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Problem Solving and Problem Orientation in Generalized Anxiety Disorder

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Abstract—The present study's main objective is to examine whether problem orientation and problem-solving skills differ according to generalized anxiety disorder (GAD) symptom level or clinical status (seeking help for GAD). Its secondary goal is to examine whether two cognitive variables (intolerance of uncertainty and beliefs about worry) vary according to GAD symptom level or clinical status. Three groups of subjects participated in the study: (a) nonclinical moderate worriers ($N = 15$), (b) nonclinical subjects meeting GAD criteria by questionnaire ($N = 14$), and (c) GAD patients ($N = 14$). Problem orientation and problem-solving skills were measured with the Social Problem-Solving Inventory (D'Zurilla & Nezu, 1990) and the Problem-Solving Inventory (Heppner & Petersen, 1982), whereas the cognitive variables were assessed with the Intolerance of Uncertainty questionnaire (Freeston, Rhéaume, Letarte, Dugas, & Ladouceur, 1994) and the Why Worry? questionnaire (Freeston, Rhéaume et al., 1994). The results show that problem orientation, intolerance of uncertainty, and beliefs about worry were similar in subjects meeting GAD criteria by questionnaire and GAD patients, whereas moderate worriers had different scores on these variables. Thus, these variables are more highly affected by GAD symptom level than by clinical status. The results also show that problem-solving skills were unaffected by symptom level and clinical status, thereby indicating that knowledge of problem-solving skills is unrelated to both GAD symptom level and GAD clinical status. The findings are discussed in terms of their theoretical and clinical implications. © 1998 Elsevier Science Ltd

In the field of clinical psychology, problem-solving deficits have been associated with an impressive number of psychological disorders. For instance, poor problem solving has been identified in agoraphobia (Brodbeck & Michelson, 1987), posttraumatic stress disorder (Nezu & Carnevale, 1987), depression

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(Heppner, Baumgardner, & Jackson, 1985) and pathological gambling (Ladouceur, Boisvert, & Dumont, 1994). Recently, a number of researchers have suggested that ineffective problem solving may be related to excessive worry. Borkovec (1985) noticed that although high worriers are experts in identifying potential problems, they remain ineffective problem solvers as they seem to have difficulty implementing solutions. However, this observation does not necessarily imply that high worriers lack solution implementation skills; they may have deficits in other problem-solving steps, which impede the implementation of potential solutions. In fact, a number of studies suggest this may be the case. For instance, Davey (1994) showed that nonclinical high worriers do not appear to lack problem-solving ability per se. However, he found that they do have poor problem-solving confidence and poor perceived control over the problem-solving process, both of which contribute to poor problem orientation. Problem orientation refers to the person's general response set when faced with a problem and does not include a set of specific skills. It may be described as a higher order metacognitive activity that defines the individual's general orientation to problems. Our own research team has shown that nonclinical worry is associated with poor problem orientation but appears to be unrelated to knowledge of problem-solving skills (Dugas, Freeston, & Ladouceur, in press; Dugas, Letarte, Rhéaume, Freeston, & Ladouceur, 1995; Lachance, Dugas, & Ladouceur, 1995).

According to the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (*DSM-IV*; American Psychiatric Association, 1994), Generalized Anxiety Disorder (GAD) is characterized by excessive and uncontrollable worry. Although no study has yet to demonstrate that GAD patients have poor problem orientation but adequate knowledge of problem-solving skills, the results of recent studies involving nonclinical worriers point to this possibility. Indirect support for this position comes from Marx, Williams, and Claridge (1992), who showed that in contrast to depressed patients, anxious patients were able to find effective cognitive solutions, but the implementation of these solutions seems to fail. On the other hand, it may be that nonclinical high worriers differ from GAD patients (those seeking help for GAD) in ways that have yet to be understood. It is conceivable that the relationship between GAD symptom level (including worry level) and either problem orientation or problem-solving skills is altered by clinical status or by other variables associated with clinical status. Although research with nonclinical populations has proven useful in understanding other disorders, such as panic disorder (Norton, Cox, & Malan, 1992) and obsessive- compulsive disorder (Rhéaume, Freeston, Dugas, Letarte, & Ladouceur, 1995), some key differences have been found between nonclinical and clinical phenomena. For instance, Freeston, Ladouceur, Provencher, and Blais (1995) found that although neutralization strategies in response to obsessions were superficially similar, there were important differences in a subset of strategies used by patients suffering from obsessive-compulsive disorder.

