1993

Effects of response set differences upon beck depression inventory scores of undergraduate students

Nancy Lehmicke
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DOI: <https://doi.org/10.31979/etd.a6aa-kty5>

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**Effects of response set differences upon Beck Depression
Inventory scores of undergraduate students**

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San Jose State University, 1993

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Ann Arbor, MI 48106**

EFFECTS OF RESPONSE SET DIFFERENCES UPON BECK
DEPRESSION INVENTORY SCORES OF UNDERGRADUATE STUDENTS

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

by

Nancy Lehmicke

May 1993

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TABLE OF CONTENTS

SECTION	PAGE
INTRODUCTION	3
The Problem and the Purpose	3
The Ruminating, Inactive Style	4
The Distracting, Active Style	7
Research on Ruminating and Distracting Styles of Coping	9
The Hypotheses of This Study	11
METHOD	12
Subjects.....	12
Measures	13
Procedure	25
RESULTS	27
DISCUSSION	30
REFERENCES	32
APPENDICES	35
Appendix A. Ruminating Items in Nolen-Hoeksema's Response Set Checklist	35
Appendix B. Beck Depression Inventory	37
Appendix C. Modifications to the Ways of Coping Questionnaire	45
Appendix D. Informed Consent Form	53
Instructions for the Top Sheet	55
<u>table of contents continues</u>	

TABLE OF CONTENTS

SECTION	PAGE
Instructions for the BDI	55
Instructions for the modified WCQ	56
Debriefing Statement	57
Appendix E. The Ways of Coping Questionnaire	58
Appendix F. The Scales of The Ways of Coping Questionnaire	65
Appendix G. Nolen-Hoeksema's Response Set Checklist..	70
Appendix H. Distracting Items from Nolen-Hoeksema's Response Set Checklist	80

LIST OF TABLES

TABLE		PAGE
1.	Correspondence between the Ways Rumination May Increase Depressive Feelings and Nolen-Hoeksema's List of Ruminative Responses	21
2.	Items in the Ruminating Scale for the WCQ	23
3.	Correspondence between the Ways Distraction May Decrease Depressive Feelings and Nolen-Hoeksema's List of Distracting Responses	24
4.	Items in the Modified Distancing Scale for the WCQ..	26
5.	The Mean BDI Score, the Standard Deviation, and the Sample Size for Each Gender by Response Style	28

Response Set

1

Effects of Response Set Differences Upon BDI Scores
of Undergraduate Students

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Running Head: RESPONSE SET

Footnotes

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Abstract

The effects of a ruminating and a distracting response style upon degree of depression and gender were investigated. The Ways of Coping Questionnaire was modified to include ruminating and distracting scales. A group of 91 undergraduate students took the modified Ways of Coping Questionnaire and the Beck Depression Inventory. This study hypothesized that (a) regardless of gender, people who ruminate would show a greater severity of depression than people who distract themselves; (b) women ruminators would show a greater severity of depression than women distractors; and (c) women ruminators and men ruminators would show the same severity of depression. A set of t-statistics was computed for the differences between the groups. A Response Style X Gender ANOVA was also done with the women ruminators and men ruminators. The results conformed to the predictions for women but not for men.

Effects Of Response Set Differences Upon Beck
Depression Inventory Scores Of Undergraduate Students

The Problem and the Purpose

Many people experience depressive symptoms from which they recover in a few hours, or occasionally, a few days. Some experience these symptoms less frequently and with less severity than others and this raises the question, "Why do some people seem to be able to shake off depressive feelings readily while for others these feelings seem to persist and to reoccur with great frequency ?"

Among the many explanations that have been proposed to answer this question, Nolen-Hoeksema (1987, 1990a) has suggested that the way people respond to their feelings (i.e., their response set) may affect both the chronicity and severity of their depressive symptoms. Specifically, she argued that people who respond with a ruminating, inactive style, in contrast to those who respond with a distracting, active style experience more depressive episodes and have a greater severity of depressive symptoms (Nolen-Hoeksema, 1990b). In discussing this hypothesis, Nolen-Hoeksema (1987) noted that women are more likely than men to use a ruminating, inactive response style.

