

Suggested APA style reference: Perosa, S. L., Perosa, L. M., & McDaniel, T. (2010). *The relationship between coping style, depression and stages of change in cardiac rehabilitation patients*. Retrieved from http://counselingoutfitters.com/vistas/vistas10/Article_74.pdf

Article 74

The Relationship Between Coping Style, Depression and Stages of Change in Cardiac Rehabilitation Patients

Sandra L. Perosa, Linda M. Perosa, and Teresa McDaniel

Perosa, Sandra, L., is a Professor at the University of Akron. She teaches courses in counseling theory, human development, practicum, and techniques of counseling. Her research interests are: attachment and individuation, trauma, resilience and coping.

Perosa, Linda, M., is an Associate Professor at the University of Akron. She teaches courses in marriage and family theory, marriage counseling, techniques, medical issues in family counseling, and outcome research in marriage and family. Her research issues include eating disorders, competencies in marriage and family, attachment and individuation.

Mc Daniel, Teresa, is at the Centerstone of Indiana Counseling Center, Richmond. She works with adults. Her research interests are in stages of change.

In the past fifteen years research focused on variables related to trauma, resiliency, adaptation, and stages of change to enhance our understanding of how individuals deal with trauma and crises in their lives has burgeoned. Models have been proposed that describe how growth occurs after confronting traumatic events (Calhoun & Tedeschi, 2006; Tedeschi & Calhoun, 1995; Tedeschi, Park, & Calhoun, 1998). Professionals focus on enhancing adaptation and development in clients as they move forward and give their life meaning. Concurrent with the extant research, recent legislation has opened the way for counselors to expand their work settings to include medical centers, e.g., the Veterans Administration, in which they deal with military personnel confronting an array of traumatic experiences and medical crises. In response to these forces, the new CACREP Standards call for the inclusion of trauma research findings in the curriculum and for the provision of students with clinical experience in these settings (CACREP, 2009). The research project described in this paper is relevant for counselors in that it provides evidence on how individuals cope with a medical crisis and adapt to the challenges they must confront. Thus it informs counselors how they can best help their clients move forward.

A major trauma confronting an individual is the experience of a life-threatening medical event such as a myocardial infarction (MI) and severe coronary heart disease (CAD). Research has indicated that often 40% to 50% of patients drop out of cardiac rehabilitation programs which complicates their recovery and adjustment. A model that

has recently impacted our understanding of how individuals adapt to crises is the Transtheoretical Model (TTM) developed by Prochaska and DiClemente (1982) and Prochaska, Norcross, & DiClemente (1994). Central to the model is the view that individuals traverse through five stages in the process of altering their behavior: (a) Precontemplation - individuals have no intention to change, b) Contemplation - individuals are aware there is a problem and are thinking of making changes, (c) Preparation - individuals combine the intentions of changing behavior with some attempts at behavior change, (d) Action - individuals make modifications, (e) Maintenance - individuals work at relapse prevention and maintaining gains made. Besides identifying the stages of change, the model also describes nine processes that are similar to coping styles and include activities such as consciousness raising and emotional arousal. The nine processes have been categorized into two coping styles: experiential and behavioral. The third component of the TTM is a hierarchical list of factors such as situational problems, maladaptive beliefs, and interpersonal conflicts that impede the individual from making changes.

What factors foster transition across the stages? According to Prochaska and DiClemente (1982), decisional balance, in which the pros outweigh the cons related to changing a targeted behavior, is critical in determining whether the individual moves from stage to stage. Another predictor of change across the stages is self-efficacy, or the belief that the individual will be able to make the life-style change. Numerous studies have supported the relevance of the TTM for understanding smoking cessation, weight loss, exercise programs, healthy food choice, and participation in counseling. Although most of the studies on the stages have utilized cross-sectional designs, a few studies have been longitudinal. The longitudinal studies have yielded mixed findings concerning the utility of decisional balance and self-efficacy beliefs for predicting stage transitions (Armitage, Sheeran, Connor, & Arden, 2004; Herzog, Abrams, Emmons, Linnan, & Shadel, 1999). None have been conducted with CAD patients. Other variables from the theory of planned behavior (TPB), such as perceived behavioral control, attitude toward change, and behavioral intentions, also have been applied to the TTM and have yielded mixed findings in predicting change within or across the stages (Armitage et al., 2004; Armitage, 2006) but these variables have not been assessed with CAD patients.