Specific cognitive variables have also recently been linked to worry. Intoler-

ance of uncertainty and beliefs about worry have been shown to correlate with nonclinical worry, regardless of their respective relationships with anxiety and depression (Dugas et al., in press; Freeston, Rhéaume et al., 1994). Intolerance of uncertainty may be broadly defined as the way an individual perceives information in uncertain or ambiguous situations and responds to this information with a set of cognitive, emotional and behavioral reactions (Ladouceur, Talbot, & Dugas, 1997). Beliefs about worry include beliefs such as, worrying can prevent negative outcomes, provide distraction, help find a better way of doing things, increase control or find solutions. For intolerance of uncertainty and beliefs about worry, the same question arises: do they vary according to GAD symptom level or clinical status?

The primary goal of the study is to examine whether problem-solving skills and problem orientation differ according to GAD symptom level or clinical status (seeking help for GAD). The secondary goal is to examine whether the two cognitive variables (intolerance of uncertainty and beliefs about worry) vary according to GAD symptom level or clinical status. As suggested by Borkovec and Rachman (1979), research with analog subjects should compare nonclinical subjects and clinical patients on the most significant dimensions of the relevant behavior. By using groups of nonclinical subjects with moderate levels of worry, nonclinical subjects meeting GAD criteria by questionnaire and GAD patients, the present study tests the following alternative hypotheses: (a) the dependent variables vary according to clinical status; or (b) the dependent variables vary according to GAD symptom level.

METHOD

Subjects

Forty-three volunteer adults participated in a study on worrying and problem solving. There were three groups: (a) moderate worriers (nonclinical subjects with moderate levels of worry), (b) GAD by questionnaire (nonclinical subjects meeting GAD criteria by questionnaire), and (c) GAD patients (patients seeking help for GAD). The two nonclinical groups were recruited from among 584 students (39% male) who participated in an initial screening study by questionnaire (see *Procedure* below). The moderate worry group consisted of 12 women and 3 men aged 20 to 49 ($M = 25.4$, $SD = 9.1$) who met none of the GAD criteria on the GADQ-M and scored between the 40th and 60th percentile on the Penn State Worry Questionnaire (PSWQ). The GAD by questionnaire group was composed of 11 women and 3 men aged 20 to 39 ($M = 24.0$, $SD = 5.8$) who met GAD criteria on the GADQ-M and scored above the 80th percentile on the PSWQ. None of the nonclinical subjects was currently receiving treatment from a mental health professional. The third group was made up of patients who were referred by affiliated clinicians. There were 8 women and 6 men aged 25 to 58 ($M = 42.0$, $SD = 11.4$) who met diagnostic criteria for a principal

diagnosis of GAD according to the Anxiety Disorders Interview Schedule-Revised (ADIS-R; Di Nardo & Barlow, 1988). Subjects in the GAD patient group were significantly older than in the other two groups, $F(2, 40) = 16.10$, $p < .0001$. Three moderate worriers, four GADs by questionnaire and 12 GAD patients had previously consulted a mental health professional. Significantly more patients had previously consulted than both groups of nonclinical subjects, $\chi^2 = 15.9$, $p < .0001$.

Questionnaires

Two questionnaires were used to screen subjects and select the moderate worry group and GAD by questionnaire group, the Generalized Anxiety Disorder Questionnaire (GAD-Q; Roemer, Borkovec, Posa, & Borkovec, 1995) and the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990).

