Routledge
Taylor & Francis Group

When simplifying life is not so bad: the link between rigidity, stressful life events, and mental health in an undergraduate population

JOSEPH CIARROCHI, TERRI SAID & FRANK P. DEANE

Illawarra Institute for Mental Health, Department of Psychology, University of Wollongong, Wollongong, 2522, Australia; e-mail: Joseph_Ciarrochi@uow.edu.au

ABSTRACT *Decades of research have generally shown that being more rigid is associated with poorer mental health. We investigated whether all aspects of what has been termed "rigidity" are harmful. In particular, we hypothesized that the desire for simple structure (DSS) will not be associated with poor mental health, and in some cases might be associated with better mental health. In contrast, the intolerance of uncertainty (IU) was hypothesized to be associated with a wide range of indices of poor mental health. We also hypothesized that people high in IU would be less resilient in the face of stressful life events. Results across two cross-sectional surveys (N = 240; N = 331) supported our hypotheses. DSS was associated with less hopelessness, whereas IU was associated with more depression, anxiety, stress, suicidal ideation, and hopelessness. In addition, moderational analysis supported the hypothesis that IU magnifies the adverse effect of stressful life events on depression, anxiety and hopelessness. IU was more strongly related to the negative indices of well-being than to the positive index of life satisfaction. The implications of these findings for cognitive behavioural therapy practice are discussed.*

Introduction

Life is complex, uncertain, and constantly changing. The amount of information in the world is vast. Complexity can be distressing. Researchers have identified stable individual differences in how much people seek to structure the world into simplified, more manageable forms. People who show a strong tendency to cognitively simplify are often characterized as "rigid" or high in need for structure.

Rigidity has generally been associated with poorer mental health (Dugas *et al.,* 1997; Neuberg & Newson, 1993; Thompson *et al.,* 2001). Cognitive behavioural therapy interventions often have components that are designed to reduce rigidity and thereby improve mental health (e.g., Beck, 1995; Ellis, 2001).

The present paper will attempt to extend previous research on the link between rigidity and mental health in several ways. First, we sought to examine whether some aspects of rigidity are not associated with worse mental health, and indeed are associated with better mental health. Secondly, we sought to examine the extent that self-reported rigidity amplified the adverse effects of stress on mental health. Finally, we sought to examine the relevance of rigidity to a wide variety of indices of mental health, including depression, anxiety, and life satisfaction.

Rigidity

We have chosen to use the term "rigidity" in order to highlight the pejorative way in which it is normally viewed in the literature. It is generally considered to be harmful, in that it is linked to increased emotional distress, stereotyping, and poor problem solving (Neuberg & Newson, 1993; Schaller *et al.*, 1995). However, we recognize that terms that are more neutral than "rigidity" are also appropriate, and we will frequently use the term Personal Need for Structure (Neuberg & Newson, 1993).

There is a family of measures that seem to reflect rigidity to some extent. These include Personal Need for Structure (Neuberg & Newson, 1993), Intolerance of Ambiguity (Frenkel-Brunswick, 1949), Rigidity (Gough & Sanford, 1952), Uncertainty Orientation (Sorrentino & Hewitt, 1984), Dogmatism (Rokeach, 1960) and Authoritarianism (Adorno *et al.*, 1950). The Personal Need for Structure scale (PNS) is moderately related to other measures of rigidity (Thompson *et al.*, 2001). We chose to focus on the PNS scale because it captures two aspects of rigidity that we expected to relate differently to mental health.

PNS is defined as the extent that an individual is dispositionally motivated to cognitively structure their world in simple, unambiguous ways. Factor analysis indicates that it is made up of two related factors, namely, the Desire for Simple Structure (DSS) and the Intolerance of Uncertainty (IU). DSS consists of items such as "I enjoy having a clear and structured mode of life." IU consists of items such as, "I don't like situations that are uncertain."

