CONDITIONING EXPERIENCES IN SPIDER PHOBICS

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Summary—Using the Phobic Origin Questionnaire (Öst, L. G. & Hugdahl, K. Behaviour Research and Therapy, 19, 439–477, 1981), the present study examined the extent to which severe spider phobics (N = 42) attributed their phobia to conditioning experiences, modeling experiences and/or informational learning experiences. Modeling was most often reported (71%), followed by conditioning (57%), and informational learning experiences (45%). It was also found that patients with a conditioning background reported less extreme cognitive symptoms when confronted with the phobic stimulus than patients with an indirect mode of acquisition (modeling and/or informational learning).

INTRODUCTION

In a recent review article, Hugdahl (1989) concludes that “recent clinical studies . . . have shown simple phobias in clinically relevant patients to be acquired through traumatic classical conditioning to an extent not previously acknowledged” (p. 303). This conclusion is largely based on retrospective studies in which phobic patients completed the Phobic Origin Questionnaire (POQ; Öst & Hugdahl, 1981). The POQ asks patients to indicate which discrete circumstances (a traumatic experience, a fearful mother, negative information etc.) are related to the onset of the phobic complaints. It is based on a notion put forward by Rachman (1977), namely the idea that there are direct (conditioning) and indirect (modeling; negative information) pathways to phobic fear. Öst and Hugdahl (1981; Öst, 1985; Hugdahl & Öst, 1985) repeatedly found that a majority of the patients (approx. 60%) attributed their fear to a traumatic conditioning experience. Öst (1985) also found the preponderance of the direct conditioning pathway to be most prominent in agoraphobics (i.e. 88% of these patients ascribed their phobia to a conditioning pathway) and to least prominent in animal phobics (i.e. 50% of animal phobias was presumably based on a conditioning pathway). As for agoraphobia, Öst and Hugdahl’s findings were recently confirmed in a study by Merckelbach, de Ruiter, van den Hout and Hoekstra (1989). Taken together, these results cast doubts on the popular view (e.g. Lazarus, 1971) that conditioning plays only a marginal role in the etiology of phobic fears.

The present study addresses two issues. Firstly, it examines whether the preponderance of the conditioning pathway also holds for severe spider phobics. Secondly, it examines whether there are systematic relationships between type of etiology (conditioning versus indirect pathways) and type of self-reported symptomatology (cognitive versus physiological symptoms). It should be noted that in their subsample of animal phobics, Öst and Hugdahl (1981) found some support for Rachman’s (1977) hypothesis that a conditioning pathway to fear is associated with relatively more physiological than cognitive symptoms, while the reverse is true for indirect pathways (modeling, negative information).

METHOD

Subjects

Ss were 42 spider phobics (3 men). They were recruited by means of announcements in local newspapers. In these announcements, spider phobics were offered “free” treatment* in return for participation in research. Mean age of the patients was 32 yr (range: 17–54 yr). Mean duration of the phobic complaints was 25 yr (range: 9–48 yr). The mean score on the Spider Questionnaire

* Treatment results are described elsewhere (Merckelbach, de Jong & Arntz, 1990).
(Klorman, Weerts, Hastings, Melamed & Lang, 1974) was 23 (SD = 3.4) which comes close to the average score of spider phobics reported by Fredrikson (1983). All patients underwent a behavioral test during which they were encouraged to approach a live spider in a glass jar. The average distance at which patients began to feel uncomfortable was 78 cm (SD = 52 cm).

Assessment

Before undergoing one-session treatment (Öst, 1989), patients completed a Dutch version of the POQ (Öst & Hugdahl, 1981). This POQ version comprises two sections. The first section (9 questions) is concerned with the origins of the phobic complaints. It asks patients to indicate whether the complaints are related to traumatic conditioning experiences (2 questions), modeling experiences (4 questions), and/or exposure to negative information about the phobic stimulus (3 questions). In the present study, answers were categorized using a two-fold classification (yes/no). Presence of at least one yes-score was considered sufficient to assign the patient to the conditioning, modeling and/or informational learning group. This POQ section also contains an open-end question that invites Ss to describe the factors that contributed to the development of their phobia.

The second section of the POQ contains 21 specific questions regarding symptoms that the patient might experience when confronted with the phobic stimulus. Eleven questions pertain to physiological symptoms (e.g. flashes, respiratory irregularities) and 10 questions pertain to cognitive symptoms (e.g. I will faint; I will lose control). Patients indicated on 10 cm Visual Analog Scales (VASs) ranging from 0 (never/not at all) to 10 (always/extremely) to what extent they suffer from these symptoms when confronted with the phobic stimulus. VAS scores were averaged separately for physiological and cognitive symptoms.

