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## Helping and Coping Attributions: Development of the Attribution of Problem Cause and Solution Scale

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HELPING AND COPING ATTRIBUTIONS:  
DEVELOPMENT OF THE ATTRIBUTION OF  
PROBLEM CAUSE AND SOLUTION SCALE

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A measure of Brickman, Rabinowitz, Karuza, Cohn, and Kidder's structure of helping and coping orientations was developed, and its relation to a variety of counseling variables was investigated. A sample of 202 college students completed the Attribution of Problem Cause and Solution Scale (APCSS), an additional measure of attribution, and measures of coping and self-efficacy. The findings indicate that scores obtained using the APCSS have sound reliability and factor structure and are related to coping style and self-efficacy in the hypothesized manners. The APCSS has clinical implications with regard to client problem-solving efficacy and preferred means of coping.

*Keywords:* helping and coping attributions; causal attributions; solution attributions; attribution assessment

The examination of attributional variables within the counseling process has been relatively rare despite their documented utility in this arena (Claiborn & Dowd, 1985; Murdock & Altmaier, 1991; Strong, 1970; Strong, Welsh, Corcoran, & Hoyt, 1992). Researchers and clinicians have proposed that attributional variables can serve as a framework to better understand many aspects of the counseling process. For example, Tracey (1988) drew on

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this framework to examine the counseling relationship. Claiborn and Dowd (1985) looked at client change from this perspective. Strong (1970) and Tracey et al. (1983) also used this framework to understand help seeking. One reason for the relative dearth of research using attributional models in counseling is the lack of appropriate measures. The purpose of our research was to develop a measure of attribution using Brickman, Rabinowitz, Karuza, Cohn, and Kidder's (1982) attributional model of help seeking. We then examined the construct validity of the obtained scores using this instrument with respect to help seekers' attributions and their connection to the methods of coping they use. Finally, we examined the relation of the measure to client self-efficacy.

Attributions can be defined as the explanations people hold about the past, present, and/or future behavior of themselves or others. Such explanations are derived from a person's "beliefs, attitudes, and values as well as the information available at a given point and time" (Young & Marks, 1986, p. 320). Research on attributional responsibility has been well documented since the 1950s, when Heider (1958) first proposed the concept. Originally, attributions were viewed almost exclusively in relation to responsibility for problem causation (Cohn, 1983). This is evidenced in that the major models of attributions proposed and examined in the literature (e.g., Abramson, Seligman, & Teasdale, 1978; Hill & Larson, 1992; Rotter, 1966; Seligman, 1974; Sweeney, Anderson, & Bailey, 1986; Weiner, 1988) all focused exclusively on responsibility for problem cause, specifically the delineation of various causal attributions and their effects.

Brickman et al. (1982) argued that although the extant attributional models had led to some important results, they defined attribution in a confounded manner and were less applicable to the help-seeking and help provision process. Given this, Brickman et al. divided attributions into (a) responsibility for problem cause and (b) responsibility for problem solution. The extant models, on the other hand, viewed attributions as implicitly including both causation and solution. Brickman et al. argued that attributions for problem cause and solution are different, and the failure to account for their uniqueness can lead to inaccurate conclusions. They further proposed that these two aspects of responsibility attribution are particularly salient in applications to help seeking and coping. They held that cause alone was insufficient to explain the helping and coping strategies used by help seekers. In particular Brickman et al. stipulated that help seekers must also take into account whom they hold responsible for the solutions to their problems before adopting particular coping strategies.

Brickman et al. (1982) developed a two-dimensional structure, with one dimension reflecting responsibility for problem cause and the other dimension reflecting responsibility for problem solution. They proposed that both dimensions vary in terms of degree of self-responsibility, that is, high versus

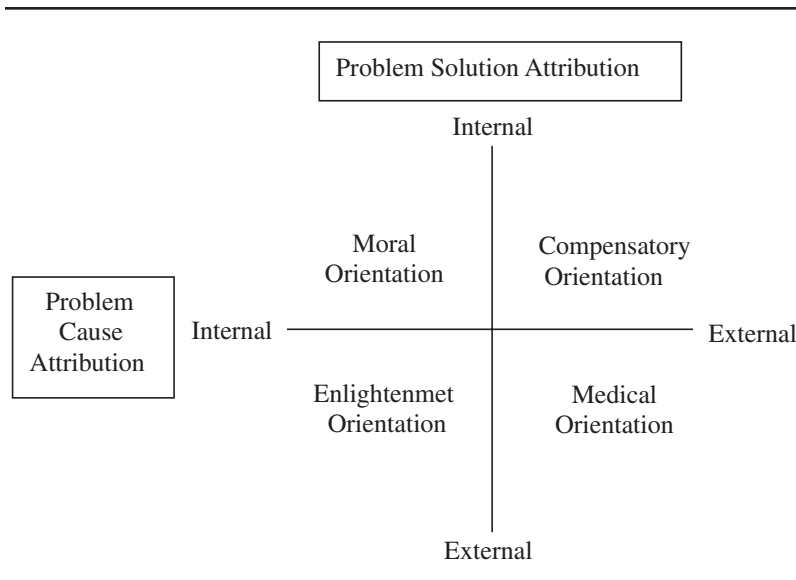


Figure 1. Brickman et al.'s (1982) structure of helping and coping orientations.

