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ABSTRACT

Since the incidence of cancer in this country is high and the cancer survival rates are increasing, it is important to study coping strategies in cancer patients. As survival time lengthens, coping strategies that might affect the quality of a patient's life become increasingly important. A study was conducted to examine coping strategies in newly diagnosed head and neck cancer patients (N=35). The relationships between the use of approach and avoidant coping strategies and the physical and emotional distress of subjects during the early stages of cancer treatment were evaluated. Patients were categorized on the basis of coping strategy at the time of diagnosis and were then evaluated twice during the course of their treatment at 4 to 6 week intervals. The results indicated that cancer patients who predominantly employed either approach or avoidant strategies had lower initial levels of emotional distress than did patients who did not use either of these strategies. Although symptoms of distress decreased in patients using approach or avoidance, symptoms increased for those patients who did not use these strategies. The level of stress for this cancer population was found to be highest at the point of confirmed diagnosis and to recede during the course of treatment. These findings suggest both theoretical and clinical implications. (NB)

COPING WITH CANCER

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Running head: Coping with Cancer

ABSTRACT

The study examined coping strategies in head and neck cancer patients. The relationships between the use of approach and avoidant coping strategies and the physical and emotional distress of thirty-five newly diagnosed head and neck cancer patients during the early stages of cancer treatment were evaluated. Patients were categorized on the basis of coping strategy at the time of diagnosis and then evaluated twice during the course of their treatment at four to six week intervals. Cancer patients who predominantly employed either approach or avoidant strategies had lower initial levels of emotional distress than patients who did not use either of these strategies. Although symptoms of distress decreased in patients using approach or avoidance, symptoms increased for those patients who did not use these strategies. The level of stress for this cancer population is highest at the point of confirmed diagnosis and recedes during the course of treatment. The theoretical and clinical implications of these findings are discussed.

The need to study coping strategies in cancer is highlighted by two important observations. First, the incidence of cancer is high. Cancer will strike nearly one out of three individuals and in three out of four American families [1]. A second important fact is that cancer survival rates are increasing [1]. As survival time lengthens, coping strategies that might affect the quality of a patient's life become increasingly important.

While the study of coping is clearly essential to the comprehensive and sensitive care of cancer patients, there is increasing controversy surrounding the role coping efforts might play in cancer. Contributing to this controversy have been the methodological and theoretical shortcomings of the existing literature on coping with cancer [2].

The Psychological Literature on Coping with Cancer

Using interviews and objective psychological tests, several studies [3-9] have attempted to describe typical emotional reactions and/or defenses evident in various groups of cancer patients. Results are inconsistent. For example, while some studies [3-5] report depression in only 25% or less of their cancer patients, others [6-9] have found depression in 50% or more of cancer patients. Similarly, Derogatis et al. [10] found 47% of their patient population were distressed enough to warrant a DSM-III psychiatric diagnosis. These and similar studies can offer only limited data on what might be the more common patterns of coping in cancer. Numerous methodological problems, most

notably differing cancer populations or mixed populations, vague or differing criteria for assessing emotional reactions, and either limited or varying [illegible]s of assessment make it difficult to compare the results of [illegible] studies. Another problem plaguing the interpretation of this research is that most investigators simply list the emotional and defensive reactions to cancer in a descriptive or anecdotal manner and offer little theoretical explanation as to why some cancer patients might react with depression or emotional disturbance and others might not.

Another group of cancer studies [11-21, 23] attempts to go beyond cataloguing emotional and defensive reactions to cancer and explores how various coping responses affect psychosocial and medical recovery variables. These studies used questionnaires, interviews, and chart review to follow patients systematically after treatment. The majority of studies [11-18] agree that denial and various forms of repression are associated with generally unfavorable outcomes in cancer, e.g., faster disease progression, heightened emotional distress, shorter length of survival, etc. While Silberfarb [19] suggests that denial might be adaptive in the early stages of cancer, only Greer, Morris, and Pettingale [20] associate denial with favorable prognostic outcome. Although one study [11] showed that patients who showed aggressiveness had earlier deaths, most studies [12,14,15,16,20] agree that responses to cancer that are assertive, self-reliant, information seeking, openly expressive, confrontational, and even hostile are related to favorable outcome. Similarly, Meyerowitz, Watkins and Sparks [21] found that a majority of their cancer

patients identified "staying busy" and "getting information" as the most helpful strategies in adjusting to chemotherapy. However, some researchers [22-23] warn that conclusions associating psychosocial factors and survival in malignant disease are premature. Cassileth et al. [23] found that the biology of disease progression in melanoma and breast cancer appeared to predominate and override the consideration of any psychosocial variables.