RESULTS

Table 1 shows the frequency of Ss who indicated at least one conditioning, modeling and/or informational learning experience. Informational learning experiences were reported less often than modeling and conditioning (Cochran's Q = 6.3, d.f. = 2, P < 0.05). From Table 1 it can also be concluded that there is a considerable number of spider phobics who recall more than one type of experience. Table 2 shows response frequencies when mutually exclusive categories are used. As can be seen, the mixed pathway category (i.e. spider phobics who indicate a combination of conditioning, modeling, and/or informational learning experiences) contains more cases than the conditioning-only, the modeling-only, or the informational learning-only category [χ² (3) = 34.1, P < 0.05].

Twenty out of 24 Ss in the mixed pathway category reported a combination of modeling or informational learning with conditioning. The remaining Ss (4) indicated a combination of modeling and informational learning without conditioning.

In order to explore whether there is a relationship between etiology (first section POQ) and symptomatology (second section POQ), two groups of spider phobics were formed. The first group (conditioning group; N = 24) consisted of Ss who recalled at least one conditioning event (see Table 1). The second group (indirect-acquisition group; N = 15) consisted of phobics who reported modeling and/or informational learning experiences but no conditioning events. A t-test demonstrated that the conditioning and indirect acquisition groups did not differ with respect to physiological symptoms [t(37) < 1.0], the means being 5.5 (SD = 1.6) and 5.7 (SD = 1.5), respectively. However, conditioning Ss scored significantly lower on cognitive symptoms than the indirect acquisition Ss [t(37) = 1.9, P < 0.05, one-tailed], the means being 5.2 (SD = 1.8) and 6.2 (SD = 1.2), respectively.

<table>
<thead>
<tr>
<th>Table 1. Frequency of conditioning, modeling, and informational learning experiences in the sample (N = 42)</th>
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<tr>
<td>Pathway to fear</td>
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<tr>
<td>Conditioning</td>
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<td>Modeling</td>
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<td>Informational learning</td>
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<th>Table 2. Frequency distribution when patients are classified using mutually exclusive categories</th>
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<tr>
<td>Pathway to fear</td>
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<tr>
<td>Conditioning-only</td>
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<td>Modeling-only</td>
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<td>Informational learning-only</td>
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<td>Mixed pathway-only</td>
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<td>No recall</td>
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It is worthy of note that 11 out of 24 patients (48%) in the conditioning group attributed their fear to a history of having been teased with spiders. In terms of classical conditioning, this would imply that in these circumstances the spider became a conditioned fear stimulus through its pairing with social humiliation (unconditioned stimulus). The most frequently reported event in the indirect-acquisition group was a fearful friend or close relative: 8 out of 15 Ss (53%) indicated that their phobia was related to their friend's or relative's fear of spiders.

DISCUSSION

Although the retrospective nature of the results presented above should be kept in mind, they at least suggest that in the etiology of spider phobics, conditioning and modeling experiences play a more important role than informational learning.

In several respects, the results substantiate the conclusions drawn by Öst and Hugdahl (1981). Firstly, they indicate that conditioning experiences are rather common among spider phobics. This finding casts doubts on the widespread belief that conditioning is a marginal factor in the origins of phobias (Lazarus, 1971). It might also imply that the alleged absence of conditioning events in analog phobias (e.g., Murray & Foote, 1979) is not generalizable to severe phobias.

Secondly, in accordance with Rachman's (1977) proposal, spider phobics with a conditioning history reported less intense cognitive symptoms than spider phobics with an indirect mode of fear acquisition. Similar results were presented by Öst and Hugdahl (1981).

Thirdly, the frequency of conditioning experiences among spider phobics (i.e., 57.5%) was lower than the frequency that we previously found among agoraphobics (i.e., 78%; Merckelbach et al., 1989). A similar pattern of results (i.e., more conditioning events in agoraphobics than in animal phobics) was reported by Öst (1985). It is worth noting that in the present study, modeling experiences were even more frequently reported by spider phobics than conditioning experiences. While this finding seems to support those animal models of specific phobias that rely on modeling procedures (Cook & Mineka, 1987), it contradicts the pattern of results found by Öst and by Öst and Hugdahl (1981). This discrepancy may, of course, be attributed to the fact that the present study was restricted to a highly specific group, namely severe spider phobics, whereas Öst worked with the broader category of animal phobics.

REFERENCES