low. Additionally, this framework yields four orientations of helping and coping (see Figure 1).

The four orientations of helping and coping proposed by Brickman et al. (1982) were moral, enlightenment, compensatory, and medical. These are determined by whether an individual attributes high or low self-responsibility for the cause and solution to his or her problem, with high self-responsibility reflecting an internal orientation and low self-responsibility reflecting an external orientation. In the moral orientation, individuals assume responsibility for both problems and their solutions, hence the cause and solution are viewed as internal. Under this orientation, an individual alone must act to change, and this is seen to compel people to take control of their situations. In the enlightenment orientation, a person is responsible for the cause of the problem (i.e., it is internal) but not for its solution (i.e., it is external), requiring people to accept negative views of themselves as guilty and submissive to others to resolve their problems. Alcoholics Anonymous is an example of the enlightenment orientation. In the compensatory orientation, a person is not responsible for the cause (i.e., it is external) but is held responsible for the solution to the problem (i.e., it is internal). In this orientation, people are seen as having obstacles that they must overcome and are responsible for their own fates. In the medical orientation, a person is not held responsible for the cause of the problem or its solution (i.e., both the cause and solution are external). Neither illness nor its treatment is viewed as an individual's responsibility.

Although research on Brickman et al.'s (1982) structure has been sparse, several researchers have used it with some success. Rabinowitz (1978) provided the first empirical support for the structure by locating environmental niches in which each of the four helping and coping orientations was being used. The structure has also been used to categorize specific client groups (e.g., rape victims, overweight clients) according to the types of helping and coping orientations they endorse (Cohn, 1983). Problem type, theoretical orientation, and client attributions, as they relate to counselor attributions, have also been investigated using this framework (Hayes & Wall, 1997; Worthington & Atkinson, 1993). Additionally, researchers have drawn on the model to examine between- and within-group differences for variables such as gender (Cheatham, Shelton, & Ray, 1985; Mitchell, 1987), ethnicity (Cheatham et al., 1985), and age (Karuzam, Zevon, Gleason, Karuza, & Nash, 1990) as they relate to attributions of responsibility for the causes of and solutions to problems. McCracken, Hayes, and Dell (1997) used the structure to understand attributions of responsibility for memory problems in older and younger adults. In terms of the counseling process, Tracey (1988) examined Brickman et al.'s structure of coping attributions and its relation to client and counselor congruence. Together, these studies provide preliminary evidence for the potential utility of this framework in the counseling realm.

The largest obstacle to research on the relations between Brickman et al.'s (1982) structure and counseling has been the lack of a psychometrically sound instrument to measure it. For example, Tracey's (1988) study used the Helping-Coping Attribution Scale to indicate how a client and counselor make attributions about responsibility for problem cause and solution. Because the scale has only 4 items, it fails to capture the finer details of the conceptual structure being measured. Michlitsch and Frankel (1989) developed an 83-item instrument and later a 25-item revised instrument encompassing Brickman et al.'s four proposed orientations. Although their results provided support for the structure, it was not designed for use within the counseling context. Karuza et al. (1990) designed an instrument intended for use in counseling, but its multistatement, 1-item format raises questions concerning the validity and reliability of obtained scores.

Part of the utility of Brickman et al.'s (1982) model is that individuals' attributional orientations can be used to locate specific methods of coping considered most useful for their problems. Folkman and Lazarus (1988) and Lazarus and Folkman (1984) distinguished between emotion-focused coping (e.g., escape avoidance and distancing) and problem-solving coping (planful problem solving and seeking social support). They argued that emotion-focused coping would be positively related to psychological and physical distress, whereas problem-solving coping would be negatively associated with such distress. The research results have been equivocal on the relation of the two coping styles to distress (e.g., Aldwin, 1994; Aldwin &

Revenson, 1987; Mitchell, Cronkite, & Moos, 1983; Solomon, Mikulincer, & Avitzur, 1998; Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). One reason for these equivocal results may be that effective coping interacts with other characteristics. We propose that Brickman et al.'s (1982) model provides a structure that may account for some of these equivocal results in that it hypothesizes different coping styles go along with different attributions.