We predict that IU in particular will amplify the adverse effects of stressful life events and will generally be related to poor mental health. There are at least two reasons to expect this link: 1) People high in IU do not seem to accept the inevitability of uncertainty, and experience distress when they encounter it. They may attempt to "reason" it away. Unfortunately, it often cannot be reasoned away, and people high in IU may end up ruminating about the uncertainty and exacerbating their distress (Dugas *et al.*, 1998) 2) People high in IU may generate fewer alternatives when they try to solve their problems in life and are thus less likely to find optimal solutions (Priester & Clum, 1993).

In contrast to IU, we expect DSS to be either unrelated or positively related to mental health. Ellis has theorized that desires and preferences by themselves do not lead to disturbance (Ellis, 2001); rather, it is when desires become demands (e.g., "I must have structure.") that one becomes "disturbed". DSS appears to measure a

preference for structure, whereas IU appears to be associated with more of a demand for structure.

DSS might even be beneficial. Desiring structure may lead people to actually reduce the uncertainty in their life and thereby reduce information overload. As a consequence, they may gain a sense of agency and hope. These hypotheses are admittedly speculative, but they highlight the possibility that DSS may have a different relationship with mental health than IU.

Rigidity and mental health

The research generally suggests that rigidity is associated with poorer mental health. The Personal Need for Structure Scale has been linked to depression and anxiety (Neuberg & Newson, 1993; Thompson *et al.*, 2001). Neuberg and Newsome's (1993) research suggests that IU may be more strongly linked to the tendency to experience negative emotions (neuroticism) than DSS, which is consistent with our hypothesis. We sought to replicate and extend this finding by examining the extent that DSS relates to other indices of mental health. We also investigated the extent that DSS amplifies the adverse effects of stressful life events (see below).

Other measures of rigidity have also been shown to be associated with poorer mental health. For example, IU has been linked to Generalized Anxiety Disorder (Dugas *et al.*, 1998), and to trait worry in non-clinical participants (Dugas *et al.*, 1997). Dogmatism has been associated with feelings of guilt and hostility (Heyman, 1977).

There appear to be few exceptions to the finding that rigidity is bad for your mental health. In one exception, Evans and his colleagues found that cognitive structuring (tendency to avoid ambiguity and seek clarity) was associated with higher well-being amongst adults with acute leukemia in remission (Evans *et al.*, 1993). In another study, Bar-Tal found that when high monitors have high ability to achieve cognitive structure they suffer less psychological distress (Bar-Tal, 1994). Finally, and of particular relevance to this paper, Elovainio and Kivimaeki (1999) found evidence that desire for structure was related to less psychological strain, when controlling for intolerance of uncertainty (Elovainio & Kivimaeki, 1999). We sought to replicate and extend the Elovainio and Kivimaeki finding by examining a wider range of mental health outcome variables, including depression, suicidality, hopelessness (study 1), and anxiety, stress, and life satisfaction (study 2).

We also sought to examine whether IU would exacerbate the effect of stressful life events on mental health. Specifically, stressful life events were expected to have a more adverse impact on people high in IU compared to those low in IU. Consistent with this view, Elovainio and Kivimaeki (1999) found that high occupational complexity (a potential stressful life event) had a more adverse impact on psychological strain amongst those high in IU compared to those low in IU. This study focused on a stressful life event that was of direct content relevance to IU (e.g., the event was about the lack of structure). Our research sought to extend this

research by focusing on stressful life events that tend to occur in everyday situations and are not directly about the loss of structure.

Study 1

Study 1 examined the relationship between stressful life events and Personal Need for Structure (DSS and IU), and three mental health variables, namely, depression, suicidal ideation, and hopelessness. We sought to determine the extent that DSS and IU were of direct relevance to mental health, and the extent that they appear to amplify the effects of stressful life events. We hypothesized that IU would be related to worse mental health outcomes, whereas DSS would not be related to such outcomes, and would potentially be related to better mental health.

Method

Participants and design

Two-hundred and forty predominantly undergraduate university students (50 male and 190 female; mean age = 20) completed the anonymous cross-sectional study for course credit. Another 24 students participated but did not complete all the questionnaires. There were no differences in the mental health of people who did or did not complete the entire protocol, all p's > .05.

