MONITORING AND BLUNTING COPING STYLES: THE MILLER BEHAVIOURAL STYLE SCALE AND ITS CORRELATES, AND THE DEVELOPMENT OF AN ALTERNATIVE QUESTIONNAIRE*

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Summary—The present article presents two studies concerning the measurement of monitoring (information seeking under threat) and blunting (information avoidance) coping styles. Study 1 (n = 69) showed that the widely used Miller Behavioural Style Scale suffers from a number of weaknesses such as insufficient internal consistency, susceptibility to correlate with measures of anxiety and other psychopathology, poor quality of scenarios, and moderate face validity. In Study 2 (n = 42), an alternative instrument is presented: the Monitoring-Blunting Questionnaire (MBQ). The MBQ has high face validity, good reliability, and is unrelated to trait anxiety. Furthermore, in a 'thought experiment' some indications were found for the predictive validity of the MBQ.

INTRODUCTION

The Miller Behavioural Style Scale (MBSS) is a questionnaire designed to measure the inclination of people to seek out or avoid information about threatening uncontrollable events (Miller, 1987). The scale consists of four hypothetical stress-evoking scenarios (dentist, hostage, dismissal, and aeroplane), each of which is followed by eight coping options. Four options represent information seeking or "monitoring", whereas the other four are avoidant or "blunting" options. Three scores can be derived from the MBSS: a total monitoring score, a total blunting score, and a summary score calculated by subtracting blunting from monitoring sum scores. Employing a median split procedure, a sample can be divided into high and low monitors, or into high and low blunters, or simply into monitors and blunters in case the summary score is used.

A number of studies have investigated the clinical relevance of monitoring and blunting. For example, these coping styles have been related to the severity of problems for which people seek medical assistance in primary health care (Miller, Brody & Summerton, 1988), the frequency of cervical smears (Steptoe & O'Sullivan, 1986), and, most importantly, the adaptation to threatening medical procedures such as cardiac catheterization (Watkins, Weaver & Odegaard, 1986), colposcopy (Miller & Mangan, 1983), amniocentesis (Phipps & Zinn, 1986), cancer chemotherapy (Gard, Edwards, Harris & McCormack, 1988), endoscopy (Gattuso, Litt & Fitzgerald, 1992; Ludwick-Rosenthal & Neufeld, 1993), and prenatal diagnosis (van Zuuren, 1993). From these studies three main conclusions can be drawn (for a review; see Miller, 1991). Firstly, monitoring is related to higher anxiety and arousal during medical procedures. Secondly, it has been suggested that during preparation of stressful, medical procedures, preparatory strategies are most effective when they are congruent with habitual coping style. That is, "monitors" fare better with a high level of information, while "blunters" do better with less information (e.g. Miller & Mangan, 1983; Watkins et al., 1986). And finally, monitoring seems to be associated with greater attention towards preventive health care actions. In conclusion, monitoring and blunting as determined with the MBSS seem to have considerable potential in medical settings.

However, there are some inconsistencies and shortcomings in the research on monitoring and blunting coping styles which require some attention. One dissimilarity concerns the use of MBSS

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scores in defining “monitors” and “blunters”. While in some studies the summary score was used (e.g. Miller & Mangan, 1983), in other investigations monitoring and blunting scores were employed separately (e.g. Miller et al., 1988). Little is known about how the summary score is related to separate monitoring and blunting scores.

Another inconsistency pertains to the response format of the MBSS. Whereas most studies employed a dichotomous format, which asks Ss to mark the options which are applicable to them (Miller, 1987), other studies have used a 5-point format on which Ss have to indicate to what extent each option is applicable (e.g. Muris, van Zuuren & Merckelbach, 1993). Uptil now, only one study investigated the relationship of dichotomous and 5-point version MBSS scores. In that study, van Zuuren and Wolfs (1991) found that the monitoring and blunting scores of the dichotomous and the 5-point version were moderately correlated.

A weakness in the research on monitoring and blunting pertains to the reliability of the MBSS. Several researchers have reported that the internal consistency of the blunting scale of the dichotomous MBSS sometimes falls below acceptable limits (Miller, 1992; van Zuuren, 1993). Nevertheless, a large number of studies fail to report data on the internal consistency of the monitoring and blunting scales in their sample (e.g. Gattuso et al., 1992; Ludwick-Rosenthal & Neufeld, 1993; for a discussion on this topic see Parker & Endler, 1992).