### *Purpose*

The primary focus of the present research was to design and evaluate a measure that operationalized Brickman et al.'s (1982) structure; such a measure could then be used to examine the structure's relationship to other counseling variables. As a result, the Attribution of Problem Cause and Solution Scale (APCSS) was developed. To establish the convergent validity of the APCSS's obtained scores, it was compared with an existing measure of casual attribution, the Causal Dimension Scale II (CDS II; McAuley, Duncan, & Russell, 1992). Furthermore, the incremental validity of the APCSS's obtained scores over an extant attribution model in accounting for methods of coping and self-efficacy was examined.

We specifically focused on the relation of Brickman et al.'s (1982) model and three coping strategies: avoidance, seeking professional help, and spiritual coping. Linking to the work of Folkman and Lazarus (1988), we assessed coping using seeking professional help as an indicator of problem-solving coping and avoidance as an indicator of emotion-focused coping. Using professional help (problem-solving coping) was hypothesized to be associated with greater focus on external solutions (enlightenment and medical orientations) because of the seeking out of others in positions of authority that Brickman et al.'s model suggests goes along with a focus on external attributions for problem solutions. Avoidance (emotion-focused coping) is not viewed as the most effective strategy in Brickman et al.'s (1982) model. In the present study, avoidance was hypothesized to be most prominent for individuals with internal cause attributions, because presumably, individuals would avoid problems experienced as caused internally. Finally, we added one other method of coping implied by Brickman et al.'s model, that of spiritual coping (i.e., using prayer and turning to a larger spiritual authority). Spiritual coping was hypothesized to be related to the enlightenment orientation (internal cause and external solution).

Coping self-efficacy beliefs also influence methods of coping and attributions of responsibility for the causes of problems and their solutions (Chwalisz, Altmaier, & Russell, 1992; McAuley et al., 1992). Self-efficacy can be viewed as an individual's belief in his or her ability to accomplish a specific task (Bandura, 1982, 1986; Peterson & Stunkard, 1992). It was hypothesized that the degree of coping self-efficacy varies across attributional

orientations. Specifically, it was hypothesized that individuals displaying internal solution responsibility have higher coping self-efficacy because perceiving themselves as being able to cope effectively (i.e., high self-efficacy) should be related to thinking that one is the source of change. Individuals with low coping self-efficacy with regard to their problems were not expected to see the solutions as residing within themselves.

## Method

### *Participants and Procedures*

Two hundred two students enrolled in undergraduate educational psychology courses at a large midwestern university completed an attribution measures packet that took approximately 25 minutes. Of the 202 participants, 121 were female, 80 were male, and 1 participant did not specify gender. Participants had a mean age of 20 years (range 17 to 25 years). Most of the participants were European American (70.3%), 12.5% were African American, 8.4% were of Spanish-speaking origin, 5.9% were Asian American, 2.5% were of other ethnic backgrounds, and 0.5% did not report ethnic backgrounds. Students were widely representative of the major campus units.

Participation was voluntary, and each student received credit toward experiment participation requirements. The measures packet was completed in group settings of 5 to 20 students. Participation required completing the questionnaire and the demographic material. The students received a consent form prior to participation and were also provided with a debriefing form after their packets were completed. Of the original 207 participants, 5 were excluded from analyses because of incomplete materials, defined as more than two items left blank on the measure. Missing data (two or fewer blank items per measure) were replaced with an individual's mean score on that scale, when applicable.

### *Instruments*

*The APCSS.* The APCSS was designed for use in this study to measure Brickman et al.'s (1982) structure of helping and coping orientations. We generated items adhering to the definitions provided by Brickman et al. An initial pool of 47 items was developed, and these items were administered in a pilot test to a sample of 218 college students. Preliminary factor and item analysis revealed that in general, the scales were supported, but some of the items did not relate in the desired manner. As such, 17 of these poor items were deleted and another 25 added, for a total of 55 items. To assess the initial

content validity of the obtained scores using the APCSS, the 55 items were sorted into categories of solution or cause by a graduate student and a faculty member. Both raters correctly sorted the items in 98% of the cases.

Participants were asked to rate 55 items, using a 7-point, Likert-type scale (with anchors 1 = *very strongly disagree* and 7 = *very strongly agree*). Two dimensions were measured: responsibility for problem cause and responsibility for problem solution. Thirty of the items were intended to measure cause responsibility (13 internal and 17 external), with the remaining 25 measuring solution responsibility (7 internal and 18 external). Sample items included "I feel guilt for having caused this problem" (internal cause), "Other people are responsible for the cause of this problem" (external cause), "I am responsible for changing the situation in this problem" (internal solution), and "Solving this problem is someone else's responsibility" (external solution). Items reflecting external focuses were reverse scored. Items were then averaged to yield the two scales. High scores indicated internality for the cause and solution scales.

