A COMPARISON OF TWO SPIDER FEAR QUESTIONNAIRES

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Summary — The present studies compared the psychometric properties of two self-report measures of spider fear: Fear of Spiders Questionnaire (FSQ) and Spider Phobia Questionnaire (SPQ). In the first study, adequate test–retest stability and internal consistency was found for both FSQ and SPQ. In the second study, both instruments were able to differentiate between phobic and non-phobic subjects. Furthermore, FSQ as well as SPQ were sensitive to therapeutic change and correlated in a meaningful way with other subjective and behavioral indices of spider fear. Data suggest that the FSQ is superior to the SPQ in measuring fear in the non-phobic range. Also, the FSQ taps a somewhat different aspect of subjective spider fear (i.e., fear of harm) and, consequently, may provide additional information. Copyright © 1996 Elsevier Science Ltd

Fear of spiders is highly prevalent in the normal population (e.g., Agras, Sylvester, & Oliveau, 1969; Davey, 1994). Spider phobia represents a radical and incapacitating version of this fear, but fortunately this phobia is highly sensitive to behavioral treatments (e.g., Ost, Salkovskis, & Hellsström, 1991).

Adequate self-report instruments for measuring specific fears are important because such instruments play a critical role in epidemiological research and therapy outcome studies. One widely used self-report instrument for measuring spider fear is the Spider Phobia Questionnaire (SPQ), originally developed by Klorman, Weerts, Hastings, Melamed, and Lang (1974). While this instrument has high internal consistency (e.g., Johnsen & Hugdahl, 1990) and is able to differentiate between spider phobic and non-phobic persons (e.g., Frederikson, 1983), it has some less favorable characteristics. For example, some authors have reported low test–retest stability for the SPQ (e.g., Packer, Bond, & Siddle, 1987). If true, this finding would cast doubt on the qualities of the SPQ as an index of therapy outcome. Furthermore, the SPQ has been criticized for its "true–false" response format and its lack of specificity with regard to the time frame of the items (Szymanski & O’Donohue, 1995). For example, a typical SPQ item is: "I dislike looking at pictures of spiders in a magazine", which has to be answered with "true" or "false".

Recently, Szymanski and O’Donohue (1995) developed the Fear of Spiders Questionnaire

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(FSQ) as an instrument that might complement information derived from the SPQ. FSQ items refer to a restricted time period (e.g., "If I encountered a spider now, I would have images of it trying to get me") and are evaluated by means of a 7-point scale. Szymanski and O'Donohue claim that the FSQ has good psychometric properties (e.g., good internal consistency) and suggest that it is more sensitive to differences between phobics and non-phobics than the SPQ. Meanwhile, it should be noted that their findings were based on a sample of undergraduate students.

The purpose of the present research was 2-fold. In Study 1, test–retest reliability of both FSQ and SPQ were evaluated. In Study 2, FSQ and SPQ were compared in a sample of clinical spider phobics and non-phobics. Spider phobics were tested twice: before and after exposure therapy.

Method

Subjects

Subjects in Study 1 were 33 undergraduate psychology students (22 women). Their mean age was 20.5 years ($SD = 3.7$; range 18–33 years).

Subjects in the second study were 45 female spider phobics who applied for treatment at the University Spider Phobia Project. Ages ranged from 17 to 48 years with a mean of 31.8 years ($SD = 6.0$). All patients met the DSM-III-R criteria for specific phobia. The non-phobic control group consisted of 31 female subjects who were selected by means of an advertisement in a local newspaper. Mean age was 29.1 years ($SD = 8.5$; range 17–51). The control group was comparable to the phobic group in terms of age and educational level.

Procedure

In the first study, subjects completed FSQ and SPQ twice. There was a 3-week interval between the two occasions. After the second assessment, subjects were informed about the aim of the study.

In the second study, spider phobics were treated individually at the University laboratory. Prior to treatment, they completed FSQ, SPQ, and two 9-point Likert scales which asked the subject to rate anxiety and avoidance of a self-described situation central to their phobia (these scales were taken from the Fear Questionnaire as described by Watson and Marks (1971), and are called FQ anxiety and FQ avoidance hereafter). In addition, phobics carried out a Behavioral Avoidance Test (BAT). During the BAT, phobics were asked to approach a live spider in a stepwise manner. There were 8 steps, ranging from 1, "walk towards the spider", to 8 "let the spider walk on your hand". After the pre-treatment assessment, phobics received one 2.5 hour session of exposure in vivo as described by Öst (1989). Briefly, this treatment consists of hierarchically structured confrontation with spiders in combination with modeling by the therapist. After therapy, phobics completed FSQ, SPQ, and "main phobia" Likert scales, and went through the BAT again. Non-phobic subjects came to the laboratory only once. They completed the FSQ, SPQ, and underwent a BAT procedure.