Although there are some important differences among the studies that comprise this literature, taken together they are certainly provocative enough to warrant continuing research into how coping responses to cancer might contribute to emotional and physical distress and ultimately to prognostic outcome. It is also worth noting here that further investigation into the particular role of psychological coping responses in cancer is likewise supported by more biologically based studies which indicate a possible relationship between physiological variables associated with tumor response and psychosocial factors [24-26].

The psychological literature reviewed here and future research would clearly benefit from a more unified theoretical framework; such a framework might explain possible relationships within this seemingly fragmented literature. Without a theoretica perspective, the meaning of denial, aggression, and other psychological constructs in coping with cancer remains unclear.

Approach-Avoidance and Coping with Stress

While there are several possible ways of conceptualizing and measuring the coping process [27-28], Roth and Cohen [29] argue

that the study of stress and coping points to two concepts central to an understanding of the response to trauma: approach and avoidance. In its simplest form, this pair of concepts refers to two basic orientations toward stressful information, or two basic modes of coping with stress. Approach and avoidance are shorthand terms for cognitive and emotional activity that is oriented either toward or away from the source of stress. These concepts underlie formulations that focus on individual styles of coping with stress [e.g., 30] and those that emphasize commonalities in response to stress and present a prototypic case of coping [e.g., 31,32]. Suls and Flethcher [33] have completed a meta-analysis of studies comparing the efficacy of attention (approach) versus avoidance as coping strategies. The approach-avoidance dimension is clearly emerging as an important construct in understanding coping processes.

Reviewing the theoretical framework for this approach-avoidance dimension in coping, Roth and Cohen [29] describe the various costs and benefits of each strategy in detail and discuss the implications of their approach-avoidance model of coping. For example, in the early stages of a trauma, avoidance can reduce stress and anxiety while allowing for a gradual recognition of the threat; later, only approach will allow for the assimilation and resolution of threat and trauma into an integrated self-structure [e.g., 32,34]. A potential cost of the avoidant strategy could be the blocking of appropriate action whereas an approach strategy might result in worry that is both time consuming and nonproductive. While these strategies can be evaluated separately, Roth and Cohen point out that they are not

necessarily mutually exclusive, for example certain aspects of threatening material can be avoided while other aspects are approached.

The approach-avoidance dimension is potentially quite helpful in studying coping in cancer because it provides a much needed theoretical framework for describing coping strategies and conceptualizing their impact on recovery. The present study, based upon the approach-avoidance model of coping, examines the effects of these coping strategies on the general emotional distress, physical distress, and psychosocial adjustment of 35 head and neck cancer patients during the early stages of cancer treatment.

Method

Subjects

Thirty-five patients having squamous cell carcinoma of the head and neck diagnosed at Stage II or greater [35] served as subjects. Subjects were recruited from patients consecutively evaluated by the Head and Neck Tumor Boards of the Comprehensive Cancer Center, Duke University Medical Center and the Veteran's Administration Hospital, Durham, NC. Over the course of the study, only one patient who was eligible to participate refused; four who agreed to participate could not complete the study because of serious medical complications and one subject died. All patients were over 18, spoke English, had no previous history of cancer or severe psychological disorder, and had a minimum life expectancy of three months.

The study sample consisted of 30 men and 5 women whose

average age was 60 years (range = 23-73). Twenty-six were white, seven were black, one was Asian American, and one was Native American. The patients' mean scores on the sociometric level of the Hollingshead and Redlich [36] two-factor index of sociometric status (1 = highest, 5 = lowest) was 4.0 (SD = 1.6). Three patients were treated for their cancer by surgery alone, 8 by radiation, 9 by surgery plus radiation, and 15 by surgery which excised the cancer but also required removal of the patient's larynx and subsequent radiation.

Measures

The following measures were collected from all Ss.