Two additional variables identified by researchers that have predicted patient adjustment and well-being are coping style and depression. Much of the research on coping has centered on Lazarus and Folkman's (1984) cognitive view of coping. Scholars have identified two types of coping behaviors, problem-focused (i.e., efforts to alter the environment) and emotion-focused coping (i.e., reappraisal of the way an encounter is interpreted or attended to) that categorize coping strategies. Studies that have investigated coping in relation to cardiac rehabilitation have identified how specific strategies are related to adjustment at different phases of treatment but not to the TTM specifically.

Another body of research has studied the impact of depression on cardiac rehabilitation outcome and confirmed that patients with depression are three times more likely to be noncompliant with medical regimens. Depression also has been found to be associated with a higher rate of future cardiac events and mortality in cardiac patients. Thus, although scholars have found that the aforementioned variables impact client outcome in cardiac patients, a major weakness in the extant research is the failure to link

how these variables are related to movement within or across the stages of change in the TTM.

The purpose of this study was to further our understanding of how coping style and depression are associated with CAD patients' transitions through the stages as they make lifestyle alterations. It extends prior research on CAD patients because it (a) is longitudinal, (b) assesses their change *within* each stage of the TTM, and (c) includes coping style and depression as predictors.

Method

Participants

The participants were 62 patients enrolled in a hospital-based outpatient, Phase II cardiac rehabilitation program at three hospitals located in urban settings in the Midwest. There were 43 males and 19 females. Forty-two were married, 8 were divorced, 9 were widowed, and 3 had never been married. Fifty-six were Caucasian and 5 were African American.

Twenty-seven participants had participated in CAD programs ranging from 4 to 8 weeks. Twenty had completed a 6-week program and seven had completed an 8-week program. Thirty-nine participants had completed treatment programs ranging from nine to twelve weeks. Most participants in the group (34) had completed 12-week programs.

The goals of all the programs were similar, yet they varied in how they met their goals. In the six 8-week programs, patients exercised on site two times per week. They also attended classes one hour per week. The classes dealt with healthy eating, stress management and psychological issues. In the 12-week program, patients exercised three times per week on site for 30 minutes and met 20 minutes per week for an education class or attended three one-hour education workshops.

Instruments

Stages of change were assessed by the Stage of Change Questionnaire (SOCQ; McConaughy, Prochaska, & Velicer, 1983). The SOCQ consists of four scales (Precontemplation, Contemplation, Action, and Maintenance) with eight items per scale that assess the participant's readiness for change. In responding to each item, participants were asked to list a problem they are currently dealing with in their treatment and rate the extent to which they agree or disagree with each statement based on how they feel right now. The participants received a score on each scale and could score high on more than one scale. This is consistent with the TTM that argues that an individual can be in more than one stage of the model at any time.

Coping style was investigated with the 66-item Revised Ways of Coping Questionnaire (WCQ; Folkman & Lazarus, 1988). It contains eight coping scales (i.e., Confrontive coping, Distancing, Self-control, Seeking Social Support, Accepting Responsibility, Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal). Depression level was determined by the Beck Depression Inventory-11 (Beck, Steer, & Brown, 1996).

All measures had demonstrated reliability and validity in several studies. The participants completed the measures when they entered their cardiac rehabilitation program and again after completion of the program.