A further point of criticism is related to the nature of the scenarios that are described in the questionnaire. Steptoe (1989) has noted that especially the hostage scenario is far removed from the everyday experience of most people. In addition, Steptoe observed that patients with severe illnesses considered the hostage scene as trivial and even insulting.

A final point of critique applies to the relationship between MBSS scores and measures of anxiety and other indices of psychopathology. Although several studies have found that monitoring and blunting are not related to trait anxiety (e.g. Miller & Mangan, 1983), some studies do report a positive relationship between the MBSS (monitoring) score and trait anxiety (Steketee, Bransfield, Miller & Foa, 1989; Davey, 1993). In addition, other studies have shown that MBSS (monitoring) scores were positively related to medical fears (Muris & van Zuuren, 1992), perception of threat (Muris & de Jong, 1993), psychiatric disturbance (Steptoe & O’Sullivan, 1986), depression (Miller et al., 1988), and worry (Davey, Hampton, Farrell & Davidson, 1992). Altogether, MBSS scores, and its monitoring score in particular, are regularly found to be positively related to measures of anxiety and other psychopathology. In other terms, the MBSS may not be a “pure” coping measure.

In the light of these considerations, Study 1 was undertaken. The following issues were investigated: (1) the relationship between the MBSS summary score and the separate monitoring/blunting scores, (2) the relationship between dichotomous and 5-point version MBSS scores, (3) the internal consistency of MBSS scales; (4) the quality of the MBSS scenarios, and (5) the relationship between MBSS scores and measures of anxiety and psychopathology. In addition, (6) the validity of the MBSS was examined. Ss were provided with the definitions of monitoring and blunting coping strategies and asked to judge how strongly they relied on these coping strategies throughout a variety of hypothetical, threatening situations.

In Study 2, an alternative inventory for the measurement of information seeking coping styles is presented: the Monitoring-Blunting Questionnaire (MBQ). Apart from data on the reliability of the MBQ, a “thought experiment” is presented which aimed to investigate the validity of this questionnaire.

STUDY 1: THE MBSS AND ITS CORRELATES

Method

Subjects

The Ss were 70 female introductory psychology students who participated in the study for credit points. Only women participated because they were more available and since previous studies have indicated that there are differences in coping processes and coping styles between males and females (e.g. Vingerhoets & van Heck, 1990; Muris & de Jong, 1993), it was preferred to use a
gender-homogeneous group. Due to a procedural error, 1 S did not complete all questionnaires and was removed from the sample. The mean age of the final group was 20.8 years (SD = 2.8; range 18–35).

Measures

MBSS (Miller, 1987). As mentioned earlier, this scale consists of four hypothetical, threatening, uncontrollable situations, each of which is followed by four monitoring and four blunting options. The dichotomous version simply asks Ss to mark those items that are applicable to them (range for each subscale 0–16). The 5-point version (van Zuuren & Wolfs, 1991) asks Ss to indicate to what extent each option is applicable (1 = not at all applicable; 5 = very much applicable; range for each subscale 16–80).

Levels of trait anxiety were measured using the State-Trait Anxiety Inventory (STAI; Spielberger, 1983). STAI-trait scores range between 20 (almost never anxious) and 80 (almost always anxious).

The Dutch revised version of the Fear Survey Schedule (FSS III-R; Arrindell, Emmelkamp & van der Ende, 1984) comprises 64 neurotic anxiety stimuli. The items are to be rated on their fear provoking capacity on a 5-point scale ranging from 1 (not at all) to 5 (very much). The following subscales can be discriminated: social phobia (13 items), agoraphobia (13 items), blood-injury, death and illness (12 items), sex and aggression (8 items), harmless animals (6 items), and other fears (12 items). A total FSS score can be obtained by summing up the scores of all 64 items (range 64–320).

While the FSS measures fear of external objects and situations, the Anxiety Sensitivity Index (ASI; Reiss, Peterson, Gursky & McNally, 1986) measures fear of interoceptive cues, such as breathing and cardiac acceleration. The ASI consists of 16 items which are scored on a 5-point scale (0 = not at all; 4 = very strong). A total score is calculated by summing the scores on these items (range 0–64).

