Exposure therapy outcome in spider phobics: effects of monitoring and blunting coping styles

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Summary—The present study examined whether monitoring (i.e. seeking out threat-related information) and blunting (i.e. avoiding threat-related information) coping styles affect therapy outcome. The sample consisted of 36 spider phobics who underwent one 2.5 hr session of exposure in vivo. Monitoring and blunting were assessed with the Miller Behavioural Style Scale (MBSS) at two points in time: before and after (i.e. at 2 years follow-up) treatment. It was found that coping styles did not change dramatically over a 2-year period. Furthermore, pre-treatment and follow-up coping style scores essentially produced the same results: monitoring was associated with less favourable therapy outcome, whereas blunting was related to better treatment results.

INTRODUCTION

Monitoring and blunting refer to coping styles that can be observed in individuals who are confronted with threatening events. Monitoring is characterized by the tendency to seek out threat-relevant information, whereas blunting is characterized by avoiding threat-related cues (Miller, 1980). Miller (1987) devised a self-report inventory, the Miller Behavioural Style Scale (MBSS), which intends to measure these coping styles. In recent years, monitoring and blunting were mostly investigated in relation to threatening medical situations (for a review; see Miller, 1988). Interestingly, Steketee, Bransfield, Miller and Foa (1989) examined the relationship between monitoring/blunting and effectiveness of behaviour therapy [i.e. exposure treatment; see Rodriguez & Craske (1993) who recommended to investigate this issue]. On the basis of a model formulated by Foa and Kozak (1986), Steketee et al. predicted that Ss who predominantly engage in monitoring would profit more optimally from exposure therapy than individuals with a blunting style. These researchers suggested that monitoring Ss pay more attention to the phobic stimulus and consequently process more fully corrective (i.e. fear reducing) information about that stimulus than blunting Ss. However, in their study, Steketee et al. found no convincing evidence to support this hypothesis.

Whereas phobics in the Steketee et al. study were treated with two experimental sessions of exposure-in-vivo, Muris and coworkers (Muris, de Jong, Merckelbach & van Zuure, 1993a, b) attempted to examine the effects of monitoring/blunting coping styles in phobics who received a clinically relevant one-session treatment of exposure-in-vivo. In the first study (Muris et al., 1993a), no effects of coping style on treatment outcome could be demonstrated. Surprisingly however, the second study (Muris et al., 1993b) showed that monitoring was related to a less favourable treatment outcome. In an attempt to explain this result, Muris and colleagues (1993b) argued that the combined influence of a procedure in which the therapist was constantly directing the subject's attention to phobic stimuli and consequently process more fully corrective (i.e. fear reducing) information about that stimulus than blunting Ss. However, in their study, Steketee et al. found no convincing evidence to support this hypothesis.

Although this explanation seems plausible, it remains unclear why in the first Muris et al. (1993a) study no detrimental effect of monitoring coping style on treatment outcome could be demonstrated. By and large, both studies followed a similar procedure. An apparent difference between the two studies, however, was that coping style was assessed at different points in time. Whereas in the first study the coping style questionnaire was completed a posteriori, at 18 months follow-up (Muris et al., 1993a), Ss in the second study filled in the MBSS before the intervention (Muris et al., 1993b).

While MBSS scores are found to have good test–retest reliability [over a 4-month period test–retest rs of about 0.80; Miller & Michiel (1966); see Miller (1987)] and hence can be considered as stable personality characteristics, it is conceivable that a radical life event, such as one-session treatment in the case of a phobic, alters Ss' coping style. Note also that following exposure treatment subjects are instructed to keep on exercising at home, i.e. to attend to spiders rather than to avoid them. Thus, monitoring behaviour is promoted, whereas blunting behaviour is discouraged. Possibly, such an attitude may generalize to coping responses in other threatening situations. If this line of reasoning is correct, then it follows that measuring coping styles either before or after treatment [as was done in the Muris et al. (1993a, b) studies] yields an incomplete picture.

The aim of the present study was two fold. First, the relationship between monitoring/blunting and therapy outcome was examined in more detail. Second, in order to examine the stability of coping style in a group of treated phobics, monitoring and blunting scores before and after treatment (i.e. at two years follow-up) were compared with each other. To investigate these issues, Ss of the Muris et al. (1993b) study were mailed and asked to complete a follow-up measurement of spider fear and MBSS, two years after treatment.
METHOD

Subjects

Subjects were the 36 female spider phobics. This sample has been described in detail elsewhere (Muris et al., 1993b). Before treatment, Ss had a mean score of 22.3 on the Spider Phobia Questionnaire (SPQ; Klorman, Weerts, Hastings, Melamed & Lang (1974)), and they all met the DSM-3-R criteria for simple phobia.