Measures

The *Beck Depression Inventory-II* (BDI-II; (Beck *et al.*, 1996) is a widely used symptom distress measure that consists of 21 items that assess cognitive, somatic and behavioural indices of depression experienced during the past two weeks.

The *Suicide Ideation Questionnaire* (SIQ; (Reynolds, 1987) consists of 30 items (e.g., "I thought it would be better if I were not alive") concerning thoughts relating to suicide that occurred in the previous month. The 7-point scale ranges from "I never had this thought" (0) to "almost every day" (6). The SIQ is highly reliable (internal consistency = .96). It is also related to a number of theoretically relevant measures including depression, hopelessness, and negative life events (Reynolds, 1987).

The *Beck Hopelessness Scale* (BHS; Beck *et al.*, 1974) contains 20 items measuring the extent of negative expectations and pessimism regarding the future. Subjects rate items as true or false (e.g., "I look forward to the future with enthusiasm (reversed item)", "My future seems dark to me"). The BHS has high levels of internal consistency (KR-20 = .89) and it predicts eventual suicide (Beck *et al.*, 1985).

Personal Need for Structure has 12 items (PNS; Neuberg & Newson, 1993; Thompson *et al.*, 2001). Respondents rate each statement on a 6-point scale ranging from "strongly disagree" (1) to "strongly agree" (6). The scale aims to capture, as a

chronic individual motive, several aspects of the desire for simple structure. The scale has two factors – Desire for Simple Structure (DSS) and Intolerance of Uncertainty (IU). The authors labelled the IU factor as "response to lack of structure", but we chose to use the simpler IU label described by others (Dugas *et al.*, 1997). Items indicative of DSS include, "I enjoy having a clear, structured mode of life" and "I like to have a place for everything". Items capturing IU include, "It upsets me to go into a situation without knowing what to expect" and "I don't like situations that are uncertain". The scale has good internal reliability in the present sample (DSS α = .80 and IU α = .76). It has shown substantial convergent and divergent validity, and also predicts theoretically relevant outcomes such as stereotyping (Neuberg & Newson, 1993).

The Hassles Scale (HAS; Kanner *et al.*, 1981) was used to represent Stressful Life Events in the present study and is a 117-item inventory that assesses the frustrations and irritations of everyday encounters. It includes items such as "troublesome neighbours", "financial insecurity", "difficulty with friends" and "transportation problems". If the hassle did not occur, it is given a 0 for the person. If it did occur, it is rated on a 3-point Likert scale ranging from "somewhat severe" (1) to "extremely severe" (3). The three point severity scales were summed to generate a cumulative severity score (Kanner *et al.*, 1981).

Results

Preliminary analyses

The means and standard deviations were as follows: Desire for Simple Structure (DSS; $M = 3.81$, $SD = 1.01$), Intolerance of Uncertainty (IU; $M = 3.64$, $SD = .77$), Depression ($M = 12.73$, $SD = 9.13$), Hopelessness ($M = 24.13$, $SD = 3.95$), Suicidal Ideation ($M = 1.69$; $SD = .75$; Stressful Life Events ($M = 53.95$, $SD = 33.85$). Correlational analyses indicated that higher IU was associated with depression ($r = .24$, $p < .01$), hopelessness ($r = .15$; $p < .05$), suicidal ideation ($r = .13$, $p < .05$), and Stressful Life events ($r = .14$, $p < .05$). In contrast, higher DSS was not related to higher incidence of negative affect, and indeed was associated with less hopelessness ($r = -.13$, $p = < .05$). We explored whether sex or age related to any of the variables in the study. No sizable relationships ($p < .01$) were found., so we collapsed across sex and age in all subsequent analyses.