Prior to rating these items, participants were asked to describe problems they were currently experiencing or had recently experienced. This focus on specific problems, compared with more general distress, was selected because we thought that specific problems could be more easily responded to, and much of the attribution literature adopts this specific-problem approach (e.g., McAuley et al., 1992). Participants used these problem when rating the items. For example, a responsibility for cause item "I am responsible for the cause of this problem" was assessed on the basis of the extent to which participants agreed with the statement with regard to their specific problems.

*The CDS II.* The CDS II (McAuley et al., 1992) was chosen as a comparison structure with Brickman et al.'s (1982) model. The CDS II was designed to represent Weiner's (1988) model of attributions and focuses on responsibility for cause only. Participants use the specific problems they describe at the beginning to derive what they believe to be the causes of the problems. Then, using the causes they express, they rate 12 items reflecting the four dimensions measured as per Weiner's (1988) model (3 items for each): locus of causality, stability, external control, and personal control.

The items in the CDS II are rated using a 9-point, Likert-type rating scale in which participants circle one number in relation to each question; for example, "Is the cause something that reflects an aspect of yourself (9)" or "Is the cause something that reflects an aspect of the situation (1)." Thus, scores are divided into four subscales with, high scores indicating that the cause is perceived as internal, stable, and controllable either personally or externally. McAuley et al. (1992) found the internal consistency reliabilities ( $\alpha$ ) across their three studies to be .67 for locus of causality, .67 for stability, .79 for personal control, and .82 for external control.



*The Methods of Coping Scale (MoCS).* The MoCS was designed for use in this study to measure the likelihood that individuals would use different methods of coping for their described problems. Items were developed to broadly reflect methods of coping reported by individuals. In developing items, information was gleaned from practitioners, clinical interviews, and an extensive review of the coping literature. Ultimately, this resulted in 22 methods of coping that were rated with respect to the specific problems the participants selected. Items on this scale include “physician,” “pray,” “sleep,” “psychologist,” and “talk with friends.”

To aid in interpretation, a principal-axis factor analyses was conducted on the 22 methods of coping included on the MoCS using the current sample. This analysis yielded factors with the following eigenvalues and variances: Factor 1, 4.68 (21.3%); Factor 2, 1.78 (8.1%); Factor 3, 1.34 (6.1%); Factor 4, 0.87 (3.9%); and Factor 5, 0.69 (3.1%). Given that the determination of the number of factors is not an error-free decision, several criteria were used to establish the number of factors to retain: parsimony, the scree test, and interpretability. Given these criteria, only the first three factors were retained. Furthermore, we conducted a parallel analysis of 1,000 distributions of similar random items using the PARAFAC procedure in the R statistical package. These were examined using principal-axis analysis. The resulting mean eigenvalues were then used to decide if the obtained components exceeded those obtained by chance. Only the first three factors exceeded the mean eigenvalues obtained by chance, thus supporting the three-factor basis of the MoCS scale. An oblimin rotation was chosen given that it was not anticipated that the obtained factors would be independent of one another. The rotated analysis yielded four factors with the following eigenvalues and variances: Factor 1, 3.69 (16.8%); Factor 2, 2.24 (10.2%); and Factor 3, 1.87 (8.5%).

Items displaying pattern coefficients greater than .3 were included in the subsequent analyses. The first factor had 11 items, was labeled Professional Coping, and consisted of items such as “physician” and “psychologist.” The second factor had 5 items, was labeled Avoidance Coping, and consisted of items such as “sleep” and “use drugs and/or alcohol.” The third factor had 2 items, was labeled Spiritual Coping, and consisted of the items “pray” and “seek help from God.” The three factors supported the hypothesized structure. The items on this instrument were averaged to yield subscale scores, and internal consistency (Cronbach’s  $\alpha$ ) ranged from low to high: Professional Coping  $\alpha = .84$ , Avoidance Coping  $\alpha = .69$ , and Spiritual Coping  $\alpha = .91$ . The interfactor correlations among the subscales were Professional Coping and Avoidance Coping  $r = .30$ , Professional Coping and Spiritual Coping  $r = .27$ , and Avoidance Coping and Spiritual Coping  $r = .03$ .

