that you go out today to come to the store? (circle one)

   1  2  3  4  5  6  7
   Not at all Important
   Extremely Important

4. Anxiety Rating upon entering store (circle one)

   1  2  3  4  5  6  7
   Not at all Anxious
   Extremely Anxious

5. Pulse upon entering store ___________/per minute

6. Anxiety Rating upon leaving store (circle one)

   1  2  3  4  5  6  7
   Not at all Anxious
   Extremely Anxious

7. Pulse upon leaving store ________________/per minute

8. How long did you stay ________________(please be precise)

9. Comments:
I was not able to get to Tanglewood Mall today.

Please check the behavior that characterizes how far you were able to go:

- Got dressed and ready to leave my home.
- Walked out the front door.
- Got in my car.
- Drove the car out of the driveway.
- Got part way to Tanglewood.
- Got to parking lot at Tanglewood.
- Got to entrance of Mall.
- Went into Mall.
- Other: _____________________________

If you drove or rode in a car, how far did you travel?

- Number of miles. (Odometer reading _____ to _____)

Anxiety level right now:

1  2  3  4  5  6  7

Not at all Anxious  Extremely Anxious

Pulse Rate: ___________/per min. right now
The ___ page vita has been removed from the scanned document
The ____ page vita has been removed from the scanned document
The ___ page vita has been removed from the scanned document
The 8 page vita has been removed from the scanned document
The ___ page vita has been removed from the scanned document
The ____ page vita has been removed from the scanned document
The ___ page vita has been removed from the scanned document
The ___ page vita has been removed from the scanned document
Agoraphobia is the most pervasive and serious of all the phobic disorders. Marks (1969) reported that agoraphobics represent between 50%-60% of all phobic clients seen by practicing mental health professionals. The syndrome includes fears of leaving home, being in closed spaces, shopping, and traveling especially when alone. There is much fear generalization throughout the course of the disorder, and numerous other symptoms are commonly present, including panic attacks, tension, dizziness, frequent depression, depersonalization, and obsessions.

The present study included a large-scale media outreach campaign directed towards gathering demographic and normative data regarding agoraphobia. Seventy individuals agreed to complete an extensive questionnaire survey. Data derived from this sample confirmed the findings presented in the literature that the majority of agoraphobics are middle-aged female housewives. A number of other demographic characteristics and scores on self-report inventories were also reported.

Ten of the respondents to the questionnaire survey agreed to participate in a treatment outcome study that compared
assertion training and in vivo exposure according to a multiple baseline across subjects experimental design. Dependent measures included (1) self-report; (2) self-monitoring of daily anxiety, stress-related physical symptoms, and psychotropic medication; and (3) an in vivo behavioral assessment that incorporated a behavioral duration measure, heart rate, and self-ratings of anxiety level.

Results indicated that all subjects improved from pre-treatment to post-treatment assessment periods on a number of dependent measures (self-report and self-monitoring). These treatment gains appeared to be maintained at three-month follow-up. Results of the behavioral in vivo assessment procedure were equivocal. There were no significant differences between the assertion training and in vivo exposure procedures on any measures of treatment outcome.

Treatment subjects were compared to a no-treatment control group and showed significantly greater improvement on a number of self-report measures. Methodological problems precluded firm conclusions and competing hypotheses of demand characteristics and subject expectancies were discussed.

Results were discussed within the context of the empirically derived literature and clinical reports and a model for the development and maintenance of agoraphobic behavior was presented. Directions for future research in the assessment and treatment of agoraphobia were suggested.