The Student Worry Scale (SWS; Davey, 1993) is a 10-item scale which asks Ss how much they worry about 10 content relevant to students (e.g. financial concerns, academic matters, etc.). Ss are asked to indicate on a 4-point scale the extent to which they worry about each item (1 = almost never; 4 = almost always). An overall measure of worrying is obtained by summing the scores of each item (range 10–40).

The Depression Symptom Inventory (DSI; Bouman, 1987) is a self-rating depression questionnaire. It asks Ss to indicate to what extent they suffer from symptoms like feelings of loneliness, sleep disturbances, etc. The summed DSI score varies between 0 (no depression symptoms) to 116 (all 29 depression symptoms present).

In the Threat Questionnaire (TQ; Muris & de Jong, 1993) 20 potentially threatening situations are shortly described. Ss are asked to score on a 21-point scale (0, 0.5, 1, 1.5 … 8.5, 9, 9.5, 10) the degree to which each situation is threatening to them (0 = not at all; 10 = very much). Apart from the four MBSS situations, the TQ contains a number of threatening medical (e.g. undergoing a cardiac catheterization) and non-medical (e.g. encountering a group of dubious people at night) situations. A total TQ score is calculated by summing the scores on all items (range 0–200).

The short revised version of the Eysenck Personality Questionnaire (EPQ-R short scale; Eysenck, Eysenck & Barrett, 1985) consists of 48 items which represent four subscales: three personality dimensions: Psychoticism, Extraversion, and Neuroticism, and a Lie scale. Ss are asked to indicate which items are applicable to them and which are not. The scores on each subscale range from 0 to 12.

Procedure

Ss came in groups of 6–8 students to the experimental room. The session lasted approx. 1 hr. First, Ss were asked to complete a dichotomous and a 5-point version of the MBSS. They were told that both questionnaires strongly resembled each other but that the response format was somewhat different. When Ss had completed the MBSSs, they were given an envelope containing the other self-report questionnaires (STAI, FSS, ASI, SWS, DSI, TQ, and EPQ).

Then, they were given a booklet containing the 20 situations of the TQ. Each situation in the booklet was followed by six 100 mm visual analogue scales (VASs) on which Ss had to rate the following
variables: imaginability, controllability, predictability, duration, possibility to obtain information on the situation, and possibility to distract (0 = not at all; 100 = very much; for duration: 0 = very short; 100 = very long). The booklet intended to obtain information on some relevant characteristics of MBSS and other TQ situations.

Finally, Ss received information about the MBSS and that it measures styles of information seeking under threat. That is, Ss were provided with the definitions of monitoring and blunting strategies as described by van Zuuren and Wolfs (1991; pp. 143-144). It was emphasized that both strategies can be used alternately in a threatening situation. They were given a second booklet also containing the 20 TQ items. Each situation was followed by two VASs on which Ss had to indicate the extent to which they relied on both the monitoring and the blunting strategy in that particular threatening situation (0 = not at all; 100 = very much).

### Results

**The dichotomous and the 5-point version of the MBSS**

Table 1 offers some statistics on both versions of the MBSS. First of all, it should be noted that the mean MBSS scores of both the dichotomous and the 5-point version are comparable to those found in other female student populations (see e.g. Miller, 1987; Muris & de Jong, 1993). Furthermore, it was found that the internal consistency of the monitoring and blunting scales of the 5-point version was satisfactory (Cronbach’s α for both scales 0.74). However, both scales of the dichotomous MBSS produced unacceptable Cronbach’s αs: 0.39 for monitoring and 0.50 for blunting. Following this, all further data on the dichotomous scale should be discarded. Yet, for comparison these data are presented hereafter.

As expected, dichotomous and 5-point version scores correlated significantly with each other: for monitoring, $r(69) = 0.81$, $P < 0.001$, for blunting, $r(69) = 0.71$, $P < 0.001$, and $r(69) = 0.85$, $P < 0.001$ for the summary scores.