Main analyses

We next examined the extent that DSS and IU relate to mental health, when controlling for each other and for stressful life events (SLE). We also examined the possibility that DSS and IU affected the relationship between SLE and mental health. Following the procedure outlined by Aiken and West (1991) for testing interactions (or moderation effects) involving continuous variables, we converted all continuous variables to z scores and used stressful life events, the rigidity variables,

and the product terms between stressful life events and the rigidity variables to predict mental health (Aiken & West, 1991). Only one interaction term was entered into the model at a time, in order to reduce problems associated with collinearity between the interaction terms (DSS × SLE and IU × SLE).

The results are presented in Table 1. The simple effect betas (e.g., for IU) are for when IU × SLE is entered into the model. There was little difference in these betas when the other interaction term was entered into the model. Consistent with predictions, both stressful life events and IU were associated with poorer mental health. In contrast, DSS was associated with better mental health. However, these main effects were qualified by significant interactions. The interaction terms indicate that people high in IU and in DSS responded more adversely to stressful life events. That is, stressful life events had a stronger impact on mental health for those high in DSS or IU than it did for those low in these variables.

Study 2

Study 1 supported our main hypothesis. IU was related to worse mental health, whereas DSS was related to better mental health. IU amplified the adverse effect of stressful life events on mental health. Somewhat surprisingly, DSS also amplified the adverse effects of stressful life events. However, despite this amplification effect, DSS was associated with better mental health for most participants.

Study 2 sought to replicate and extend study 1 in several important ways. First, we included a wider variety of mental health indices, to examine how much the effects generalized. Second, we included a positive index of mental health, namely, Life satisfaction. There is substantial evidence that positive and negative affective states have different causes (Watson & Vaidya, 2003). Consequently, we wanted to examine whether rigidity was as related to this positive index as it is to the negative indices.

TABLE 1. Study 1: Regression analysis evaluating the extent that the Need for Structure and Stressful Life Events relates to mental health

	Beta		
	Depression	Suicide	Hopelessness
Stressful Life Events (SLE)	.34***	.29***	.14*
Desire for Simple Structure (DSS)	−.24***	−.20***	−.32***
Intolerance of Uncertainty (IU)	.32***	.21**	.32***
SLE × DSS	.13*	.12*	.14*
SLE × IU	.14*	.14*	.16*
Variance explained by the model	24%	15%	13%

*$p < .05$; **$p < .01$; ***$p < .001$

Method

Participants

Three-hundred and thirty-one predominantly undergraduate university students (255 female; 76 male; mean age = 22, SD = 6.34) completed the anonymous cross-sectional study for course credit. Another ten students participated but did not complete all the questionnaires and were excluded from further analysis. There were no differences in the mental health between those who did and did not complete both sections of the survey. The survey was administered in two equal halves on two different days.

Measures

The *Depression, Anxiety and Stress Scale* (DASS) (Lovibond & Lovibond, 1995) is a 42-item self-report measure with three subscales designed to assess the negative affective states of depression, anxiety and stress. The Depression scale measures dysphoria, hopelessness, self-depreciation, anhedonia, devaluation of life, inertia and lack of interest or involvement. The Anxiety scale measures autonomic arousal, skeletal muscular effects, situational anxiety and subjective experiences of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset or agitated, over-reactive or irritable and impatient. The DASS Depression and Anxiety scales show good convergent validity with other scales designed to discriminate between depression and anxiety (Lovibond & Lovibond, 1995). Alpha coefficients for the three 14-item DASS scales in the present sample are as follows: Depression = .94, Anxiety = .91, and Stress = .93.

The *Satisfaction With Life Scale* (SWLS) (Diener *et al.*, 1985) is a well-validated measure that allows respondents to weight domains of their lives in terms of their own values. It consists of five statements (e.g., "I am satisfied with my life") measured on a 7-point Likert scale ranging from completely agree (1) to completely disagree (7). In the present study the alpha coefficient was .89. *Other scales* The hopelessness and suicidal ideation scales were identical to those used in study 1.