*General self-efficacy (GSE).* The GSE subscale of the Self-Efficacy Scale (SES; Sherer et al., 1982) consists of 17 items that measure individuals’ beliefs in their willingness to initiate and persist in behavior. The SES was

chosen to explore the relationship between individuals' attributional responsibility for problems and their sense of self-efficacy. The items on the SES are rated using a 7-point, Likert-type scale indicating the degree to which an individual agrees or disagrees with each of the self-efficacy statements. Items on the subscale are averaged to create a score for the subscale. High scores on the GSE indicate high levels of self-efficacy. In terms of reliability, internal consistency ( $\alpha$ ) was found by Sherer et al. to be .86 for the GSE. In terms of validity, the SES has been found to correlate with external criterion measures of internality and self-esteem (Sherer et al., 1982).

## Results

### *APCSS Structure*

The APCSS was designed to measure the two dimensions of Brickman et al.'s (1982) structure. Items were factor analyzed using principal-axis factor analysis with varimax rotation to see if this structure held. Varimax rotation was chosen given that Brickman et al. theorized that the attributions for problem cause and attributions for problem solution, the two hypothesized factors, were independent of each other and functioned in a differential fashion. Similar structural results were obtained with oblique rotation, but for clarity and ease of presentation, the orthogonal results are presented below.

The eigenvalues and variance accounted for by the first five factors were 19.0 (28.3%), 7.5 (11.1%), 3.1 (4.6%), 2.8 (4.2%), and 2.4 (3.5%). We used the criteria of parsimony, the scree test, and interpretability to determine the number of factors to retain. The pattern coefficients associated with the first factor were not consistently positive and nonzero, arguing against the presence of a general response factor. Given these values and the expectation of two factors on the basis of Brickman et al.'s (1982) theory, in addition to the scree plot and the variance accounted for, two factors were rotated. To further substantiate the two-factor structure, we also conducted a parallel analysis of 1,000 distributions of similar random items, again using the PARAFAC procedure in the R statistical package. These items were examined using principal-axis analysis. From this analysis, the mean eigenvalues were again used to decide if the obtained components exceeded those obtained by chance. Only the first two factors exceeded the mean eigenvalues obtained by chance, thus supporting the two-factor basis of the APCSS scale.

After rotation, the eigenvalues and percentage of variance accounted for were as follows: Factor 1, 18.5 (27.5%); and Factor 2, 6.9 (10.3%). On Factor 1, the pattern coefficients for external responsibility for cause items were negative and for internal responsibility for cause items were positive. On Factor 2, the pattern coefficients for external responsibility for solution items were positive and for internal responsibility for solution items were negative.

Given that the goal of this research was to create a sound measure with two relatively independent dimensions, items were removed if they displayed pattern coefficients of less than .4 or displayed pattern coefficients contrary to prediction as per the theory. Of the initial 55 items, 4 did not display pattern coefficients in excess of .4 on either dimension, and 7 items displayed pattern coefficients in a manner contrary to that predicted by the theory. These items were dropped from the scale. Four additional items displayed pattern coefficients in excess of .4 on both factors and were retained as instrument items. The 5 items that had pattern coefficients in excess of .4 on both factors were retained. This final pool of 44 items was again subjected to a principal-axis analysis, which resulted in two clear factors for which the eigenvalues and percentage of variance accounted for were as follows: Factor 1, 18.1 (39.7%); and Factor 2, 5.9 (13.0%). A similar parallel analysis was conducted and supported the presence of two factors. After rotation, the eigenvalues and percentage of variance accounted for were as follows: Factor 1, 17.2 (32.6%); and Factor 2, 6.8 (15.2%). The results of factor analysis are summarized in Table 1. Thus, the final APCSS measure is a 44-item scale, with 24 items measuring responsibility for problem cause (11 external, 13 internal) and 20 items measuring responsibility for problem solution (16 external, 4 internal). The internal consistency for the cause and solution scales was high, with Cronbach's  $\alpha$  values of .95 (cause) and .92 (solution).

#### *Relations Among Attribution Scales*

The correlations between the APCSS and the CDS II are presented in Table 2. The APCSS cause and solution scales are correlated at  $r = .35$  with each other. This indicates a modest relationship between the cause and solution scales. With respect to the CDS II scales, there are moderate correlations between the APCSS cause and solution scales and the four CDS II scales. Personal control is positively correlated with the APCSS cause ( $r = .62$ ) and solution scales ( $r = .43$ ), indicating that high personal control over the situation is related to internal responsibility for cause and solution, and low personal control over the situation is related to external responsibility for cause and solution. Locus of causality on the CDS II is also positively correlated with the cause ( $r = .58$ ) and solution scales ( $r = .36$ ) of the APCSS, indicating that an internal locus of causality is related to internal responsibility attributions for cause especially but also relates to internal responsibility for solution. External control on the CDS II is negatively correlated with the cause ( $r = -.30$ ) and solution ( $r = -.39$ ) scales of the APCSS, indicating that low external control (by others) is related to internal responsibility for cause and solution, and high external control (by others) is related to external responsibility for cause and solution. Stability on the CDS II is also negatively correlated with the cause ( $r = -.28$ ) and solution ( $r = -.23$ ) scales of the APCSS,