The monitoring and blunting scores as measured with the dichotomous version were negatively correlated, $r(69) = -0.29$, $P < 0.05$, whereas the monitoring and blunting scores of the 5-point version were not significantly correlated, $r(69) = -0.12$. Furthermore, for both versions it was found that the summary score was substantially related to separate monitoring and blunting scores (see lower part of Table 1).

### Quality of MBSS scenarios

In agreement with the study of van Zuuren and Wolfs (1991), oneway analyses of variance revealed that the four situations of the MBSS were scored dissimilar on all characteristics: imaginability [$F(3,204) = 30.8$, $P < 0.001$], controllability [$F(3,204) = 44.9$, $P < 0.001$], predictability [$F(3,204) = 63.5$, $P < 0.001$], duration [$F(3,204) = 23.5$, $P < 0.001$], possibility to obtain information [$F(3,204) = 38.0$, $P < 0.001$], and possibility to distract [$F(3,204) = 12.2$, $P < 0.001$].

Two situational characteristics had our special attention: controllability (since MBSS scenarios by
Table 2. Pearson product-moment correlations between indices of monitoring and blunting on one hand, and measures of anxiety and other psychopathology on the other hand

<table>
<thead>
<tr>
<th></th>
<th>M2</th>
<th>B2</th>
<th>M2-B2</th>
<th>M5</th>
<th>B5</th>
<th>M5-B5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trait anxiety (STAI)</td>
<td>0.23*</td>
<td>-0.05</td>
<td>0.17</td>
<td>0.26**</td>
<td>-0.06</td>
<td>0.21*</td>
</tr>
<tr>
<td>Specific fears (FSS)</td>
<td>0.30**</td>
<td>-0.12</td>
<td>0.25**</td>
<td>0.37***</td>
<td>-0.02</td>
<td>0.25**</td>
</tr>
<tr>
<td>Total phobia</td>
<td>0.33**</td>
<td>-0.04</td>
<td>0.19</td>
<td>0.30**</td>
<td>-0.06</td>
<td>0.22*</td>
</tr>
<tr>
<td>Social phobia</td>
<td>0.32**</td>
<td>-0.04</td>
<td>0.21*</td>
<td>0.32***</td>
<td>-0.02</td>
<td>0.20*</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>0.14</td>
<td>0.02</td>
<td>0.06</td>
<td>0.25**</td>
<td>-0.05</td>
<td>0.21*</td>
</tr>
<tr>
<td>Blood-injury</td>
<td>0.23*</td>
<td>-0.10</td>
<td>0.32*</td>
<td>0.27**</td>
<td>-0.04</td>
<td>0.24*</td>
</tr>
<tr>
<td>Sex-aggression</td>
<td>0.17</td>
<td>-0.10</td>
<td>0.15</td>
<td>0.28**</td>
<td>-0.06</td>
<td>0.21*</td>
</tr>
<tr>
<td>Harmless animals</td>
<td>0.15</td>
<td>-0.05</td>
<td>0.13</td>
<td>0.27**</td>
<td>-0.07</td>
<td>0.13</td>
</tr>
<tr>
<td>Other fears</td>
<td>0.21*</td>
<td>-0.10</td>
<td>0.17</td>
<td>0.32***</td>
<td>-0.03</td>
<td>0.12</td>
</tr>
<tr>
<td>Anxiety sensitivity (ASI)</td>
<td>0.18</td>
<td>0.16</td>
<td>-0.00</td>
<td>0.14</td>
<td>-0.01</td>
<td>0.10</td>
</tr>
<tr>
<td>Worry (SWS)</td>
<td>0.17</td>
<td>0.17</td>
<td>0.01</td>
<td>0.27**</td>
<td>0.11</td>
<td>0.11</td>
</tr>
<tr>
<td>Depression (DSI)</td>
<td>0.19</td>
<td>0.05</td>
<td>0.08</td>
<td>0.28**</td>
<td>0.00</td>
<td>0.19</td>
</tr>
<tr>
<td>Appraisal of threat (TQ)</td>
<td>0.22*</td>
<td>-0.16</td>
<td>0.24**</td>
<td>0.37***</td>
<td>0.05</td>
<td>0.21*</td>
</tr>
<tr>
<td>Personality (EPQ)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychoticism</td>
<td>0.08</td>
<td>-0.22*</td>
<td>0.19</td>
<td>0.01</td>
<td>-0.28**</td>
<td>0.19</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.08</td>
<td>0.19</td>
<td>-0.08</td>
<td>0.04</td>
<td>0.17</td>
<td>-0.09</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.15</td>
<td>0.09</td>
<td>0.03</td>
<td>0.27**</td>
<td>0.03</td>
<td>0.16</td>
</tr>
<tr>
<td>Lie</td>
<td>-0.05</td>
<td>-0.04</td>
<td>-0.00</td>
<td>-0.06</td>
<td>0.13</td>
<td>-0.17</td>
</tr>
</tbody>
</table>