The Ruminating, Inactive Style

Rumination has been defined as "the act of persistently pondering or meditating about a problem...for an excessive period of time" (Goldenson, 1984, p. 647). While Goldenson defined rumination with regard to mental activities (i.e., pondering and meditating), Morrow and Nolen-Hoeksema (1990) expanded this definition to include behaviors. They described ruminative responses as those behaviors and cognitions which a depressed person persistently uses. The continued use of these behaviors and cognitions tends to focus the person's attention on his/her symptoms of depression and on the possible causes and consequences of these symptoms. This self-focus is considered a primary characteristic of rumination (Nolen-Hoeksema, 1990a).

For this study, rumination is defined as a person persistently focusing, via thoughts or actions, on his/her problems and pondering the causes and the consequences of these problems. An example of a ruminative response would be for a depressed person to go somewhere alone and think about his/her feelings.

This focusing on depressed feelings for an excessive period of time tends to increase negative behaviors and

cognitions in three ways (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1987). First, focusing on depressed feelings interferes with attention, concentration, and instrumental behaviors. In this regard, Morrow and Nolen-Hoeksema (1990) noted that the self-focus which occurs with rumination tends to impair attention and concentration, thereby lowering both performance on tasks and expectancies about future success which could increase depressive feelings. Similiar to Morrow and Nolen-Hoeksema, Kuhl (1981) argued that when a depressed person focuses on his/her mood-state, that focus interferes with instrumental behaviors. Such interference with instrumental behaviors may in turn lead to a sense of helplessness in the depressed person in controlling his environment. An example of this type of ruminative cognition would be, "I can't finish my paper because I feel too bad."

The next way persistent pondering on depressed feelings could enhance negative cognitions and behaviors is by increasing the probability the depressed person will recall negative information and thereby make negative judgments about events (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1987). A depressed person tends to recall sad memories and to have impaired accessibility of pleasant

ones. Likewise, a depressed person has a greater assessibility of negative perceptions: he/she interprets his/her behavior in social situations more negatively than does a non-depressed person; rates his/her life satisfaction as low; and forms more negative impressions of others and self. An example of ruminating about negative self-perceptions is to "think about how I can't do anything right." In addition to increasing negative self-perceptions, a depressed mood also makes it easier to learn negatively-toned material.

A third way rumination could amplify depression is by increasing the possibility the depressed person may use a maladaptive explanatory style (Nolen-Hoeksema, 1990a). As noted above, rumination tends to increase the accessibility of negatively-toned material. This accessibility could amplify the person's existing depressed mood by causing the depressed person to interpret his/her current depressed mood in the context of past losses and failures, perhaps generating depressing explanations. According to Abramson, Seligman, and Teasdale's (1978) reformulated helplessness theory of depression, such explanations could increase the depressed person's expectations that he/she will continue to

experience similiar problems (Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema, 1987). Other studies, such as Brewin's (1985) review of the literature, have found explanatory style to be implicated with depression. Brewin reported explanatory style may be involved with the processes of coping with and recovery from depression. An example of this type of ruminative thinking is to "think about all my shortcomings, failings, faults, mistakes" (see Appendix A) and attribute these as the cause of the current distress.

Passivity has also been implicated with depression. Morrow and Nolen-Hoeksema (1990) noted that passive behaviors tend not to increase the opportunities for internal or external positive reinforcement and thus are not expected to increase positive affect. Activity, in contrast, may lift depression as it appears to give some sense of control and to give some opportunities for positive reinforcement. McCann and Holmes (1984) suggested the psychosocial effects associated with exercise, such as distraction and being with friends, tend to relieve depression.

The Distracting, Active Style

Reber (1985) defined a distractor as "any event or stimulus which diverts attention" (p. 209). Thus, if a

depressed person goes to a movie and the movie diverts his/her attention from his/her sad feelings, the movie has functioned as a distractor. Distracting responses are defined by Morrow and Nolen-Hoeksema (1990) as cognitions and behaviors which take a person's thoughts off his/her depressive symptoms. The act of going to a movie to relieve sad feelings would be a distracting response.