Results

Preliminary Analyses

In order to identify each participant's stage of change when they entered a cardiac rehabilitation program, their scores from the SOCQ completed at pretest were calculated. The patient's highest subscale score was used to determine their stage of change. However, some patients scored within 1 or 2 points difference on two scales. Therefore, three additional categories were created into which participants could be classified (i.e., Precontemplation-Contemplation, Contemplation-Action, and Action-Maintenance). This was done because the test manual provided for the stages of change measure does not provide information on how to classify a participant when they score high on more than one scale.

The participants were at different stages of change based on their highest pretest scale scores. Three participants were in the Precontemplation stage; five were in the Precontemplation-Contemplation stage; 14 were in the Contemplation stage, and 19 were in the Contemplation-Action stage. Another 19 participants were in the Action stage and five were in the Action-Maintenance stage. Finally, one participant was in the Maintenance stage. Thus, the majority of the sample was in the Contemplation stage or Contemplation-Action stage when they entered cardiac rehabilitation. This finding is consistent with the TTM regarding clients who are beginning treatment; they are most likely to be contemplating changing their behavior, but they could be in several stages of the model based on which behaviors they are focused on changing in their treatment protocol.

Next means, standard deviations, and reliability estimates (Cronbach's Alpha) were computed for the entire sample on the pretest and posttest variables in the study. Alpha coefficients ranged from .93 (on the BDI) to a low of .68 on the Precontemplation Stage pretest scale.

The scale means and standard deviations were consistent with means described in the literature. It is noteworthy that the mean for the BDI-II (Depression) was in the low range. The means and standard deviations were also computed separately for males and females. They, too, were consistent with the extant research. A series of independent t-tests were calculated comparing the mean score of the female group with the mean score of the male group on each of the pretest scores. The results indicated that there was a significant difference between the mean of the two groups [$t(64) = 2.666, p < .05$] on the BDI-II. The mean of the female group ($M = 10.68$) was significantly higher than the mean of the male group ($M = 5.93$). Likewise, there was a significant difference between the mean of the two groups [$t(60) = 2.054, p < .05$] on the Accept Responsibility coping scale. The mean for the male group ($M = 3.38$) was significantly higher than the mean of the female group ($M = 1.89$).

Because significant sex differences were obtained for some of the variables in this study, and because there were too few females in the sample to compute separate analyses for the females and males, sex was entered as an independent variable in each of the hierarchical multiple regression analyses.

Primary Analyses

The General Hypothesis stated that Sex plus pretest scores on Coping Style (i.e., Social Support, Accept Responsibility, Escape-Avoidance, Confrontive, Distancing, Self-Control, Planful Problem Solving, and Positive Reappraisal), and Depression are significantly related to the posttest Stage of Change scores controlling for the pretest Stage of Change scores. This hypothesis was tested using eight separate hierarchical multiple linear regressions; four in which sex and the coping scale scores predicted change *within* each of the four stages in the TTM model, and four analyses in which sex and the depression scores predicted change *within* each of the four stages. Specifically, for each regression analysis, the pretest Stage of Change scale scores for the scale used as the dependent variable in the analysis were entered in step one; in step two, the pretest Stage of Change scores and the other independent variables (i.e., the pretest scores on these variables) were entered. The posttest scores for the Stage of Change scale being investigated served as the dependent variable. Thus, change *within* each stage of change was assessed by covarying the pretest scores for that stage and using the posttest scores for that stage as the dependent variable in each analysis. Since this study was exploratory, a two-tailed test of significance was utilized for each hypothesis.

The results revealed that coping style was significantly associated with change within three stages in the TTM model. Tables 1, 2, and 3 present the findings. The results for coping style and the Precontemplation stage were not supported and are not tabled.

