

Is flexibility always associated with mental health? A study of coping and depression

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Summary

Despite the abundance of data linking coping to well-being and lack of flexible thinking to depression, there remains a need for research investigating the relationship between flexibility in coping and depressive symptoms. The present study aimed to determine if there is indeed a relationship between coping flexibility, defined as an ability to use a greater variety of coping strategies, and depression scores in patients suffering from major depression. Participants were taken from the cognitive–behavioral therapy arm of Jacobson’s landmark study (1996, 2008). Depression was assessed using the Beck Depression Inventory (BDI), coping strategies were identified using the Coping Patterns Rating Scale (CPRS), and coping flexibility was calculated using Gini’s C concentration measure. No significant association was found between flexibility in coping and severity of depression. While flexibility in coping, or lack thereof, is not associated with depression severity, it remains to be seen whether decreased flexibility in coping is different in individuals suffering from depression when compared with non-depressed individuals.

depression, coping, cognitive–behavioral therapy, coping flexibility, Coping Patterns Rating Scale

Richard Lazarus and Susan Folkman define coping as adapting cognitive and behavioral efforts to manage specific external or internal demands that are appraised as taxing or as exceeding the resources of the person [1]. A coping strategy is considered to be effective when it reduces immediate distress and contributes to more positive outcomes, such as psychological well-being [2]. Indeed, Endler and Parker [3] found that coping strategies play a significant role in one’s adaptation to stressful life events, as certain coping strategies can have either positive or negative effects on one’s psychological or physical health. More specifically, Endler and Parker’s findings

revealed that individuals who used more effective ways of coping subsequently had greater life satisfaction and overall happiness [see also 4–6].

In addition to this, it has also been suggested that individuals who can produce multiple appraisals of potentially threatening situations demonstrate flexibility, and thus adaptive solutions, in their coping styles across situations. Indeed, early studies by Fresco and colleagues [7] and by Reardon and Williams [8,9] suggest there may be a relationship between coping rigidity, and anxiety and depression. This finding is congruent with Beck’s cognitive theory of depression, which states that individuals with depression are stuck in a negative loop, rigidly viewing themselves, the world, and the future in a negative way. More importantly perhaps, it is also congruent with a broader conceptualization of mental health. Indeed, a number of

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studies in mental health have shown that cognitive flexibility is related to psychological health [10,11] and, conversely, cognitive rigidity is tied to psychological problems. For example, psychological inflexibility is related to greater endorsement of depression and anxiety symptoms [12] and is found in individuals diagnosed with obsessive-compulsive disorder and anorexia nervosa at higher rates relative to healthy counterparts [13,14].

With the exception of studies conducted by Fresco and colleagues [7] and Williams [8,9], there remains a dearth of empirical research examining the possible links between flexible, non-rigid use of coping strategies and depression. In addition to this, those earlier studies relied solely on questionnaires that were administered to college students, not on a systematic observation of the discourse or behaviors of clinical patients. In light of this, the goal of the current study was to examine the relationship between levels of depression and flexibility in coping. The current study also made use of an observer-rated method to assess coping styles, and a sample of clinical patients was used in order to address the above-mentioned limitations in previous studies.

METHOD

Participants

Participants were taken from the landmark Jacobson study [15,16]. They met criteria for major depression according to the Structured Clinical Interview of the Diagnostic and Statistical Manual of Mental Disorders (third edition) (SCID-III) [17], scored at least 20 on the Beck Depression Inventory (BDI) [18], and scored 14 or greater on the 17-item Hamilton Rating Scale for Depression (HRSD) [19]. Exclusion criteria comprised a number of concurrent disorders: bipolar or psychotic subtypes of depression, panic disorder, current alcohol or other substance abuse, past or present schizophrenia or schizophreni-

form disorder, organic brain syndrome, and intellectual disability.

In the original study, all patients were randomly assigned to one of three treatment arms, which consisted of 20 sessions of: (1) a treatment focused on behavioral activation, or (2) a treatment that included both behavioral activation and the teaching of skills to modify automatic thoughts, or (3) full cognitive-behavioral therapy (CBT). The present study focused on the full CBT arm only (N = 50) as coping scores were available for that arm. The sample of participants for this study was 76% female; the mean age was 39.2 years (SD = 8.8), and 76% of participants were White. For the purposes of this study, session 3 was used to derive the data; this session was chosen over the first two sessions as contractual arrangements regarding the therapy are covered by then.

Measures

The BDI is a 21-item self-report inventory that measures the intensity of depression. The psychometric properties of the BDI are well established [20]. The BDI was completed by participants following session 3.

