INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI®

Bell & Howell Information and Learning
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
800-521-0600

THE UNIVERSITY OF CALGARY

Depression in Marriage: An Investigation of Problem-Solving Behavior and Marital Cognition

by

Susan Jackman Cram

A DISSERTATION

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF DOCTOR OF PHILOSOPHY

PROGRAM IN CLINICAL PSYCHOLOGY

CALGARY, ALBERTA

DECEMBER, 1998

© Susan Jackman Cram 1998

National Library of Canada
Acquisitions and Bibliographic Services
395 Wellington Street
Ottawa ON K1A 0N4
Canada

Bibliothèque nationale du Canada
Acquisitions et services bibliographiques
395, rue Wellington
Ottawa ON K1A 0N4
Canada

Your file Votre référence

Our file Notre référence

The author has granted a non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of this thesis in microform, paper or electronic formats.

L'auteur a accordé une licence non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de cette thèse sous la forme de microfiche/film, de reproduction sur papier ou sur format électronique.

The author retains ownership of the copyright in this thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without the author's permission.

L'auteur conserve la propriété du droit d'auteur qui protège cette thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

0-612-38476-4

Canada

Abstract

This study was designed to investigate problem-solving behavior and marital cognition as a function of depression and marital distress. In the study, the presence or absence of a depressed wife was crossed with the level of marital satisfaction (distressed or nondistressed) to produce four groups of couples. This design permitted the isolation of effects unique to depression from those that were associated with marital distress. Each couple completed questionnaires assessing marital attributions and perceived efficacy expectations, and then attempted to resolve a problem they had identified in their marriage. The only behavioral characteristic that was unique to depressed couples was the exhibition of depressive behavior by the wife in the problem-solving task. Facilitative and aggressive behaviors differentiated maritally distressed and nondistressed couples, but did not discriminate between depressed and nondepressed couples. Group differences for problem-solution behavior were not found. Maritally distressed couples, as compared to nondistressed couples, made maladaptive causal and responsibility attributions for negative partner behaviors, and reported lower perceived efficacy expectations regarding their ability to solve marital problems. Depressed wives did not differ from the nondepressed in their attributions regarding partner behavior. Maritally nondistressed couples in which the wife was depressed reported lower efficacy expectations than control couples. After controlling for the level of depression and the level of marital satisfaction, wives' and husbands' attributions and efficacy expectations were unrelated to their problem-solving behavior. The study findings are discussed in terms of their implications for future research and theory.

Acknowledgements

So many individuals have guided and supported me in the completion of my dissertation and throughout my doctoral work, and I wish to thank them all. First and foremost, it has been my privilege to work with Dr. Keith Dobson, and I wish to express my sincere thanks to him. I really can't imagine having had a better supervisor. Throughout the course of my doctoral work, I have been able to rely on his judgement and knowledge, and have regarded his judgement and knowledge highly. He has always shown a keen interest in what I have had to say, and has demonstrated a wonderful enthusiasm for his work and the field generally. For his interest in thinking with me, and challenging me, I am very grateful. I am appreciative of all the time he has given me from his hectic schedule. He has always made himself easily accessible throughout the years it has taken to complete this project. Finally, I am truly appreciative of the support he has given me. He has been not only an excellent supervisor and mentor, but also a friend.

I extend thanks to my dissertation committee members, Dr. Kerry Mothersill and Dr. Don Addington, for their willingness to participate on my committee, and for their insightful comments in the initial phases of this project. I am also very appreciative of Dr. Mothersill's excellent contribution to the workshops offered to participants of this project, and of the support he has given to me in his capacity as internship director at the Holy Cross Hospital. Also greatly appreciated, Dr. Addington taught me how to prepare a research grant application, and with this knowledge and know how I have been able to acquire a number of research grants over the course of my doctoral work. I wish to extend sincere thanks to Dr. Janet Wright and Dr. Michelle Phillips for their willingness to

participate in the study workshops, and for the excellent lectures they presented. Over the course of my data collection, I often noted how fortunate I was to have the support of Dr. Don Angus, Ms. Beth Dorsey, Andrea, Gail, and Val, from the Psychiatric Assessment Service of the Foothills Hospital. Dr. Tak Fung, a statistical consultant with the University, provided invaluable expertise, guidance, and support to me throughout the process of the statistical analysis of this project. I am very grateful to him and also appreciative of his willingness to give so freely of his time. A sincere thanks as well to Dr. Theresa Kline who similarly provided invaluable expertise regarding the statistical analysis of this project, and who made herself easily accessible to me. A sincere thank you to Joe Warren, my research assistant, who always came through for me, even when I wanted tasks completed by yesterday. I am thankful to granting agencies - Social Sciences and Humanities Research Council of Canada, Alberta Mental Health, Alberta Heritage, and the University of Calgary - whose support was crucial in the completion of this project.

A special thank you to my mother who left her home to stay at mine to care for my precious wee ones, so I could complete this project.

Finally, my sincere appreciation to my husband, my partner in life, for his unfailing support, care, patience, understanding, encouragement, and belief in me. Thank you especially, Brian.

Dedication

To my father, T. Gerald Jackman, who inspired me to reach for the stars

and

To my precious wee daughters, Brielle and Bronwyn, who have shown me what is truly important in this life.

Table of Contents

Page

Approval ii

Abstract iii

Acknowledgements iv

Dedication vi

Table of Contents vii

List of Tables x

List of Figures xiii

List of Appendices xiv

Introduction 1

Negative Marital Processes and Depression 5

Marital Problem-Solving Behavior and Depression 5

Marital Cognition in Marital Distress and Depression 9

Cognition and Marital Distress 9

Cognition and Depression 11

Conclusion 16

Marital Cognition and Problem-Solving Behavior 17

The Present Study 21

Method 26

Overview 26

Subjects 26

Page

Instruments 35

Screening and Diagnostic Instruments 35

Personal Information Questionnaire 35

Beck Depression Inventory (BDI) 35

Dyadic Adjustment Scale (DAS) 37

Structured Clinical Interview for DSM-III-R:

Patient Edition (SCID-P) 38

Instruments to be Completed by the Subjects 40

SCID-P Current Major Depression Syndrome Section 40

Relationship Attribution Measure (RAM) 40

Perceived Efficacy Expectations Scale (PEES) 42

Coding the Marital Interaction 43

Marital Interaction Coding System-Version IV (MICS-IV) . . . 43

Procedure 46

Screening Assessment 46

Community Couples 46

Hospital Couples 47

Communication Assessment 49

Results 50

Characteristics of the Sample 50

Analyses of Marital Problem-Solving Behavior 61

Page

Analyses of Marital Cognition 64

Analyses of Marital Cognition and Problem-Solving Behavior 77

Discussion 104

Overview and Summary of Results 104

Marital Problem-Solving Behavior 104

Marital Cognition 106

Marital Cognition and Problem-Solving Behavior 108

Limitations and Qualifications 110

Implications for Future Research and Theory 112

Marital Problem-Solving Behavior 113

Marital Cognition 117

Marital Cognition and Problem-Solving Behavior 120

Conclusion 123

References 125

Appendices 140

List of Tables

Table Page

1 DSM-III-R Disorders Diagnosed in Psychiatric Patients 30

2 Reasons for Attrition and Exclusion from the Sample of Hospital Volunteers . 33

3 Reasons for Attrition and Exclusion from the Sample of Community Volunteers 36

4 MICS-IV Codes Included in Conglomerate Code Categories 45

5 Wife and Husband Demographic Variables: Means, Standard Deviations, and Percentages 51

6 Mean Scores for the BDI and the DAS 55

7 Source Table for the 2x2 ANOVAS of BDI Scores 56

8 Source Table for the 2x2 ANOVAS of DAS Scores 57

9 Means, Standard Deviations, and Percentages on Demographic Variables for Clinical Subjects and Clinical Nonparticipants 59

10 Means, Standard Deviations, and Percentages on Demographic Variables for Community Subjects and Community Nonparticipants 62

11 Mean Proportions and Standard Deviations of Communication Behavior Codes by Spouse and Group 65

12 Source Table for the 2x2x2 ANOVA of Depressive Behavior 66

13 Source Table for the 2x2x2 ANOVA of Aggressive Behavior 67

14 Source Table for the 2x2x2 ANOVA of Facilitative Behavior. 68

15 Source Table for the 2x2x2 ANOVA of Problem Solution Behavior 69

Table		Page

16 Means and Standard Deviations of Marital Cognitions by Spouse and Group . . 71

17 Source Table for the 2x2x2 ANOVA of Causal Attributions 72

18 Source Table for the 2x2x2 ANOVA of Responsibility Attributions 73

19 Source Table for the 2x2x2 ANOVA of Perceived Efficacy Expectations 75

20 Hierarchical Regression of Wives' Positive Behavior on Group, Causal Attributions, and Group x Causal Attributions 80

21 Hierarchical Regression of Wives' Positive Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions 82

22 Hierarchical Regression of Wives' Negative Behavior on Group, Causal Attributions, and Group x Causal Attributions 84

23 Hierarchical Regression of Wives' Negative Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions 86

24 Hierarchical Regression of Wives' Positive Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations 88

25 Hierarchical Regression of Wives' Negative Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations 90

26 Hierarchical Regression of Husbands' Positive Behavior on Group, Causal Attributions, and Group x Causal Attributions 92

27 Hierarchical Regression of Husbands' Positive Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions 94

28 Hierarchical Regression of Husbands' Negative Behavior on Group, Causal

Table | Page

Attributions, and Group x Causal Attributions 96

29 Hierarchical Regression of Husbands' Negative Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions 98

30 Hierarchical Regression of Husbands' Positive Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations 100

31 Hierarchical Regression of Husbands' Negative Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations 102

List of Figures

Figure Page

1 Perceived Efficacy Expectations by Depression and Marital Distress 76

List of Appendices

Appendix — Page

A Personal Information Questionnaire 140

B Beck Depression Inventory 142

C Dyadic Adjustment Scale 147

D Relationship Attribution Measure 152

E Perceived Efficacy Expectations Scale 156

F Consent Form for Screening Assessment 157

G Study Flyer 161

H Consent Form for Participation 163

I Instructions for the Problem-Solving Task 167

Introduction

Depressive disorders are the single most common problems seen in mental health clinics (Beach, Sandeen, & O'Leary, 1990). Each year more than 100 million people worldwide develop clinically recognizable depression. During the course of a lifetime, it is estimated that between 5 and 25% of individuals will become depressed, with women at twice the risk compared to men (American Psychiatric Association, 1994; Robins & Reiger, 1991; Smith & Weissman, 1992; Spaner, Bland, & Newman, 1994). Furthermore, approximately 50 to 60% of individuals with major depressive disorder, single episode, can be expected to have a second episode (American Psychiatric Association, 1994). The consequences of depression are potentially lethal. Major depression is the psychiatric diagnosis most commonly associated with suicide (e.g., Murphy, 1986). Indeed, the mortality risk from all causes appears to be elevated in depressed individuals (Murphy, Monson, Olivier, Sobol, & Leighton, 1987).

While no single set of factors can adequately explain the full range of phenomena associated with depression, researchers have increasingly expressed an appreciation of the significance of interpersonal aspects of this disorder (Gotlib & Beach, 1995). Within this context, the marriages of depressed individuals have become a focus of interest. At the present time, there is little question of a strong and consistent association between depression and marital distress (Beach, Smith, & Fincham, 1994).

Beach, Jouriles, and O'Leary (1985) found that in 50% of couples requesting marital therapy, at least one partner met diagnostic criteria for major depression. Rounsaville, Weissman, Prusoff, and Herceg-Baron (1979) found that 50% of the women

seeking treatment for depression reported marital distress. In a community survey study, Weissman (1987) found that marital distress resulted in a 25-fold increase in the relative risk of major depression, for men and women. In addition, almost half of the wives in distressed relationships met criteria for major depression sometime in the six months preceding the assessment. Likewise, in a sample of newly married couples, O'Leary, Christian, and Mendell (1994) reported that the risk of developing depression was 10 times greater for individuals experiencing relationship problems, compared to the risk for individuals in nondistressed relationships. As suggested by these several examples, the diversity and expanse of the depression-marital distress literature demonstrates that their concurrent relationship is robust across samples, stages of family development, and varying definitions of the two constructs (Beach, Fincham, & Katz, in press). Indeed, the depression-marital distress relationship continues to be replicated across laboratories and disciplines (Beach et al., in press).

A review of the data suggests a bidirectional link between depression and marital distress. Marital distress influences the development of depression, and similarly, depression plays a role in the development of marital distress. The marital discord model of depression (Beach et al., 1990) outlines the way in which marital processes can exacerbate or maintain depressive symptomatology. The life-stress and depression literature provides empirical evidence to support the contribution of marital adjustment to the course of depressive experience (Gollan, Gortner, & Jacobson, 1996). This literature indicates that marital problems are often reported as a source of stress prior to the onset of a depression, and that relationship factors can buffer or inoculate against stress-induced

depression (e.g., Brown & Harris, 1978; Monroe, Bromet, Connell, & Steiner, 1986; Paykel et al., 1969). Outcome research has established that marital therapies for depression are just as effective as individual cognitive therapy, when patients present with concurrent depression and marital distress (Beach et al., in press). Furthermore, relational factors are associated with subsequent relapse rates in depression (Foley, Rounsaville, Weissman, Sholomaskas, & Chevron, 1989; Hooley & Teasdale, 1989).

Hammen's (1991) stress generation model of depression proposes that depression leads to a variety of marital difficulties, and increases marital stress. Possible mechanisms of stress-generation in marriage attributable to depression include, for example, negative support behavior, role performance decrements, and problem-solving deficits (Beach et al., in press). Interpersonal theories of depression similarly argue that depressed people engage in behaviors that hinder successful interpersonal relating (e.g., Coyne, 1976). These theories are supported, in part, by the findings that depressed individuals are perceived by their spouses as burdensome (Coyne et al., 1987), and further by findings that depressed individuals engage in a host of behaviors that adversely affect the quality of their relationships (for review, see Gotlib & Beach, 1995).

The robust association between depression and marital distress establishes the importance of understanding the depressed person in context, and supports the need for continuing investigation into the marriages of the depressed. The relevant depression research to date, however, has focused largely on the marital behavior of depressed individuals and their spouses. While these studies have identified important aspects of the marital relationship in depression, strictly behavioral models have limited our

understanding of marital functioning (Fincham, Bradbury, & Scott, 1990).

In recent years there has been a growing realization among marital researchers that a comprehensive account of marriage must also address the cognitive variables that give meaning to marital behaviors (Fincham et al., 1990). Theoretical models of marriage have given prominent attention to the attributions and expectancies that spouses provide for behaviors (e.g., Doherty, 1981a, 1981b; Fincham & Bradbury, 1987a). Independent of the marital literature, depression investigators have similarly concluded that the most significant advances in our understanding of the relationships of the depressed, are likely to come from an examination of their cognitive and behavioral functioning (Gotlib & Hooley, 1988). Furthermore, it has been concluded that the study of marital functioning and depression must proceed by examining the roles of all relevant parties, not just the depressed individual (Lee & Gotlib, 1994). In sum, the investigation of cognition that captures views of the partner, from the perspectives of depressed individuals and their spouses, and the relationship of that cognition to behavior, is an important direction for future research.

The present study aimed to further the understanding of the marital relationships of depressed persons. To build on the extant literature, the study investigated both cognitive and behavioral functioning in depressed wives and their nondepressed husbands, and examined the associations between the cognitive and behavioral variables. The importance of this study is highlighted in the treatise which follows, in its examination of: (a) negative marital processes and depression, including marital problem-solving behavior and depression, and marital cognition in marital distress and depression;

and (b) associations between marital cognition and problem-solving behavior.

Negative Marital Processes and Depression

Marital Problem-Solving Behavior and Depression

Marital interaction studies have revealed that depressed individuals interact in troubling ways with their nondepressed partners (Gollan et al., 1996). Couples with one depressed spouse are more likely to experience negativity and conflict compared to nondepressed couples (e.g., Hinchliffe, Hooper, & Roberts, 1978). Such couples engage in aversive exchanges (McCabe & Gotlib, 1993; Ruscher & Gotlib, 1988), and are characterized by more hostility and criticism (Arkowitz, Holliday, & Hutter, 1982), and greater reactivity to recent negative events (Jacobson, Follette, & McDonald, 1982).