Assessment

To evaluate therapy outcome the following measures were used: (1) The Spider Phobia Questionnaire (SPQ). The SPQ is a 31-item self-report instrument that measures fear of spiders. SPQ scores range from 0 to 31. (2) A Behavioural Approach Test (BAT). The BAT was used to assess avoidance of spiders. During this test, Ss were seated behind a large table. A movable glass jar containing a liver spider was placed on the far end of the table, 3 m from the subjects. Ss held a string connected to the glass jar in their hand and were instructed to pull the jar as nearby as they could tolerate. BAT performance was coded using a 13-point scale, ranging from 0 (spider still at 3 m distance) to 12 (spider on the hand).

Monitoring and blunting coping styles were assessed with the five-point version of the MBSS (Miller, 1987). Scores of both subscales range from 16 to 80.

Procedure

As has been described elsewhere (Muris et al., 1993b), Ss underwent exposure treatment of the type described by Öst (1989). This treatment consists of one session (duration: 2–2.5 hr) that contains elements such as hierarchically structured confrontation with spiders, modelling by the therapist, encouragement to interact with the spiders etc. Before and after treatment and at one-week follow-up, Ss filled in the SPQ and carried out the BAT. Before treatment, Ss also completed the MBSS.

Two years after treatment, Ss were mailed and asked to complete the MBSS again together with a long-term follow-up measurement of the SPQ. Thirty out of 36 subjects (83%) cooperated by returning MBSS and SPQ. T-tests revealed that the six non-responders did not differ from the 30 responders on any measure (all ts < 1).

RESULTS AND DISCUSSION

Treatment was effective as indicated by a substantial reduction in SPQ scores. Mean SPQ scores of the total sample were 22.3 (SD = 4.3) at pre-treatment, 11.8 (SD = 6.4) at post-treatment, 14.0 (SD = 7.0) at one-week follow-up, and 11.3 (SD = 7.4) at two years follow-up. Separate t-tests revealed that the differences between pre-treatment SPQ on the one hand and post-treatment SPQ, one-week follow-up SPQ and two years follow-up SPQ on the other hand were all highly significant [t (35) = 11.8, P < 0.001, t (35) = 9.2, P < 0.001, and t (29) = 9.8, P < 0.001, respectively]. Similarly, the significant increase on the BAT, from 3.7 (SD = 2.4) at pre-treatment to 9.6 (SD = 3.3) at post-treatment and to 8.1 (SD = 3.3) at one-week follow-up [t (35) = -13.0, P < 0.001 and t (35) = -9.2, P < 0.001, respectively] indicated that the exposure treatment was, on the whole, rather successful.

Pearson product-moment correlations were computed between pre-treatment and follow-up monitoring/blunting scores and therapy outcome measures (SPQ and BAT). As can be seen in Table 1, pre-treatment monitoring was positively correlated with SPQ at one week follow-up and (as a trend) with SPQ at two years follow-up. Additionally, pre-treatment monitoring was negatively correlated with BAT treatment measured directly after treatment and at one-week follow-up. The correlations between follow-up monitoring scores and therapy outcome measures revealed a highly similar pattern. That is, follow-up monitoring was positively related to SPQ scores, whereas negative correlations were found with BAT performance.

For pre-treatment blunting no significant relationships with therapy outcome emerged. Yet, follow-up blunting was found to be negatively correlated with SPQ scores at post-treatment, at one-week and at two years follow-up, whereas positive correlations emerged between follow-up blunting and BAT performance post-treatment and at one-week follow-up.

An additional finding of the present study was that coping styles before treatment and at two years follow-up were moderately correlated: r (30) = 0.59 for monitoring and r (30) = 0.57 for blunting (both Ps < 0.001). Paired t-tests showed that blunting scores did not change significantly: from 51.0 (SD = 9.6) at pre-treatment to 49.0 (SD = 10.4) at follow-up [t (29) = 1.2, P > 0.20]. However, in contrast to what was expected, monitoring scores showed a marginally significant decline: from 56.3 (SED = 7.3) before treatment to 54.1 (SD = 6.8) two years after treatment [t (29) = 1.9, P < 0.07].

Although correlations were certainly not dramatic, the present data indicate that a monitoring style is associated with a negative therapy outcome whereas a blunting style is related to a positive outcome. Note that this pattern of results was true for both behavioural (BAT) and self-report (SPQ) indices of therapy success. Note also that pre-treatment and post-treatment assessment of coping styles (MBSS) gave essentially the same results, though correlations became somewhat stronger with the post-treatment MBSS measures. Some remarks are in order as to the meaning of the relationship between

| Table 1. Pearson product-moment correlations between pre-treatment and follow-up monitoring/ blunting and therapy outcome measures |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | Monitoring pre-treatment | Monitoring follow-up | Blunting pre-treatment | Blunting follow-up |
| SPQ pre-treatment | 0.11              | 0.13             | -0.08             | -0.12            |
| SPQ post-treatment| 0.20              | 0.27*            | -0.17             | -0.43***         |
| SPQ 1 week follow-up | 0.34**          | 0.29*           | -0.13             | -0.37**          |
| SPQ 2 years follow-up | 0.24*          | 0.35**          | -0.15             | -0.31**          |
| BAT pre-treatment | -0.18             | -0.09            | 0.11              | 0.13             |
| BAT post-treatment| -0.26*            | -0.36**          | 0.20              | 0.37**           |
| BAT 1 week follow-up | -0.40***        | -0.32**          | 0.10              | 0.42***          |