A term similar to distraction is distance. Reber (1985) defined psychological distance as referring "to real, physical distance as it functions psychologically or to a mental dimension of separateness or dissimilarity between things...(Distancing also refers to) the deliberate maintenance of dispassion" (p.308-309). Thus, distance is keeping some separateness, physically or psychologically, often with the intent to control emotions. Although Reber does not specify what the person is keeping a distance from, it could be inferred that distancing is used both for interpersonal and intrapersonal purposes. For example, a distressed person may decide to distance himself/herself from his/her feelings by going to a movie. He/she is then distancing himself from his/her sad feelings by using a movie as a distractor. In this context, a distractor is a means of achieving distance.

For this study distraction is seen as the means of diverting one's attention to a particular event, thought, or behavior so that one can achieve some separateness from distressing thoughts. In addition to going to a movie, another example of a distracting response is to work on a hobby which requires concentration (Nolen-Hoeksema, 1990a).

Morrow and Nolen-Hoeksema (1990) argued that when a depressed person is involved in activities, he/she is distracting himself/herself from negative cognitions, thereby decreasing depressive feelings. Further, the depressed person's ability to distract himself/herself increases his/her chances of controlling the environment and of obtaining positive reinforcement, both of which may decrease a depressed mood. In distracting himself/herself, the person is increasing his/her pleasant activity level which is associated with a decrease in depressive symptoms.

Research on Ruminating and Distracting Styles of Coping

Several studies have investigated distracting and ruminating responses to depressive feelings. Morrow and Nolen-Hoeksema (1990) induced a depressive mood in university students and then assigned subjects to 1 of 4 tasks: active and distracting; passive and distracting; active and ruminating; and passive and ruminating. They

reported the greatest decrease in depressed mood occurred in the active and distracting group, followed by the passive and distracting group, the active and ruminating group, and the passive and ruminating group. Morrow and Nolen-Hoeksema found the degree of rumination had a greater effect on the lessening of depression than did the activity level.

Nolen-Hoeksema (1990b) used a field study to investigate the occurrence, severity, and duration of depressed feelings with university students and to determine if this population responded with ruminative or distracting responses when feeling depressed. She reported that women had a significantly higher severity and longer duration of depression than men and that women used ruminative responses significantly more than men.

In another study of ruminative responses, Wood, Saltzberg, Neale, Stone, and Rachmiel (1990) asked 40 male community residents to complete daily reports for 30 days. These daily reports inquired about events, moods, physical symptoms, and coping strategies. Wood and her colleagues reported that ruminative, passive coping was associated with distressed feelings. The finding that men who use a ruminating, passive coping style were more distressed than

those who did not use this style gives support to Nolen-Hoeksema's (1987) suggestion that response style differences may mediate the difference between men and women in incidence of unipolar depression.

The Hypotheses of this Study

From the above studies it appears that if a ruminating style increases depression while a distracting style decreases depression, then those people who use a ruminating style would have a higher degree of depression than those who use distraction. Therefore, I predicted that ruminators, regardless of gender, would have a higher degree of depression than distractors.

Next, I predicted that women who ruminate would have a higher degree of depression than women who use distraction. Nolen-Hoeksema (1987) has suggested that women's use of a ruminating style could account for their higher degree of depression.

Finally, I hypothesized that women who ruminate and men who ruminate would show the same severity of depression. If a ruminating response style accounts for women's greater propensity to depression (Nolen-Hoeksema, 1987), then there should be no difference between the genders if both use this style. Morrow and

Nolen-Hoeksema's (1990) and Wood et al.'s (1990) studies seem to support Nolen-Hoeksema's position.

Method

Subjects

In selecting the subjects for this study, a group of 100 university subjects were recruited from the Psychology Department Subject Pool at San Jose State University. Ninety-one subjects' (50 females and 41 males) responses to the Beck Depression Inventory (BDI; see Appendix B) and the modified Ways of Coping Questionnaire (WCQ; see Appendix C) were analyzed. Nine subjects' questionnaires were not used in the analysis for the following reasons: 6 subjects did not answer all statements on the WCQ; 2 subjects did not answer all BDI statements; and 1 subject answered no statements on either questionnaire.

The pair of response style scores (i.e., the distracting and ruminating scores on the modified WCQ) for each subject were inspected and, as a result, 32 subjects were identified as distractors (i.e, distracting score > ruminating score) while 50 subjects were defined as ruminators (i.e., distracting score < ruminating score). It should be noted that 2 male and 7 female subjects were dropped from further consideration because they could not

be classified as either ruminating or distracting (i.e., ruminating score = distracting score).