*p < 0.10; **p < 0.05; ***p < 0.01.

Relation of MBSS scores to measures of anxiety and other psychopathology

Table 2 displays Pearson product–moment correlations between indices of monitoring and blunting and other self-report measures. Monitoring (M5) correlated significantly with trait anxiety as indexed by the STAI, but when using the dichotomous version (M2) only a trend was found. Furthermore, monitoring (M2, M5) was significantly correlated to FSS total scores. As can be seen in Table 2, this positive relationship was reflected in all subscales, except harmless animals. None of the monitoring/blunting indices was related to anxiety sensitivity scores (ASI), whereas worry (SWS), depression (DSI), and neuroticism (EPQ) only correlated significantly with monitoring as indexed by the 5-point version. Appraisal of threat (TQ) was significantly correlated to 5-point version monitoring scores, but when using the monitoring scores of the dichotomous version only a trend was found. Finally, EPQ-psychoticism was negatively correlated to blunting (B5), while with the blunting scores of the dichotomous version a marginal negative correlation emerged.

In general, the correlations between summary scores and self-report measures were in the same direction, although somewhat smaller, as those found with the monitoring scores.

Validity of MBSS scores

As can be seen in Table 3, both dichotomous and 5-point version MBSS scores correlated moderately with Ss’ judgement of monitoring and blunting. This was not only the case with Ss’ judgement of coping strategies in the four MBSS situations (0.53–0.64), but also with Ss’ judgement of all (TQ) situations (0.41–0.49).

Conclusion

In Study 1, the following issues were investigated: (1) the relationship between MBSS summary scores and separate monitoring and blunting scores; (2) the relationship between dichotomous and 5-point version MBSS scores; (3) the internal consistency of MBSS scales; (4) the quality of the MBSS scenarios; (5) the relationship between MBSS scores and measures of anxiety and other psychopathology; and (6) the validity of MBSS scores.
Table 3. Pearson product-moment correlations between Ss' judgement of monitoring and blunting and MBSS scores

<table>
<thead>
<tr>
<th></th>
<th>All situations</th>
<th>MBSS situations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monitoring</td>
<td>Blunting</td>
</tr>
<tr>
<td>M2</td>
<td>0.43</td>
<td>0.56</td>
</tr>
<tr>
<td>B2</td>
<td>0.41</td>
<td>0.42</td>
</tr>
<tr>
<td>M2-B2</td>
<td>0.49</td>
<td>0.45</td>
</tr>
<tr>
<td>M5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M5-B5</td>
<td>0.46</td>
<td>0.43</td>
</tr>
</tbody>
</table>

Only meaningful correlations are given. In all cases $P < 0.001$.

As to our first research topic, for both MBSS versions, it was found that summary scores and separate monitoring and blunting scores were substantially correlated. However, with respect to the use of the summary score, a critical side-note can be made. The current data confirmed results of earlier studies (e.g. Miller et al., 1988) which have shown that monitoring and blunting as indexed by the MBSS are largely unrelated coping dimensions, implying that it is inappropriate to calculate a difference score as has been done in several studies (e.g. Miller & Mangan, 1983).

Concerning the relationship between the dichotomous and the 5-point version of the MBSS, it appeared that monitoring, blunting, and summary scores of both versions strongly resembled each other (as indicated by high correlations).