1. Structured interviews to assess coping style - In these interviews, patients were asked to talk about the impact of the disease and what it has been like to live with cancer and its treatment. The interviews were audiotaped and transcribed; then the content was rated with respect to several possible cognitive, behavioral, and affective indicators of approach-avoidance coping strategies which had been generated earlier by the researchers. These indicators included such strategies as thinking about cancer, talking about it, denying the reality of the situation, wanting more information, remembering it, distraction, and dealing with feelings. Based on the ratings, patients were characterized as high or low in terms of both approach and avoidance. Patients also recieved global ratings of approach, avoidance, or where neither strategy seemed to predominate they received the rating "no judgment." Follow-up interviews were typically much briefer because of the patient's physical condition following surgery and other demands of the treatment

regimen. Therefore, the second and third structured interviews were scored using only the global rating procedure. To determine the reliability of the interview ratings, ten randomly selected first interviews were independently rated by two raters; the percentage agreement for levels (high vs. low) of approach (100%) and avoidance (90%) was quite high as was agreement on global ratings (100%). Three groups of subjects were identified on the basis of the structured interview: 1) those high on approach and low on avoidance, (n=5); 2) those low on approach and high on avoidance, (n=12); 3) those low on both approach and avoidance, (n=18).

2. The Impact of Event Scale (IES) - This scale developed by Horowitz, Wilner, and Alvarez [37] was used to measure the patients subjective stress response to the cancer diagnosis and treatment. This scale was designed to evaluate subjective distress relative to a specific event. It consists of fifteen commonly reported experiences of intrusion and avoidance following a stressful life event. Separate subscores for intrusion and avoidance as well as a total subjective distress score were compared. Scale items for intrusion reflect cognitive and affective intrusive aspects of responding to a traumatic event such as troubled dreams or unbidden thoughts. Scale items for avoidance reflect aspects of denial such as trying to forget the event or staying away from reminders of it.

3. The Symptom Checklist-90R (SCL-90R) - This 90-item scal measures symptoms of psychological distress along nine empirically validated dimensions [38]: somatization, obsessive-

compulsiveness, interpersonal sensitivity, anxiety, depression, hostility, phobic anxiety, paranoid ideation, and psychoticism. Three global indices of distress--the General Severity Index, the Postive Symptom Total, and the Positive Symptom Distress Index--were also scored. The SCL-90R has been shown to be reliable and valid in previous studies of cancer patients. The SCL-90R focuses on current symptoms of psychological distress and was used because it is more sensitive than trait measures to changes in symptomatology that occur over time.

4. The Symptom Distress Scale [39] - This 10-item scale measures the degree of physical distress perceived by the patient with respect to nausea, mood, appetite, insomnia, pain, mobility, fatigue, bowel pattern, concentration, and appearance and also provides a total symptom distress measure. McCorkle and Young [39] focused on cancer patients in developing this scale and establishing its validity. This measure of physical distress was selected because head and neck cancer and its treatment can produce physical distress in each of the areas measured by the scale.

5. The Psychosocial Adjustment to Illness Scale (PAIS) - This scale developed by Derogatis [40] was used to evaluate health-care orientation, vocational, social, and domestic environment, extended family relationships, sexual realationships and psychological distress. A total score reflecting overall psychosocial adjustment, and separate scores reflecting adjustment within individual domains were computed.

Procedure

To evaluate the differential effects of coping strategies on

psychological and physical distress and psychosocial adjustment, measures were taken at three different time periods. The first time was within three days following the initial diagnosis of cancer and prior to the start of treatment. The second time was four to six weeks later, typically coinciding with completion of the first part of treatment when patients are either preparing for hospital discharge or returning for their first follow-up medical evaluations or continuing radiotherapy. The final evaluation took place two to three months following the initial diagnosis of cancer. At this time, patients were usually being followed on an outpatient basis and were beginning to cope with different chronic aspects of the disease.

All measures were collected at each evaluation with the exception of the Psychosocial Adjustment of Illness Scale which was given only at the final evaluation. Because of the patient's physical discomfort, items from the questionnaires were usually read to the patient by the investigator. After surgery, patients whose speech was impaired either whispered their responses to interview questions or spoke with the aid of an electronic "voice box."