Next, subjects were assigned to groups based on their gender and on their scores on the modified WCQ. Women whose score on the ruminating scale was greater than their score on the distracting scale were assigned to the Women Ruminators ($N = 29$) group. Likewise, women whose score on the distracting scale exceeded their score on the ruminating scale were assigned to the Women Distractors group ($N = 14$). Men Ruminators ($N = 21$) and Men Distractors ($N = 18$) were similarly assigned. Women and men whose scores on the ruminating scale equaled their score on the distracting scale were not included in either group (i.e., 7 women and 2 men).

All of these subjects were volunteers who had signed the Informed Consent Form (see Appendix D) prior to the start of the study. Class credit for participation was given to each student.

Measures

Testing materials consisted of a cover sheet on which the subjects recorded their gender, age, and major, the Beck Depression Inventory (BDI; see Appendix B), and a modified version of the Ways of Coping Questionnaire (WCQ;

see Appendix C). With regard to the cover sheet questions, age and major were requested in order not to disclose to the subjects that gender was a variable in this study. The Beck Depression Inventory and the Ways of Coping Questionnaire are described in the following paragraphs.

Beck Depression Inventory. The BDI (see Appendix B) is an inventory composed of 21 categories of symptoms and attitudes of depression. It was developed from clinical observations of the characteristic attitudes and symptoms of depressed patients. Those attitudes and symptoms which appeared to be specific for depressed patients and which were consistent with descriptions of depression in the psychiatric literature were selected for the inventory. Thus, the items included in the BDI were chosen on the basis of their relationship to observable signs, symptoms, and descriptions of depression and did not reflect a particular theory regarding the etiology of depression (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

Each of the BDI's 21 categories describes a specific symptom or attitude of depression. The categories include mood, pessimism, sense of failure, lack of satisfaction, guilty feeling, sense of punishment, self-hate, self-accusations, self-punitive wishes, crying spells,

irritability, social withdrawal, indecisiveness, body image, work inhibition, sleep disturbance, fatigability, loss of appetite, weight loss, somatic preoccupation, and loss of libido (Beck et al., 1961).

Each category consists of 4 to 5 self-evaluative statements. The statements are scored to reflect the range of severity of the symptom, i.e., from 0 (neutral) to 3 (maximum severity). In some categories, two alternative statements are assigned the same weight. These alternative statements are labelled a and b (i.e., 2a, 2b) to indicate they are at the same level. For example, the category 'Mood' has alternative statements 2a ("I am blue or sad all the time and I can't snap out of it") and 2b ("I am so sad or unhappy that it is very painful"). Each of these 'Mood' statements is scored a 2 (Beck et al., 1961). After the scores of the responses to the statements in all the categories are summed, the depth of depression may be classified as none, mild, moderate, or severe. For 'none' the cut-off score is 11, for 'mild' 19, and for 'moderate' 25. 'Severe' includes scores above 25 (Beck, 1972).

To validate the BDI, Beck and his colleagues (1961), compared subjects' BDI scores and Depth of Depression

scores with 2 samples of subjects. The Depth of Depression score was determined by a psychiatrist after interviewing a subject. A score, ranging from 0 - 4, was then assigned to the subject. A score of 0 indicated the category of 'none' for depression, 1 indicated 'mild', 2 'moderate', and 3 'severe'. The subjects were drawn from routine admissions to the psychiatric outpatient department of a university hospital and to the psychiatric inpatient and outpatient service of a metropolitan hospital.

Beck and his colleagues found that as the Depth of Depression score increased, so did the BDI score. The Kruskal-Wallis One-way Analysis of Variance by Ranks, which evaluated the over-all association between BDI scores and 'Depth of Depression' scores, was significant, $p < .001$. Next, the Mann-Whitney U test was used to examine the ability of the BDI to distinguish between the four Depth of Depression categories (none, mild, moderate, and severe). They found all differences between adjacent categories to be significant at $p < .0004$ with one exception: the difference between the moderate and severe categories was significant at $p < .1$ in Study 1 and $p < .02$ in Study 2. A Pearson biserial r was used to determine the correlation between the BDI scores and the Depth of Depression scores.