Results

Preliminary analyses

The means and standard deviations were as follows: Desire for structure (DSS; M = 3.82, SD = .98), Intolerance of uncertainty (IU; M = 3.55, SD = .91), Depression (M = .60, SD = .61), Anxiety (M = .56, SD = .57), Stress (M = 1.04, SD = .67) Hopelessness (M = 23.2, SD = 3.13), Suicidal Ideation (M = 1.62; SD = .68); Stressful Life Events (M = 51.24, SD = 33.79); and Life satisfaction (M = 4.61; SD = 1.36).

Correlational analyses indicated that higher IU was associated with higher depression ($r = .25$, $p < .01$), anxiety ($r = .35$, $p < .01$), stress ($r = .40$, $p < .01$), hopelessness ($r = .17$; $p < .01$), suicidal ideation ($r = .19$, $p < .01$), stressful life events ($r = .23$, $p < .01$), and with lower life satisfaction ($r = -.13$, $p < .05$). Higher DSS was related to higher anxiety ($r = .17$, $p < .01$), stress ($r = .22$, $p < .05$), and stressful life events ($r = .11$, $p < .05$). We statistically compared the magnitude of the correlations between the IU and the negative indices, and IU and the positive indices. We found that IU was more strongly related to depression, stress, and anxiety, then to life satisfaction, all ps $< .05$

Finally, we explored whether sex or age related to any of the variables in the study. We found no strong relationships ($p < .01$), so we collapsed across sex and age in all subsequent analyses.

Main analyses

We next examined the extent that DSS and IU relate to mental health, when controlling for each other and for stressful life events (SLE). We used the same covariation analyses utilized in study 1.

The results are presented in Table 2. Consistent with predictions, both stressful life events and IU were associated with the negative indices of mental health. In contrast, as found in study 1, DSS was associated with lower levels of hopelessness. DSS was not associated with any of the other outcomes. Also, only stressful life events predicted unique variance in life satisfaction. The interaction terms were significant only for IU. Thus, stressful life events had a stronger impact on mental health for those high in IU than it did for those low in these variables.

TABLE 2. Study 2: Regression analysis evaluating the extent that the Need for Structure and Stressful Life Events relates to mental health

	Beta					
	Depression	Anxiety	Stress	Hopeless	Suicide	Life Sat.
SLE	.38***	.43***	.46***	.23***	.34***	−.33***
DSS	−.06	−.02	.04	−.14*	.05	.06
IU	18**	.24***	.27***	.18**	.12*	−.09
SLE ×DSS	.05	.03	.01	.03	.01	−.05
SLE ×IU	.09*	.09*	.10*	.08[a]	.04	−.03
% variance	23%	33%	40%	11%	17%	13%

[a]$p < .05$ (one-tailed); *$p < .05$; **$p < .01$; ***$p < .001$

Note: SLE = Stressful Life Events; DSS = Desire for Simple Structure; IU = Intolerance of Uncertainty; Life sat. = Life satisfaction

Overall discussion

We will focus our discussion on effects that were significant in both studies. Intolerance of Uncertainty (IU) was directly related to poor mental health, and appeared to amplify the adverse effects of stressful life events on depression, anxiety, stress, and hopelessness. In contrast, the Desire for Simple Structure (DSS) was not associated with worse mental health. Indeed, across both studies, DSS was associated with less hopelessness. IU tended to be more strongly related to negative indices of mental health (e.g., depression and anxiety) than to a positive index (life satisfaction).

One potential limitation of our study is that social desirability might have inflated the observed relations between rigidity and mental health. However, this possibility seems unlikely, given past research has shown that both IU and DSS are unrelated to social desirability (Neuberg & Newson, 1993). Another potential limitation of this research is that common method variance (CMV) factors other than social desirability might have inflated observed relationships (Lindell & Whitney, 2001). IU, DSS, and mental health are all based on self-report measures. However, our analyses provide evidence against a CMV account. The self-report measures are all presumably influenced by CMV. These measures were entered as covariates in regression analyses, a procedure that reduces or eliminates CMV (Lindell & Whitney, 2001).