The GAD-Q, developed by the Penn State group, consists of a series of questions that correspond to *DSM-III-R* criteria (American Psychiatric Association, 1987). Four questions correspond to the cognitive criteria: excessive or unrealistic worry, most frequent topics (to determine whether two or more), bothered by worry more days than not, and duration. The somatic criterion is based on 18 items rated on a scale from 0 (None) to 4 (Very severe/Grossly disabling); this scale is drawn from the ADIS-R (Di Nardo & Barlow, 1988). Symptoms rated as 2 (Moderate) or more were recorded as present. Finally, the degree of interference caused by anxiety and worry is rated on a 0–8 scale. The French translation shows moderate test-retest stability for both the diagnostic status and the 18-item somatic scale (Doucet, Lachance, Freeston, Ladouceur, & Blais, 1993; Lachance, Doucet, Freeston, & Ladouceur, 1993). The internal consistency of the somatic scale was .86. The PSWQ is a 16-item questionnaire measuring the tendency to worry. It shows good validity and reliability in both English and French (Brown, Antony, & Barlow, 1992; Ladouceur et al., 1992; Meyer et al., 1990).

Three questionnaires measured anxious and depressive symptoms. The Worry Domains Questionnaire (WDQ; Tallis, Eysenck, & Mathews, 1992) is a 30-item questionnaire measuring worry themes on a 5-point scale. The French translation shows excellent internal consistency, good stability, and convergent validity with the PSWQ (Dugas, Letarte et al., 1995b). The Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988) is a 21-item checklist of anxiety symptom intensity. The French translation shows good reliability and construct validity (Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994). The Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) is a 21-item questionnaire measuring depressive symptoms. The French adaptation has excellent reliability (Bourque & Beaudette, 1982) and the BDI's validity is well-established.

Two questionnaires were used to assess problem solving. First, the Social

Problem-Solving Inventory (SPSI; D'Zurilla & Nezu, 1990) is a multidimensional measure of social problem-solving ability, which consists of 70 items that are divided into two major scales and seven subscales. The two major scales are the Problem Orientation Scale and the Problem-Solving Skills Scale. The Problem Orientation Scale, which refers to general motivational factors, contains three subscales: Cognition, Emotion, and Behavior. The Problem-Solving Skills Scale is divided into four subscales: Problem Definition and Formulation, Generation of Alternative Solutions, Decision Making, and Solution Implementation and Verification. The French translation of the SPSI has sound psychometric properties (Dugas, Letarte et al., 1995). Second, the Problem-Solving Inventory (PSI; Heppner & Petersen, 1982) is a 35-item inventory that measures three problem-solving constructs: Problem-Solving Confidence, Approach-Avoidance Style, and Personal Control. All items are rated on a 4-point scale and are constructed as face-valid measures of the three constructs. A French adaptation has been validated in Quebec (Laporte, Sabourin, & Wright, 1988) and has good psychometric properties.

Finally, two questionnaires measured cognitive variables associated with worry. The Intolerance of Uncertainty questionnaire (IU; Freeston et al., 1994) contains 27 items about uncertainty, emotional and behavioral reactions to ambiguous situations, implications of being uncertain, and attempts to control the future. The questionnaire has shown excellent internal consistency as well as criterion-related, convergent and discriminant validity (Freeston et al., 1994; Ladouceur et al., 1995; Ladouceur et al., in press). The Why Worry? questionnaire (WW; Freeston et al., 1994) consists of 20 items giving reasons why people say they worry. The scale has demonstrated criterion-related, convergent and discriminant validity (Freeston et al., 1994), as well as adequate test-retest reliability (Dugas, Freeston, & Ladouceur, 1995).

Procedure

The nonclinical groups were recruited in introductory psychology, sexology, and musicology courses. Questionnaires were distributed at the beginning of classes and students participated on a voluntary basis. Each student received written instructions, the questionnaires (PSWQ and GADQ-M), and a form asking for volunteers to participate in a second phase. The consent form was presented separately. Administration took approximately 15 minutes. One-hundred and six (17%) volunteered to participate in the second phase. Subjects were selected based on their response on the GADQ-M and PSWQ. The cognitive criteria on the GADQ-M were (a) excessive worry, (b) worry about two or more topics, (c) worry more days than not over the last 6 months, and (d) duration of greater than 6 months. The somatic criterion was six items or more rated as moderate or higher. The moderate worry subjects met neither the somatic or cognitive criteria for GAD according to the GADQ-M and scored between the 30th and the 70th percentiles on the PSWQ. The GAD by questionnaire subjects