A correlation of .65, $p < .01$ was found in Study 1 and of .67, $p < .01$ in Study 2.

The BDI has been also been validated for use with a university population by Bumbery, Oliver, and McClure (1978). Using psychiatric ratings of depth of depression as concurrent validation of the BDI, they reported a Pearson product-moment correlation coefficient of .77.

Ways of Coping Questionnaire. The WCQ (see Appendix E) is a tool to appraise the behaviors and thoughts individuals use to cope with stressful events in daily living. The WCQ is based on a cognitive theory of stress and coping. Stress is defined as the relation between the person and his environment which the person has appraised as equaling or exceeding his resources. Coping is seen as the person's behavior and thoughts (e.g., his efforts) to manage a specific external or internal demand which the person assesses as equaling or exceeding his resources. There are two types of coping efforts: emotion-focused coping (i.e., coping aimed at regulating the emotional response to a problem); and problem-focused coping (i.e., coping directed at managing or changing the problem). Most people use a combination of coping types with each stressful event. Both coping and stress are viewed as being transactional in nature, that is, the person and

his/her environment are in a dynamic and bidirectional relationship (Folkman & Lazarus, 1988).

The WCQ is made-up of eight scales, i.e., distancing, confrontive coping, self-controlling, seeking social support, escape-avoidance, accept responsibility, planful-problem solving, and positive reappraisal. Each existing scale (see Appendix F) has between four and eight brief cognitive and behavioral statements which the subject rates if applicable to his/her for a specific stressful situation occurring during the past week. The subject rates each statement on a 0 - 3 range with 'Not used' equal to 0, 'Used somewhat' to 1, 'Used quite a bit' to 2, and 'Used a great deal' to 3.

The WCQ may be scored by two methods, raw score and relative score (Folkman & Lazarus, 1988). The raw score method is the sum of each subject's responses to the statements in a particular scale. In the Seeking Social Support Scale, for example, there are six statements; if a subject scored a "2" on each statement in this scale, the raw score for this scale would be 12. In contrast, relative scores show the contribution of each scale relative to the combined scores on all the scales. This technique controls for the unequal number of items within

each scale. This study used the raw score technique as only two scales were used to test the hypotheses. Face validity of the WCQ responses was established by specifying coping strategies which people have reported using to cope with stressful events. Construct validity was established when the results of studies were consistent with Folkman and Lazarus's theoretical predictions, i.e., coping consists of both problem-focused and emotion-focused strategies and coping is a process (Folkman & Lazarus, 1988)

Additions and Modifications to the Ways of Coping Questionnaire. To test if the difference in response styles to depressive events is implicated in the depth of depression, a new scale, Ruminating, was added to the WCQ and an existing WCQ scale, Distancing, was modified to include distracting responses. The responses used in the Ruminating scale and the modified Distancing scale were taken from Nolen-Hoeksema's Response Set Checklist (see Appendix G).

Ruminating Scale. As discussed previously, Morrow and Nolen-Hoeksema (1990) specified three ways ruminating responses could increase depression (i.e., by interfering with instrumental behaviors and concentration, by increasing negative cognitions, and by increasing the

possibility of using a maladaptive explanatory style). The correspondence between these three ways to amplify depression and the ruminative responses from Appendix A is shown in Table 1. For example, a problem which interferes with concentration is shown by the response, "I think about how hard it is to concentrate" (response 4).

After examining the existing scales of the WCQ and finding none which included a ruminating response style, it was proposed that a new scale, Ruminating, be added to the questionnaire.