Several interactional studies have suggested that it is important to investigate cognition and perception, as well as problem-solving behaviors, in couples with a depressed spouse. Kowalik and Gotlib (1987), for example, had depressed and nondepressed psychiatric outpatients and normal controls participate in an interaction task with their spouses, while simultaneously coding the intended impact of their own behavior and their perception of their spouses' behavior. Depressed spouses intended and perceived a lower percentage of positive messages and a higher percentage of negative messages. Outside observers coded comparable percentages of both codes in all groups. Gotlib and Whiffen (1989) found that while dysfunctional interaction patterns characterized both depressed patients and their spouses, and nondepressed medical patients and their spouses, only the depressed couples (i.e., depressed patients and their spouses) were characterized by negative affect following a problem-solving interaction,

and negative appraisals of their spouses' behavior. Hooley and colleagues (as cited in Gotlib & Hooley, 1988) found that while criticism ratings assigned to spouses by their depressed partners did not predict the spouses' behavior, either during an interview with a researcher or during a marital problem-solving interaction, the ratings were predictive of the depressed partners' nine-month relapse. Sher and Baucom (1993) examined differences in communication and the perception of communication among maritally distressed couples in which the wife was depressed, maritally distressed couples in which neither spouse was depressed, and normal control couples. Depression within the context of a distressed marriage was associated with more negative communication toward and from the depressed spouse, and with spouses' lower comprehension of each others' messages. Finally, McCabe and Gotlib (1993) reported that couples in which the wife was depressed perceived their interactions to be more hostile, less friendly, and more dominated by their partners than did couples in which the wife was nondepressed. Depressed wives also became increasingly negative in their verbal behavior over the course of the interaction.

As noted previously, there is a strong and consistent association between marital distress and depression, and, unfortunately, the two have often been confounded in marital interaction studies. In those studies that failed to control for marital distress, it is possible, therefore, that marital distress rather than depression was responsible for the observed dysfunctional problem-solving behaviors. A few studies have, however, attempted to separate the deviant couple interaction patterns unique to depression from those that are associated with marital distress (Biglan et al., 1985; Hautzinger, Linden, &

Hoffman, 1982; Nelson & Beach ,1990; Schmaling & Jacobson, 1990; Sher & Baucom, 1993). Hautzinger et al. (1982), for example, found that communication in maritally distressed couples with a depressed partner was more disturbed than in distressed couples without a depressed partner. Specifically, spouses of depressed partners seldom agreed with their spouses, offered help in an ambivalent manner, and evaluated their depressed partners negatively. Biglan et al. (1985) compared the marital interactions of control couples with those of distressed couples in which the wife was depressed (depressed-distressed couples) and nondistressed couples in which the wife was depressed (depressed-only couples). Both depressed groups exhibited a lower rate of self-disclosure than did nondepressed couples, and the depressed-distressed couples exhibited a lower rate of facilitative behaviors. Depressed women, regardless of their level of marital distress, showed higher rates of depressive behavior and lower rates of problem-solving behavior. Nelson and Beach (1990) compared the marital interactions of control couples with maritally distressed couples in which neither spouse was depressed (distressed-only couples), and maritally distressed couples in which the wife was depressed (depressed-distressed couples). Nondistressed couples exhibited more facilitative and less aggressive behavior than distressed couples, and depressed wives exhibited more depressive behavior than nondepressed subjects.

Only one previous study, that conducted by Schmaling and Jacobson (1990), used a full factorial design to investigate marital problem-solving behavior in depression. The presence or absence of a depressed wife was crossed with level of marital satisfaction (i.e., distressed or nondistressed) to produce four couple groups. This design permitted

separation of the effects of depression status from those of marital satisfaction. Schmaling and Jacobson (1990) found that maritally distressed couples, regardless of depression status, showed high rates of negative affect and aggressive statements, and low rates of positive affect and facilitative statements. Depressed wives exhibited more depressive behavor, as compared to nondepressed subjects. In addition, depressed wives in maritally nondistressed relationships exhibited high rates of aggression, behavior characteristic of maritally distressed couples.

In conclusion, the literature has shown that some level of negative behavior towards the spouse is characteristic of depressed persons during marital problem-solving discussions, rather than being entirely attributable to marital distress (Beach et al., in press). Findings from several studies have indicated that data concerning both behavioral and cognitive functioning may be valuable to understanding the association between depression and marital distress. Interpretation of the extant literature is, however, limited by a number of methodological problems. Except for the Schmaling and Jacobson (1990) study, the primary problem has been the lack of appropriate control groups that allow for the unambiguous isolation of the effects of depression from those of marital distress. Additional problems have included: (a) variation in the criteria used to classify individuals as depressed, ranging from a score in the moderate range of the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) to a diagnosis of major depression (e.g., Kowalik & Gotlib, 1987; Schmaling & Jacobson, 1990); (b) inadequate criteria used to classify individuals as nondepressed, including, for example, a BDI score below 20, the moderate range of depression (e.g., Schmaling &

Jacobson, 1990); (c) variation in the criteria used to classify individuals as maritally distressed, including, for example, a couple's combined score in the distressed range of the Dyadic Adjustment Scale (DAS; Spanier, 1976) versus both spouses individually obtaining scores in the distressed range (e.g., Bradbury, Beach, Fincham, & Nelson, 1996; Schmaling & Jacobson, 1990); (d) poor standards for inter-rater reliability, for example a reliability of .46 for husbands' depressive behavior and of .49 for wives' self-disclosure in the Biglan et al. (1985) study; (e) combined samples of depressed males and females, when little is known about how gender might influence the relationship between depression and marital interaction (e.g., Gotlib & Whiffen, 1989); and (f) use of experimenter defined problem-solving tasks (e.g., McCabe & Gotlib, 1993; Ruscher & Gotlib, 1988).

Marital Cognition in Marital Distress and Depression

Cognition and Marital Distress.

Recognizing the solid, albeit incomplete, foundation provided by behavioral studies of marital interaction, researchers investigating the psychology of marriage began, in the 1980s, to consider a variety of covert variables that might enrich our understanding of marital functioning (Fincham et al., 1990). In recent years, considerable effort has been expended exploring cognitive variables that influence marital quality and behavior (Bradbury & Fincham, 1990). The majority of this empirical research can be organized in terms of two major topics, attributions and beliefs (Fincham et al., 1990).

Most of the theoretical papers and empirical studies have focused on the attributions that spouses make for events occurring in their relationships (e.g., Doherty,

1981a, 1981b; Fincham & Bradbury, 1987a). Indeed, several models of close relationships have assigned a prominent role to spouses' causal and responsibility attributions, and the impact of attributions on behavior and relationship quality (Fincham, et al., 1990). Causal attributions concerned the explanations that a spouse made for an event, defined in terms of the locus, stability, and globality of the cause. Responsibility attributions focused on the accountability or answerability for an event, defined in terms of its intentionality, motivation, and blameworthiness.

Numerous studies have documented a robust association between relationship satisfaction and causal and responsibility attributions (for review, see Bradbury & Fincham, 1990). Specifically, it has been demonstrated that distressed spouses, compared to nondistressed spouses, are more likely to see the causes of marital problems and negative partner behaviors as stable, global, and located in the partner, and to view the partners' behavior as intentional, selfishly motivated, and blameworthy. That is, relative to their nondistressed counterparts, distressed spouses make attributions that are likely to increase the impact of negative events and maintain their distress. The distress-maintaining or maladaptive attributional pattern has also been found to predict declines in marital quality over time (Fincham & Bradbury, 1987b).

The literature examining marital beliefs has focused on unrealistic relationship beliefs, and on beliefs regarding perceived efficacy in resolving marital conflicts. Although perceived efficacy expectations have been the focus of little empirical work, they have been emphasized by marital therapists (e.g., Weiss, 1984a) and have been incorporated into cognitive models of marital conflict (Doherty, 1981a, 1981b; Fincham

& Bradbury, 1987a). Marital therapists have highlighted issues of low efficacy and helplessness in distressed couples. Theoretical arguments (e.g., Doherty, 1981a, 1981b; Epstein, 1985) have proposed that low expectations for efficacy in solving relationship problems impede conflict resolution and exacerbate marital distress. Empirical investigations have demonstrated that efficacy expectations related positively to marital satisfaction, and predicted satisfaction 12 months later, when initial levels of marital satisfaction were statistically controlled (Bradbury, 1990).

Cognition and Depression.

Relatively little is known about marital cognition in the relationships of depressed individuals. The results of one study, however, conducted by Horneffer and Fincham (1996), highlighted the importance of marriage-specific cognitions in understanding depression in the context of marriage. These investigators examined the simultaneous contribution of depressogenic and distress-maintaining marital attributions to the prediction of depressive symptoms and marital distress, using structural equation modeling. Depressogenic attributions were defined by the authors as internal, stable, and global causal attributions for negative self behaviors. Distress-maintaining attributions were defined as attributions that ascribed causes of negative partner behavior to partner locus, and to stable and global causes. Results were that distress-maintaining marital attributions yielded unique information in the prediction of both marital distress and depressive symptoms. The authors suggested that the study of cognitive variables identified in the depression literature was insufficient for understanding depression in the context of marriage, and that a more complete understanding of spousal depression

required consideration of marital attributions.

Because depressed individuals tend to evaluate many social stimuli in a negative fashion, they might also be expected to demonstrate a maladaptive or negative pattern of marital cognition, when explaining interactive behavior in their marriages (Karney, Fincham, Bradbury, & Sullivan, 1994). Indeed, there is some suggestion in the literature that maladaptive marital cognition characterizes the depressed individual. For example, in a study by Pretzer, Epstein, and Fleming (as cited in Baucom, Epstein, Sayers, & Sher, 1989) spouses' low efficacy expectations regarding their ability to solve their marital problems were associated with marital distress and depression. Results from a study of couples in long-term premarital relationships by Fletcher, Fitness, and Blampied (1990), suggested that depression was associated with a relationship-negative pattern of attributions, defined as attributing negative events to one's partner to a greater extent than for positive events. Pretzer, Epstein, and Fleming (1991) assessed attributions and expectancies regarding relationship problems in a sample of clinic and nonclinic couples. Depression among females was associated with attributions for marital problems to the spouse's personality and behavior, and with lower expectancies for improvement in the relationship. For males, depression was only associated with seeing marital problems as due to the spouses' lack of love. In a mixed sample of community couples and couples seeking marital therapy, Heim and Snyder (1991) found that across gender, increased levels of depression were associated with attribution of lack of love to the spouse, attribution of malicious intent to the spouse, and attribution of marital difficulties to the spouse's personality. Senchak and Leonard (1993), in a community sample of newlywed

couples, found that depression among husbands and wives was associated with less marital satisfaction and with an increased tendency to attribute negative events to the partner and to the self. In a community sample of married couples, Karney et al. (1994) used structural equation modeling with latent variables to test whether negative affectivity correlated with spouses' attributions for relationship events. Husbands and wives high in negative affectivity, defined as the cross-situational tendency to experience and express negative thoughts and feelings, tended to make maladaptive attributions for marital events and negative partner behaviors. Specifically, compared to spouses with low levels of negative affectivity, high negative affectivity spouses attributed negative partner behaviors and marital events to stable and global characteristics of the partner, and viewed the partner as behaving intentionally, with selfish motivation, and in a blameworthy manner. Finally, Davila, Bradbury, Cohan, and Tochluk (1997) reported that newlywed wives with higher levels of dysphoria were characterized by negative expectancies regarding upcoming interactions with their husbands.

While our knowledge of spousal depression will likely be furthered by examining the marital cognitions of depressed individuals, it is equally important that research explore how spouses of depressed patients think about their patient-partners. Observational studies of depressed people's interactions with strangers, roommates, and partners, have indicated that depressed individuals do elicit a variety of negative perceptions from those with whom they interact (for review, see Coyne, Burchill, & Stiles, 1991). Overall, however, studies assessing the marital cognitions of spouses of depressed individuals, have been sparse. Karney et al. (1994) found that spouses'

attributions for partner behavior were unrelated to the level of negative affectivity reported by the partner. Sacco, Dumont, and Dow (1993) found that husbands of depressed, relative to nondepressed wives, reported less marital satisfaction, made more dispositional attributions for negative nonmarital events, and indicated more negative affect in reaction to the negative events. In addition, depressed wives were rated more negatively on both depression-related and depression-neutral personality traits. The authors interpreted the results as suggesting that spouses of depressed wives had a generalized negative view of their wives. It is noteworthy, however, that in this investigation, the negative attributions towards the depressed were due to concomitant marital distress.

Some investigators have suggested that the attributions that spouses' made about their partners' depressive behaviors were particularly important in understanding their marital relationships. Hooley's (1987) attributional model of symptom controllability, for example, proposed that spouses attributed causes to their partner's illness behavior, which involved either blaming the patient, or blaming the illness. If, for example, depressive behavior was viewed as being due to the patient's personality, over which the patient had some control and responsibility, spouses were likely to be less tolerant and more critical of the patient, and the marital relationship was likely to be distressed. If depressive behavior was attributed to an illness that the patient could not control and for which he or she was not responsible, spouses were likely to be more tolerant, and the marital relationship was likely to be more satisfactory. According to the symptom controllability model, positive symptoms were likely to be attributed to genuine illness, despite their

highly disruptive nature, and therefore associated with higher levels of marital satisfaction. Negative symptoms, involving primarily an absence of normal functions, were likely to be attributed to the patient's volition and associated with marital distress. Consistent with predictions of the symptom controllability model, Hooley, Richters, Weintraub, and Neale (1987) found that independent of specific psychiatric diagnoses, the spouses of patients with predominantly positive symptoms, were more happily married than the spouses of patients with mostly negative or impulse control symptoms. As a further test of the symptom controllability model, Bauserman, Arias, and Craighead (1995) assessed causal and responsibility attributions for depressive behaviors in the spouses of depressed psychiatric inpatients and in nondepressed dyads. As predicted, more maritally distressed spouses rated negative, depressive behavior as caused by the partner's personality, as unlikely to change, as affecting other areas of the marriage, as deliberate, as due to selfish motivation, and as blameworthy.

Our knowledge of depression will be enhanced by continuing research addressing how depressed individuals perceive their spouses, and similarly how spouses perceive their depressed patient-partners. In regard to the former, limitations of the described studies affect the significance accorded the findings. Most studies to date have examined marital cognition as a function of depressive symptoms, and their findings may not generalize to major depression. Results obtained with partners in dating relationships (e.g., Fletcher et al., 1990) may not be relevant for marital relationships. Overall, findings from the reviewed literature are difficult to compare due to the considerable variation in the assessment of attributions (e.g., Fletcher et al., 1990; Senchak & Leonard, 1993). An

additional problem is the failure to assess causal and responsibility attributions. There has been little investigation of efficacy expectations in distressed marriages or marriages with a depressed spouse, and findings reviewed pertain to quite different operationalizations of the construct. Thus, while our understanding of spousal depression may be furthered by the consideration of marital cognitions, the results to date yield an incomplete picture. The question of whether depression is associated with negative or maladaptive cognition relevant to the marital context remains an important area of investigation (Beach et al., in press).

Considering the marital cognitions of spouses of depressed individuals, it does appear that the attributions they make about their patient-partner's depressive behavior may be associated with their marital adjustment. No conclusions can be drawn about the attributions that spouses make for their patient-partner's nondepressed negative marital behaviors.

Conclusion

There is a large body of research on negative marital processes and depression suggesting that relationship problems are common in depressed marriages. While a considerable amount of work has already been done, many questions remain unanswered. The literature review indicated, in particular, the importance of including multiple sources of information (i.e., husband and wife) and a focus on both marital cognition and behavior in future research endeavors. The literature also pointed to a significant number of methodological problems that need to be addressed in future investigations.