met cognitive and somatic criteria on the GADQ-M and scored above the 80th percentile on the PSWQ. All subjects who met inclusion criteria and volunteered to participate in the second phase were telephoned 2 weeks later. Fifteen subjects meeting the moderate worry criteria and 14 meeting the GAD by questionnaire criteria participated in the second phase of the study, which consisted of completing a series of questionnaires.

The subjects in the clinical group were referred to participate in an assessment program for anxiety disorders. Subjects receiving a primary GAD diagnosis were offered treatment at our clinic and completed the questionnaires as part of their pretreatment assessment package.

RESULTS

Group Formation

Analyses of variance (ANOVAs) revealed significant differences on the number of somatic symptoms reported on the GADQ-M, $F(2, 40) = 53.10$, $p < .05$, and the score on the PSWQ, $F(2, 40) = 35.31$, $p < .05$. Planned contrasts were used to test the difference between (a) moderate worriers and GADs by questionnaire, and (b) GADs by questionnaire and GAD patients. GADs by questionnaire reported more somatic symptoms, $F(1, 40) = 74.37$, $p < .025$, and scored higher on the PSWQ, $F(1, 40) = 53.58$, $p < .025$, than the moderate worriers (see Table 1). There were no differences on either variable between the GADs by questionnaire and GAD patients ($F < 1$). Thus, the nonclinical groups (moderate worriers and GADs by questionnaire) differed on anxiety variables, as postulated by group formation, whereas the GADs by

TABLE 1
MEANS (*M*) AND STANDARD DEVIATIONS (*SD*) OF MEASURES OF WORRY, ANXIETY, AND DEPRESSION

	Moderate Worriers		GADs by Questionnaire		GAD Patients	
	M	*SD*	*MD*	*SD*	*M*	*SD*
Group formation						
Penn State	41.6	4.4	63.1	6.4	62.6	11.4
Somatic symptoms	2.7	1.5	11.7	2.5	12.2	3.9
Worry, anxiety and depression						
Number of worries (0–6)	2.1	1.6	4.6	1.9	4.5	1.5
Interference (0–8)	2.8	1.1	5.9	1.3	5.8	1.4
Beck Anxiety (0–63)	7.7	5.6	18.6	10.2	21.4	10.6
Beck Depression (0–63)	6.9	6.9	13.6	10.0	22.2	11.0
Worry Domains (0–120)	35.4	20.3	55.1	18.9	54.4	22.5

Note. GAD = generalized anxiety disorders.

questionnaire and GAD patients differed only on clinical status (seeking help for GAD) and not on levels of anxiety symptoms.

ANOVAs revealed significant differences on the number of worry themes, $F(2, 40) = 14.92$, $p < .05$, and the degree of interference, $F(2, 40) = 29.39$, $p < .05$. Planned contrasts indicated that the GAD by questionnaire group reported significantly more worry themes, $F(1, 40) = 44.4$, $p < .025$, and interference, $F(1, 40) = 44.4$, $p < .025$, than the moderate worry group, but did not differ from the GAD patients on either variable ($F < 1$). Further, significant differences were observed on both the BAI, $F(2, 40) = 9.29$, $p < .001$, and the BDI, $F(2, 40) = 9.69$, $p < .001$. Planned contrasts (Bonferroni adjusted) indicated that the GAD by questionnaire group reported significantly more anxiety than the moderate worry group, $F(1, 40) = 10.13$, $p < .025$, but did not differ from the GAD patients ($F < 1$). However, the pattern was reversed for depressive symptoms: there was no significant difference between the moderate worriers and GADs by questionnaire but the GAD patients were more depressed than the GADs by questionnaire, $F(1, 40) = 5.65$, $p < .025$. Finally, significant differences were observed on the WDQ, a measure of the range of worry, $F(2, 40) = 4.31$, $p < .05$. The GAD by questionnaire group scored significantly higher than the moderate worriers, $F(1, 40) = 6.62$, $p < .025$), but there was no difference between the GADs by questionnaire and GAD patients ($F < 1$). The pattern of results described confirms that the two nonclinical groups differed on worry and anxiety levels, whereas the GAD by questionnaire and patient groups differ on depressive symptoms but reported similar levels of worry and anxiety.