The Coping Patterns Rating Scale (CPRS) [21] is an observer-rated system used to assess coping processes based on interview transcripts. The measure has been used in numerous studies and its validity and reliability are well established [22-30]. The rating scale comprises 12 categories of coping originating from a landmark study conducted by Skinner and colleagues [31]. Transcripts were transcribed verbatim and rated by trained independent judges; raters were blind as to the level of depression severity. Inter-rater reliability, calculated on 26% of the cases, was satisfactory, with a mean intraclass correlation coefficient (ICC 2,1) of 0.70.

To compute a flexibility score for coping, an innovative statistic known as a dispersion index was used [32-34]. This statistic is derived from Gini's concentration C measure, as follows:

$$\text{Dispersion} = \frac{C}{C_{\max}} = \frac{1 - \sum (\text{squared probabilities of ratings in each level})}{\text{Maximum value of } C}$$

The maximum value of C (C_{\max}) is computed as shown in Table 1, where n refers to the num-

ber of coping strategies observed in the session. A dispersion of 0 indicates maximum rigidity,

while a dispersion score of 1.0 indicates maximum flexibility in coping strategies. Spearman correlations were then used to assess the rela-

tionship between flexibility in coping, computed with the dispersion index, and depression severity.

Table 1. Formulas for computations of C_{max}

Number of coping ratings in one subject's transcript	Value of C_{max}
If ($n \leq 12$)	$1 - n \times [(1/n)^2]$
If ($n \geq 13$ & $n \leq 24$)	$1 - [(n-12) \times (2/n)^2 + (12-(n-12)) \times (1/n)^2]$
If ($n \geq 25$ & $n \leq 36$)	$1 - [(n-24) \times (3/n)^2 + (12-(n-24)) \times (2/n)^2]$
If ($n \geq 37$ & $n \leq 48$)	$1 - [(n-36) \times (4/n)^2 + (12-(n-36)) \times (3/n)^2]$
If ($n \geq 49$ & $n \leq 60$)	$1 - [(n-48) \times (5/n)^2 + (12-(n-48)) \times (4/n)^2]$

RESULTS

The mean BDI score across participants was 23.2 (SD = 8.4, range 7–46), whereas the mean flexibility score was 0.65 (SD = 0.11, range 0.47–0.86). No relationship was found between BDI scores and flexibility scores ($r = 0.16$, n.s.).

DISCUSSION

No correlation was found between BDI scores and flexibility scores, suggesting that coping flexibility is not related to depression severity. This finding is in many ways counterintuitive. Numerous studies have shown that flexibility in cognitions and behaviors is related to improved mental health [10–14]. As such, it would have been reasonable to expect a reduced repertoire of coping strategies to be related to greater symptom severity. While this cannot be said to be due to insufficient variance in depression severity in the sample, it may be tied to reduced variance in the patients' coping flexibility scores. Indeed, the variance observed in the coping flexibility of patients was relatively low, by such suggesting that flexibility in coping can be relatively similar from one individual to the next, at least in depressed patients. More importantly perhaps, it is possible that differences in coping flexibility are not tied to the severity of the depression but rather to the presence, as opposed to the absence, of depression. As such, the onset of depression may be associated with reduced flexibility in coping, but once individuals reach

that critical point where a formal diagnosis can be given, the severity of the depression does not matter. To determine this, a much broader sample of individuals with and without depression would be required.

The absence of a significant association between coping flexibility and depression severity does to some extent call into question theories about flexibility in mental health, or at the very least, it circumscribes them. While mental illness may be related to increased cognitive and behavioral rigidity, it appears that the severity of the illness is unrelated to rigidity. Using a method similar to ours, Drapeau and colleagues [33] examined rigidity in defense mechanisms in patients suffering from anxiety. Contrary to what they had anticipated, they found that a larger repertoire of defense mechanisms was significantly related to more symptom severity and to greater levels of anxiety. Their findings hence suggest that anxious patients may make multiple random but unsuccessful attempts at dealing with stressors. In the case of depression, however, no such process appears to be present. It is hence possible that while patients suffering from anxiety make random and unsuccessful attempts at dealing with stressors, and that these attempts are in proportion to their level of anxiety, depressed patients do not appear to use more or less coping as they become more depressed; indeed, one of their difficulties might instead be in choosing and adopting coping strategies that are adaptive. Until further research is conducted, the possible ties between cognitive and behavioral coping and mental illness will remain theory, not science based.

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