Eighteen of the ruminating responses listed in Appendix A were selected for inclusion in the new scale. The two responses not selected, "I take recreational drugs or alcohol" and "I think about a recent situation and wish it had gone better," were excluded because there were similar items in the existing WCQ Escape-Avoidance scale. Next, the 18 responses selected for the Ruminating scale were synthesized, compressed into seven responses, and written in the WCQ format. The intent was to keep the meaning of the original ruminating responses, to 'wordsmith' them so they blended with the existing WCQ statements, and to have no more responses in the Ruminating Scale than are in the largest existing WCQ scale. The

Table 1

Correspondence between the Ways Rumination May Increase
Depressive Feelings and Nolen-Hoeksema's List of
Ruminative Responses

Ways	Responses ^a
1. decreased attention, concentration, and instrumental behaviors	2, 3, 4, 6, 9
2. increased recall of negatively-toned information leading to negative judgments	1, 5, 7, 8, 10 11, 13, 12, 14, 15 16, 17, 18, 19, 20
3. increased possibility of using a maladaptive explanatory style	5, 13, 15, 17, 20

^aSome of the ruminative responses correspond to more than one way to increase depression and, therefore, appear more than once in this table (for example, ruminative response 5 corresponds to both the second and third Ways that ruminating may increase depression).

seven responses which comprised the Ruminating Scale in this study are listed in Table 2.

Distancing Scale. Appendix H lists the 14 items that Nolen-Hoeksema used to measure distracting responses. Most of these responses are concerned with some type of mental or physical activity which has the potential for diverting a person from depressive feelings. As discussed previously, Morrow and Nolen-Hoeksema (1990) suggested a distracting activity decreased depressive feelings in four ways: (a) by diverting attention from negative cognitions, (b) by increasing opportunities to control the environment, (c) by more opportunities for positive reinforcement, and (d) by increasing the pleasant activity level. Table 3 shows the correspondence between these effects and the distracting responses in Appendix H.

As noted earlier, distracting oneself may be thought of as a means of achieving distance. Therefore, the Distancing scale of the WCQ (see Appendix F) was modified to address distracting as a coping style. The modifications consisted of altering four of the existing Distancing scale responses, deleting one existing distancing response, and adding three new responses.

Table 2

Items in the Ruminating Scale for the WCQ

Ruminating Items

---

1. I preferred to be alone and think about how I felt.
  2. I thought about my problem concentrating.
  3. I thought about feeling tired and achey; at times I did not seem to feel anything anymore.
  4. I just couldn't seem to get going, I didn't feel up to anything.
  5. I thought about my shortcomings, feelings, mistakes; I thought others might see what I'm really like.
  6. I thought about how angry I was with myself/with someone else.
  7. I listened to sad music.
-

Table 3

Correspondence between the Ways Distraction May Decrease
Depressive Feelings and Nolen-Hoeksema's List of
Distracting Responses

Ways	Responses
1. divert from negative cognitions	1, 2, 3, 4, 5, 6, 7, 8 9, 10, 11, 12, 13, 14
2. increased control of environment	1, 2, 3, 4, 5, 6, 7, 8 9, 10, 11, 12, 13, 14
3. increased positive reinforcement	1, 2, 8
4. increased pleasant activity level	6, 8, 9, 12, 13

The modified Distancing scale as used in this study is shown in Table 4. Henceforth, the term Distracting scale refers to the modified version of the scale that was used in this study.

Procedure

The subjects were told the purpose of the experiment was to examine differences in feelings people may have. The subjects were tested as a group with the testing being done in a classroom at San Jose State University. Each subject was given a test packet. The order of the BDI and the WCQ were counterbalanced. The informed consent form was attached to the front of the test packet (see Appendix D). The subjects were debriefed after completing the testing (see Appendix D).

All materials from this study were kept in a locked drawer in the SJSU Psychology Department. Only the thesis committee members and I had access to these materials.

If a subject appeared to become distressed during the testing and wished to stop before completing the test, s/he would have been allowed to do so. Also, if this subject appeared to need assistance, the investigator would have offered to accompany the subject to the SJSU Counseling Center or to contact a faculty member, a friend, or a family member.

Table 4

Items in the Distracting (Modified Distancing) Scale for
the WCQ

Distracting Items

---

1. I made light of the situation; I decided to go out and have some fun.
  2. I went on as if nothing had happened; I concentrated on something other than how I felt.
  3. I didn't let it get to me; I refused to think about it as these feelings won't last.
  4. I tried to distract myself by watching TV, reading, going to a movie, to a favorite place.
  5. I looked for the silver lining; I tried to look on the positive side of the situation or at something I've learned.
  6. I went along with fate; sometimes I just have bad luck.
  7. I did something with a friend which I enjoyed or which made me feel better.
  8. I stayed around others; I helped someone else.
-

Results

The data for these subjects were summarized and the resulting mean BDI score, the standard deviation, and the sample size of each gender by response style group is listed in Table 5. These data were used to test each of the hypotheses of this study with the following results.