Specifically, the hypothesis stating that sex and coping style are significantly related to change within the Contemplation Stage was partially supported (see Table 1). The overall model was significant [$F(10, 51) = 2.983, p < .01$]. The change in R^2 from step one to step two also was significant [$F \text{ Change}(9, 51) = 2.335, p < .05$]. Beta weights for the variables in step two reveal that the Coping Style scales of Escape-Avoidance [$t(51) = -1.990, p < .05$] and Planful Problem Solving [$t(51) = -3.256, p < .017$] are significantly negatively related to the Contemplation Stage posttest scores, while the Confrontive coping scale [$t(51) = 2.385, p < .001$] is significantly positively associated with the Contemplation Stage posttest scores. Sex did not significantly contribute to the prediction. The variables in step two of the model explained 26% ($R^2 \text{ Change} = .26$) of the variance in the post Contemplation Stage scores controlling for the Contemplation Stage pretest scores.

In addition, there was partial support for the hypothesis stating that sex and coping style are significantly related to change within the Action Stage (see Table 2). The overall model was significant [$F(10, 51) = 2.389, p < .05$]. The change in R^2 from step one to step two also was significant [$F \text{ Change}(9, 51) = 1.991, p < .05$]. Beta weights for the variables in step two reveal that the Coping Style scales of Escape-Avoidance [$t(51) = -2.057, p < .05$] and Planful Problem Solving [$t(51) = -3.225, p < .01$] are significantly negatively related to the Action Stage of Change posttest scores, while the Confrontive coping scale [$t(51) = 2.260, p < .05$] is significantly positively related to the Action Stage posttest scores. Sex did not significantly contribute to the prediction. The variables in step two explained 24% ($R^2 \text{ Change} = .24$) of the variance in the Action Stage posttest scores controlling for the Action Stage pretest scores.

The hypothesis stating that sex and coping style are significantly related to change within the Maintenance Stage, also was partially supported (See Table 3.) The overall model was significant [$F(10, 51) = 3.655, p < .001$]. The Change in R^2 from step one to

step two was significant [F Change (9,51) = 3.591, $p < .01$]. Beta weights for the variables in step two reveal that Sex [t (51) = 2.139, $p < .05$], and the Coping Style scales of Confrontive coping [t (51) = 2.187, $p < .05$] and Distancing [t (51) = 2.601, $p < .01$] are significantly positively associated with the Maintenance Stage posttest scores, controlling for the Maintenance Stage pretest scores. In contrast, the coping scales of Escape-Avoidance [t (51) = -2.538, $p < .01$], Planful Problem Solving [t (51) = -2.539, $p < .01$], and Positive Reappraisal [t (51) = -1.973, $p < .05$] are significantly negatively related to the Maintenance Stage posttest scores, controlling for the pretest Maintenance Stage scores. The variables in step two of the model explained 37% ($R^2 = .37$) of the variance on the Maintenance Stage posttest scores.

The hypotheses which predicted that Sex and the Beck Depression Inventory-II pretest scores are significantly related change within each of the Stages of Change were not supported.

Discussion

There were several important findings in this study. Most noteworthy is that coping style was significantly related to change within the Contemplative, Action and Maintenance stages. It was not significantly associated with change in the Precontemplative Stage. This is consistent with the mixed findings from other longitudinal studies examining the impact of variables that foster movement within or across stages. Specifically, the results of the regression analyses in this study revealed that Confrontive coping was significantly positively related to change in the Contemplation, Action, and Maintenance Stage scores from pretest to posttest. The Distancing coping style and Positive Reappraisal also were significantly positively related to change in the Maintenance Stage scores from pretest to posttest.

Negative predictions were also found. Planful Problem Solving coping and Escape-Avoidance coping were significantly negatively related to changes in the Contemplation, Action, and Maintenance Stages from pretest to posttest. Since research investigating the relationship between coping style (as assessed by the Ways of Coping scale) and the stages of change is lacking, no comparison with similar research findings was possible. One can speculate, however, how these coping strategies may be associated with change in the Contemplation, Action, and Maintenance stages.

Confrontive coping is a problem-focused coping strategy and is described as an aggressive interpersonal effort to alter the situation (Folkman, Lazarus, Gruen, & DeLongis, 1986). With Confrontive coping the individual tends to act quickly. In other words, the individual may not spend a lot of time making detailed plans about how he/she will resolve the problem or make changes. Questions on the Ways of Coping Questionnaire reflect this idea. An example of this is, "I did something which I didn't think would work, but at least I was doing something." The significant positive relationship to change in the Contemplation, Action, and Maintenance stages for Confrontive coping may indicate the need for an individual to be decisive and take action rather than ponder on what needs to be done for an extended period of time.