Marital Cognition and Problem-Solving Behavior

While the study of marriage has yielded an impressive empirical literature, theoretical development has lagged behind. As an initial step towards addressing this problem, Bradbury and Fincham (1991) outlined the contextual model of marital interaction. According to this model, spouses attend to, perceive, and assign meaning to behavior exhibited by the partner, and as a function of this processing, they then exhibit a behavioral response of their own. The processing, which comprises a series of attentional, affective, and attributional steps, is influenced by the nature of the stimulus behavior, as well as by transient emotions or thoughts experienced by the processing individual, and by their relatively stable psychological features, such as marital satisfaction, personality, and chronic mood state.

Early theoretical models have already taken one step towards specifying which of the many possible covert variables might be important in influencing problem-solving behavior. Doherty (1981a, 1981b) and Fincham and Bradbury (1987a) argued that conflict in marriage instigated two cognitive processes for spouses, the first concerning why there was conflict and who might be responsible for it (i.e., causal and responsibility attributions), and the second concerning whether the conflict could be resolved (i.e., perceived efficacy expectations). To date, the empirical literature has provided some evidence for the role of marital attributions and efficacy expectations in influencing behavior.

As noted by Bradbury and Fincham (1992), initial studies in this area, while supportive, failed to sample a wide range of marital satisfaction (e.g., Miller, Lefcourt,

Holmes, Ware, & Saleh, 1986), and to provide adequate measures of attributions (Doherty, 1982), or behaviors (Fincham, Beach, & Nelson, 1987). Early studies also failed to control for marital satisfaction, making it possible that the reported attribution-behavior association was a function of their shared variance with satisfaction.

Bradbury and colleagues (Bradbury et al., 1996; Bradbury & Fincham, 1992; Miller & Bradbury, 1995) endeavored to study the attribution-behavior link while addressing some of the weaknesses of previous investigations. In a series of two investigations, Bradbury and Fincham (1992) asked spouses from community samples of married couples, to make causal and responsibility attributions for difficulties in their marriage, and to participate in problem-solving discussions. Their first study demonstrated that, controlling for marital satisfaction, wives' maladaptive responsibility attributions for marital difficulties were related to less effective problem-solving skills. Wives' causal attributions were unrelated to their problem-solving behavior. Husbands' causal and responsibility attribution indices did not covary with problem-solving behavior. The second study demonstrated that spouses' maladaptive causal and responsibility attributions were associated with higher levels of negative behavior for husbands and wives, and, for wives only, with lower levels of positive behavior. In both studies, attributions and behavior tended to be more strongly related for distressed than nondistressed wives. In a sample of newlywed couples, Miller and Bradbury (1995) found that, after controlling for marital satisfaction, wives offering maladaptive responsibility attributions tended to behave in ways that hindered problem resolution in a problem-solving discussion and in a social support discussion with their spouses. As in

the initial Bradbury and Fincham (1992) study, husbands' causal and responsibility attributions, and wives' causal attributions, were unrelated to their problem-solving behavior. Overall, attributions and behaviors were more strongly related among relatively distressed spouses than nondistressed spouses.

Finally, Bradbury et al. (1996) examined the responsibility attribution-behavior association by using three groups of couples: (a) those in which the wife was depressed and both spouses were maritally distressed, (b) those in which the wife was not depressed and both spouses were maritally distressed, and (c) those in which neither spouse was depressed or maritally distressed. To the extent that they made maladaptive responsibility attributions, wives displayed less positive and more negative problem-solving behavior in a discussion with their partners. Wives' attributions were not associated with their nonverbal behavior. Husbands' attributions and behaviors were unrelated, and the associations between attributions and behavior were not moderated by marital distress or depression. In sum, the literature has supported a link between wives' responsibility attributions and problem-solving behavior, and has produced inconsistent results regarding the role of wives' causal, and husbands' causal and responsibility attributions, in influencing behavior.

Attempts to investigate the assumption that perceived efficacy expectations influence problem resolution have been rare. Efficacy expectations regarding the ability to solve marital problems have been found to correlate with spouses' self-reports of helpless behavior (Fincham & Bradbury, 1987a), and with wives' quality of problem-solving, as rated by trained observers (Bradbury, 1990). In a related vein, Weiss (1984b)

found that spouses' expectations regarding the behaviors and feelings they would experience during a problem-solving discussion with their partners, were correlated with rates of observer-coded positive behavior exhibited during the discussion.

In conclusion, while a key assumption of the emerging cognitive-behavioral models of marriage is that cognitions covary with and perhaps guide problem-solving behaviors, there is little evidence to support the assertion, and, in fact, surprisingly little is known about the variables that contribute to marital problem-solving behavior (Miller & Bradbury, 1995). There is some support in the literature, more so for wives, that maladaptive causal and responsibility attributions and low efficacy expectations hinder the resolution of marital problems (e.g., Bradbury, 1990; Bradbury et al., 1996; Miller & Bradbury, 1995). Taken together, however, the empirical literature addressing the attribution-behavior link has produced inconsistent results, and basic questions remain concerning the reliability and the significance of the association between attributions and behavior, particularly for husbands. Overall, the foregoing review suggests several refinements that need to be implemented in future research in this area, including: (a) assessment of both responsibility and causal attributions, which are thought to reflect distinct attributional phenomena (Bradbury & Fincham, 1990); and (b) control for the effects of marital satisfaction and depression, to demonstrate that the association between attributions and problem-solving behavior is not an artifact of their shared variance with either. In addition, there is a need for investigations examining the relationship of efficacy expectations, and other types of marital cognition (Baucom et al., 1989), with spouses' behavioral responses.

The Present Study

Depression is a multifaceted phenomenon, and as such, its various manifestations require study. As discussed, marital interaction research has yielded considerable insight into problem-solving behavior as a function of depression and marital distress. The literature has indicated, however, that our understanding of the link between depression and distress will be enhanced by an examination of data relevant to both cognitive and behavioral marital functioning in depression (Gotlib & Hooley, 1988). The literature has further suggested that the study of cognitive variables identified in depression research is insufficient for understanding depression in the context of marriage, and that a more complete understanding of spousal depression will require consideration of marriage-specific attributions (Horneffer & Fincham, 1996). In recent years, investigation of intrapersonal factors in marriage has shown that maritally distressed and nondistressed couples display differences in the marital cognitions they make regarding their relationship, and research has only begun to assess marital cognition as a function of depression. Examination of the interplay between behavior and cognitions in this domain is important, not only for specifying the role of cognitions in marriage, but also because it has the additional benefit of clarifying potential determinants of behavior in marital interaction (Miller & Bradbury, 1995).

The present study was designed to combine the two largely independent literatures on marital interaction and cognition to investigate the marital relationships of the depressed by: (a) assessing both problem-solving behavior and marital cognition; and (b) determining whether spouses' cognitions were related to their problem-solving

behavior in interaction, after controlling for the effects of depression and marital distress. Specifically, the current study assessed spouses' causal and responsibility attributions and perceived efficacy expectations, and marital problem-solving behaviors, and examined whether spouses' attributions and expectations were predictive of their problem-solving behaviors. Although other cognitive variables may have significance in marital functioning (e.g., Baucom et al., 1989), attributions and efficacy expectations were viewed as particularly important to consider because, as noted, theoretical models and marital therapists have given prominent attention to both variables (e.g., Doherty, 1981a, 1981b; Fincham & Bradbury, 1987a), and because a large body of empirical evidence has supported the role of attributions in marital adjustment (Bradbury & Fincham, 1990).

In its investigation of both cognitive and behavioral aspects of marital functioning for husbands and wives, and the examination of the cognition-behavior link, the current study extends the existing literature, and aims to provide a more complete account of the marital relationships of depressed persons. The study was designed to examine more definitively the characteristics of depressed couples by the use of a full factorial design, in which the presence or absence of depression was crossed with level of marital satisfaction (i.e., distressed or nondistressed). As noted previously, such a design has the advantage of isolating effects due to depression from those due to marital distress, as well as identifying possible interactions between depression and marital satisfaction levels. Furthermore, the current study addresses some of the weaknesses of previous work by the use of: (a) multiple and stringent criteria for classifying a subject as depressed; (b) multiple and stringent criteria for classifying a subject as nondepressed; (c) stringent

criteria for classifying a marital relationship as distressed; (d) a coding system with satisfactory content, validity, and reliability for both marital distress and depression (Weiss, 1992); (e) reliable and valid instruments for the assessment of attributions and efficacy expectations; and (f) a marital interaction task in which couples defined the problem for discussion, as opposed to the use of a researcher defined problem.

On the basis of past research investigating problem-solving behavior in maritally distressed couples (Weiss & Heyman, 1997) and in couples with a depressed spouse (Biglan et al., 1985; Nelson & Beach, 1990; Schmaling & Jacobson, 1990), it was hypothesized that:

(1) Depressed wives would exhibit more depressive behavior than their nondepressed spouses and nondepressed wives.

(2) Depressed wives in maritally nondistressed relationships would exhibit more aggressive behavior than normal control wives.

(3) Maritally distressed couples, in contrast to nondistressed couples, would exhibit more aggressive behavior.

(4) Maritally distressed couples, in contrast to nondistressed couples, would exhibit less facilitative behavior.

(5) Maritally distressed couples, in contrast to nondistressed couples, would exhibit less problem solution behavior.

The following hypotheses relevant to marital cognitions were tested. Hypotheses 6, 7, and 8 were consistent with findings from the marital distress literature (Bradbury, 1990; Bradbury & Fincham, 1990). Hypotheses 9, 10, and 11 were based on the

proposition that, given the association of depression with negativistic patterns of thinking, depression would be associated with negatively-valenced marital cognition.

(6) Maritally distressed couples, in contrast to nondistressed couples, would explain the causes of negative partner behavior as located in the partner, and as global and stable.

(7) Maritally distressed couples, in contrast to nondistressed couples, would view negative partner behavior as intentional, motivated by selfish concerns, and deserving of blame.

(8) Maritally distressed couples, in contrast to nondistressed couples, would report lower levels of perceived efficacy expectations.

(9) Depressed wives would explain the causes of negative partner behavior as located in the partner, and as global and stable, as compared to their nondepressed spouses and to nondepressed wives.

(10) Depressed wives would view negative partner behavior as intentional, motivated by selfish concerns, and deserving of blame, as compared to their nondepressed spouses and to nondepressed wives.

(11) Depressed wives would report lower levels of perceived efficacy expectations, as compared to their nondepressed spouses and to nondepressed wives.

The final set of hypotheses concerned the associations among marital cognitions and spouses' behaviors observed in a problem-solving discussion. These hypotheses were derived from the contextual model of marriage (Bradbury & Fincham, 1991), and have

received a limited degree of support in the empirical literature (Bradbury et al., 1996; Bradbury & Fincham, 1992; Miller & Bradbury, 1995). It was predicted that:

(12) To the extent that spouses make maladaptive causal attributions, they would be expected to exhibit more negative problem-solving behavior.

(13) To the extent that spouses make maladaptive causal attributions, they would be expected to exhibit less positive problem-solving behavior.

(14) To the extent that spouses make maladaptive responsibility attributions, they would be expected to exhibit more negative problem-solving behavior.

(15) To the extent that spouses make maladaptive responsibility attributions, they would be expected to exhibit less positive problem-solving behavior.

(16) To the extent that spouses report lower efficacy expectations, they would be expected to exhibit more negative problem-solving behavior.

(17) To the extent that spouses report lower efficacy expectations, they would be expected to exhibit less positive problem-solving behavior.

The current study also addressed two important questions for which there is little empirical data. First, did the association between marital cognitions and problem-solving behavior vary as a function of depression and marital distress, and second, what was the nature of marital cognition in spouses with depressed partners.

Method

Overview

The current study investigated marital cognition and problem-solving behavior as a function of depression and marital satisfaction. In the study, the presence or absence of a depressed wife was crossed with the level of marital satisfaction (distressed or nondistressed) to produce four groups of subject couples. Recruitment for the four groups was carried out in one hospital setting and in the community. In the first stage of the selection process, all interested volunteer couples completed questionnaires assessing mental health history, and levels of depression and marital satisfaction. For those women presenting to the hospital setting, and indicating mild or more severe levels of depression, a second step in selection involved the administration of a semi-structured interview to determine psychiatric status. Couples meeting criteria for entry into one of the subject groups were invited to continue in the study by arranging an appointment for a videotaped problem-solving interaction task. Prior to the interaction, couples completed measures assessing causal and responsibility attributions, and perceived efficacy expectations, and chose a moderate sized problem in their relationship for discussion. Following study participation, couples were debriefed and paid an honorarium.

Each of the procedures and instruments used in the study will be discussed in greater detail, in the sections which follow.

Subjects

Subjects were recruited into one of four groups of married couples. They included: (a) 17 couples in which the wife was depressed and the marital relationship was

distressed (depressed-distressed couples), (b) 17 couples in which the wife was depressed and the marital relationship was nondistressed (depressed-only couples), (c) 17 couples in which neither spouse was depressed but the marital relationship was distressed (distressed-only couples), and (d) 17 couples in which neither spouse was depressed and the marital relationship was nondistressed (normal control couples). Depressed and maritally distressed couples were recruited from an outpatient psychiatric assessment clinic within the Department of Psychiatry at Foothills Hospital, Calgary, Alberta. Control couples were recruited by an advertisement placed in a local newspaper inviting couples happy in their relationships to participate in a research project on marriage.

In addition to psychiatric criteria specified below, potential study participants had to satisfy the following three conditions before being considered for one of the couple groups: (a) married for at least one year and currently living with spouse, (b) between the ages of 18 and 60 years, and (c) fluency in English. The married and cohabiting requirements have been employed in previous investigations of depression and marriage (e.g., Schmaling & Jacobson, 1990). The lower age limit was selected in order to restrict participation to adults who could provide their own informed consent. The fluency requirement was necessary in order to make feasible the collection and coding of behavioral data.

Classification of couples as maritally distressed or nondistressed was based on scores from the DAS (Spanier, 1976). Consistent with prior research (e.g., Nelson & Beach, 1990), a couple was classified as distressed if both spouses obtained a score below 100. The nondistressed groups consisted of couples in which both spouses scored 100 or

above.

The classification of wives as depressed depended on their meeting two criteria: (a) a diagnosis of current episode major depression on the Structured Clinical Interview for DSM-III-R-Patient Version (SCID-P; Spitzer, Williams, Gibbon, & First, 1990); and (b) a BDI (Beck et al., 1961) score of 10 or greater, the conventional cut-off point for mild depression (Shaw, Vallis, & McCabe, 1985). Classification as nondepressed was based on a BDI score below 10 (Shaw et al., 1985).

Couples were excluded from the study if wives reported a history of schizophrenia, bipolar disorder, schizophreniform disorder, or substance abuse or dependence on the SCID-P. These exclusion criteria have been observed by many other researchers investigating the correlates of major depression (e.g., Nelson & Beach, 1990; Schmaling & Jacobson, 1990). Exclusion criteria also included a couple history of marital violence, and a history of psychiatric treatment in husbands, with the exception of a report of marital therapy in distressed couple groups. No psychiatric history was also required of wives in the normal control group.

Specifically, classification in the depressed-distressed couple group was defined in terms of DAS scores below 100 for both spouses, and BDI scores of 10 or above for wives and below 10 for husbands. In addition, depressed-distressed wives met SCID-P inclusion and exclusion criteria, and husbands reported no history of psychiatric treatment, except marital therapy. Spouses in the depressed-only group were characterized by DAS scores greater than or equal to 100. Depressed-only wives reported BDI scores of 10 or above and met SCID-P inclusion and exclusion criteria. Husbands in

the depressed-only group obtained BDI scores below 10, and reported no past psychiatric treatment. Distressed-only spouses obtained DAS scores below 100, BDI scores below 10, and reported no history of psychiatric treatment, except marital therapy. Normal control spouses reported DAS scores greater than or equal to 100, BDI scores below 10, and described no history of psychiatric treatment.

As indicated, couple groups characterized by depression or marital distress were recruited from an outpatient psychiatric assessment clinic. Individual patients and couples had been referred to the clinic either by their family physicians or by hospital physicians who had seen them in the Hospital Emergency Department on a crisis basis. For a period of 35 months, consecutive referrals to the clinic who were between the ages of 18 and 60 years, married for at least one year and cohabiting with their spouse, and fluent in English, were invited to participate in the study. Subsequent screening ensured that couples met the psychiatric criteria. Similarly, control couples responding to newspaper advertisements were invited to participate if they were between 18 and 60 years of age, fluent in English, and married at least one year and cohabiting.