Hypothesis 1

This hypothesis predicted that regardless of gender, ruminators would exhibit a greater depth of depression (i.e., a higher BDI score) than distractors. As a first test of this hypothesis, a t -statistic was computed to analyze the difference between the means for the total distractors and ruminating groups and it was found to be significant: $t(80) = 2.15$, $p < .02$ (one-tailed). While these data appear to support Hypothesis 1, results reported in the following paragraphs suggest otherwise.

Hypothesis 2

This hypothesis predicted that women distractors would score lower on the BDI than their ruminator peers. To test this hypothesis, a t -statistic was computed to analyze the difference between the means for women distractors and ruminators and it was found to be significant: $t(41) = 2.71$, $p < .005$ (one-tailed).

Table 5

The Mean BDI Score, the Standard Deviation, and the Sample Size for Each Gender by Response Style.

Group	N	Mean	Standard Deviation
<u>Distractors</u>			
Men	18	7.83	9.39
Women	14	5.86	7.09
Total	32	6.97	8.39
<u>Ruminators</u>			
Men	21	8.62	6.52
Women	29	12.60	8.08
Total	50	10.92	7.68

The strength of this result suggested that the data presented in support of Hypothesis 1 might be misleading. In Hypothesis 1, the difference between the means for the total distracting and ruminating groups was significant. However, when this difference was examined in relation to women distractors and women ruminators, it appeared to be an artifact of the fairly substantial difference between the means of the women in each of these groups. To test for this possibility, the difference between the means for men distractors and ruminators was tested and it was not significant, $t(37) = .30$. Thus, collectively these results suggest that the relative effectiveness of ruminating and distracting as methods of coping with depression are gender-related.

Hypothesis 3

This hypothesis predicted that male and female ruminators would not differ significantly in their levels of depression. To test this hypothesis, the difference between the BDI means for these groups was analyzed with the result that $t(48) = 1.91$, $p < .10$. While this result is not statistically significant, it closely approaches significance. Thus, it seems prudent to argue that these data fail to support Hypothesis 3. Further, like the data

presented to test Hypotheses 1 and 2, these results seem to underscore the probability that the response style measures in this study are gender-linked; i.e., the response style measures are more salient for women than they are for men as ways of coping with depression. In this regard, the pattern of means that is listed in Table 5 suggests the possibility of a gender by response style interaction with women distractors scoring lower on the BDI than men distractors, and women ruminators scoring higher on the BDI than men ruminators. This possibility was tested by computing a 2X2 (Gender by Response Style) ANOVA for the details summarized in Table 5, with the result the interaction between these variables was not significant ($F(1,78) = 2.07$).

Discussion

In developing a rationale for the hypotheses of this study, two assumptions were made: that a distracting response style is a more effective means of coping with depression than a ruminating response style; and that these response styles were independent of gender with regard to their effectiveness as coping mechanisms. As has been seen, the validity of these assumptions is only partially supported by the data. For women, the mean BDI score of

the ruminators was 2.15 times higher than the mean BDI of the distractors. In contrast, for men the mean BDI scores for ruminators and distractors were nearly identical (i.e., there was only a 10% difference between these groups). Therefore, it seems fair to conclude that for women, the measurement of distracting and ruminating response styles may prove to be a useful method of predicting level of depression.

This conclusion implies a potentially important contribution of this study in that it is based on scales that were developed for this research to measure distracting and ruminating response styles. The reliability of the results listed above suggest that these measures are reliable and the fact that they conformed to the prediction for females suggests that they may be valid when used with women.

Failure to find the predicted results for men may mean either that these response styles are not salient methods that men use in coping with depression or that inadvertently the items were written in a way that biased these scales so that they were more meaningful for women. However, until these possibilities are explored further, it is not possible to argue convincingly for either.

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35-36, Appendix A

37-44, Appendix B

45-52, Appendix C

53-57, Appendix D

58-64, Appendix E

65-69, Appendix F

70-79, Appendix G

80-81, Appendix H

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