Desire for Simple Structure is good for your mental health, or at least it is not all that bad

DSS was related to less hopelessness across both studies. We suggested that this relationship might be observed because people high in DSS create structure out of uncertainty, and this structure allows them to have a sense of agency and control. The present findings are consistent with this hypothesis, but future research is needed to directly test it.

The causal relationship between DSS and mental health might go in either direction or be bi-directional. For example, DSS might lead to less hopelessness, as the hypothesis above suggests. Or, hopeless people may have lower desire for simple structure because they believe they can never have it. The present research establishes that there is the potential for a causal link between DSS and positive mental health. Future longitudinal or intervention research is needed to identify the direction of the causal link.

Intolerance of uncertainty, stressful life events, and mental health

IU seems to be the main factor associated with poorer mental health. It was moderately related to stress, anxiety, depression, and hopelessness. Dugas *et al.* (1998) proposed a model for General Anxiety Disorder that we believe can account for the observed anxiety and stress results and can be extended to account for the

depression and hopelessness results. Dugas *et al.* propose that that Intolerance of uncertainty exacerbates initial "what if . . ." questions, and the "what if" questions in turn lead to increases in worry and anxiety. We would argue that "what if" thinking could lead to depression, anxiety, or hopelessness, depending on the focus of the thinking. If it is focused on the prospect of an undesirable event, it is likely to lead to anxiety. If it is focused on the self ("what if I'm not good enough") or the future ("what if things will never be good again"), it may lead to depression and hopelessness. Essentially, "what if." thinking may be an attempt to escape the negative affect associated with uncertainty about the self, others, and life. Ironically, such attempts to escape negative affect often lead to increases in negative affect (Hayes *et al.,* 1999).

IU appears to exacerbate the impact of stressful life events on depression, anxiety, stress, and hopelessness. The Dugas *et al.* model can explain this effect if it is assumed that stressful life events produce uncertainty and thereby set in motion the ruminative, what-if processes described above. Priester and Clum (1993) have described another theory that could account for the stress-IU interaction. They suggest that inflexible people will fail to generate a wide range of coping responses to stressful life events, fail to deal effectively with the stressful events, and respond with consequent negative affect and hopelessness (Priester & Clum, 1993). Consistent with the view, Neuberg and Newsom (1993) have shown that people high in IU tend to generate fewer alternative categories in response to a categorization task. That is, people high in IU appear to have a reduce repertoire of responding. Future research is needed to directly evaluate the Dugas *et al.* model and the Priester and Clum model.

Implications, limitations, and future directions

Intolerance for uncertainty can be measured using a brief self-report scale. It can thus be used to easily assess a client's level of IU. We found that approximately 5% of our sample scored higher than 5.05 on the 6-point scale and 10% scored higher than 4.73. Perhaps these cut-off scores can be used in conjunction with the client interview to help determine if a client is struggling with IU.

Cognitive Behavioural Therapy (CBT) approaches would offer several methods for reducing intolerance of uncertainty. One approach might seek to challenge thoughts and beliefs associated with IU. For example, a counsellor might ask, "where is the evidence that uncertainty is intolerable" or challenge irrational or inflexible thinking associated with IU (e.g., "I must always be in control") (Beck, 1995; Ellis, 2001). Behavioural experiments that involve placing the client in situations of varying uncertainty and demonstrate their capacity to tolerate this uncertainty without anything catastrophic happening might be used to supplement such challenges. Graded exposure combined with relaxation to specific situations involving un-certainty may be a more behaviourally oriented approach.

One element of Rational-Emotive Behavioural Therapy (REBT) in particular seems to resonate well with the distinction between the Desire for Simple Structure

and Intolerance of Uncertainty. A core component of the REBT approach is the focus on evaluative cognitions that are rigid and demanding (e.g., cognitions that involve "Musts"). More flexible thinking is assumed to involve preferential statements, such as, "I prefer to win, but there is no law that says I must win" (Dryden *et al.*, 2003). Items in the Intolerance of Uncertainty scale appear to reflect less flexible thinking, such as, "I hate to change my plans at the last minute". In contrast, the DSS items appear less dogmatic, "I like to have a place for everything and everything in its place." The DSS items are worded more as preferences for a particular state rather than a demand for the world to be a particular way. As such, the scales may have some clinical utility in assessing the relative movement of individuals receiving REBT or other CBT approaches toward more flexible ways of thinking.