A third finding of the current study pertains to the reliability of the MBSS. In line with some other studies (van Zuuren & Wolfs, 1991; Miller, 1992; van Zuuren, 1993), the internal consistency of the blunting scale of the dichotomous version was insufficient. Surprisingly, the internal consistency of the monitoring scale of the dichotomous version was found to be even lower. This finding suggests that it is important to investigate the reliability of the MBSS scales, especially in case the dichotomous version is used. The 5-point version produced acceptable Cronbach’s $\alpha$s, for both monitoring and blunting. From the viewpoint of internal consistency, the 5-point version seems preferable to the dichotomous one (see van Zuuren & Wolfs, 1991; for a similar conclusion).

Another topic of research was the quality of the MBSS situations. From the present data, it can be concluded that all MBSS situations are to some extent uncontrollable as was the intention of its author (Miller, 1987). Furthermore, as expected, the hostage situation scored too low on imaginability, indicating that this item is indeed too far removed from the daily experience of most people.

As to the relationship between MBSS (5-point) scores and measures of anxiety and other psychopathology, it appeared that the monitoring (and summary) scores are to some extent positively related to self-report measures like the FSS, STAI, TQ, and indices of depression, worry, and neuroticism. The MBSS blunting score was only found to be negatively correlated with psychoticism. Altogether, the findings sustain that the MBSS is not a pure coping measure (see Steptoe & O’sullivan, 1986; Muris & de Jong, 1993).

A final topic of research was related to the validity of the MBSS scores. To investigate this issue, Ss were completely informed on the content of monitoring and blunting coping strategies. Next, they were asked to indicate the degree to which they relied on each strategy in a number of hypothetical, threatening situations (including the four MBSS scenarios). It was found that Ss’ judgement of their coping strategies correlated moderately with the MBSS scores. In other words, the MBSS scenarios and options only cohere to some extent with the S’s own judgement of the use of monitoring and blunting in hypothetical, threatening situations.

In conclusion, Study 1 underscores that the research using the MBSS is plagued by several shortcomings and inconsistencies: insufficient internal consistency (dichotomous version), susceptibility to correlate with measures of anxiety and other psychopathology (both versions), and poor quality of scenarios (hostage situation). Moreover, face validity of MBSS scores appeared to be moderate. In the light of these shortcomings, it was decided to develop an alternative inventory: the Monitoring-Blunting Questionnaire (MBQ).
STUDY 2: DEVELOPMENT OF AN ALTERNATIVE INVENTORY, THE MBQ

The idea behind the MBQ is simple and straightforward. If one is interested in the coping style of people, why not measure it in a more direct way. That is, by asking people what coping strategy they use in threatening, uncontrollable situations. In Study 1, Ss were given a booklet with 20 potentially threatening situations. In addition, they were provided with the definitions of monitoring and blunting and asked to indicate on 100 mm VASs the extent to which they relied on both strategies in each of the situations. This booklet was the starting point for the development of the MBQ.

Selection of MBQ situations

The data of the Ss in Study 1 were used to select the MBQ situations. To become incorporated in the MBQ, a situation had to fulfill two criteria: (1) the situation had to be more or less uncontrollable; and (2) the situation had to be sufficiently imaginable. For both criteria VAS scores of 50 served as cut-off. In other words, a situation was incorporated in the MBQ when its mean score of controllability was below the cut-off and when its mean score of imaginability was higher than the cut-off. Ten situations fulfilled both criteria. These were five medical situations: endoscopy, dentist, headache examination, cancer threat, and appendicitis, and five non-medical situations: electric shock, passenger, dubious people, dismissal, and aeroplane.

In Study 2, internal consistency, test–retest reliability, and predictive validity of the MBQ were investigated.

Method

Subjects

The Ss were 42 female introductory psychology students (students who had participated in Study 1 were excluded). They had a mean age of 21.2 years (SD = 2.3, range 18–30). Ss participated in the study in return for credit points and a small financial compensation.

Measures

MBQ (see Appendix). As mentioned earlier, the questionnaire is a small booklet (A5 size) in which 10 hypothetical, threatening situations are described. On each page of the booklet, a situation is followed by two 10-point scales on which Ss are asked to indicate to what extent they make use of the monitoring and blunting strategy in that particular situation (0 = not at all; 10 = very much). On the front page of the booklet, definitions of monitoring and blunting are given. Ss are invited to tear off this front page, so that they can easily take a look at the definitions when they fill in each situation. A total monitoring and a total blunting score can be obtained by summing up relevant items (range for each scale 0–100).