Problem Solving

ANOVA with planned contrasts was used to test two alternative hypotheses. The first contrast (Moderate Worriers and GADs by Questionnaire vs. GAD Patients) tests the hypothesis that the dependent variables vary according to clinical status whereas the second (Moderate Worriers vs. GADs by Questionnaire and GAD Patients) test the hypothesis that dependent variables vary according to worry and anxiety levels.

Two types of problem-solving variables were available: skills and orientation. The skills variables were measured by the four subscales of the SPSI and the Approach-Avoidance subscale of the PSI. There were no significant contrasts for any of the skills variables ($F < 1$), indicating that the groups did not differ on problem-solving skills either as a function of GAD symptom level or as a function of clinical status (see Table 2). Problem orientation was measured by the Cognitive, Emotional, and Behavioral Orientation subscales of the SPSI and by the Problem-Solving Confidence and Personal Control subscales of the PSI. Bonferroni adjusted contrasts showed that the GADs by Questionnaire and GAD patients scored significantly lower than moderate worriers on the Cognitive, $F(1, 40) = 17.3$, $p < .005$, Emotional, $F(1, 40) = 18.35$, $p < .005$, and

TABLE 2
MEANS (*M*) AND STANDARD DEVIATIONS (*SD*) OF MEASURES OF PROBLEM-SOLVING SKILLS AND PROBLEM ORIENTATION

	Moderate Worriers		GADs by Questionnaire		GAD Patients	
	M	*SD*	*MD*	*SD*	*M*	*SD*
Problem-solving skills						
SPSI[a] (D'Zurilla & Nezu, 1990)						
Problem definition and formulation (0–40)	22.2	4.4	20.7	5.5	20.8	7.8
Generation of alternative solutions (0–40)	24.5	5.2	22.8	4.8	23.7	5.7
Decision making (0–40)	26.1	5.9	24.2	4.9	24.8	4.4
Implementation and verification (0–40)	20.8	4.8	21.9	5.1	20.3	4.9
PSI[b] (Heppner & Peterson, 1982)						
Approach-avoidance style (16–96)	43.5	15.7	43.7	11.2	47.5	12.9
Problem-solving skills						
SPSI[a] (D'Zurilla & Nezu, 1990)						
Cognitive (0–40)	28.6	4.1	21.8	5.8	22.3	4.6
Emotional (0–40)	23.6	6.0	12.0	6.4	15.6	8.8
Behavioral (0–40)	25.7	4.4	19.2	6.6	20.9	5.5
PSI[b] (Heppner & Peterson, 1982)						
Personal control (5–30)	15.6	5.0	18.6	3.3	21.6	4.4
Problem-solving confidence (11–66)	21.3	4.9	31.9	6.8	33.4	6.3

Note. GAD = generalized anxiety disorder; SPSI = Social Problem-Solving Inventory; PSI = Problem Solving Inventory.
[a] Higher scores reflect fewer difficulties/greater abilities.
[b] Higher scores reflect more difficulties/lesser abilities.

Behavioral, $F(1, 40) = 10.21$, $p < .005$, Orientation subscales, whereas the other contrast testing clinical status was nonsignificant in all cases ($F < 1$). Note that for these scales higher scores mean fewer difficulties with problem orientation. In the case of the PSI subscales, both contrasts were significant for both the Problem-Solving Confidence, $F(1, 40) = 12.61$, $p < .005$; $F(1, 40) = 34.68$, $p < .005$, and Personal Control, $F(1, 40) = 10.19$, $p < .005$; $F(1, 40) = 10.54$, $p < .005$. Note that for these scales higher scores mean greater difficulties. Examination of the means suggests that the large differences between the moderate worriers and GAD patients probably accounts for the fact that both contrasts were significant. In fact, for Problem-Solving Confidence, the GADs by Questionnaire and GAD patients obtained similar scores, whereas for Personal control, the GADs by Questionnaire fell midway between the mod-