Results

Approach-Avoidant Coping Strategies

From the detailed interviews at the first evaluation, it is possible to offer prototypical descriptions for the three coping categories. The Hi approach-Lo avoidance subjects spent much of their time thinking about the cancer and its impact on different aspects of their lives such as family, work, and future treatment

These subjects indicated they would sometimes like to forget about the cancer but were unable to do so. The Hi approach-Lo avoidance subjects were more likely to accept the gravity of their condition and want to learn more about it. They tended to seek out family, friends, or doctors to talk about the problems they were having living with the disease. "I think it's better to talk and get it out of your system" was a characteristic posture. Hi approach-Lo avoidance subjects were aware of strong feelings they were experiencing and were inclined to deal with them directly.

Lo approach-Hi avoidance subjects did not report spending much time thinking about cancer or its consequences. These subjects actively sought out distractions or maintained that they simply did not think about the cancer. They were generally hopeful and emphasized their faith in doctors and medical treatments. They were inclined to push their feelings aside, often times trivializing or even explicitly denying the gravity of their condition with remarks such as "It's just one of those things" or "I don't believe it is cancer."

There were two subgroups of Lo approach-Lo avoidance subjects. One group used a combination of approach and avoidant coping strategies with one or the other of these styles predominating but not to the extent seen in the other two categories of patients. The other subgroup used both coping strategies with neither predominating. In general, these subjects were much more passive and made fewer attempts to actively cope with their disease.

Approach-Avoidant Strategies and the Distress Measures

A 3 x 3 repeated measure analysis of variance was performed on scores for each distress measure (IES, SCL-90R, and the total score of the Symptom Distress Scale). The two factors were coping group and time. To deal with the problem of unequal n, a regression method was used [41]. Each effect was calculated only after controlling for all the other effects in the model. Possible confounds due to nonorthogonality were thus eliminated. For the PAIS variables, a one-way analysis of variance was performed. The means for those variables with significant effects appear in Table 1.

Insert Table 1 here

There were main effects for coping groups for the SCL-90R Global Severity Index, $F(2, 32) = 4.70$, $p < .05$. Post-hoc tests revealed that both the Hi approach-Lo avoidance and Lo approach-Hi avoidance groups had significantly lower levels of global distress than subjects in the Lo approach-Lo avoidance group (Hi-Lo vs. Lo-Lo: $t(21) = 2.36$, $p < .05$; Lo-Hi vs. Lo-Lo: $t(21) = -2.27$, $p < .05$). The General Severity Index is considered the best single global distress score of the SCl-90R combining information on the number of symptoms reflected in the Positive Symptom Total with the intensity of perceived distress reflected by the Positive Symptom Distress Index.

There were main effects for coping groups on the IES avoidance scale ($F(2, 32) = 4.24$, $p < .05$). Post-hoc tests showed that the Lo approach-Hi avoidance group scored significantly higher on IES avoidance than the Hi approach-Lo

avoidance group (t (15) = -2.67, p <.05). While this result is not surprising, it does indicate that the patients use of avoidan coping strategies was clearly apparent in their responses to both the structured interview and Impact of Event Scale.

Main effects for time were obtained for IES avoidance (F (2, 32) = 4.83, p <.05) and the IES total scores (F (2, 32) = 6.31, p <.01). Post-hoc tests revealed that IES avoidance scores decreased significantly from Time 1 to Time 3 (t (34) = 2.93, p <.01), and that the IES total score decreased significantly from Time 1 to Time 2 (t (34) = 2.55, p <.05) and Time 1 to Time 3 (t (34) = 3.94, p <.001). There was also a mair effect for time on the SCL-90R Anxiety Scale (F (2, 32) = 6.81, p <.01). Post-hoc tests revealed that anxiety level was significantly higher at Time 1 than at Times 2 and 3 (t (34) = 2.14, p <.05; t (34) = 3.55, p <.001).

Coping groups x time interactions were significant for two SCL-90R measures--the Positive Symptom Total (F (4, 64) = 4.0, p <.01), and Depression subscore (F (4, 64) = 3.25, p <.05), and for a third measure, the Obsessive-Compulsive subscore, a marginal interaction was obtained (F (4, 64) = 2.32, p = .066). As can be seen in Figures 1, 2, and 3, the pattern of means on each of these measures were highly similar. In each case symptoms were found to decrease over time for subjects in either the Hi approach-Lo avoidance or Lo approach-Hi avoidance groups. Subjects in the Lo approach-Lo avoidance group, however, showed increasing symptoms of psychological distress over time.