Trait anxiety was assessed with the STAI (Spielberger, 1983) (see Study 1).

Procedure

In the course of an unrelated experiment, Ss were asked to complete the MBQ and STAI. After this experiment, Ss were invited to participate in a second study, consisting of a “thought experiment” concerning their study behaviour, in return for an extra credit point. None of the Ss refused to participate. Approximately 1 month after the experiment, Ss were mailed and invited to fill in the MBQ again (in order to assess test–retest reliability).

Thought experiment

The instruction of the “thought experiment” ran as follows: “This brief questionnaire concerns how introductory psychology students prepare themselves for an important examination. You will be asked to read a description of an examination situation. Try to imagine that you are the main character in this situation”.

Next, Ss read the description: “After two weeks, you have to pass an examination which you have
already failed twice. Last time, you studied really hard and you have the feeling that your knowledge on the topic is considerable. However, the professor makes the test extremely difficult, so that only a small percentage of the students succeed. For you, this test is particularly important because if you fail you will have to do a whole year over again”.

After reading the description, Ss were given three empty graphics. On the x-axis of these graphics the following points in time were represented: (1) the 14 separate days in anticipation of the examination; (2) the day of the examination. The y-axis of the graphics were 10-point scales. Ss were asked to rate their feelings of tension (0 = not at all tense; 10 = very tense), the amount of time they are thinking about the test (0 = no time at all; 10 = all the time), and their study behaviour (0 = I do not study at all; 10 = I study all the available time) at each point in time.

Data reduction and analyses

For tension, thinking about test, and study behaviour, mean anticipation scores (day 1 to 14) were calculated. A series of stepwise regression analyses was carried out with anticipation scores and examination-day scores being the dependent variables, and with trait anxiety, MBQ monitoring and MBQ blunting being the predictors. It was predicted that, during anticipation of the examination, monitoring was positively associated with thinking about the test and study behaviour, whereas the opposite was expected to be found with blunting.

Results

Some statistics on the MBQ

The mean scores on MBQ monitoring and MBQ blunting were 71.4 (SD = 11.7) and 54.0 (SD = 15.7), respectively. Both scales correlated negatively with each other, \( r = -0.49, P < 0.01 \). The internal consistency of both MBQ scales was satisfactory: \( \alpha = 0.71 \) for monitoring and \( \alpha = 0.80 \) for blunting.

Furthermore, both MBQ monitoring and MBQ blunting were unrelated to trait anxiety scores: \( r = 0.04 \) and 0.10, respectively.

Twenty-two Ss (52%) returned the follow-up MBQ. Test–retest Pearson correlations were 0.64 for MBQ monitoring and 0.83 for MBQ blunting (for both \( rs: P < 0.01 \)), indicating that MBQ scores have sufficient test–retest reliability.

Validity of MBQ scores: results of the thought experiment

In the regression analysis predicting tension during the 2 weeks preceding the examination, only trait anxiety accounted for a significant proportion of the variance \( [r = 0.55, P < 0.001; \hat{r}^2 = 0.30, F(1,40) = 16.9] \). In the regression analysis predicting thinking about the test during the 2 weeks preceding the exam, neither MBQ monitoring nor MBQ blunting were included in the equation. Trait anxiety, however, again contributed significantly \( [r = 0.54, P < 0.001; \hat{r}^2 = 0.29, F(1,40) = 16.4] \). Both analyses indicated that trait anxiety was positively related to Ss’ ratings of tension and thinking about the test during the 2 weeks preceding the examination. The regression analysis with study behaviour being the dependent variable revealed that MBQ monitoring declared 16% of the variance \( [r = 0.40, P < 0.01; F(1,40) = 7.5] \). None of the other variables entered in this equation. As Fig. 1 illustrates, compared to low monitoring Ss, high monitoring Ss indicated that they would study more intensively on almost every day, but especially during week 1.

The series of regression analyses with examination-day scores being the dependent variables only revealed one significant finding: predicting thinking about the test, trait anxiety accounted for a significant proportion of the variance \( [r = 0.33, P < 0.05; \hat{r}^2 = 0.11, F(1,40) = 4.7] \).