TABLE 3
MEANS (*M*) AND STANDARD DEVIATIONS OF (*SD*) OF INTOLERANCE OF UNCERTAINTY AND BELIEFS ABOUT WORRY

	Moderate Worriers		GADs by Questionnaire		GAD Patients	
	M	*SD*	*MD*	*SD*	*M*	*SD*
Intolerance of uncertainty (27–135)	52.8	18.2	76.8	18.9	77.3	26.8
Beliefs about worry (20–100)	36.3	10.4	52.6	13.9	46.9	22.5

Note. GAD = generalized anxiety disorder.

erate worriers and GAD patients. Thus problem orientation as defined by the SPSI clearly distinguished between GAD symptom levels but results with the PSI subscales were not as clear. The PSI subscales appear to be tapping a somewhat different construct, particularly Personal Control that seems to vary as a function of both clinical status and worry level.

Intolerance of Uncertainty and Beliefs About Worry

The Bonferroni adjusted planned contrasts showed that the GADs by Questionnaire and GAD patients scored significantly higher than the moderate worriers on both the Intolerance of Uncertainty, $F(1, 40) = 11.82$, $p < .0125$, and Why Worry? questionnaires, $F(1, 40) = 6.49$, $p < .0125$. The other contrast testing clinical status was not significant (see Table 3).

DISCUSSION

Overall, the results show that the dependent variables were more highly affected by GAD symptom level than by clinical status (seeking or not seeking professional help for GAD). Problem orientation (as measured by the SPSI), intolerance of uncertainty and beliefs about worry were similar in subjects meeting GAD criteria by questionnaire and GAD patients, whereas moderate worriers had different scores on these variables. Problem-solving confidence and personal control over the problem-solving process (as measured by the PSI) varied according to both GAD symptom level and clinical status. Of all variables measured in this study, only depressive symptoms varied according to clinical status only as the GAD patients were more depressed than the GADs by questionnaire and the moderate worriers. Finally, as predicted, problem-solving skills were unrelated to both GAD symptom level and clinical status.

Whether measured by the SPSI or the PSI, problem-solving skills were unaffected by level of GAD symptoms and clinical status. These results are coherent with those of recent studies that indicate that knowledge of problem-solving

skills appears to be unrelated to worry and anxiety. For instance, our research team showed that problem-solving skills do not predict the tendency to worry in nonclinical populations (Dugas, Letarte et al., 1995; Dugas et al., 1997; Lachance et al., 1995). Moreover, Davey (1994) demonstrated that worry is related to poor problem-solving confidence and poor perceived control over the problem-solving process, but is unrelated to problem-solving ability. In fact, with trait anxiety partialed out, worry is associated with positive problem-solving behaviors such as problem-focused coping strategies and information-seeking coping strategies (Davey, Hampton, Farrell, & Davidson, 1992). Finally, Marx and colleagues (1992) demonstrated that anxious patients are able to find effective cognitive solutions to their problems, but the implementation of these solutions seems to fail. Therefore, the present findings confirm and extend those of previous studies by showing that knowledge of problem-solving skills does not appear to vary with either level of GAD symptoms or seeking/not seeking professional help for GAD.

The results of this study also show that individuals meeting GAD criteria by questionnaire and GAD patients have poorer problem orientation than moderate worriers (as measured by both the SPSI and the PSI). Although previous studies had shown that poor problem orientation was related to worry in nonclinical populations (Davey, 1994; Dugas, Letarte, et al., 1995; Dugas et al., 1997; Lachance et al., 1995), this study is the first to demonstrate that GAD patients have a counterproductive general response set when faced with a problem. However, the present findings also indicate that problem orientation is more highly related to GAD symptom level than to clinical status. Therefore, for both nonclinical individuals meeting GAD criteria and GAD patients, poor problem orientation may hinder the proper application of problem-solving skills, thereby interfering with the problem-solving process and prolonging worry.