Insert Figures 1, 2, and 3 here

There were no significant main or interaction effects obtained on the Symptom Distress Scale or the PAIS.

Demographic and Disease Variables

Statistical analyses failed to reveal significant differences among the three coping groups on the basis of a variety of demographic (sex, race, socioeconomic status) and disease variables (stages of disease, site of tumor, treatment modality). An analysis of variance, however, did indicate a significant age effect ($F(2, 32) = 3.79$, $p < .05$). The mean age for the high approach-low avoidance group was 51 years, 63 for the low approach-high avoidance, and 60 for the low approach-low avoidance group. The relationship between age and distress variables related to coping were evaluated. In each case a 2 x 3 analysis of variance was performed with high and low age groups and the three evaluation points. Age groups were formed by splitting subjects at the median of the sample distribution. There were no significant age or age by time effects in any of the analyses. Therefore, while coping groups differed in age, age does not provide an alternate explanation for the differences found on distress measures among the coping groups.

Discussion

The results of this study indicate that patients who make use of approach or avoidance strategies to cope with cancer experience less emotional distress than patients who make little use of either of these coping methods. While cancer patients who primarily use approach or avoidance show marked reductions in symptoms of depression, obsessive-compulsiveness and overall

emotional distress during treatment, those who score low on both the approach and avoidance measure showed increasing levels of distress.

It is worth noting here that ratings confirmed that while it was possible to identify the more predominant coping strategy, the use of approach and/or avoidant coping strategies were not mutually exclusive.

Despite the preliminary nature of this study, several findings were quite interesting. One such finding was that patients who clearly use either approach (Hi approach-Lo avoidance group) or avoidance (Lo approach-Hi avoidance group) had low levels of emotional distress. Certain disadvantages have been associated with using approach or avoidance coping strategies in dealing with major life stressors. While avoidant strategies might prevent anxiety related to a traumatic event from becoming overwhelming, avoidance might also interfere with taking appropriate action and lead to procrastination or other avoidant behavior. While approach strategies might facilitate appropriate action and the ventilation of affect, confronting the source of threat might also serve to increase emotional distress. The present study found that, at least in the early stages of coping with cancer, approach and avoidant strategies had positive rather than negative consequences. In fact, patients who had the most difficulty with emotional distress were those who were passive and tended to use neither approach nor avoidance strategies to cope with cancer. Follow-up evaluation of these patients is necessary to address the theoretical viewpoint raised by Roth and Cohen [29] and Suls and Fletcher [33] that while

avoidant coping strategies might be beneficial in the short run, approach strategies are associated with more positive long term outcomes.

It is also interesting that the experience of stress associated with head and neck cancer is greatest at the point of diagnosis and recedes as the patient progresses through treatment. Stress level, as measured by the Impact of Events scale and by symptoms of anxiety on the SCL-90R, was highest at the time of diagnosis and decreased significantly over time. It has often been said that in cancer the treatment may be worse than the disease. While treatments for head and neck cancer such as surgery or radiation typically involve discomfort, pain, swallowing problems, and speech impairments [42], patients found the time immediately following diagnosis of the disease (Time 1) more emotionally stressful than the subsequent time during treatment (Time 2 and Time 3). Treatment was, in general, associated with relief of stress-related symptoms.

This study found that the effects of coping were apparent for measures of psychological distress but not for the measure of physical distress. Serious illnesses like cancer impose certain limitations on the variety of coping options normally available to an individual. Coping in head and neck cancer appears to be effective in regulating the emotional distress that might be associated with cancer and its treatment but not the physical distress.