In total, 273 patients, presenting individually or as couples, were approached at the hospital regarding participation in the study. After hearing a verbal description of the research, 131 (48%) volunteered to participate. Of the 131, 82 (63%) met DAS, BDI, and psychiatric treatment history criteria. Of these 82, 20 couples (24%) met criteria for entry into the group of maritally distressed couples. Sixty-two wives (76%) were administered the SCID-P. Table 1 lists the psychiatric disorders which were diagnosed in this group. Of these 62 wives, 38 wives (61%) met SCID-P criteria for study entry. Table 2 portrays the

Table 1

DSM-III-R Disorders Diagnosed in Psychiatric Patients

Category and Disorder	Number of Patients	Proportion[a] of Patients
Mood Disorders		
Bipolar Disorder		
-lifetime	0	.00
-current episode	2	.03
Major Depression		
-lifetime	9	.15
-current episode	48	.77
Dysthymia		
-current episode	11	.18
Psychoactive Substance Use Disorders		
Alcohol Abuse		
-lifetime	0	.00
-current episode	0	.00
Alcohol Dependence		
-lifetime	4	.06
-current episode	0	.00

(table continues)

Category and Disorder	Number of Patients	Proportion[a] of Patients
Drug Abuse		
-lifetime	3	.05
-current episode	1	.02
Drug Dependence		
-lifetime	0	.00
-current episode	0	.00
Anxiety Disorders		
Panic Disorder		
-lifetime	6	.10
-current episode	11	.18
Agoraphobia without History of Panic Disorder		
-lifetime	2	.03
-current episode	1	.02
Social Phobia		
-lifetime	4	.06
-current episode	13	.21
Simple Phobia		
-lifetime	2	.03
- current episode	5	.08

(table continues)

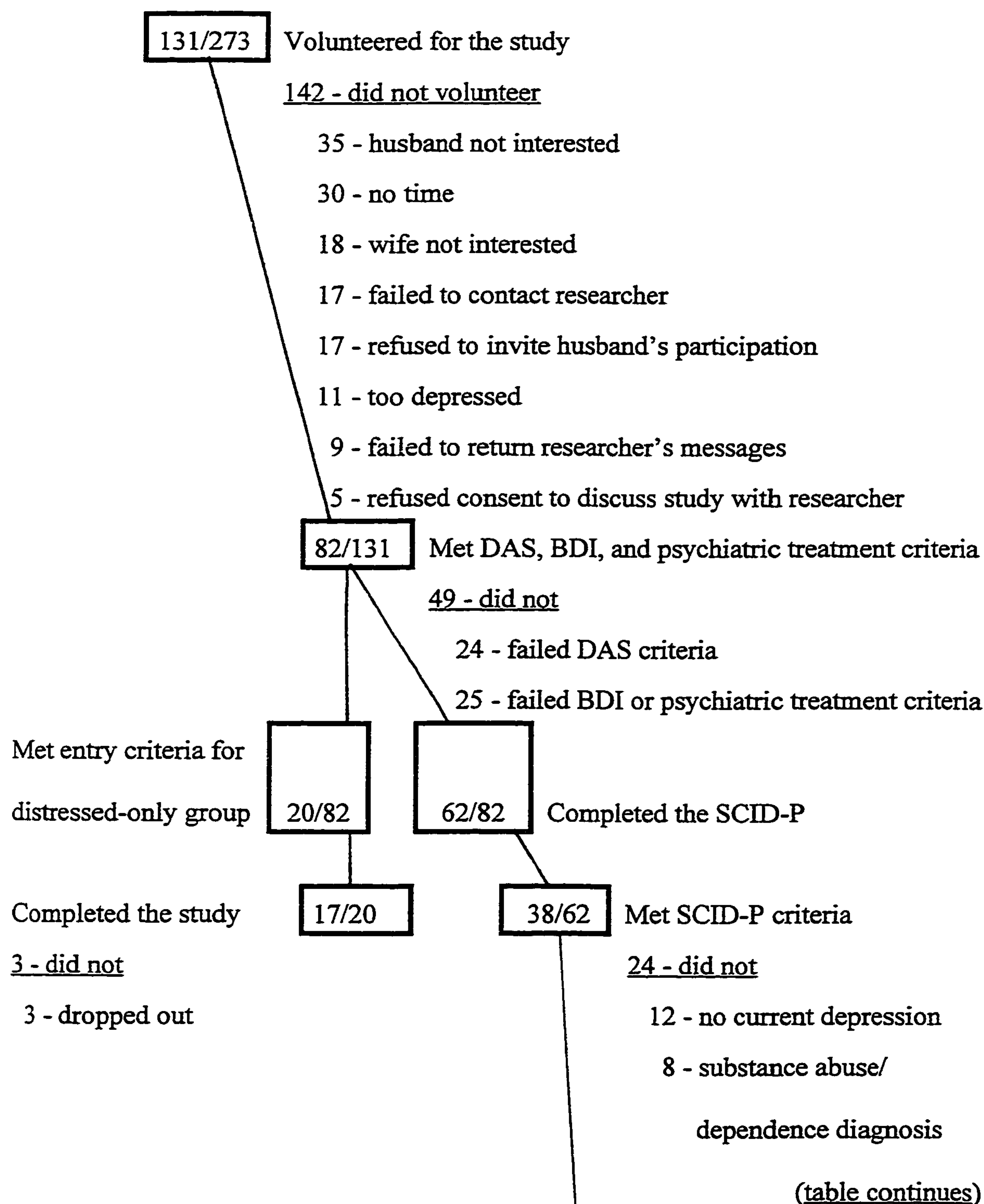
Category and Disorder	Number of Patients	Proportion[a] of Patients
Obsessive Compulsive Disorder		
-lifetime	3	.05
-current episode	1	.02
Generalized Anxiety Disorder		
-current episode	2	.03
Somatoform Disorders		
-current episode	0	.00
Eating Disorders		
Bulimia Nervosa		
-lifetime	8	.13
-current episode	0	.00
Anorexia Nervosa		
-lifetime	0	.00
-current episode	1	.02
Adjustment Disorder		
-current episode	1	.02

Note. Lifetime excludes current episode.

[a] Proportions were calculated on a total N = 62.

Table 2

Reasons for Attrition and Exclusion from the Sample of Hospital Volunteers



(table continues)

2 - bipolar history

2 - failed major depression criteria on retest

34/38 Completed study

4- did not

3- dropped out after SCID-P

1- video malfunction

reasons underlying exclusion and attrition at various points in the selection process.

In the community setting, 85 couples responded to the newspaper advertisement. Of these, 72 (85%) couples met study nonpsychiatric criteria, and were invited to participate. After hearing a description of the research, 45 (63%) couples volunteered. Of the 45, 18 couples (40%) met criteria for inclusion in the normal control group. Table 3 shows the process of exclusion and attrition whereby the control group of couples was identified.

Instruments

Screening and Diagnostic Instruments

Personal Information Questionnaire.

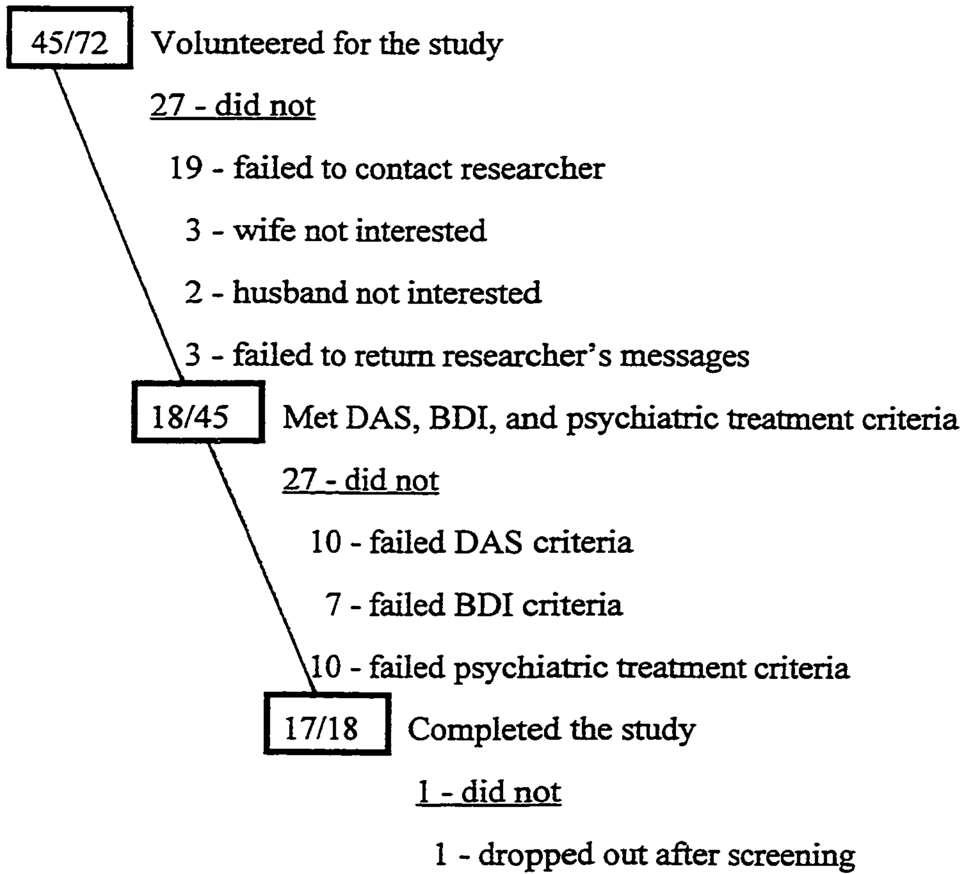
The Personal Information Questionnaire was designed for use in the current study in order to collect descriptive and demographic data from subjects (see Appendix A). Study subjects were asked to provide information regarding their age, years education, employment status, occupation, years married, and number, age, and sex of children. In addition, subjects were asked to provide information regarding mental health problems, history of marital violence, current or past treatment, model of treatment, and the current or past use of medication prescribed for stress or any emotional problems. For the current study, a psychiatric treatment history was defined as involvement in psychotherapy or counselling or the use of psychotropic medications.

Beck Depression Inventory (BDI).

The BDI (Beck et al., 1961) is a clinically derived, self-report measure of depression, that was developed to measure the depth of depression symptomatology

Table 3

Reasons for Attrition and Exclusion from the Sample of Community Volunteers



across a wide variety of nosological entities (Kendall, Hollon, Beck, Hammen, & Ingram, 1987). The inventory (see Appendix B) consists of 21 items, each corresponding to a specific category of symptoms and attitudes. Affective, cognitive, motivational, and physiological areas of depressive symptomatology are included. For each item, there is a graded series of alternatives ranging from neutral to severe. Subjects are asked to select the statement in each category that best describes how they felt during the past week. The BDI has excellent reliability (Beck, Steer, & Garbin, 1988), strong associations with other self-report and clinical rating scale measures of depression in both clinical and community samples, and has been demonstrated to be sensitive to changes in severity of depression (Rehm, 1988). In the present study, the BDI was used to screen for the presence of depression, and to confirm absence of depression. A semi-structured interview was used to determine the presence of nosological depression.

Dyadic Adjustment Scale (DAS).

The DAS (Spanier, 1976) is a 32-item self-report inventory designed to provide a measure of global marital adjustment (see Appendix C). It is comprised of four subscales assessing spouses' perceptions of the cohesion, consensus, satisfaction, and affective expression in their marriage. Scores range from 0 to 151, with high scores indicating greater adjustment. The DAS has excellent internal consistency, with a coefficient alpha of $r = .96$ for the total scale, and coefficient alphas for the four subscales varying from $r = .73$ to $r = .94$ (Spanier, 1976). The evidence for criterion-related and construct validity is good. The DAS reliably discriminates between married and divorced spouses and correlates highly with the Locke-Wallace Marital Adjustment Scale (Spanier, 1976).

Structured Clinical Interview for DSM-III-R: Patient Edition (SCID-P).

The SCID (Spitzer et al., 1990) is a semi-structured interview for making the major Axis I DSM-III-R diagnoses. It was designed to be administered by a clinician or a trained mental health professional familiar with DSM-III-R classification and diagnostic criteria.

In the current study, the researcher-interviewer had a master's degree in psychology and extensive clinical experience. In addition, the interviewer had studied the SCID User's Guide, and had completed an informal training series involving SCID administration and observation, including rating of SCID interviews and discussions of any sources of disagreement in ratings with other trainees.

The current study employed the SCID-P, one of two standard editions of the SCID, which was designed for use with subjects identified as psychiatric patients. The SCID-P includes an introductory overview followed by nine modules, seven of which represent the major axis diagnostic classes. The overview queries patients about their education and work history, their present illness (i.e., the patients' chief presenting complaint or description problem, illness onset and course, the development of recurrence of symptoms, the context and precipitants to the illness), the patients' treatment history, other current problems, and current social functioning. The modules cover mood syndromes, psychotic and associated symptoms, differential diagnosis of psychotic disorders, mood disorders, psychoactive substance use disorders, anxiety disorders, somatoform disorders, eating disorders, and adjustment disorder. The output of the SCID is a record of the presence or absence of each of the disorders, for current episode

(defined as past month) and for lifetime occurrence.

The use of the SCID-P leads to reliable classification for broad and specific DSM-III-R Axis I diagnoses (Skre, Onstad, Torgersen, Kringlen, 1991; Williams, et al., 1992). In Skre et al. (1991), audiotaped interviews were rated independently by three raters. Excellent inter-rater reliabilities (kappa ≥ .85) were obtained for, for example, schizophrenia, major depressive disorder, dysthymia, generalized anxiety disorder, and psychoactive substance use disorder. Using the test-retest format, the Williams et al. (1992) multisite study reported that for most of the major categories (i.e., bipolar disorder, major depression, schizophrenia, alcohol abuse and dependence), kappas for current and lifetime diagnoses were above .60. This value is roughly comparable to that obtained with other structured diagnostic instruments. In the current study, the SCID-P was only administered to wives seeking treatment at the psychiatric assessment clinic after obtaining a BDI score in the depressed range (i.e., BDI score of 10 or greater). The interviews were audiotaped and a random 20% (n = 12) were independently rated by a psychiatrist, blind to the researcher-assigned diagnoses. The psychiatrist had received SCID-P training which consisted of reading the SCID Users' Guide (Spitzer et al., 1990), including case vignettes with accompanying completed SCIDs, and rating audiotaped interviews, followed by discussion of interviewing technique and sources of disagreement in the ratings. Inter-rater agreement on classification as qualified to participate in the study (i.e., a diagnosis of current episode major depression and no exclusionary diagnoses) for the randomly selected subsample of women was 100%.

Instruments to be Completed by the Subjects

SCID-P Current Major Depression Syndrome Section.

Wives who had been identified for the depressed groups met diagnostic criteria for major depression at the time they completed the SCID-P. However, between completion of this psychiatric interview and participation in the marital problem-solving interaction session, varying lengths of time elapsed, with an average time lag of 12 days. In addition to the time lag required to coordinate the schedules of the couples and the researcher, many of the wives had begun a regimen of antidepressant medication and psychotherapy immediately after volunteering for the study. In light of these factors, it seemed prudent to review wives' depressive symptomatology at the time they presented with their spouse for the marital interaction. The importance of reviewing subjects' depression status has also been emphasized by depression researchers (Kendall et al., 1987) who recommend that assessments of depression be made at a time concurrent with other assessments to which covariation is to be examined. In the present study, the Current Major Depression Syndrome section of the SCID-P was re-administered to wives on the day of the couple's study participation, to ensure that DSM-III-R criteria for current episode were still met. Two of the wives had shown improvement since the time of the original diagnosis, no longer met criteria for current episode major depression, and as such, were excluded from the study.

Relationship Attribution Measure (RAM).

Marital attributions were assessed with the 48-item RAM (Fincham & Bradbury, 1992). The RAM (see Appendix D) contains eight negative stimulus events that

commonly occur in marriage. For each event, subjects are asked to rate on a 6-point scale the extent to which they agree or disagree with each of six statements. The statements reflect six attribution dimensions, three of which pertain to causal attributions (i.e., locus, globality, and stability of the cause of the negative stimulus event), and three of which pertain to responsibility attributions (i.e., intent, motivation, and blame for the event).