Results

In Study 1, both FSQ and SPQ were found to have satisfactory internal consistency. For FSQ, Cronbach’s alphas on occasions 1 and 2 were 0.95 and 0.97, respectively. For SPQ, alphas were 0.91 and 0.91, respectively. Most importantly, both FSQ and SPQ demonstrated
good stability over time. That is, mean scores on these questionnaires did not change significantly over the 3-week period, and test–retest correlations were high: 0.91 (p < .001) for FSQ and 0.94 (p < .001) for SPQ.

In Study 2, internal consistency of the FSQ appeared good for both spider phobics (α = 0.88 at pre-treatment and α = 0.94 at post-treatment) and non-phobic controls (α = 0.91). Internal consistency of the SPQ turned out to be sufficient for spider phobics (α = 0.62 at pre-treatment and α = 0.90 at post-treatment), but fell below acceptable limits for non-phobic controls (α = 0.43) (see Table 1). Closer inspection of the data revealed that this finding can be attributed to the lack of variance of non-phobic subjects’ SPQ scores (M = 2.7, SD = 1.8). It appears that due to the 7-point response format, the FSQ does not have this problem.

In the non-phobic sample, the correlation between FSQ and SPQ was 0.30 (p < .05). In the phobic sample, this correlation was 0.53 (p < .001) before treatment and 0.68 (p < .001) after treatment.

Furthermore, it was found that at pre-treatment, both the FSQ and the SPQ were able to differentiate between spider phobics and non-phobic controls, t(74) = -26.0, p < .001 and t(74) = -39.3, p < .001, respectively. Both instruments correlated in a meaningful way with behavioral and other self-report indices (FQ anxiety and FQ avoidance) of spider fear (see lower part of Table 1).

Finally, both the FSQ and the SPQ appeared to be sensitive to behavioral therapy. That is, after successful exposure therapy (mean score on the BAT increased from 3.6 (SD = 1.9) to 7.0 (SD = 1.3), t(44) = -10.1, p < .001), significant FSQ [t(44) = 13.4, p < .001] and SPQ [t(44) = 10.2, p < .001] declines were observed (see upper part of Table 1).

Discussion

The results of the present studies can be summarized as follows. First, FSQ and SPQ appear to be reliable self-report measures of spider fear. Both questionnaires demonstrate good test–

Table 1

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<tr>
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<th>Non-phobic controls</th>
<th>Spider phobics</th>
<th>Spider phobics</th>
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<tbody>
<tr>
<td></td>
<td>FSQ</td>
<td>SPQ</td>
<td>Before</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>FSQ</td>
</tr>
<tr>
<td>Mean</td>
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<td>2.7</td>
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<tr>
<td>Standard deviation</td>
<td>7.8</td>
<td>1.8</td>
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<tr>
<td>Cronbach's alpha</td>
<td>0.91</td>
<td>0.43</td>
<td>0.88</td>
</tr>
<tr>
<td>BAT performance*</td>
<td>-0.31*</td>
<td>-0.33*</td>
<td>-0.34*</td>
</tr>
<tr>
<td>FQ anxiety</td>
<td>—</td>
<td>—</td>
<td>0.40**</td>
</tr>
<tr>
<td>FQ avoidance</td>
<td>—</td>
<td>—</td>
<td>0.30*</td>
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\*Low BAT scores reflect high levels of spider fear. *p < .05; **p < .01.
retest reliability and, in general, satisfactory internal consistency. Second, evidence for the validity of FSQ and SPQ was obtained. That is, both instruments correlated in a sensible way with other self-report measures of spider fear and performance on a Behavioral Avoidance Test. Moreover, both FSQ and SPQ were able to discriminate between phobic and non-phobic subjects and were able to index changes in spider fear after exposure in vivo therapy.

In the past decades, researchers have used the SPQ as an index of self-reported spider fear. The present research justifies further employment of this questionnaire. Under particular circumstances, however, the FSQ might be a good alternative. For example, the present findings indicate that in samples with (extremely) low levels of spider fear, SPQ scores may lack variance. Due to the 7-point response format, the FSQ does not have this problem, and is probably capable to index more subtle differences in self-reported spider fear. Furthermore, the 18-item FSQ is shorter than the 31-item SPQ. This characteristic together with the fact that items are explicit about the time frame make the FSQ suitable for therapy outcome studies. Finally, as Szymanski and O’Donohue (1995) already pointed out, the FSQ can be used to complement the SPQ. Factor analysis of the FSQ seems to indicate that the FSQ taps a unique factor of spider fear, namely “fear of harm”, that is not measured by the SPQ. Previous research by Arntz, Lavy, van den Berg, and van Rijsoort (1993) has shown that “fear of harm” is an important subjective aspect of spider fear. Thus, if one is specifically interested in this aspect of spider fear, the FSQ is preferable to the SPQ.

References