The CBT approaches described above are not the only ways one might target IU. A new wave of mindfulness based CBT approaches have emerged in recent years (Hayes *et al.*, 1999; Kabat-Zinn, 1990; Segal *et al.*, 2002). These approaches would minimize direct challenging of IU-related thoughts. Instead, they would help people to look *at* their reactions to uncertainty, rather than *through* them. For example, someone might react to uncertainty with anxiety and the thought, "This is awful." The mindfulness-based approach would help the individual step back and look at their reactions. They would learn to recognize "awful" and "anxiety" for what they are (passing reactions), rather than what they say they are (dangers to be avoided; literal truths that must direct behaviour). This shift in perspective is expected to shorten the intensity and duration of adverse reactions to uncertainty (Hayes *et al.*, 1999).

Our research does not address the important question: If you reduce IU, will you also improve mental health? Future research could identify people high in IU and provide CBT interventions such as those described above. The effects of these interventions can then be observed on mental health outcomes. Our research does suggest that reducing IU may reduce negative indices of mental health (e.g., depression), but is unlikely to have much of an impact on positive indices (e.g., life satisfaction).

In addition, our research gives some hints as to how such an intervention should be designed. It is important that the intervention not simply attempt to increase openness to uncertainty. Desiring simple structure does not appear to be harmful to mental health, and may even be beneficial. Problems seem to arise when the "desire" for structure becomes converted to a "need" or demand and the potential loss of structure seems intolerable. Interventions should illustrate to people that although it is not harmful for them to desire simple structure, they would be better off if they also accepted the inevitably of losing structure and facing uncertainty.

References

ADORNO, T.W., FRENKEL-BRUNSWICK, E., LEVINSON, D.J. & SANFORD, R.N. (1950). *The Authoritarian Personality*. New York: Harper.

AIKEN, L. & WEST, S. (1991). *Multiple Regression: Testing and Interpreting Interactions*. Newbury Park, London: Sage Publications.

BAR-TAL, Y. (1994). Monitoring, blunting, and the ability to achieve cognitive structure. *Anxiety, Stress, & Coping*, *6(4)*, 265–274.

BECK, A.T., STEER, R.R. & BROWN, G.K. (1996). *BDI-II manual* (2 ed.). San Antonio, TX: Psychological Corporation.

BECK, A.T., STEER, R.A., KOVACS, M. & GARRISON, B. (1985). Hopelessness and eventual suicide: a 10-year prospective study of patients hospitalized with suicidal ideation. *American Journal of Psychiatry*, *142(5)*, 559–563.

BECK, A.T., WEISSMAN, A., LESTER, D. & TREXLER, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting & Clinical Psychology*, *42(6)*, 861–865.

BECK, J.S. (1995). *Cognitive therapy: Basics and beyond*. New York: The Guilford Press.

DIENER, E., EMMONS, R.A., LARSEN, R.J. & GRIFFIN, S. (1985). The Satisfaction With Life Scale. *Journal of Personality Assessment*, *49(1)*, 71–75.

DRYDEN, W. (2001). *Reason to change: A Rational Emotive Behaviour Therapy (REBT) Workbook*. New York: Brunner-Routledge.

DUGAS, M.J., FREESTON, M.H. & LADOUCEUR, R. (1997). Intolerance of uncertainty and problem orientation in worry. *Cognitive Therapy & Research*, *21(6)*, 593–606.

DUGAS, M.J., GAGNON, F., LADOUCEUR, R. & FREESTON, M.H. (1998). Generalized anxiety disorder: a preliminary test of a conceptual model. *Behaviour Research & Therapy*, *36(2)*, 215–226.