The RAM yields a causal attribution index (RAM-C) and a responsibility attribution index (RAM-R), each of which is composed of 24 items (eight stimulus events by three dimensions). Composite indices of causal and responsibility attributions are constructed, as it is the pattern of attributions across dimensions that has been emphasized in theoretical statements and past research findings investigating spousal attributions (e.g., Bradbury, 1990; Bradbury & Fincham, 1992; Fincham & Bradbury, 1987b; Miller & Bradbury, 1995). Scores on the RAM-C and the RAM-R range from 24 to 144, with higher values indicating maladaptive attributions, or attributions that portray the partner in a negative way. Higher scores on the causal index indicate that the respondent was more likely to locate the cause of the negative partner behavior in the partner, and perceive the cause to be stable and global. Higher scores on the responsibility index indicate that the respondent was more likely to view the partner's negative behavior as intentional, motivated by selfish concerns, and deserving of blame.

Fincham and Bradbury (1992) have demonstrated that the RAM is a reliable and valid measure. Reliability was established by showing the measure to be internally consistent (alpha for RAM-C = .84 and .86, for wives and husbands, respectively; alpha for RAM-R = .89 and .86, for wives and husbands, respectively) and by demonstrating

adequate test-retest reliability (r = .60 or more for 2-week test-retest). The validity of the measure has been established by the demonstration of significant correlations between RAM responses and marital satisfaction (for wives, r = -.40 for RAM-C and -.44 for RAM-R; for husbands, r = -.44 for RAM-C and -.45 for RAM-R), attributions for actual partner behaviors generated by the spouses (for wives, r = .71 for RAM-C and r = .73 for RAM-R; for husbands, r = .60 for RAM-C and r = .66 for RAM-R), and attributions for marital difficulties (for wives, r = .43 for RAM-C and r = .31 for RAM-R; for husbands, r = .48 for RAM-C and r = .63 for RAM-R).

Coefficient alpha for RAM-C in the current study was excellent (wives = .91 and husbands = .92), and, as in prior research, a composite index was formed by summing the 24 causal judgements. Coefficient alpha for the RAM-R was also excellent (wives = .92 and husbands = .92), and a composite responsibility index was similarly formed.

Perceived Efficacy Expectations Scale (PEES).

This 7-item measure of perceived efficacy (Bradbury, 1990) was used to assess the extent to which spouses believed they were able to resolve their marital conflicts (see Appendix E). Subjects indicate on a 7-point Likert scale the degree to which they agree or disagree with seven statements concerning the disagreements in their marriages (e.g.,"I have little control over the conflicts that occur between me and my partner"). Higher scores on the PEES reflect lower levels of perceived efficacy.

Bradbury (1990) demonstrated that the PEES is a reliable and valid measure. Reliability was established by showing the measure to be internally consistent (coefficient alpha = .88 and .82, for wives and husbands, respectively) and by demonstrating

adequate test-retest reliability ($r = .58$ and .55 for wives and husbands respectively, for a 12 month interval). The validity of the measure has been established by the demonstration of significant correlations between the PEES and levels of marital distress ($r = .75$ for wives and .67 for husbands), and quality of problem-solving in marital interactions (for wives, $r = .28$). In the current study, coefficient alphas for the PEES were excellent (alphas = .91 and .87 for wives and husbands, respectively).

Coding the Marital Interactions

Marital Interaction Coding System-Version IV (MICS-IV).

The MICS-IV (Weiss, 1992) is a complex microanalytic coding system developed and revised by investigators within the Oregon Marital Studies Program. The MICS-IV was designed to be a comprehensive system for describing problem-solving interactions. It consists of content codes (e.g., problem description, criticize, agree), form codes (e.g., command, question), nonverbal carrier codes (e.g., smile, dysphoric affect), and state codes (e.g., listener attention). The primary emphasis of the MICS is on the verbal content of an interaction. However, the content codes do require the consideration of paralinguistic aspects of speech for their definition. For example, the criticize code can only be applied to a spouse's verbal expression of disapproval or dislike if it is stated with a hostile or irritated voice tone.

The designers of the MICS-IV have grouped the codes into the following nine functional categories: description, blame, propose change, irrelevant, validation, invalidation, facilitation, withdrawal, and dysphoric affect. In the current investigation, the data from the MICS-IV were further reduced into conglomerate code categories which

had been previously found to differentiate the interactions of depressed, maritally distressed, and normal control couples (e.g., Biglan et al., 1985; Schmaling & Jacobson, 1990). The categories were: (a) depressive, comprised of dysphoric affect; (b) facilitative, comprised of validation and facilitation; (c) aggressive, comprised of blame, invalidation, and withdrawal; and (d) problem solution, comprised of propose change. Table 4 lists the individual codes that comprise each of the four conglomerate code categories. These categories reflected those employed in four previous studies (Biglan et al., 1985; Jacobson, Dobson, Fruzzetti, Schmaling, & Salusky, 1991; Romano et al., 1991; Schmaling & Jacobson, 1990), where similar individual codes defined the same four conglomerate categories, using the Living in Family Environments Coding System (LIFE; Arthur, Hops, Biglan, 1982) and the Kategoriensystem fur partnerschaftliche Interacktion (KPI; Hahlweg et al., 1984). Neutral information (i.e., problem description, irrelevant utterances, and listening) was excluded from analyses, both to reflect the protocol in prior research and to control for the effects of ipsativity (e.g., Biglan et al., 1985; Schmaling & Jacobson, 1990). As in the prior investigations, the frequencies of the four codes were transformed into proportions (i.e., frequency of code/total number of codes) for the study analyses.

The validity of the MICS has been demonstrated in various studies over the past 20 years (e.g., Markman & Notarius, 1987; Weiss & Tolman, 1990). The MICS differentiates distressed from nondistressed couples, and is sensitive to changes associated with behavior marital therapy.

Videotapes of couple problem-solving interactions were sent to the Oregon

Table 4

MICS-IV Codes Included in Conglomerate Code Categories

Facilitative	Aggressive
Assent	Criticize
Disengage (neutral voice tone)	Mindread Negative
Excuse Other	Put Down
Humor	Threat
Mindread Positive	Voice Tone (non-neutral)
Question	Disagree
Positive Physical Contact	Disapprove
Paraphrase/Reflection	Deny Responsibility
Smile/Laugh	Excuse
Agree	Interrupt
Approve	Non-compliance
Accept Responsibility	Turn-off
Compliance	Withdrawal
	Off Topic
Depressive	**Problem Solution**
Self Complaints	Compromise
Sad, Despondent, or Depressed Affect	Negative Solution
Crying/Tearfulness	Positive Solution
Vocal Cues (slow speech, monotone)	
Bodily Non-verbal (pouting, sighing, low activity)	
Whining	

Marital Studies Program for coding by trained raters, under the supervision of Dr. Robert L. Weiss. Raters were unaware of the nature of the project and the diagnostic status of the couples. According to the coding conventions of the Program, each interaction was coded by a master coder, and a randomly selected 20% of the interactions were coded by a second rater. The second rater was required to maintain a minimum code-by-code agreement level of 70% with the master coder. If the agreement figure fell below this criterion, the coders were recalibrated and the disagreements were conferenced. Reliability checks against a standard protocol were also regularly assigned. Reliability of coding was assessed by calculating a percentage reliability, obtained by adding all codes that agreed together, multiplying that total by two, and dividing by the sum of the total number of codes. In the current study, 14 tapes were coded by two raters. Inter-rater reliability averaged 73% for individual codes.

Procedure

Screening Assessment

Community Couples.

Couples answering the advertisement for "couples happy in their relationship" received a brief telephone interview assessing marital status, age, and fluency in English. Those meeting these initial study criteria were given an overview of the purpose, procedures, and incentives of the study, and were invited to participate. Couples were informed that, in return for their participation in the study, they would receive an invitation to a day long workshop focussing on issues of depression and marital satisfaction, and $25.00 to cover their transportation and child care costs. Couples were

also advised that information regarding therapy services available in the city would be made available to them at their request. Whether or not couples wished to volunteer, they were asked to provide anonymous demographic information. A meeting was scheduled with interested volunteers to explain in more detail the procedures of the study, and to deliver and explain screening consent forms (see Appendix F) and screening questionnaires. Screening questionnaires assessed couples' history of psychiatric treatment, and levels of depression and marital satisfaction. The importance of independent completion of the questionnaire materials was emphasized by the researcher, and spouses were provided with separate envelopes to protect their confidentiality. Spouses were encouraged to contact the researcher directly to address any questions about the completion of screening materials, and were asked to seal the completed materials in the provided envelopes before talking about the study. Consent forms were read, signed, and witnessed in the presence of the researcher. It was agreed that the researcher would retrieve the questionnaires, or the couple would deliver them to the researcher, a maximum of 3 days following the initial meeting.

Couples were excluded from the study if they did not meet criteria for the normal control group. Couples meeting criteria arranged an appointment in the laboratory with the researcher to collect questionnaire and marital problem-solving interaction data. Finally, couples were debriefed, given the opportunity to ask questions, and paid an honorarium for their participation.

Hospital Couples.

Patients who met marital status, age, and fluency requirements were identified

from psychiatric assessment clinic referral forms. The study was initially introduced to identified patients by an intake worker at the termination of the clinic assessment interview. Intake workers advised such patients that a research project on depression and marital satisfaction was currently underway at the clinic, and asked if patients would be willing to meet briefly with the researcher to be informed of the project. Consenting patients were briefed by the researcher regarding study purpose, procedures, and incentives, and were invited to participate. Patients also received a flyer (see Appendix G) summarizing study details and providing the researcher's name and phone number. As with community couples, patients were informed that, in return for their participation in the study, they would receive an invitation to a day long workshop focussing on issues of depression and marital satisfaction, and $25.00 to cover their transportation and child care costs. Whether or not patients wished to meet with the researcher or to volunteer for the study, they were asked to provide anonymous demographic information.

Patients presenting to the clinic without their spouses were subsequently contacted by the researcher to determine if spouses were interested in study involvement. The protocol for the first stage of the selection process was identical to the screening procedure for the normal control couples. A meeting was scheduled with interested couples to explain in more detail the procedures of the study, and to deliver and explain consent forms and screening questionnaires. Spouses were instructed by the researcher to complete the questionnaires independently, encouraged to contact the researcher directly to address any questions, and asked not to discuss the study with their partners prior to sealing the completed materials in an envelop. Screening consent forms were read,

signed, and witnessed in the presence of the researcher. It was agreed that the researcher would retrieve the questionnaires, or the couple would return them, a maximum of 3 days following the initial meeting. Couples meeting BDI, DAS, and psychiatric history criteria for one of the clinical groups, were invited to continue in the study. For those couples in which the wife obtained a score of 10 or above on the BDI, study continuation included a second step in the selection process. This second step consisted of the administration of the SCID-P to determine wife's psychiatric status. Couples were scheduled for an appointment in the laboratory to complete questionnaire and marital problem-solving interaction data. Couples were debriefed, given the opportunity to ask questions, and paid an honorarium for their participation.

Communication Assessment

The researcher met the couple at the depression laboratory at the appointed time. After orientation to the facility, the researcher gave an overview of the questionnaires and the problem-solving interaction task the couple would be required to complete, following which couples were asked to read and sign a study participation consent form (see Appendix H). The husband and wife were then seated in separate rooms, and individually administered the set of questionnaires assessing causal and responsibility attributions, and perceived efficacy expectations. Spouses were given the opportunity to ask questions regarding the task if there was uncertainty about what to do. Upon completion of the questionnaires, spouses were brought together in the same room, seated facing each other, and asked to identify what they considered to be a moderate sized problem in their relationship, for a subsequent discussion. Couples were instructed not to

begin discussing the problem, but simply to decide on which problem would be their focus. The researcher escorted the couple to the social laboratory where the problem-solving discussion would be conducted. The social laboratory consisted of an experiment room and an adjoining observation room that had the capacity to videotape conversations in the experiment room. The couple was asked to engage in a 10-minute discussion of the chosen marital problem. The researcher gave instructions to the couple in the experiment room and then left to videotape the interaction from the observation room. Instructions to the couple emphasized resolution of the problem (see Appendix I). When the 10 minutes had elapsed, the researcher signalled the couple to end their discussion.

Results

Presentation of the results will begin with an explanation of the demographic and descriptive characteristics of wives and husbands in the four couple groups. Subjects who participated in the study will then be compared with potential subjects who did not participate. Evaluation of the dependent variable data will follow. The sequence of analyses of the dependent variables is consistent with the order in which hypotheses were outlined in the introduction: (a) analyses of marital problem-solving behavior, (b) analyses of marital cognition (i.e., attributions and perceived efficacy expectations), and (c) analyses of the associations between marital cognition (i.e., attributions and perceived efficacy expectations) and problem-solving behavior. Each set of analyses will begin with a brief discussion of the experimental design and the approach to statistical analysis.

Characteristics of the Sample

Demographic characteristics of the four couple groups are presented in Table 5.

Table 5

Wife and Husband Demographic Variables: Means, Standard Deviations, and Percentages

Variables	Depressed-Distressed (n = 17)	Depressed-Only (n = 17)	Distressed-Only (n = 17)	Normal Controls (n = 17)
		Wives		
Age[a]	37.59(10.17)	40.24 (7.70)	36.12 (7.57)	38.82 (9.70)
SES[a,b,c]	55.32(14.95)	54.91(13.59)	54.02 (8.57)	55.26 (16.12)
Years of Education[a]	13.24 (2.39)	13.53 (2.65)	13.47 (2.76)	15.18 (2.30)
Employment Status[d]				
-unemployed	59%	59%	35%	24%
-employed	41%	41%	65%	76%
Years Married[a,c]	9.68 (9.75)	11.88 (7.28)	9.24 (5.82)	10.09 (10.04)
Number of Children[a,c]	1.76 (1.39)	1.94 (1.14)	1.88 (0.78)	2.35 (1.37)

(table continues)

Variables	Depressed-Distressed (n = 17)	Depressed-Only (n = 17)	Distressed-Only (n = 17)	Normal Controls (n = 17)
		Husbands		
Age[a]	39.53 (10.80)	41.24 (8.25)	40.06 (5.87)	39.71 (9.91)
Years of Education[a]	14.65 (2.99)	13.53 (3.00)	14.18 (3.52)	15.65 (2.18)
Employment Status[d]				
-unemployed	12%	6%	18%	12%
-employed	88%	94%	82%	88%

Note. Standard deviations are bracketed.

[a]2x2 ANOVAS revealed no significant group differences.

[b]SES was defined using the Blishen Index corresponding to the highest-rated occupation in the household.

[c]Variables descriptive of the couple.

[d]χ^2 analysis revealed no significant group differences.

Continuous demographic variables were assessed using 2 x 2 analyses of variance (ANOVAS), separately for wives and husbands. No significant differences were found for couples' length of marriage, number of children, and socioeconomic status (Blishen, Carroll, & Moore, 1987). In addition, ANOVAS indicated no differences on the educational level and age of either wives or husbands. Chi square analyses of employment status by group revealed no significant differences for husbands or wives. Chi square analyses of wives' employment status by level of marital distress, and of husbands' employment status by level of depression and level of marital distress, produced no differences. Analysis of wives' employment status by level of depression did reveal significant differences between depressed and nondepressed wives, with fewer depressed wives being employed ($\chi^2(1, N = 68) = 5.96, p < .05$). A point biserial correlational analyses indicated that wives' employment status did not correlate significantly with any dependent variables, however, and the magnitudes of the correlations were all less than .20, sharing less than 5% of the variance. Therefore wives' employment status was not used as a covariate in subsequent analyses.

For the overall study sample, wives were on average 38.20 years old (SD = 8.80) and had 13.85 years of education (SD = 2.59). Fifty-six percent of wives were employed. Husbands averaged 40.13 years of age (SD = 8.73) and 14.50 (SD = 3.02) years of education. Eighty-eight percent of husbands were employed. Couples averaged 10.22 years of marriage (SD = 8.28) and had 1.99 children (SD = 1.19). The socioeconomic status score for the average couple in the sample was representative of occupations such as managers in the manufacturing sector, writers, editors, and nurses.