A final concern is the level of emotional distress experienced by cancer patients. While some studies [6,8,9] have

found elevated levels of depression in the majority of cancer patients, other studies [4,5] report a much lower incidence of depressive symptoms. The present study found that at their highest level (Evaluation 3) the most distressed group of patients in the current study (the Lo approach-Lo avoidance group) showed only slightly elevated levels of depression on the SCL-90R. Overall distress in this group was only somewhat higher than the non-patient SCL-90R standardization population, while overall emotional distress for the other groups were either close to or somewhat less than a nonpatient norm. However, levels of emotional distress early in treatment may be artificially low because of the patient's hopefulness. Another possible interpretation is that the lack of symptom endorsement reflects the lack of psychological sophistication in this patient population. The head and neck cancer population has often been characterized as typically lower class with a frequent history of alcohol abuse and heavy smoking [43]. Follow-up studies are needed to determine whether this pattern of results remains the same over time.

The present study is preliminary and suffers from some limitations. This study evaluates the effects of coping only during the very early stages of treatment of this disease. Many patients are still quite hopeful at this point and, as a result, may display low levels of symptomatic distress. Coping may play either a more or less important role further along in the course of this illness when some of the major demands of chronicity begin to be experienced. We are currently following this sample of patients to determine whether coping styles

evaluated at initial diagnosis are related to recovery variables and prognostic outcomes assessed one to three years post-treatment.

The present study only used self-report indices of coping and recovery variables. More objective measures of coping such as observations of the patient, interviews with spouse and family, and more objective indices of important recovery variables such as pain [42] can be obtained. These measures could aid in the identification of behavioral correlates of these different self-reported coping strategies in future research.

While the results of this preliminary study are tentative, they would have several clinical implications if confirmed in subsequent studies. Physicians are often unsure how to identify and evaluate coping styles of their patients. Structured interview methods similar to those used in this study may provide a practical means of identifying coping styles in cancer patients. The present study also found that a brief, standardized questionnaire, the SCL-90R, is sensitive to changes in emotional distress in cancer patients. The SCL-90R can easily be adapted to clinical settings and administered before, during and after cancer treatment to evaluate the effects of coping in cancer patients. Physicians are also uncertain as to which coping styles are effective for their patients. As a result some oncologists urge all of their patients to accept the cancer diagnosis and encourage them to consider the consequences that the disease will have on their lives. These physicians believe that an avoidance strategy is likely to work against the patient.

Other physicians avoid or are tentative in their use of the term cancer and implicitly encourage most of their patients to avoid confronting their disease directly. These doctors are concerned that patients may be overwhelmed and unable to cope if they are forced to directly confront the reality of their cancer. The results of the present study suggest that patients who clearly prefer to use either approach or avoidance strategies cope well emotionally with the early stages of treatment of this disease. The results suggest that, at least in the short run, these strategies have few disadvantages and that patients should probably be allowed to use the strategy they seem to prefer. The results also raise questions about whether patients should be actively encouraged to take a coping approach that might not work as well for them.

Finally, the findings of this study suggest that clinicians should be especially sensitive to those patients who appear to be passive in coping with cancer diagnosis. These patients, who make little use of either approach or avoidance strategies, may well experience the greatest amount of distress during cancer treatment. Training in coping methods or supportive therapy may benefit these patients by reducing their emotional distress and suffering. Future research directed at further delineating the useful apsects of approach or avoidance strategies may provide some clues as to training methods that may prove beneficial.

In conclusion, the present paper suggests that an approach-avoidance dimension might be a useful framework with which to evaluate coping styles in cancer patients. Further research is needed on coping in cancer. Longitudinal studies of patients

having the same type of cancer using standardized assessments of coping style and recovery variables are especially needed. It is only by following patients over time that the effects of coping on the prognostic outcome and the quality of life of cancer patients can be fully understood.

Index Terms

Cancer, Head and Neck Cancer, Coping Strategies

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FOOTNOTES

The literature review, method, and results of this study are described more fully in a longer version of this manuscript (contact Dr. Francis Keefe, Box 3926, Duke University Medical Center, Durham, North Carolina 27710) and in Dr. Manuel's doctoral dissertation (contact Dr. Manuel at reprint address).