ELLIS, A. (2001). *Overcoming Destructive Beliefs, Feelings, and Behaviors: New Directions for Rational Emotive Behavior Therapy*. Amherst, NY: Prometheus Books.

ELOVAINIO, M. & KIVIMAEKI, M. (1999). Personal need for structure and occupational strain: an investigation of structural models and interaction with job complexity. *Personality & Individual Differences*, *26(2)*, 209–222.

EVANS, D.R., THOMPSON, A.B., BROWNE, G.B., BARR, R.M. *et al.* (1993). Factors associated with the psychological well-being of adults with acute leukemia in remission. *Journal of Clinical Psychology*, *49(2)*, 153–160.

FRENKEL-BRUNSWICK, E. (1949). Intolerance of ambiguity as an emotional personality variable. *Journal of Personality*, *18*, 143–198.

GOUGH, H.G. & SANFORD, R.N. (1952). *Rigidity as a psychological variable*. Unpublished manuscript, Institute of Personality Assessment and Research, University of California, Berkeley.

HAYES, S.C., STROSAHL, K.D. & WILSON, K.G. (1999). *Acceptance and commitment therapy: An experiential approach to behavior change*. New York: The Guilford Press.

HEYMAN, S.R. (1977). Dogmatism, hostility, aggression, and gender roles. *Journal of Clinical Psychology*, *33(3)*, 694–698.

KABAT-ZINN, J. (1990). *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness*. New York: Dell Publishing.

KANNER, A.D., COYNE, J.C., SCHAEFER, C. & LAZARUS, R.S. (1981). Comparison of two modes of stress management: daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine*, *4(1)*, 1–37.

LINDELL, M.K. & WHITNEY, D.J. (2001). Accounting for common method variance in cross-sectional research designs. *Journal of Applied Psychology*, *86(1)*, 114–121.

LOVIBOND, S. & LOVIBOND, P. (1995). *Manual for the Depression Anxiety Stress Scales*. Sydney: The Psychology Foundation of Australia, Inc.

NEUBERG, S.L. & NEWSON, J.T. (1993). Personal need for structure: individual differences in the desire for simpler structure. *Journal of Personality & Social Psychology*, *65(1)*, 113–131.

PRIESTER, M.J. & CLUM, G.A. (1993). The problem-solving diathesis in depression, hopelessness, and suicide ideation: a longitudinal analysis. *Journal of Psychopathology & Behavioral Assessment*, *15(3)*, 239–254.

REYNOLDS, W.W. (1987). *Suicidal Ideation Questionnaire*. Odessa, FL: Psychological Resources.

ROKEACH, M. (1960). *The open and closed mind: Investigations into the nature of belief systems and personality systems*. New York: Basic Books.

SCHALLER, M., BOYD, C., YOHANNES, J. & O'BRIEN, M. (1995). The prejudiced personality revisited: personal need for structure and formation of erroneous group stereotypes. *Journal of Personality & Social Psychology*, *68(3)*, 544–555.

SEGAL, Z.V., WILLIAMS, J.M.G. & TEASDALE, J.D. (2002). *Mindfulness-based cognitive therapy for depression: A new approach to preventing relapse*. New York: Guilford Press.

SORRENTINO, R.M. & HEWITT, E.C. (1984). The uncertainty-reducing properties of achievement tasks revisited. *Journal of Personality & Social Psychology*, *47(4)*, 884–899.

THOMPSON, M.M., NACCARATO, M.E., PARKER, K.C. & MOSKOWITZ, G.B. (2001). The personal need for structure and personal fear of invalidity measures: historical perspectives, current applications, and future directions. In: MOSKOWITZ, G.B. (Ed.), *Cognitive social psychology: The Princeton Symposium on the Legacy and Future of Social Cognition* (pp. 19–39).

WATSON, D. & VAIDYA, J. (2003). Mood measurement: current status and future directions. In: SCHINKA, J.A. & VELICER, W.F. (Eds), *Handbook of psychology: Research methods in psychology*, Volume 2 (pp. 351–375). New York: John Wiley & Sons, Inc.