Conversely, Planful Problem Solving coping is a problem-focused coping strategy that tends to be a slower, more methodical strategy for solving a problem or making changes. Perhaps, because of this, patients may bog down in the decision-making

process and fail to make the changes as quickly or at all. This is reflected in the Ways of Coping question, “I came up with a couple different solutions.” This may in part explain the significant negative relationship found for Planful Problem Solving coping in regard to change in the Contemplation, Action, and Maintenance stages from pretest to posttest.

That being said, the research literature tends to support the use of problem-focused coping styles, especially Planful Problem Solving. For example, some research indicates that the use of Planful Problem Solving coping techniques result in fewer psychological symptoms, while the use of Confrontive coping strategies can result in worsened emotional states (Folkman et al., 1986). Future research is needed to clarify the meaning of these findings.

Another significant finding was that the use of Distancing coping strategies was significantly positively related to change in the Maintenance stage. Distancing is an emotion-focused style of coping. Research indicates that Emotion-focused coping strategies are often used when things are seen as not amenable to change and the individual abandons efforts at altering that situation (Folkman, 1984; Folkman & Lazarus, 1985). Appropriate emotion-focused coping strategies such as Distancing, therefore, are used to enable an individual to accept the situation. An example of this is reflected in the Ways of Coping question, “I looked for the silver lining, so to speak; tried to look at the bright side of things.” Thus, it may be that the use of Distancing coping strategies in the Maintenance stage aid the person in accepting the limitations (although still maintaining) the needed lifestyle changes.

As noted, Escape-Avoidance coping was significantly negatively related to change in the Contemplation, Action, and Maintenance stages from pretest to posttest. Escape-Avoidance also is an emotion-focused coping strategy. This coping strategy is reflected in the Ways of Coping question, “I wished the situation would go away or somehow be over with.” Researchers have reported that individuals who continue to use Escape-Avoidance coping tend to be non-compliant with treatment regimens for heart disease and heart attack (Feifel, Strack, & Nagy, 1987; Lazarus & Folkman, 1985; Suls & Fletcher, 1985) and see little need for lifestyle changes (Robbins, 1991). Therefore, the findings regarding Escape-Avoidance coping in this study confirm previous research findings.

In addition, Positive Reappraisal coping was significantly negatively related to change in the Maintenance stage. Positive Reappraisal is an emotion-focused coping strategy in which the problem remains, but is reframed so that a more benign emotion is created (Lazarus & DeLongis, 1983). Scholars have noted that reappraisal can either be realistic or defensive. Perhaps some of the participants in this study made an unrealistic assessment of their situation. For example, after receiving medical treatment and participating in cardiac rehabilitation, some cardiac patients may have felt better than they had for a long time. As a result, they may have assessed their situation unrealistically and assumed that they really didn’t have a problem and, therefore, they would be fine without making the changes advocated by their doctors.

An unexpected finding in this study was that depression was not significantly related to changes in any of the Stages of Change scores from pretest to posttest. Research has indicated that depression interferes with compliance with medical regimens, including cardiac rehabilitation (Schweitzer-Courtice, 1997). Also, a recent meta-analysis by DiMatteo, Lepper, & Croghan (2000) reported that depressed patients are

three times as likely to be noncompliant with medical treatment regimens than patients without depression. Therefore, the findings from the current study are inconsistent with previous research. It is noteworthy that the participants in this study were not experiencing high or even moderate levels of depression that might have made them less compliant with rehabilitation. Scholars have noted that after cardiac events 13-19% of patients report major depression and 27-30% report minor depression (Forrester, Lipsey, Teitelbaum, DePaulo, & Andrezejewski, 1992; Ladwig, Roll, Breithardt, Budde, & Borggreffe, 1994). The high levels of depression, according to the literature, become prominent three to four days after hospitalization and are also noticeable in the early phases of cardiac rehabilitation. This may indicate that the higher levels of depression reported in the previous literature occurred mostly in Phase I cardiac rehabilitation patients, and by the time they start Phase II cardiac rehabilitation some of the depressive symptoms have declined. Also, it may be that the majority of patients with higher levels of depression do not even enter Phase II cardiac rehabilitation programs.