BDI and DAS scores were assessed using 2 x 2 ANOVAS, separately for husbands and wives. Mean scores for the BDI and the DAS by spouse and group are presented in Table 6. ANOVA results (see Tables 7 and 8) revealed that the recruitment procedures were successful in establishing groups of depressed-distressed, depressed-only, distressed-only, and control couples, that differed in their levels of depression and marital satisfaction. Wives in the depressed groups reported significantly more depressive symptoms on the BDI than those in the nondepressed groups ($F(1,64) = 335.35$, $p < .0001$). Categorizing BDI scores into levels of depression (Shaw et al., 1985), depressed wives exhibited severe depression ($M = 30.30$; range of 20 to 46), and nondepressed wives exhibited a normal nondepressed state ($M = 5.74$; range of 0 to 9).

Results for husbands' BDI scores revealed a significant main effect for marital distress ($F(1,64) = 12.87$, $p < .001$) and a significant depression by marital distress interaction ($F(1,64) = 16.72$, $p < .0001$). Post hoc comparison analyses (Bonferroni adjusted alpha = .0125) found that husbands in the control group obtained lower scores than depressed-only husbands ($F(1,32) = 8.58$, $p < .01$) and distressed-only husbands ($F(1,32) = 39.83$, $p < .0001$); and depressed-distressed husbands obtained lower scores than distressed-only husbands ($F(1,32) = 8.15$, $p < .01$). These results were not unexpected. BDI scores are typically elevated in maritally distressed couples, as compared to control couples (Schmaling & Jacobson, 1990). Similar measures are elevated in spouses living with depressed partners (Coyne et al., 1987). These elevations reflect the general distress associated with marital discord or with the burden of living with a depressed partner, as well as the tendency of the BDI to measure such nonspecific

Table 6

Mean Scores for the BDI and the DAS

Measure	Depressed-Distressed (n = 17)	Depressed-Only (n = 17)	Distressed-Only (n = 17)	Normal Control (n = 17)
Wife BDI	30.41 (7.74)	30.18 (7.00)	7.47 (2.07)	4.00 (3.02)
Husband BDI	5.18 (3.07)	5.53 (3.45)	7.88 (2.42)	2.47 (2.58)
Wife DAS	76.77(11.68)	111.29 (8.56)	81.12 (15.50)	115.65 (8.99)
Husband DAS	86.77(14.68)	110.94 (8.77)	84.06 (13.89)	114.65 (10.26)

Note. Standard deviations are bracketed.

Table 7

Source Table for the 2x2 ANOVAS of BDI Scores

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Wives				
Depression	10253.31	1	10253.31	335.35****
Distress	58.37	1	58.37	1.91
Depression by Distress	44.49	1	44.49	1.45
Error	1956.82	64	30.58	
Husbands				
Depression	0.53	1	0.53	0.06
Distress	108.76	1	108.76	12.87***
Depression by Distress	141.24	1	141.24	16.72****
Error	540.71	64	8.45	

***$p < .001$. ****$p < .0001$.

Table 8

Source Table for the 2x2 ANOVAS of DAS Scores

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Wives				
Depression	322.12	1	322.12	2.43
Distress	20268.76	1	20268.76	152.68****
Depression by Distress	0.00	1	0.00	0.00
Error	8496.24	64	132.75	
Husbands				
Depression	4.25	1	4.25	0.03
Distress	12746.49	1	12746.49	86.34****
Depression by Distress	174.72	1	174.72	1.18
Error	9448.82	64	147.64	

****$p < .0001$.

life distress (Gotlib, 1984; Schmaling & Jacobson, 1990). In addition, it may be that the significant differences obtained in husbands' scores in this study were contributed to by the low standard deviations characterizing the four groups. There was no evidence of clinical depression in husbands in the current study. Husband depression scores were in the nondepressed range (i.e., 0 to 9), and husbands reported no emotional problems or psychological symptoms for which they received psychotropic medications or current or past psychological or psychiatric treatment, other than marital problems and therapy.

As expected, distressed and nondistressed wives ($F(1,64) = 152.68$, $p < .0001$) and distressed and nondistressed husbands ($F(1,64) = 86.34$, $p < .0001$) differed from each other on the DAS (see Table 8). In each instance, DAS scores were lower, reflecting more distress, for spouses in distressed relationships.

In order to examine subjects' representativeness of the larger sample from which they were drawn, study participants were compared to nonparticipants on common demographic variables. Since the source of depressed and maritally distressed couples who participated in the study was an outpatient assessment clinic, couples in these groups ($N = 51$) were compared to nonparticipant couples ($N = 222$) from the same outpatient clinic. Means, standard deviations, and percentages are displayed in Table 9. T- tests revealed no significant differences between study participants and nonparticipant couples in length of marriage, socioeconomic status, and number of children. No significant differences were found on the educational level and age of either wives or husbands in the participant versus the nonparticipant sample. Similarly, chi-square analyses failed to indicate significant differences on husbands' and wives' employment status. Couples

Table 9

Means, Standard Deviations, and Percentages on Demographic Variables for Clinical Subjects and Clinical Nonparticipants

Variables	Clinical Subjects (N = 51)	Clinical Nonparticipants (N = 222)
	Wives	
Age[a]	37.98 (8.57)	36.99 (8.53)
SES[a,b,c]	54.75 (12.43)	52.79 (13.49)
Years of Education[a]	13.41 (2.55)	13.14 (2.06)
Employment Status[d]		
-unemployed	51%	50%
-employed	49%	50%
Years Married[a,c]	10.33 (7.68)	10.95 (8.30)
Number of Children[a,c]	1.88 (1.11)	1.82 (1.21)

(table continues)

Variables	Clinical Subjects (<u>N</u> = 51)	Clinical Nonparticipants (<u>N</u> = 222)
	Husbands	
Age[a]	40.27 (8.40)	39.38 (8.90)
Years of Education[a]	14.12 (3.19)	13.58 (2.05)
Employment Status[d]		
-unemployed	12%	11%
-employed	88%	89%

<u>Note</u>. Standard deviations are bracketed.

[a]<u>T</u>-tests revealed no significant group differences.

[b]SES was defined using the Blishen Index corresponding to the highest-rated occupation in the household.

[c]Variables descriptive of the couple.

[d]χ^2 analysis revealed no significant group differences.

comprising the normal control group were recruited through advertisements in the local newspaper. The nonparticipating community couples ($N = 55$) were compared to the study control group couples ($N = 17$). No significant differences were found on length of marriage, number of children, socioeconomic status, or on husbands' and wives' education, age, and employment status. Means, standard deviations, and percentages are reported in Table 10.

Analyses of Marital Problem-Solving Behavior

Repeated measures ANOVAS were performed on the four marital problem-solving behaviors (depressive, aggressive, facilitative, problem solution). As noted, neutral information, defined as problem description, irrelevant utterances, and listening (Biglan et al., 1985; Schmaling & Jacobson, 1990) was excluded from the analyses to control for the effects of ipsativity. The analyses were 2 x 2 x 2 ANOVAS with one within-subjects factor (sex of spouse) and two between-subjects factors (depression status and marital distress status). There were two levels to the within-subjects factor (wife versus husband), two levels to the factor of wife's level of depression (depressed versus nondepressed), and two levels to the marital distress factor (distressed versus nondistressed). Planned contrasts were conducted with significance attained when alpha < .05 (Kirk, 1982). In post hoc analyses, the Bonferroni adjustment was employed to control for Type I error. With each type of major effect (e.g., level of depression, level of marital distress, sex, level of depression by marital distress, etc.) defined to represent a family (Maxwell & Delaney, 1990), familywise alpha was controlled at .05.

The mean values and standard deviations for the behavior codes by spouse and

Table 10

Means, Standard Deviations, and Percentages on Demographic Variables for Community Subjects and Community Nonparticipants

Variables	Community Subjects (N = 17)		Community Nonparticipants (N = 55)	
		Wives		
Age[a]	38.82	(9.70)	37.67	(8.38)
SES[a,b,c]	55.26	(16.12)	56.97	(13.07)
Years of Education[a]	15.18	(2.30)	14.40	(2.41)
Employment Status[d]				
-unemployed	24%		27%	
-employed	76%		73%	
Years Married[a,c]	10.09	(10.04)	9.62	(7.54)
Number of Children[a,c]	2.35	(1.37)	2.00	(1.25)

(table continues)

Variable	Community Subjects (N = 17)		Community Nonparticipants (N = 55)	
	Husbands			
Age[a]	39.71	(9.91)	38.84	(8.00)
Years of Education[a]	15.65	(2.18)	14.76	(2.52)
Employment Status[d]				
-unemployed	12%		9%	
-employed	88%		91%	

Note. Standard deviations are bracketed.

[a]T-tests revealed no significant group differences.

[b]SES was defined using the Blishen Index corresponding to the highest-rated occupation in the household.

[c]Variables descriptive of the couple.

[d]χ^2 analysis revealed no significant group differences.

group are presented in Table 11. The ANOVA source table for the results of the depressive behavior analysis, presented in Table 12, indicate significant main effects for level of depression ($F(1,64) = 18.78$, $p < .0001$) and sex of spouse ($F(1,64) = 13.12$, $p < .001$), as well as a significant interaction between sex of spouse and level of depression ($F(1,64) = 13.94$, $p < .0001$). Analyses of simple main effects indicated that, as hypothesized, larger proportions of depressive behavior were observed among depressed women as compared to their nondepressed spouses ($t(33) = 3.59$, $p < .001$) and to nondepressed women ($t(33.13) = 4.08$, $p < .0001$). Results from the analysis of aggressive behavior (see Table 13) revealed a significant main effect for level of marital distress ($F(1,64) = 19.93$, $p < .0001$). As predicted, maritally distressed couples made more aggressive statements than did nondistressed couples. The hypothesized level of depression by level of marital distress interaction for wives was not confirmed, providing no support for the prediction that depressed-only wives would be more aggressive than control wives. Results of the facilitative behavior analysis, presented in Table 14, showed a significant main effect for level of marital distress ($F(1,64) = 40.16$, $p < .0001$). Maritally distressed couples engaged in significantly less facilitative behavior than nondistressed couples, as hypothesized. As shown in Table 15, the predicted difference due to level of marital distress on problem solutions was not confirmed.

Analyses of Marital Cognition

To test hypotheses regarding marital cognitions (causal attributions, responsibility attributions, and perceived efficacy expectations) 2 x 2 x 2 repeated measures ANOVAS were performed, again with sex of spouse as a within-subjects factor (husband versus

Table 11

Mean Proportions and Standard Deviations of Communication Behavior Codes by Spouse and Group

Codes	Depressed-Distressed (n = 17)	Depressed-Only (n = 17)	Distressed-Only (n = 17)	Normal Control (n =17)
		Wives		
Depressive	.13 (.17)	.06 (.06)	.00 (.00)	.00 (.01)
Aggressive	.13 (.08)	.06 (.05)	.15 (.12)	.04 (.03)
Facilitative	.27 (.16)	.45 (.17)	.25 (.12)	.48 (.13)
Problem Solution	.03 (.04)	.03 (.03)	.03 (.03)	.02 (.03)
		Husbands		
Depressive	.01 (.01)	.02 (.04)	.00 (.01)	.00 (.01)
Aggressive	.12 (.15)	.07 (.06)	.17 (.17)	.04 (.03)
Facilitative	.31 (.12)	.40 (.14)	.28 (.14)	.46 (.14)
Problem Solution	.03 (.05)	.04 (.04)	.03 (.03)	.03 (.02)

Note. Standard deviations are bracketed. Values rounded to two decimal places.

Table 12

Source Table for the 2x2x2 ANOVA of Depressive Behavior

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
	Between Subjects			
Depression	0.09	1	0.09	18.78****
Distress	0.01	1	0.01	1.65
Depression by Distress	0.01	1	0.01	2.21
Error	0.29	64	0.00	
	Within Subjects			
Sex	0.05	1	0.05	13.12***
Depression by Sex	0.05	1	0.05	13.94****
Distress by Sex	0.01	1	0.01	2.82
Depression by Distress by Sex	0.01	1	0.01	3.21
Error	0.24	64	0.00	

***$p < .001$. ****$p < .0001$.

Table 13

Source Table for the 2x2x2 ANOVA of Aggressive Behavior

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Subjects				
Depression	0.00	1	0.00	0.06
Distress	0.26	1	0.26	19.93****
Depression by Distress	0.03	1	0.03	2.47
Error	0.84	64	0.01	
Within Subjects				
Sex	0.00	1	0.00	0.31
Depression by Sex	0.00	1	0.00	0.04
Distress by Sex	0.00	1	0.00	0.01
Depression by Distress by Sex	0.00	1	0.00	0.28
Error	0.45	64	0.01	

****$p < .0001$.

Table 14

Source Table for the 2x2x2 ANOVA of Facilitative Behavior

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Subjects				
Depression	0.00	1	0.00	0.12
Distress	1.00	1	1.00	40.16****
Depression by Distress	0.04	1	0.04	1.49
Error	1.60	64	0.03	
Within Subjects				
Sex	0.00	1	0.00	0.00
Depression by Sex	0.00	1	0.00	0.07
Distress by Sex	0.05	1	0.05	3.01
Depression by Distress by Sex	0.00	1	0.00	0.22
Error	0.97	64	0.02	

****$p < .0001$.

Table 15

Source Table for the 2x2x2 ANOVA of Problem Solution Behavior

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Subjects				
Depression	0.00	1	0.00	0.29
Distress	0.00	1	0.00	0.34
Depression by Distress	0.00	1	0.00	0.13
Error	0.10	64	0.00	
Within Subjects				
Sex	0.00	1	0.00	0.73
Depression by Sex	0.00	1	0.00	0.20
Distress by Sex	0.00	1	0.00	0.99
Depression by Distress by Sex	0.00	1	0.00	0.03
Error	0.04	64	0.00	

wife), and level of depression (depressed versus nondepressed) and level of marital distress (distressed versus nondistressed) as between-subjects factors. Planned contrasts were conducted at an alpha level of .05 (Kirk, 1982). The Bonferroni adjustment was employed in post hoc analyses to control familywise alpha at .05.

Table 16 presents the mean values and standard deviations for the marital cognitions by spouse and group. The ANOVA source table (see Table 17) for the results of the causal attribution analysis revealed a significant main effect for level of marital distress ($F(1,64) = 158.24$, $p < .0001$), as hypothesized. The distressed, in contrast to the nondistressed, explained the causes of negative partner behavior as located in the partner, and as global and stable. The hypothesized level of depression by sex of spouse interaction was not confirmed, providing no support for the prediction that depressed wives would report more maladaptive casual attributions than their nondepressed spouses and nondepressed wives. Results also indicated no differences in the causal attributions made by husbands in the depressed versus nondepressed couple groups.

Results of the analysis of responsibility attributions, presented in Table 18, found that the main effect for level of marital distress was significant ($F(1,64) = 101.35$, $p < .0001$). As hypothesized, distressed as compared to nondistressed couples, viewed negative partner behavior as intentional, motivated by selfish concerns, and deserving of blame. The predicted level of depression by sex of spouse interaction was not obtained. Depressed wives did not make more maladaptive responsibility attributions than their nondepressed spouses and nondepressed wives. Similarly, husbands in depressed groups did not make more maladaptive responsibility attributions than husbands in nondepressed

Table 16

Means and Standard Deviations of Marital Cognitions by Spouse and Group

Cognitions	Depressed-Distressed (n = 17)	Depressed-Only (n = 17)	Distressed-Only (n = 17)	Normal Controls (n = 17)
		Wives		
Causal Attrib[a]	110.24 (12.88)	79.94 (15.21)	103.47 (15.23)	78.71 (16.24)
Resp Attrib[b]	90.71 (16.96)	56.12 (19.12)	89.35 (19.42)	55.35 (15.46)
Efficacy Exp[c]	33.59 (7.84)	20.88 (8.51)	34.06 (7.86)	12.35 (3.76)
		Husbands		
Causal Attrib[a]	100.71 (12.92)	80.59 (13.16)	101.35 (12.34)	72.41 (14.11)
Resp Attrib[b]	86.24 (20.49)	55.65 (15.59)	89.65 (15.33)	54.47 (18.26)
Efficacy Exp[c]	29.24 (8.47)	23.12 (6.74)	32.18 (9.55)	15.41 (6.12)

Note. Standard deviations are bracketed.