Although all problem orientation subscales of the SPSI and the PSI varied according to GAD symptom level, the Problem-Solving Confidence and Personal Control subscales of the PSI were also related to clinical status. However, examination of subscale means suggests that only Personal Control truly varied according to clinical status, as the GADs by questionnaire fell midway between the moderate worriers and GAD patients on this subscale. It is certainly conceivable that personal control over the problem-solving process varies according to both GAD symptom level and clinical status. Considering that the GAD patients were more depressed than the moderate worriers and the GADs by questionnaire in the present study, personal control (and perhaps other components of problem orientation) may be affected by level of depression. In fact, the literature on learned helplessness in depression (cf. Rosenbaum, 1990; Seligman, 1975) suggests that beliefs about personal control and depressive symptoms are highly related. Therefore, the perception of personal control may be vulnerable to variations in depression levels, which may in turn be characteristic of GAD patients (cf. Butler, Fennel, Robson, & Gelder, 1991).

Both cognitive variables, intolerance of uncertainty, and beliefs about worry,

varied according to GAD symptom level exclusively. Compared to moderate worriers, GADs by questionnaire and GAD patients have greater difficulty tolerating uncertainty and believe that worrying is more useful. Therefore, intolerance of uncertainty and beliefs about worry are specifically linked to GAD symptom level, irrespective of clinical status or depression levels. Considering that recent studies indicate that intolerance of uncertainty and beliefs about worry may be important process variables in worry and GAD (Dugas et al., 1997; Freeston et al., 1994; Ladouceur et al., 1995), the present findings support the relevance of both cognitive variables.

What are the clinical implications of these findings? First and foremost, clinicians should help their GAD patients identify and correct all cognitive, behavioral, and emotional manifestations of poor problem orientation. In particular, we have noticed that GAD patients often react to problem situations as threats to be avoided rather than challenges to be met. By correcting poor problem orientation, patients learn that problem situations can be used to develop new coping strategies and help them prepare to deal with upcoming problems. Moreover, a recent study indicates that intolerance of uncertainty may account for most of the contribution of poor problem orientation to worry (Dugas et al., 1997). Our clinical experience also supports the relevance of intolerance of uncertainty in poor problem orientation, as GAD patients often struggle with the ambiguous or uncertain elements of the problem situation as well as the problem-solving process and its outcome: ''Where will all this lead to? How can I guarantee that the solution will not fail? How can I decide which solution will turn out best from all points of view?'' Therefore, to improve their problem orientation, GAD patients should learn to recognize and cope with uncertainty rather than trying to eliminate all uncertain elements from the problem-solving scenario.

This study's findings also indicate that clinicians should help their GAD patients identify and correct faulty beliefs about the usefulness of worrying. GAD patients tend to overestimate the value of worrying as a way of finding solutions or avoiding unpleasant future events or emotions. Although at times worrying can be useful (Davey et al., 1992; Mathews, 1990; Wells, 1995), GAD patients tend to overestimate the benefits of worrying. Clinicians may use several cognitive and behavioral techniques to help their patients correct faulty beliefs about worry. For instance, GAD patients may be asked to worry about the outcome of specific upcoming events and not worry about the outcome of others. By recording the outcome of all upcoming events, patients may then test their hypothesis that worrying prevents negative future outcomes or provides protection against disappointment if negative outcomes occur.

In conclusion, the present study shows that knowledge of problem-solving skills appears to be unrelated to GAD symptom level and seeking/not seeking help for GAD. Further, problem orientation, intolerance of uncertainty, and beliefs about worry vary according to GAD symptom level but do not generally vary according to clinical status. In addition to extending previous findings to

clinical populations, this study indicates that nonclinical individuals meeting GAD criteria by questionnaire are similar in many respects to GAD patients. This means that research using nonclinical subjects should continue to prove highly valuable in furthering our knowledge of GAD, without however removing the necessity of validating findings in clinical populations.

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