Unexpectedly, sex and the pretest scores and coping style were significantly related to change in the Maintenance stage. Sex and Confrontive Coping and Distancing were significantly positively associated with change, whereas sex and Escape-Avoidance, Planful Problem Solving, and Positive Reappraisal coping were significantly negatively related to change in the Maintenance stage. Unfortunately, because there were not enough females in this study to conduct separate analyses for males and females, it is not possible to specify the sex differences in coping utilized in the Maintenance stage. Future research is needed using a larger sample of females and males to highlight the differences. In addition, since this study did not use measures of self-efficacy or pros and cons, future research is needed to test whether the influence of coping style is mediated through pros and cons and self-efficacy as suggested by the TTM model.

In summary, while this study adds to the extant research on the TTM, it is noteworthy that it also informs counselors of the types of coping strategies to emphasize when they work with CAD patients who are at various stages of change as they adapt to the trauma of experiencing a life threatening medical event such as a myocardial infarction. Confrontive coping strategies are useful in the contemplative, action, and maintenance stages. Distancing and positive reappraisal cognitive strategies are also effective in the maintenance stage. The findings further suggest that reliance on planful problem solving and escape-avoidance strategies might not be as helpful for CAD clients in these stages.

References

- Armitage, C. J. (2006). Evidence that implementation intentions promote transitions between the stages of change. *Journal of Consulting and Clinical Psychology*, 74, 141- 151.
- Armitage, C. J., Sheeran, P., Connor, M., & Arden, M. I. (2004). Stages of change or changes of stage? Predicting transitions in transtheoretical model stages in relation to healthy food choice. *Journal of Consulting and Clinical Psychology*, 72, 491-499.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II manual*. San Antonio: Harcourt Brace & Company.

- Council for Accreditation of Counseling and Related Educational Programs. (2009). *CACREP 2009 standards*. Alexandria, VA: Retrieved from <http://www.cacrep.org>.
- Calhoun, L.G., & Tedeschi, R.G. (Eds.) (2006). *Handbook of posttraumatic growth: Research and practice*. Mahwah, NJ: Erlbaum and Associates
- DiMatteo, M. R., Lepper, H. S., & Croghan, T. W. (2000). Depression is a risk factor for noncompliance with medical treatment: Meta-analysis of the effects of anxiety and depression on patient adherence. *Archive of Internal Medicine*, 160, 2101-2107.
- Feifel, H., Strack, S., & Nagy, V. T. (1987). Coping strategies and assorted features of medically ill patients. *Psychosomatic Medicine*, 49, 616-625.
- Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology*, 46(4), 839-852.
- Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48(1), 150-170.
- Folkman, S., & Lazarus, R. S. (1988). *Manual for the ways of coping questionnaire: Research edition*. Palo Alto, CA: Consulting Psychologists Press.
- Folkman, S., Lazarus, R. S., Gruen, R., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology*, 50, 571-579.
- Forrester, A. W., Lipsey, J. R., Teitelbaum, M. L., DePaulo, J. R., & Andrezejewski, P. L. (1992). Depression following myocardial infarction. *International Journal of Psychiatry in Medicine*, 22(1), 33-46.
- Herzog, T. A., Abrams, D. B., Emmons, K. M., Linnan, L. A., & Shadel, W. G. (1999). Do processes of change predict smoking cessation movements? A prospective analysis of the transtheoretical model. *Health Psychology*, 18, 369-375.
- Ladwig, K. H., Roll, G., Breithardt, G., Budde, T., & Borggrefe, G. (1994). Post-infarction depression and incomplete recovery 6 months after acute myocardial infarction. *The Lancet*, 343, 20-23.
- Lazarus, R. S., & DeLongis, A. (1983). Psychological stress and coping in aging. *American Psychologist*, 38, 245-254.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- McConaughy, E. A., Prochaska, J. O., & Velicer, W. F. (1983). Stages of change in psychotherapy: Measurement and sample profiles. *Psychotherapy: Theory, Research and Practice*, 20(3), 368-375.
- Prochaska, J. O., & DiClemente, C. C. (1982). Transtheoretical therapy: Toward a more integrative model of change. *Psychotherapy: Research and Practice*, 20, 161-173.
- Prochaska, J. O., Norcross, J. C., & DiClemente, C. C. (1994). *Changing for good*. New York: William Morrow and Company
- Robbins, B. (1991). Social work and the psychosocial issues of cardiac rehabilitation. *Journal of Cardiopulmonary Rehabilitation*, 11, 240-247.