Conclusion

The data of Study 2 showed that internal consistency and test–retest reliability for both MBQ scales were satisfactory. Additionally, MBQ monitoring and blunting negatively correlated with each other, and both scales were unrelated to trait anxiety.
Monitoring and blunting coping styles

Fig. 1. Mean ratings of study behaviour in the 2 weeks preceding the examination for high (n = 21) and low monitors (n = 21).

The thought experiment revealed some indications for the predictive validity of MBQ scores. Firstly, it should be noted that trait anxiety was significantly related to Ss' estimates of tension. This result provides evidence for the veracity of the data of the thought experiment. Furthermore, as expected, high monitoring Ss indicated that they would prepare themselves more thoroughly for an important examination than low monitors. This finding fits within the definition that “monitoring” refers to an orientation towards the threatening event (e.g., Miller, 1987). On the basis of this definition, it was also predicted that monitoring was positively related to thinking about the test during the 2 weeks preceding the examination. However, this was not the case. The results showed that thinking about the test was significantly related to trait anxiety. Furthermore, thinking about the test was found to be strongly associated with ratings of tension (r = 0.76, P < 0.001). These findings indicate that the variable “thinking about the test” clearly showed the characteristics of worrying (see Davey et al., 1992). Apparently, monitoring and blunting as indexed by the MBQ are not related to worry.

To summarize, Study 2 showed that the MBQ had satisfactory reliability. Furthermore, in a thought experiment, indications for the predictive validity of MBQ (monitoring) scores were found: high monitors indicated that they would prepare themselves more thoroughly for an important examination than low monitors. It seems worthwhile to investigate further whether the MBQ is a valuable instrument for the assessment of monitoring and blunting coping styles.

REFERENCES

APPENDIX

Monitoring Blunting Questionnaire

Instruction. In a threatening situation people can make use of two sorts of coping strategies: the monitoring strategy and the blunting strategy. When being in a threatening situation, both strategies can be used alternately.

The characteristics of the monitoring strategy are:

1. The person looks for information within the threatening situation by carefully paying attention to what is happening.
2. The person seeks information by asking other people about it or by reading in books or magazines.
3. The person engages in pleasant activities to distract himself.

The characteristics of the blunting strategy are:

1. The person avoids to think about the situation, directs his attention to other things, or tries to forget the situation.
2. The person thinks “The situation is probably less serious than it looks”.
3. The person engages in pleasant activities to distract himself.

This booklet describes 10 situations. Try to imagine that you are in each situation, and indicate to what extent you make use of the monitoring strategy and the blunting strategy in each situation (0 = not at all; 10 = very much).

Tear off this front page, so that you can take a look at the definitions when you fill in each situation.

Situations

1. You participate in a psychological experiment. During this experiment you will receive a series of harmless electric shocks.
2. You are in the hospital to undergo an intestinal investigation. To study the intestinal canal, the doctor will insert an apparatus in your anus.
3. You visit the dentist to undergo a drilling treatment.
4. You are driving (as a passenger) with an inexperienced and uncertain driver. The weather is very bad, and there is a lot of snow and ice on the road surface.
5. For some time, you have complaints about headaches and dizziness. You visit your doctor. The doctor is suspicious about your complaints and sends you to the hospital to undergo an aversive examination.
6. Late at night, you walk through a deserted neighbourhood of a city. Suddenly, a group of dubious looking people approach you from a side-road.
7. Due to a large drop in sales, it is rumoured that several people in your department at work will be laid off. Your supervisor has turned in an evaluation of your work for the past year. The decision about lay offs has been made and will be announced in several days.
8. You are on an aeroplane. The flight is very rough. The stewardess asks you not to smoke any more and to fasten your safety belt. You have the feeling that something is wrong.
9. You have discovered a small tumour on your body. Your doctor sends you to the policlinic of the hospital where the
tumour is removed. The tissue of the tumour is under investigation in the hospital’s laboratory in order to check out its malignancy. You are awaiting the result of this investigation.

10. You visit your doctor with seemingly minor intestinal complaints. However, the doctor diagnoses acute appendicitis and says that have to be operated on as soon as possible.