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Table 1

Mean Scores for Distress Variables with Significant Effects

Coping Groups	T-1	T-2	T-3	
	Main Effect - Group Only			
SCL-90R: General Severity Index				(Group)
Hi approach-Lo avoidance	.21	.11	.05	.14
Lo approach-Hi avoidance	.26	.25	.13	.21
Lo approach-Lo avoidance	.35	.38	.41	.38
	Main Effect--Time Only			
IES: Total Score				
Hi approach-Lo avoidance	1.10	.98	.58	
Lo approach-Hi avoidance	1.81	1.42	1.52	
Lo approach-Lo avoidance	1.59	1.37	1.14	
(Time)	1.60	1.33	1.19	
SCL-90R: Anxiety				
Hi approach-Lo avoidance	.28	.10	.00	
Lo approach-Hi avoidance	.32	.28	.13	
Lo approach-Lo avoidance	.46	.35	.36	
(Time)	.38	.29	.23	

Table 1 (continued)

Mean Scores for Distress Variables with Significant Effects

Coping Groups	T-1	T-2	T-3	
	Main Effect - Group and Time			
IES: Avoidance				(Group)
Hi approach-Lo avoidance	1.52	1.28	.62	1.14
Lo approach-Hi avoidance	2.60	2.23	2.36	2.40
Lo approach-Lo avoidance	2.04	1.83	1.56	1.81
(Time)	2.16	1.89	1.70	
	Group and Time x Time Effects			
SCL-90R: Obsessive Compulsivenessa				
Hi approach-Lo avoidance	.34	.10	.08	
Lo approach-Hi avoidance	.21	.23	.09	
Lo approach-Lo avoidance	1.59	1.37	1.14	
SCL-90R: Depression[b]				
Hi approach-Lo avoidance	.45	.25	.14	
Lo approach-Hi avoidance	.39	.37	.19	
Lo approach-Lo avoidance	.40	.55	.59	

[a]Group x Time Effect, $p = .066$

[b]Group Effect, $p = .057$

Table 1 (continued)

Mean Scores for Distress Variables with Significant Effects

Coping Groups	T-1	T-2	T-3
	Group, Time, and Group x Time Effects		
SCL-90R: Postive Symptom Total			
Hi approach-Lo avoidance	15.08	7.80	3.40
Lo approach-Hi avoidance	16.67	14.42	9.08
Lo approach-Lo avoidance	18.83	22.83	22.44