Table 1  
*Pattern Coefficients for the Attribution of Problem Cause and Solution Scale From Principal-Axis Factor Analysis With Varimax Rotation*

Item Stem	Cause	Solution
External cause items		
Other people are responsible for the cause	<b>-.48</b>	<b>.56</b>
I did not cause my problem	<b>.69</b>	.28
My problem was caused because I did not have as much control as I should have	<b>-.56</b>	-.12
I deserve no blame for the cause of this problem	<b>-.67</b>	.29
Forces beyond my control are the cause	<b>-.65</b>	.36
My problem is caused by things external to me	<b>-.59</b>	.25
My own action had nothing to do with the cause	<b>-.60</b>	.23
I am an innocent victim	<b>-.68</b>	.35
I am not the source of my problem	<b>-.68</b>	.31
It is not my fault	<b>-.67</b>	.26
My problem is a result of the situation I'm in	<b>-.57</b>	.21
Internal cause items		
I feel guilt for having caused this problem	<b>.76</b>	.07
I am responsible for the cause of this problem	<b>.88</b>	-.23
My personal qualities are what cause my problem	<b>.58</b>	-.09
My lack of willpower caused this problem	<b>.75</b>	.06
I should have done more to prevent this problem	<b>.75</b>	-.07
My behavior has caused this problem	<b>.83</b>	-.15
I caused my problem	<b>.76</b>	-.22
I am to be blamed for the cause of this problem	<b>.76</b>	-.12
I blame myself	<b>.86</b>	.09
My own imperfections are what cause my problem	<b>.75</b>	-.02
I should have tried harder	<b>.72</b>	-.11
I have this problem because I'm not strong-willed	<b>.59</b>	-.25
I have this problem because I do not have will power	<b>.58</b>	-.15
Internal solution items		
Solving this problem is my responsibility	<b>.53</b>	<b>-.51</b>
My own capabilities should be used	<b>.45</b>	<b>-.58</b>
I have the inner strength to solve this problem	.03	<b>-.52</b>
Solving this problem is more my responsibility	<b>.47</b>	<b>-.59</b>
External solution items		
Solving the problem is someone else's responsibility	.22	<b>.75</b>
Others are better able to solve my problem than I	.00	<b>.62</b>
I need other people's help to solve this problem	.03	<b>.56</b>
Other people should do more to solve this problem	.18	<b>.76</b>
Others must be more assertive in solving problem	.14	<b>.66</b>
Other people must change for resolution	.23	<b>.68</b>
Others are responsible for changing the situation	.21	<b>.73</b>
I feel dependent on others to solve this problem	-.22	<b>.76</b>
I do not feel I can solve this problem without others	.03	<b>.59</b>
Other people's assistance is necessary	.09	<b>.52</b>
The situation prohibits me from solving this problem	.02	<b>.49</b>

(continued)

Table 1 (continued)

Item Stem	Cause	Solution
I hold others accountable for modifying this problem	.22	<b>.74</b>
Others should be working to rectify this problem	.20	<b>.72</b>
Others have the obligation to help me	.17	<b>.73</b>
I'm waiting for someone else to take action	.15	<b>.69</b>
I think other people are required to fix	.13	<b>.65</b>
Eigenvalue	17.2	6.8
Variance (postrotation)	32.6	15.2

Table 2

*Correlation of the Attribution of Problem Cause and Solution Scale (APCSS) and the Causal Dimension Scale II (CDS II)*

Variable	Cause	Solution	Personal Control	Locus of Causality	External Control	Stability
APCSS						
Cause	(.95)					
Solution	.35	(.92)				
CDS II						
Personal control	.62	.43	(.89)			
Locus of causality	.58	.36	.59	(.89)		
External control	-.30	-.39	-.31	-.40	(.69)	
Stability	-.28	-.23	-.37	.09	.09	(.89)

*Note.* Internal consistency  $\alpha$  estimates are listed in parenthesis on the main diagonal. High scores on the APCSS indicate internal attributions.

indicating that high scores on stability (reflecting permanence of the situation) relate to external responsibility for cause and solution, and low scores on stability (reflecting changeability of the situation) relate to internal responsibility for cause and solution. The lowest correlations are for stability which is believed to be the most theoretically dissimilar to the APCSS scale.