[a]Causal Attrib refers to causal attributions.

[b]Resp Attrib refers to responsibility attributions.

[c]Efficacy Exp refers to perceived efficacy expectations.

Table 17

Source Table for the 2x2x2 ANOVA of Causal Attributions

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
	Between Subjects			
Depression	512.47	1	512.47	3.52
Distress	23036.03	1	23036.03	158.24****
Depression by Distress	23.06	1	23.06	0.16
Error	9316.71	64	145.57	
	Within Subjects			
Sex	635.56	1	635.56	2.54
Depression by Sex	0.47	1	0.47	0.00
Distress by Sex	76.50	1	76.50	0.31
Depression by Distress by Sex	437.76	1	437.76	1.75
Error	16042.71	64	250.67	

****$p < .0001$.

Table 18

Source Table for the 2x2x2 ANOVA of Responsibility Attributions

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Ratio
Between Subjects				
Depression	0.03	1	0.03	0.00
Distress	38357.76	1	38357.76	101.35****
Depression by Distress	34.00	1	34.00	0.09
Error	24221.24	64	378.46	
Within Subjects				
Sex	64.97	1	64.97	0.26
Depression by Sex	40.26	1	40.26	0.16
Distress by Sex	16.94	1	16.94	0.07
Depression by Distress by Sex	56.94	1	56.94	0.23
Error	15790.88	64	246.73	

****$p < .0001$.

groups.

Results for the analysis of perceived efficacy expectations are presented in Table 19. The main effect for level of marital distress ($F(1,64) = 99.58$, $p < .0001$) was significant, as predicted. Distressed couples, in contrast to nondistressed couples, reported lower levels of perceived efficacy expectations. A significant level of depression main effect was also obtained ($F(1,64) = 4.99$, $p < .05$), indicating that depressed couples, as compared to nondepressed couples, reported lower efficacy expectations. These main effects were qualified by two interactions, a level of depression by level of marital distress interaction ($F(1,64) = 11.71$, $p < .001$; see Figure 1) and a level of distress by sex of spouse interaction ($F(1,64) = 6.43$, $p < .05$). Post hoc analyses following the depression by marital distress interaction revealed that depressed-distressed couples reported lower efficacy expectations than depressed-only couples ($t(66) = 4.85$, $p < .0001$). Depressed-only couples reported lower efficacy expectations compared to control couples ($t(58.38) = 5.11$, $p < .0001$). Distressed couples also reported lower perceived efficacy expectations than controls ($t(54.27) = 11.07$, $p < .0001$). Post hoc analyses following the level of marital distress by sex of spouse interaction revealed that distressed wives reported lower efficacy expectations than nondistressed wives ($t(66) = 9.14$, $p < .0001$); similarly, distressed husbands reported lower efficacy expectations than nondistressed husbands ($t(66) = 5.70$, $p < .0001$). The hypothesized level of depression by sex of spouse interaction was not obtained, providing no support for the hypothesis that depressed wives would report lower perceived efficacy expectations, as compared to their nondepressed spouses, and to nondepressed wives.

Table 19

Source Table for the 2x2x2 ANOVA of Perceived Efficacy Expectations

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	*F* Ratio
		Between Subjects		
Depression	349.44	1	349.44	4.99*
Distress	6975.56	1	6975.56	99.58****
Depression by Distress	820.26	1	820.26	11.71***
Error	4483.29	64	70.05	
		Within Subjects		
Sex	1.88	1	1.88	0.04
Depression by Sex	23.06	1	23.06	0.53
Distress by Sex	282.47	1	282.47	6.43**
Depression by Distress by Sex	5.76	1	5.76	0.13
Error	2810.82	64	43.92	

*$p < .05$. **$p < .01$. ***$p < .001$. ****$p < .0001$.

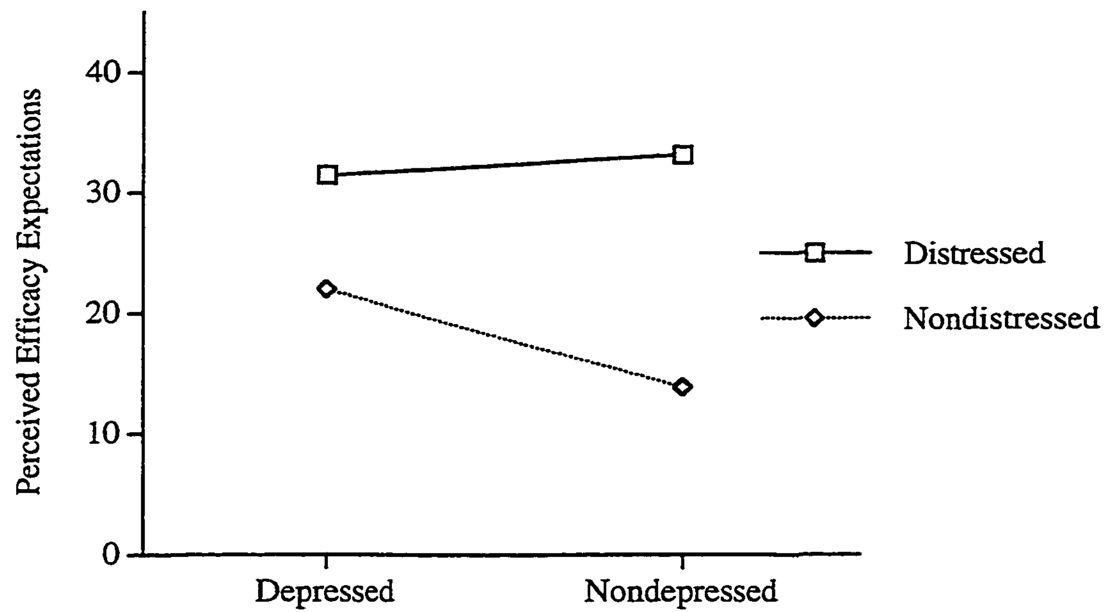


Figure 1. Perceived Efficacy Expectations by Depression and Marital Distress.

Note. Higher scores on perceived efficacy reflect lower efficacy expectations.

Analyses of Marital Cognition and Problem-Solving Behavior

A series of hierarchical multiple regressions was conducted to test study hypotheses that marital cognitions predicted problem-solving behaviors, after controlling for group status. To maximize the comparability of data from the present analyses with data reported previously (e.g., Bradbury et al., 1996; Bradbury & Fincham, 1992), the four behavior summary codes were reduced further. Facilitative and problem solution codes, representing behaviors that enhanced discussion of the problem, were collapsed into a positive composite. Aggressive and depressive codes, comprising behaviors that were detrimental to problem-solving, were collapsed into a negative composite. Also consistent with past research, regression analyses were computed separately for wives and husbands (e.g., Bradbury et al., 1996; Miller & Bradbury, 1995).

Each regression equation consisted of three steps. In the first step, the grouping status variables, consisting of the level of depression (depressed versus nondepressed) and the level of marital distress (distressed versus nondistressed), were simultaneously entered into the equation, with behavior (positive or negative) serving as a dependent variable. Dummy coding was used to represent depression status (1 = depressed, 0 = nondepressed) and marital distress status (1 = distressed, 0 = nondistressed). In the second step, a marital cognition (i.e., causal attributions, responsibility attributions, or perceived efficacy expectations) was entered. The increment in R^2 (i.e., sr^2) indicated the extent to which the cognition accounted for variance in the problem-solving behavior, above and beyond the effect of the level of depression and the level of marital distress. In the third step, interaction terms comprised of the group status variables x a marital

cognition were entered (i.e., level of depression x cognition, level of distress x cognition, level of depression x level of distress x cognition). Following recommendations by Baron and Kenny (1986) for investigating the moderating effects of one variable on the relationship between two others, a significant contribution to the equation by an interaction term (after the group status variables and the marital cognition have been entered) indicated that the association between the cognition and the behavior was moderated by the group status variable. An alpha level of .05 was employed to assess study hypotheses.

The study's predicted associations between a spouse's marital cognitions and the behaviors exhibited during a problem-solving interaction were not supported. The results of the analyses for wives, presented in Tables 20 to 25, indicated that after controlling for group status, marital cognitions did not contribute to the prediction of problem-solving behavior. All group x marital cognition interactions were also nonsignificant. Wives' level of marital distress was a significant predictor of their positive behavior ($t(65) = -5.67$, $p < .00001$). Wives' negative behavior was significantly determined by their level of marital distress and level of depression ($t(65) = 4.38$, $p < .00001$, and $t(65) = 3.23$, $p < .01$, respectively). The results for husbands, presented in Tables 26 to 31, similarly indicated that after controlling for group status, marital cognitions and behaviors did not covary. Husbands' positive and negative problem-solving behaviors were significantly determined by their level of marital distress ($t(65) = -4.40$, $p < .00001$, and $t(65) = 2.90$, $p < .01$, respectively). Moderator analysis indicated that husbands in the depressed versus nondepressed couple groups differed in the extent to which their perceived efficacy

expectations were associated with their negative behavior ($t(61) = 2.04$, $p < .05$). Specifically, the relationship between perceived efficacy expectations and negative behavior was stronger for husbands in the depressed couple groups ($r(32) = .37$, $p < .05$) than for husbands in the nondepresssed couple groups ($r(32) = .16$, ns).

Table 20

Hierarchical Regression of Wives' Positive Behavior on Group, Causal Attributions, and Group x Causal Attributions

Variable	B[a]	SE B[b]	β[c]	R^{2d}	sr^{2e}
Step 1				.33*****	.33*****
Depression	-.00	.04	-.01		
Distress	-.20	.04	- .58*****		
Step 2				.35****	.02
Depression	.00	.04	.01		
Distress	-.16	.05	-.45**		
Causal Attributions	-.00	.00	-.18		
Step 3				.36****	.01
Depression	.20	.22	.57		
Distress	-.18	.24	-.52		
Causal Attributions	-.00	.00	-.07		
Depression x Causal	-.00	.00	-.76		
Distress x Causal	-.00	.00	-.06		
Depression x Distress x Causal	.00	.00	.27		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c]β refers to standardized multiple regression coefficient.

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

$^{**}p < .01$. $^{****}p < .0001$. $^{*****}p < .00001$.

Table 21

Hierarchical Regression of Wives' Positive Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions

Variable	B[a]	SE B[b]	β[c]	R^2[d]	sr^2[e]
Step 1				.33*****	.33*****
Depression	-.00	.04	-.01		
Distress	-.20	.04	-.58*****		
Step 2				.36*****	.03
Depression	-.00	.03	-.00		
Distress	-.14	.05	-.42**		
Responsibility Attributions	-.00	.00	-.23		
Step 3				.36****	.00
Depression	-.00	.15	-.00		
Distress	-.16	.16	-.45		
Responsibility Attributions	-.00	.00	-.24		
Depression x Responsibility	.00	.00	.00		
Distress x Responsibility	.00	.00	.05		
Depression x Distress x Responsibility	-.00	.00	-.00		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c]β refers to standardized multiple regression coefficient.

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

$^{**}p < .01$. $^{*****}p < .00001$.

Table 22

Hierarchical Regression of Wives' Negative Behavior on Group, Causal Attributions, and Group x Causal Attributions

Variable	B[a]	SE B[b]	β[c]	R[2d]	sr[2e]
Step 1				.31*****	.31*****
Depression	.09	.03	.33**		
Distress	.12	.03	.45*****		
Step 2				.32*****	.01
Depression	.08	.03	.32**		
Distress	.10	.04	.36**		
Causal Attributions	.00	.00	.13		
Step 3				.34***	.02
Depression	-.04	.17	-.17		
Distress	-.12	.18	-.44		
Causal Attributions	-.00	.00	-.13		
Depression x Causal	.00	.00	.53		
Distress x Causal	.00	.00	.94		
Depression x Distress x Causal	-.00	.00	-.05		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c] β refers to standardized multiple regression coefficient.

[d] R^2 refers to variance accounted for.

[e] sr^2 refers to change in R^2.

** $p < .01$. *** $p < .001$. ***** $p < .00001$.

Table 23

Hierarchical Regression of Wives' Negative Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions

Variable	B[a]	SE B[b]	β[c]	R^{2d}	sr^{2e}
Step 1				.31*****	.31*****
Depression	.09	.03	.33**		
Distress	.12	.03	.45*****		
Step 2				.34*****	.03
Depression	.09	.03	.33**		
Distress	.08	.04	.29*		
Responsibility Attributions	.00	.00	.23		
Step 3				.40*****	.06
Depression	-.15	.11	-.58		
Distress	.02	.12	.08		
Responsibility Attributions	-.00	.00	-.21		
Depression x Responsibility	.00	.00	1.04		
Distress x Responsibility	.00	.00	.41		
Depression x Distress x Responsibility	-.00	.00	-.22		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c] β refers to standardized multiple regression coefficient.

[d] R^2 refers to variance accounted for.

[e] sr^2 refers to change in R^2.

*$p < .05$. **$p < .01$. *****$p < .00001$.

Table 24

Hierarchical Regression of Wives' Positive Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations

Variable	B[a]	SE B[b]	β[c]	R^2[d]	sr[2e]
Step 1				.33*****	.33*****
Depression	-.00	.04	-.01		
Distress	-.20	.04	-.58*****		
Step 2				.34*****	.01
Depression	.01	.04	.02		
Distress	-.16	.05	-.47**		
Perceived Efficacy Expectations	-.00	.00	-.15		
Step 3				.34***	.00
Depression	.03	.13	.08		
Distress	-.11	.14	-.32		
Perceived Efficacy Expectations	.00	.01	.00		
Depression x Efficacy	-.00	.01	-.14		
Distress x Efficacy	-.00	.01	-.28		
Depression x Distress x Efficacy	.00	.01	.06		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

[c]β refers to standardized multiple regression coefficient.

(table continues)

[d] R^2 refers to variance accounted for.

[e] sr^2 refers to change in R^2.

$^{**}p < .01$. $^{***}p < .001$. $^{*****}p < .00001$.

Table 25

Hierarchical Regression of Wives' Negative Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations

Variable	B[a]	SE B[b]	β[c]	R^{2d}	sr^{2e}
Step 1				.31*****	.31*****
Depression	.09	.03	.33**		
Distress	.12	.03	.45*****		
Step 2				.34*****	.03
Depression	.08	.03	.29**		
Distress	.07	.04	.25		
Perceived Efficacy Expectations	.00	.00	.26		
Step 3				.40*****	.06
Depression	.11	.10	.41		
Distress	-.12	.10	-.47		
Perceived Efficacy Expectations	.00	.01	.09		
Depression x Efficacy	-.00	.01	-.27		
Distress x Efficacy	.01	.01	.81		
Depression x Distress x Efficacy	.00	.00	.26		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

[c]β refers to standardized multiple regression coefficient.

(table continues)

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

$^{**}p < .01$. $^{*****}p < .00001$.

Table 26

Hierarchical Regression of Husbands' Positive Behavior on Group, Causal Attributions, and Group x Causal Attributions

Variable	B[a]	SE B[b]	β[c]	R^2 [d]	sr^2 [e]
Step 1				.23***	.23***
Depression	-.01	.03	-.03		
Distress	-.14	.03	-.48*****		
Step 2				.26***	.03
Depression	-.00	.03	-.01		
Distress	-.09	.04	-.32*		
Causal Attributions	-.00	.00	-.24		
Step 3				.29**	.03
Depression	-.03	.20	-.11		
Distress	.14	.22	.50		
Causal Attributions	-.00	.00	-.05		
Depression x Causal	-.00	.00	-.06		
Distress x Causal	-.00	.00	-1.09		
Depression x Distress x Causal	.00	.00	.24		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c]β refers to standardized multiple regression coefficient.

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

*$p < .05$. **$p < .01$. ***$p < .001$. *****$p < .00001$.