- Schweitzer-Courtice, L. (1997). A study of the relationship between psychosocial factors and attrition, compliance, gains, and recidivism in phase II cardiac rehabilitation. (Doctoral dissertation, The University of Akron, 1997). *Dissertation Abstracts International*, 58, 0392.
- Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and nonavoidant coping strategies: A meta-analysis. *Health Psychology*, 4, 249-288.
- Tedeschi, R.G., & Calhoun, L.G. (1995). *Trauma and transformation: Growing in the after-math of suffering*. Thousand Oaks, CA: Sage Publishers
- Tedeschi, R. G., Park, C. L., & Calhoun, L. G. (Eds.) (1998). *Post Traumatic Growth: Positive changes in the aftermath of crisis*. Mahwah, NJ: Erlbaum and Associates

Note: This paper is part of the annual VISTAS project sponsored by the American Counseling Association. Find more information on the project at: http://counselingoutfitters.com/vistas/VISTAS_Home.htm

Table 1

Hierarchical regression analyses for coping style and sex predicting the contemplation stage posttest scores controlling for the contemplation stage pretest scores

VARIABLES	F	df ₁	df ₂	P	B	Std Error	β	t	p	Bivariate r	Partial r	R	R ²	R ² Adj	ΔR^2 Step 1-2	F Chg	df	df	Sig F Change
Full Model	2.983	10	51	.005**								.611	.374	.248					
Step 1															.110	7.381	1	60	.009**
CONSTANT					17.495	4.063		4.305	.001***										
CONTPR					.377	.139	.332	2.705	.009**	.332	.332								
Step 2															.263	2.335	9	51	.028*
CONSTANT					12.699	4.710		2.696	.010**										
CNTPR					.525	.149	.463	3.536	.001***	.332	.447								
SEX					.636	1.581	.050	.402	.689	.037	.057								
SOCSUPR					8.714	.209	.066	.416	.679	.148	.059								
ACCRESP					.456	.340	.203	1.344	.185	.106	.187								
ESCAVOID					-.426	.214	-.324	-1.990	.052*	.094	-.271								
CONFRONT					.657	.276	.415	2.385	.021*	.183	.320								
DISTANCG					.457	.272	.242	1.678	.100	.154	.231								
SLFCNTRL					.143	.236	.101	.609	.545	.222	.086								
PLANPROB					-.816	.251	-.578	-3.256	.002**	-.145	-.418								
POSREAP					-7.837	.222	-.072	-.354	.725	.031	-.050								

Note. N = 62; * = $p < .05$; ** = $p < .01$; *** = $p < .003$. CONTPR = Contemplation Pretest; SOCSUPP = Social Support; ACCRESP = Accept Responsibility; ESCAVOID = Escape Avoid; CONFRONT = Confrontive; DISTANCG = Distancing; SLFCNTRL = Self-Control; PLANPROB = Planful Problem Solving; POSREAP = Positive Reappraisal.