Overall, the correlations of the APCSS to the CDS II indicate sufficient similarity to warrant the APCSS's use as a measure of attribution. Moreover, the APCSS also maintains an adequate amount of nonshared variance to consider it a theoretically distinct measure from the CDS II.

#### *Relation of Attribution to Methods of Coping and Self-Efficacy*

*Methods of coping.* The extent to which the APCSS accounted for a statistically significant proportion of coping method variance above that of the CDS II was examined. We conducted a hierarchical multiple regression,

whereby the CDS II scales were entered first and then the APCSS scales. The addition to prediction of coping methods was the focus of the analyses. The hierarchical regressions are summarized in Table 3.

The APCSS adds to prediction for the Avoidance Coping ( $R^2 = .07$ ,  $R^2$  change = .06) and Professional Coping ( $R^2 = .08$ ,  $R^2$  change = .05) subscales above that achieved with the CDS II alone. In addition, both cause and solution APCSS scales have statistically significant  $\beta$  weights on both these subscale regressions, indicating that each has unique variance in common with the avoidance and professional coping scales. For avoidance coping, the hypothesized relation with internal cause was supported (structure  $r = .39$ ,  $\beta = .30$ ). External solution was also found to be related to avoidance coping (structure  $r = -.21$ ,  $\beta = -.16$ ). Professional coping was hypothesized to be related to external solution, and the results support that hypothesis (structure  $r = -.20$ ,  $\beta = -.16$ ). Although not hypothesized, internal cause was also related to using professional helpers as a coping device (structure  $r = .31$ ,  $\beta = .24$ ).

As indicated in Table 3, the relationship between the APCSS and GSE is stronger than that between the APCSS and the MoCS. The same hierarchical regression procedure was used for the GSE subscale with the CDS II and the APCSS. The total  $R^2$  value is .17, with an  $R^2$  change of .10 for the APCSS. The APCSS cause and solution scales have statistically significant  $\beta$  weights, so each has unique variance in common with self-efficacy (cause structure  $r = -.37$ ,  $\beta = -.30$ ; solution structure  $r = .38$ ,  $\beta = .29$ ). As hypothesized, individuals high in internal solution attributions were found to have the highest levels of GSE.

## Discussion

The results provide initial support for the APCSS as measuring the two dimensions of responsibility as described by Brickman et al. (1982): responsibility for problem cause and responsibility for problem solution. Two meaningful scales similar to cause and solution dimensions were derived from the factor analysis and further supported by the parallel analysis. The modest correlation between these scales, in addition to their differential contribution to relations with coping and self-efficacy, provides preliminary support for the notion that both cause and solution are important to understanding attributions individuals make about problems. Correlational analyses indicated that although there are moderate correlations between the APCSS dimensions and the CDS II (as one would expect, because they both measure attribution, and some overlap was anticipated), they are also sufficiently different to enable the conclusion that they do measure distinct dimensions of attribution. Furthermore, the APCSS adds to and complements the dimensions of attribution already acknowledged to exist.

Table 3  
 Hierarchical Regression of Each Methods of Coping Scale (MoCS) Subscale and Self-Efficacy With the Causal Dimension Scale II (CDS II; Step 1) and the Attribution of Problem Cause and Solution Scale (APCSS; Step 2)

	$R^2$	Change	EC		LC		PC		ST		Cause		Solution		$\Delta$	df	$\Delta F$
			$r$	$\beta$	$r$	$\beta$	$r$	$\beta$	$r$	$\beta$	$r$	$\beta$	$r$	$\beta$			
MoCS Avoidance Coping	.07*	.06*	.09	-.01	.10	.01	-.08	-.14	.03	.06	.39**	.30**	-.21**	-.16*	1,195	6.29**	
MoCS Professional Coping	.08*	.05*	-.10	-.04	.06	.04	.11	.05	.11	.14	.31**	.24**	-.20*	-.16*	1,195	5.30**	
MoCS Spiritual Coping	.02	.00	-.00	-.01	.10	.17	-.09	-.05	.01	.05	.02	-.03	.10	.06	1,195	0.15	
Self-efficacy	.17*	.10*	.13	.10	-.11	-.07	.05	.02	-.30**	-.23**	-.37**	-.30**	.38**	.29**	1,195	11.15**	

Note. EC = CDS II external control; LC = CDS II locus of causality; PC = CDS II personal control; ST = CDS II stability. All  $\beta$  coefficients are from the final step in the analysis, and all  $r$  values are structure coefficients.

\* $p < .05$ . \*\* $p < .01$ .