Note. N = 36, except when correlations pertain to follow-up measures (N = 30). Correlations that do not pertain to the results of an earlier study (Muris et al., 1993b) are printed in bold.

*P < 0.10; **P < 0.05; ***P < 0.01 (one-tailed).
monitoring/blunting and therapy outcome. The present findings run counter to the expectations of Steketee et al. (1989). On the basis of Foa and Kozak's (1986) fear network theory, Steketee et al. argued that a habitual monitoring style is likely to result in a stronger fear network activation than the blunting style. As activation of the fear network is a prerequisite for extinction of phobic fear, Steketee et al. further reasoned that monitoring should be positively related to therapy outcome. Yet, this expectation was not borne out by their data. The data of the present study show that, if anything, monitoring is negatively associated with therapy outcome. One obvious way to account for this finding can be derived from information processing theory (Williams, Watts, MacLeod & Mathews, 1988; Eysenck, 1992). A number of laboratory studies have shown that phobic Ss exhibit an attention bias towards threatening information. This is to say, phobic Ss are likely to attend to phobic stimuli (e.g. phobia-relevant words), even when stimuli are task irrelevant. Additionally, several studies have found that successful behavioural treatment reduces attentional bias (Watts, McKenna, Sharrock & Treszne, 1986; Lavy, van den Hout & Arntz, 1993). Some authors have speculated that attentional bias is a vulnerability factor in the etiology and/or maintenance of phobic fear: individuals with an intensive and resistant attentional bias towards threatening information would display more severe symptoms and/or would recover less after therapy (Eysenck, 1992; Eysenck & Mathews, 1987; Mineka & Sutton, 1992). The idea behind this line of reasoning is that attentional bias promotes an overrepresentation of threatening information in memory schemes, thereby intensifying phobic symptoms. Obviously, the concept of monitoring strongly resembles attentional bias: after all, monitoring is defined as "a tendency to seek out threat-relevant information". The current findings are inconsistent with the notion that a tendency to attend to threat-relevant information is related to severity of symptoms (i.e. no significant correlations between monitoring and pre-treatment SPQ and BAT were found), but they fit nicely with the assumption that such a tendency is related to a relatively poor outcome. Admittedly, this line of reasoning does not explain why blunting was found to relate to a positive therapy outcome. It should be noted however that blunting appears to be a heterogeneous concept (Muris & Schouten, 1994) that may refer to mixed processes. Accordingly, the blunting scale of the MBSS has relatively low internal consistency (see e.g. Muris, de Jong & van Zuuren (1993b)). In the present context, blunting may refer to the absence of a strong attentional bias. The (marginally) significant negative correlations between monitoring and blunting (at pre-treatment: $-0.26, P = 0.05$; at follow-up: $-0.23, P = 0.10$) in the present study support this idea.

An interpretation of the present findings in terms of attentional bias assumes that a certain coping or information processing style, for example monitoring, modulates anxiety. However, the opposite process—i.e. anxiety modulating coping or processing style—cannot be ruled out. Thus, it may well be the case that Ss who benefited less from therapy changed their coping style in the direction of a more intense monitoring. The fact that monitoring scores were found to be relatively stable and, if anything, dropped from pre-treatment to follow-up assessment weighs against such an interpretation. Nonetheless, a useful direction for future research would be to test whether Ss who are resistant to treatment change their coping styles.

The results of the present study can be summarized as follows: (1) monitoring and blunting coping styles did not change dramatically over a 2-year period; (2) pre-treatment and follow-up coping style scores essentially produced the same pattern of correlations with therapy outcome measures: monitoring was associated with less favourable outcome, whereas blunting was related to better treatment results. Thus, the findings do not clarify why the Muris et al. (1993a) study found no relationship between coping styles and treatment outcome. As correlations were not large, the failure of Muris et al. (1993a) to find a significant association may simply be a result of sample fluctuations. To elucidate this issue, further studies are called for that (re-) investigate the effects of monitoring and blunting on exposure therapy outcome. These studies should include information processing measures (e.g. modified Stroop colour tasks) in order to examine whether monitoring and blunting are, indeed, related to attentional bias.

REFERENCES