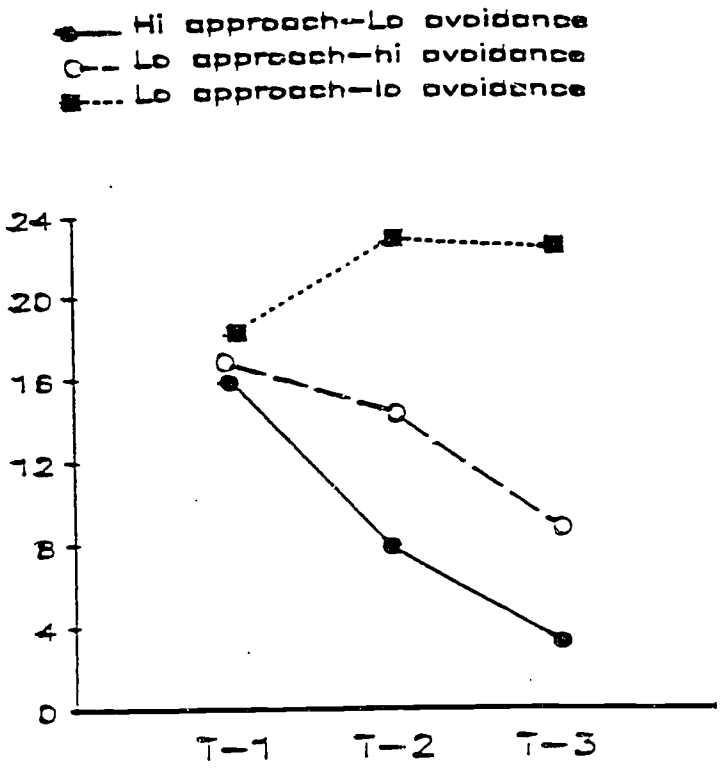
FIGURE CAPTIONS

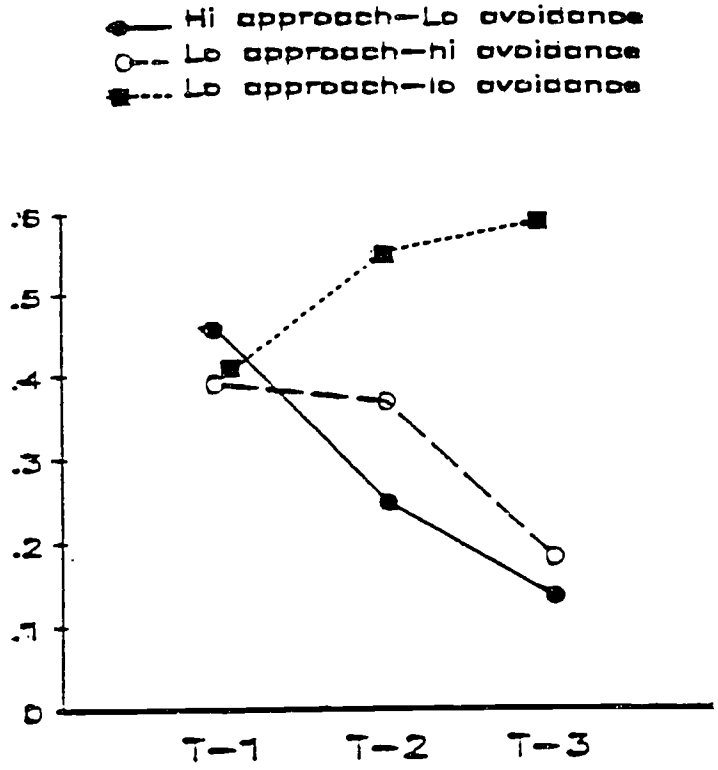
Figure 1. SCL-90R Positive Symptom Total (PST) means for the three coping groups over time. Significant comparisons: Hi approach-Lo avoidance vs. Lo approach-Lo avoidance at T-2, $t(28) = -3.19$, $p < .01$; Lo approach-Hi avoidance vs. Lo approach-Lo avoidance at T-2, $t(28) = -2.44$, $p < .05$; Hi approach-Lo avoidance vs. Lo approach-Lo avoidance at T-3, $t(21) = -2.74$, $p < .05$; Lo approach-Hi avoidance vs. Lo approach-Lo avoidance at T-3, $t(28)$, -2.79, $p < .01$; T-1 vs. T-3 for the Hi approach-Lo avoidance group, $t(4) = 6.08$, $p < .01$; T-1 vs. T-3 for the Lo approach-Hi avoidance group, $t(11) = 2.60$, $p < .05$; T-1 vs. T-2 for the Lo approach-Lo avoidance group, $t(17) = -2.51$, $p < .05$.

Figure 2. SCL-90R obsessive compulsiveness for the three coping groups over time. Significant comparisons: Lo approach-Hi avoidance vs. Lo approach-Lo avoidance at T-2, $t(28) = -2.11$, $p < .05$; Lo approach-Hi avoidance vs. Lo approach-Lo avoidance at T-3, $t(28) = -2.49$, $p < .05$. Marginally significant comparisons: Hi approach-Lo avoidance vs. Lo approach-Lo avoidance at T-2, $t(21) = -2.04$, $p = .054$; Hi approach-Lo avoidance, T-1 vs. T-2 vs. Lo approach-Hi avoidance, T-1 vs. T-2, $F(1, 15) = 3.33$, $p = .088$.

Figure 3. SCL-90R depression means for the three coping groups over time. Significant comparisons: Hi approach-Lo avoidance

vs. Lo approach-Lo avoidance at T-3, $t(21) = -2.25$, $p < .05$; Lo approach-Hi avoidance vs. Lo approach-Lo avoidance at T-3, $t(28) = -3.06$, $p < .01$; T-1 vs. T-3 for the Hi approach-Lo avoidance group, $t(4) = 2.89$, $p < .05$; T-1 vs. T-3 for the Lo approach-Hi avoidance group, $t(11) = 2.99$, $p < .05$. Marginally significant comparisons: T-1 vs. T-2 for the Lo approach-Lo avoidance group, $t(17) = -2.01$, $p = .061$.


Hi approach–Lo avoidance
Lo approach–hi avoidance
Lo approach–lo avoidance
24
20
16
12
8
4
0
T–1
T–2
T–3


Hi approach—Lo avoidance
Lo approach—hi avoidance
Lo approach—lo avoidance
.6
.5
.4
.3
.2
.1
0
T-1
T-2
T-3