Although Brickman et al.'s (1982) structure would view these dimensions as independent, our research indicates some overlap between them, at least as measured by the APCSS. These results are similar to those obtained by Michlitsch and Frankel (1989). Despite this overlap, the two dimensions appear to function in a differential manner. Modest support was found for the APCSS's relation to methods of coping, as hypothesized. Not only did the cause and solution scales of the APCSS contribute to a statistically significant amount of the variance with respect to endorsement of methods of coping, it did so better than a competing structure of attribution as measured by the CDS II. Again, although the relation between the APCSS and the MoCS is modest, it does emphasize that attribution style may have importance in relation to internal coping strategies, such as those in the Avoidance Coping subscale.

Our results in relation to avoidance coping strategies are in need of replication and further investigation. We found that internal attributions for cause were related to the tendency to use avoidance coping strategies as anticipated. We also found that external attributions for solution were related to the use of avoidance coping strategies. These findings, if replicated, have important implications for working with clients in terms of identifying those for whom avoidance may be likely. For example, it may be helpful to assist such clients in activating more internal solution attributions and thus reduce the tendency to use maladaptive avoidance strategies. Additionally, it may be helpful to work with clients to reduce internal attributions for problem cause when these may be influencing the tendency to use avoidance coping strategies. In terms of professional coping, we found that a certain level of external attribution for solution and internal attribution for problem cause is linked to the use of professional coping. This connection warrants replication and further investigation.

With regard to self-efficacy, we found that both the cause and solution dimensions of the APCSS were moderately related to self-efficacy in the hypothesized manner over and above the CDS II's relationship to self-efficacy. The results indicated that higher self-efficacy is related to more external attributions of problem cause and internal attributions of problem solution. This finding has potentially important implications for work with individuals. In particular, the link between internal responsibility for problem solution combined with external responsibility for problem cause may signify individuals who are at a high degree of readiness to address their problems in an effective manner. Again, this finding needs to be replicated and certainly deserves further investigation. Furthermore, given that we examined the construct of GSE in this study, it is reasonable to suggest that had we looked more specifically at self-efficacy in relation to problem solving in specific contexts and/or specific types of problem solving, a stronger relationship would most likely have been revealed. Bandura (1982, 1986) has



demonstrated that stronger relations exist when self-efficacy is defined in a specific manner. Future work could address this issue.

Although the findings in this study illuminate new issues and avenues along which to proceed with research on attribution and help seeking, they should be considered within the context of the limitations of the present work that are largely those of external and internal validity. First, the results from this homogeneous sample cannot be generalized to the population at large. The nonrepresentativeness of college students, particularly with regard to age and education level, prevents these results from having strong external validity. Furthermore, the imbalance in the sample on gender and ethnicity dimensions also limits the ability to generalize our findings. Encouragingly, despite the homogeneity of the population sampled and the resulting possibility of attenuated relations, statistically significant relations were found among the APCSS, two of the MoCS scales, and the GSE. It is also important to acknowledge that the incremental validity found is in the context of the reported  $R^2$  values. Although we acknowledge that the change in  $R^2$  values is modest, we also note that the contribution to prediction is significant over and above that of an established measure of attribution. Additionally, the contribution of attributions for problem solutions is not only statistically significant but also theoretically consistent. Thus, although the present findings require replication in future work, it is at least possible that a more heterogeneous population would yield a larger range of responses and help establish an even stronger relationship than found in this research. The second main limitation of the study involved the possible sample variance included in the APCSS. The APCSS was generated using a factor analysis, and although support for the two factor solution was provided, it is important to replicate the two-factor structure in future research. Another limitation in the present research comes from using a newly designed measure of coping style, the MoCS, to establish the incremental validity of the APCSS. Although the present research found support for the three-factor structure underlying the MoCS, this structure and the validity and reliability of the obtained scores from the MoCS needs to be further established. Additionally, the third factor, Spiritual Coping, had only two items and thus may be unstable.

In conclusion, there are several implications that can be drawn from these results. First, it seems possible to measure people's attributions along the dimensions specified in Brickman et al.'s (1982) structure of attribution. Moreover, Brickman et al.'s structure provides a view of attribution that is not currently covered in other existing structures of attribution. Brickman et al.'s structure provides a new theoretical structure from which to understand the way in which people make decisions about the utility of different coping methods. Additionally, the relationships between attributions and self-efficacy provide preliminary support for the potential importance of attribu-

tional orientations in the counseling process. Future research should concentrate on further internal and external validation of the APCSS and on the potential to use this theory as Brickman et al. intended it: as a way to understand the helping and coping strategies of individuals. Such work could be used in supporting the contention that matching treatment to clients along the two dimensions of the model is crucial for successful outcome.

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