Table 2

Hierarchical regression analyses for coping style and sex predicting the action stage posttest scores controlling for the action stage pretest scores

VARIABLES	F	df ₁	df ₂	P	B	Std Error	β	t	p	Bivariate r	Partial r	R	R ²	R ² Adj	ΔR^2 Step 1-2	F Chg	df	df	Sig F Change
Full Model	2.389	10	51	.021*								.569	.323	.188					
Step 1															.081	5.183	1	60	.026*
CONSTANT					21.066	3.656		5.763	.001***										
ACTPR					.283	.124	.284	2.278	.026*	.284	.284								
Step 2															.242	1.991	9	51	.060
CONSTANT					20.055	4.320		4.642	.001***										
ACTPR					.3344	.138	.345	2.500	.016*	.284	.333								
SEX					3.257	1.443	.000	.002	.998	.034	.000								
SOCSUPR					.356	.188	.308	1.897	.064	.299	.259								
ACCRESP					.170	.310	.086	.549	.585	.008	.077								
ESCAVOID					-.401	.195	-.348	-2.057	.045*	-.032	-.279								
CONFRONT					.572	.253	.412	2.260	.028*	.118	.304								
DISTANCG					.102	.247	.062	.415	.680	-.001	.059								
SLFCNTRL					8.295	.215	.007	.039	.969	.091	.005								
PLANPROB					-.746	.231	-.603	-3.225	.002**	-.105	-.415								
POSREAP					7.974	.202	.083	.395	.695	.110	.056								

Note. N = 62; * = $p < .05$; ** = $p < .01$; *** = $p < .003$. ACTPR = Action Pretest; SOCSUPP = Social Support; ACCRESP = Accept Responsibility; ESCAVOID = Escape Avoid; CONFRONT = Confrontive; DISTANCG = Distancing; SLFCNTRL = Self-Control; PLANPROB = Planful Problem Solving; POSREAP = Positive Reappraisal.

Table 3

Hierarchical regression analyses for coping style and sex predicting the maintenance stage posttest scores controlling for the maintenance stage pretest scores

VARIABLES	F	df ₁	df ₂	P	B	Std Error	β	t	p	Bivariate r	Partial r	R	R ²	R ² Adj	ΔR^2 Step 1-2	F Chg	df	df	Sig F Change
Full Model	3.655	10	51	.001***								.650	.422	.307					
Step 1															.049	3.030	1	60	.087
CONSTANT					18.158	3.441		5.277	.001***										
MAINTPR					.246	.141	.221	1.741	.087	.221	.221								
Step 2															.373	3.591	9	51	.002**
CONSTANT					10.968	3.696		2.968	.005										
MAINTPR					.307	.151	.276	2.033	.047*	.221	.276								
SEX					3.173	1.484	.260	2.139	.037*	.230	.290								
SOCSUPR					.341	.181	.269	1.884	.065	.137	.257								
ACCRESP					.484	.316	.225	1.533	.132	.105	.212								
ESCAVOID					-.522	.206	-.414	-2.538	.014**	.175	-.338								
CONFRONT					.740	.263	.487	2.817	.007**	.249	.370								
DISTANCG					.647	.249	.358	2.601	.012**	.272	.345								
SLFCNTRL					.180	.220	.132	.819	.417	.289	.115								
PLANPROB					-.581	.229	-.429	-2.539	.014**	-.149	-.338								
POSREAP					-.414	.210	-.395	-1.973	.054*	.019	-.269								

Note. N = 62; * = $p < .05$; ** = $p < .01$; *** = $p < .003$. MAINTPR = Maintenance Pretest; SOCSUPP = Social Support; ACCRESP = Accept Responsibility; ESCAVOID = Escape Avoid; CONFRONT = Confrontive; DISTANCG = Distancing; SLFCNTRL = Self-Control; PLANPROB = Planful Problem Solving; POSREAP = Positive Reappraisal.