Table 27

Hierarchical Regression of Husbands' Positive Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions

Variable	B[a]	SE B[b]	β[c]	R[2d]	sr[2e]
Step 1				.23***	.23***
Depression	-.01	.03	-.03		
Distress	-.14	.03	-.48*****		
Step 2				.23***	.00
Depression	-.01	.03	-.03		
Distress	-.15	.04	-.54***		
Responsibility Attributions	.00	.00	.08		
Step 3				.26**	.03
Depression	-.13	.13	-.47		
Distress	-.07	.14	-.24		
Responsibility Attributions	.00	.00	.05		
Depression x Responsibility	.00	.00	.45		
Distress x Responsibility	-.00	.00	-.39		
Depression x Distress x Responsibility	.00	.00	.04		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c]β refers to standardized multiple regression coefficient.

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

$^{**}p < .01$. $^{***}p < .001$. $^{*****}p < .00001$

Table 28

Hierarchical Regression of Husbands's Negative Behavior on Group, Causal Attributions, and Group x Causal Attributions

Variable	B[a]	SE B[b]	β[c]	R^{2d}	sr^{2e}
Step 1				.11*	.11*
Depression	.00	.03	.01		
Distress	.09	.03	.34**		
Step 2				.14*	.03
Depression	-.00	.03	-.01		
Distress	.05	.04	.19		
Causal Attributions	.00	.00	.22		
Step 3				.17	.03
Depression	-.17	.20	-.67		
Distress	-.05	.21	-.21		
Causal Attributions	-.00	.00	-.07		
Depression x Causal	.00	.00	.97		
Distress x Causal	.00	.00	.77		
Depression x Distress x Causal	-.00	.00	-.46		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression weight.

[b]SE B refers to standard error of B.

(table continues)

[c]β refers to standardized multiple regression weight.

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

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

Table 29

Hierarchical Regression of Husbands' Negative Behavior on Group, Responsibility Attributions, and Group x Responsibility Attributions

Variable	B[a]	SE B[b]	β[c]	R^2[d]	sr^2[e]
Step 1				.11*	.11*
Depression	.00	.03	.01		
Distress	.09	.03	.34**		
Step 2				.11*	.00
Depression	.00	.03	.01		
Distress	.09	.04	.34*		
Responsibility Attributions	-.00	.00	-.00		
Step 3				.15	.04
Depression	-.16	.12	-.61		
Distress	.15	.13	.60		
Responsibility Attributions	-.00	.00	-.23		
Depression x Responsibility	.00	.00	1.03		
Distress x Responsibility	.00	.00	.01		
Depression x Distress x Responsibility	-.00	.00	-.57		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

(table continues)

[c]β refers to standardized multiple regression coefficient.

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

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

Table 30

Hierarchical Regression of Husbands' Positive Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations

Variable	B[a]	SE B[b]	β[c]	R^{2}[d]	sr^{2}[e]
Step 1				.23***	.23***
Depression	-.01	.03	-.03		
Distress	-.14	.03	-.48*****		
Step 2				.24***	.01
Depression	-.01	.03	-.02		
Distress	-.12	.04	-.42**		
Perceived Efficacy Expectations	-.00	.00	-.11		
Step 3				.28**	.04
Depression	.14	.11	.50		
Distress	-.22	.11	-.78*		
Perceived Efficacy Expectations	.00	.00	.05		
Depression x Efficacy	-.00	.01	-.82		
Distress x Efficacy	.00	.00	.16		
Depression x Distress x Efficacy	.00	.00	.39		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

[c]β refers to standardized multiple regression coefficient.

(table continues)

[d] R^2 refers to variance accounted for.

[e] sr^2 refers to change in R^2.

*$p < .05$. **$p < .01$. ***$p < .001$. *****$p < .00001$.

Table 31

Hierarchical Regression of Husbands' Negative Behavior on Group, Perceived Efficacy Expectations, and Group x Perceived Efficacy Expectations

Variable	B[a]	SE B[b]	β[c]	R^{2d}	sr^{2e}
Step 1				.11*	.11*
Depression	.00	.03	.01		
Distress	.09	.03	.34**		
Step 2				.11*	.00
Depression	.00	.03	.00		
Distress	.08	.04	.31*		
Perceived Efficacy Expectations	.00	.00	.06		
Step 3				.18*	.07
Depression	-.20	.10	-.79*		
Distress	.18	.10	.71		
Perceived Efficacy Expectations	-.00	.00	-.22		
Depression x Efficacy	.01	.01	1.19*		
Distress x Efficacy	-.00	.00	-.11		
Depression x Distress x Efficacy	-.00	.00	-.51		

Note. Values rounded to two decimal places.

[a]B refers to unstandardized multiple regression coefficient.

[b]SE B refers to standard error of B.

[c]β refers to standardized multiple regression coefficient.

(table continues)

[d]R^2 refers to variance accounted for.

[e]sr^2 refers to change in R^2.

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

Discussion

Overview and Summary of Results

This study examined the marital interaction of couples who differed according to wife's depression and the couples' level of marital satisfaction. As in only one prior investigation (Schmaling & Jacobson, 1990), the study used control groups to better identify the unique effects attributable to depression versus marital distress. Combining two lines of research, the study assessed both cognitive and behavioral marital functioning of wives and husbands, and examined the cognitive-behavior link.

Marital Problem-Solving Behavior

The findings of the current investigation support the conclusions of Schmaling and Jacobson (1990) that there is little which is unique about the marital problem-solving behavior of maritally nondistressed couples with a depressed spouse. Indeed, the only behavioral characteristic that was unique to depressed-only couples was the exhibition of depressive behavior by the wife. Aggressive and facilitative statements discriminated between distressed and nondistressed couples, but did not differentiate depressed and nondepressed couples. Group differences for problem solution were not found. The failure to differentiate distressed and nondistressed couples on problem solution has also been reported in previous investigations (i.e., Schmaling & Jacobson, 1990), and most probably reflects the use of different coding definitions (e.g., Margolin & Wampold, 1981) across studies.

The hypothesis that depressed-only wives would exhibit more aggressive behavior than control wives was not supported. This finding conflicts with the results of

Schmaling and Jacobson (1990), who did observe that depressed-only wives exhibited high rates of aggressive content. Differences in the protocols or in the observational coding systems employed in the current investigation and that of Schmaling and Jacobson (1990) might help to explain the discrepant findings. First, the current study coded data from 10-minute problem-solving interactions. The Schmaling and Jacobson (1990) study collected interaction data for 14 minutes. Thus, it may have been that the depressed wives became more negative over the course of the interactions, a finding demonstrated only in interaction samples of longer duration, like the Schmaling and Jacobson (1990) investigation. That depressed wives become more negative over the course of a problem-solving interaction has, in fact, been reported in a recent study by McCabe and Gotlib (1993). Unfortunately, the exact length of marital interactions in the McCabe and Gotlib (1993) study is unclear. It does appear, however, that the pattern of increased negativity was evident well within the time frame of the current investigation. Thus, this explanation is unlikely to account for the differential findings.

As noted, the current study used a different coding system than the Schmaling and Jacobson (1990) investigation. Negative solution, coded when the speaker described something he or she would like the other not to do in order to solve a problem, was included in the aggressive content summary code by Schmaling and Jacobson (1990). Negative solution, defined as a request for a decrease in frequency or termination of a behavior, which was reasonable and realistic, was coded as a problem solution by the MICS-IV (Weiss, 1992), used in the current study. Schmaling and Jacobson (1990), using the KPI (Hahlweg et al., 1984) coded content and affect independently. The current

investigation, using the MICS-IV (Weiss, 1992), coded content and affect concurrently. Schmaling and Jacobson (1990), in fact, found no evidence of an association between negative affect and depression, unless the depression was combined with marital distress. This finding is consistent with the present results.

Marital Cognition

Study results replicated the well-known association between attributions and marital distress. As hypothesized, distressed spouses, as compared to nondistressed spouses, perceived negative partner behavior as located in the partner, and as global and stable, and viewed the partner as behaving intentionally, with selfish motivation, and in a blameworthy manner. Depressed wives did not make maladaptive causal and responsibility attributions, relative to the nondepressed, providing no support for the proposal that depressed wives would demonstrate a negative pattern when explaining negative partner behavior in their marriages. This finding, although consistent with that reported by Fincham, Beach, and Bradbury (1989), is contrary to that suggested by the empirical literature previously reviewed (e.g., Fletcher et al., 1990; Karney et al..1994; Pretzer et al., 1991). Of note, however, the current investigation was the only one to assess both causal and responsibility attributions, and major depression, in a full factorial design. Prior investigations have examined negative affectivity (Karney et al., 1994), or depressive symptoms (e.g., Fletcher et al., 1990; Pretzer et al., 1991), both of which are related to, but much broader, than the concept of major depression. These studies might be described as assessing the relationship between attributions and a negative personality style, characterized by the tendency to evaluate social stimuli in a pessimistic fashion.

Though major depressive disorder, also characterized by extreme negative affectivity, would similarly be associated with such a general tendency, self-derogation, in particular, may be prominent. Indeed, previous research of depressed individuals with acquaintances and students has suggested that the negative thinking of the depressed person is applied primarily to the self, rather than to other people (Bargh & Tota, 1988; Pyszczynski, Holt, & Greenberg, 1987). The relevance of this research has been questioned for the close relationship situation (Fletcher et al., 1990). The current study findings for attributions, however, are consistent with the conclusions drawn from the acquaintance and student literature that the negative thinking of the depressed may not be applied to other people.

The present data also indicated that husbands of depressed wives did not make maladaptive attributions for negative partner behaviors, relative to the husbands of nondepressed wives. These results are consistent with the findings of Karney et al. (1994) discussed previously, who reported that spouses' attributions were unrelated to the level of negative affectivity reported by the partner. Results also support Sacco et al. (1993) who found that husbands' negative attributions for the nonmarital behavior of their depressed wives were explained by the coexistence of marital distress.

Distressed couples, as compared to nondistresssed couples, reported lower perceived efficacy expectations, as predicted. The hypothesis that depressed wives, relative to their nondepressed spouses and to nondepressed wives, would report lower efficacy, was not supported. Instead, depression had its primary impact on nondistressed couples (i.e., both wife and husband), who reported lower efficacy expectations when the wife was depressed, than when she was not depressed.

Resolving marital problems requires the constructive effort of two spouses working together. It may be, therefore, that in assessing their ability to resolve conflict, spouses perceive the couple, rather than the self, as the unit of analysis. If this is the case, partners of depressed persons might be expected to report lower efficacy expectations. Indeed, they might assess their ability as a couple to resolve marital issues to be compromised, given their wives' depressive disorder.

Marital Cognition and Problem-Solving Behavior

The study failed to support the hypotheses, derived from the contextual model of marriage, that spouses' judgements about relationship conflict (i.e., who causes them, who is responsible for them, and whether they can be resolved), independent of depression and marital satisfaction status, were important determinants of marital behavior. For wives, higher levels of negative behavior were associated with marital distress and depression status; lower levels of positive behavior were associated with marital distress status. For husbands, higher levels of negative and lower levels of positive behavior covaried with marital distress status. After controlling for the group status variables, wives' and husbands' attributions and efficacy expectations did not contribute to the prediction of their problem-solving behavior. In addition, for wives, associations between attributions and efficacy expectations, and problem-solving behaviors, were not moderated by depression or marital distress status. Moderator analysis indicated that the relationship between perceived efficacy expectations and negative behavior was stronger for husbands in the depressed versus nondepressed couple groups. The association between attributions and behavior did not differ across groups for

husbands.

Only one prior unpublished study (Bradbury, 1990) has investigated the relationship between efficacy expectations and behavior, and it found a relationship between wives' efficacy expectations and an observer global rating of problem-solving quality. The current study did not support these results. The findings that wives' causal attributions, and husbands' causal and responsibility attributions and efficacy expectations, were unrelated to their problem-solving behavior are, in fact, consistent with the majority of prior findings (e.g., Bradbury, 1990; Bradbury et al., 1996; Miller & Bradbury, 1995). The lack of an association between wives' responsibility attributions and behavior, however, is inconsistent with previous work (Bradbury, 1990; Bradbury et al., 1996; Bradbury & Fincham, 1992; Miller & Bradbury, 1995), and demands further exploration. It may be that the examination of groups of differing compositions explains the discrepancies between the current and previous results. As noted, the current study was the only one investigating the cognition-behavior link to assess four groups of couples, crossing level of depression in the wife with level of marital satisfaction. More specific requirements were imposed for membership in the couple groups in the current study, as compared to prior investigations. In addition, unlike the majority of prior studies, the absence of marital violence was confirmed in the current project. Given prevalence estimates that suggest that one half of distressed couples recruited for marital research have experienced husband violence (Holtzworth-Munroe, Jacobson, Fehrenbach, & Fruzzetti, 1992), prior research has most likely included couples where violence was present. Thus the current and previous samples may not be comparable.

It is also notable, as previously discussed, that different observational coding systems and coding definitions were employed in the current and prior studies. As in this project, investigations typically have employed positive and negative composites of behavior (e.g., Bradbury et al., 1996; Bradbury & Fincham, 1992; Miller & Bradbury, 1995). The positive and negative composites utilized, however, have differed somewhat in definition. Recent research has indicated that the strength of the link, and indeed, the presence of a link, between a spouse's attribution and his or her behavior, varies as a function of the particular behavior being examined (Bradbury et al., 1996). Given these findings, the exact nature of the behavioral composite under study is an important variable. Perhaps the composites examined by Bradbury et al. (1996), using a design similar to that used in the current investigation, were more sensitive to the attribution-behavior link, than the composite employed in the current investigation.

Limitations and Qualifications

Interpretation of the present findings must be qualified by several factors. First, the study's cross-sectional design does not permit statements about causation. Longitudinal studies of depression and marital distress that are capable of testing competing models of causality are clearly needed (Gotlib & Hooley, 1988). Second, it is important to consider current study findings within the context of relationship stages. Generally speaking, variables or processes that are influential at certain points in relationship development may be less important at other points (Pasch, Bradbury, & Sullivan, 1997). Thus, the present findings, based on couples who had been married for about 10 years, may not generalize to couples at different stages in their marriage. Third,

though consistent with the vast majority of previous investigations in this area, only a brief sample of interaction was studied in the laboratory. Research has tended to show that couples find laboratory interactions similar to interactions they have at home (Bradbury, 1994). However, the affective experience may not be as strong in the laboratory, as compared to the home.

Fourth, since this study used women as the identified patients, the results are not generalizable to couples with depressed husbands. In fact, little is known about how gender may influence the relationship between depression and marital interaction. Attention to gender differences in marital interaction will, however, be of paramount importance in future investigations. Indeed, some recent research suggests differences between depressed males and females. Johnson and Jacob (1997), for example, examined the marital interactions of couples with a depressed husband, couples with a depressed wife, and nondepressed control couples. Couples with a depressed wife exhibited lower levels of positivity and a trend toward higher levels of negativity, as compared to couples with a depressed husband. Note, however, that this study contained no nondepressed maritally distressed control group, making it difficult to examine the role of marital distress.

Fifth, it is possible that study findings were influenced by the different strategies employed to recruit normal control and clinical groups. The normal control couples were recruited from the community through newspaper advertisements seeking couples happy in their relationships. Couples with a depressed wife and maritally distressed couples were recruited while seeking treatment at a psychiatric assessment clinic. It is possible,

therefore, that clinic couples, having made the decision to seek treatment, were motivated to show their problems, and that control couples responding to a search for happy relationships, attempted to present themselves favorably (Schmaling & Jacobson, 1990). As argued by Schmaling and Jacobson (1990), however, a number of research findings militate against these possibilities. Vincent, Friedman, Nugent, and Messerly (1979), for example, found that even when couples were instructed by a researcher to "fake good" or "fake bad", observers were still able to reliably discriminate distressed from maritally satisfied couples. Furthermore, it has been observed that maritally distressed couples perform similarly whether recruited through the media or seeking treatment (Holtzworth-Munroe & Jacobson, 1985).

The size of the present sample compares favorably with those utilized in prior investigations (e.g., Biglan et al., 1985; Nelson & Beach, 1990; Sher & Baucom, 1993). The power to detect differences would, however, be greater in larger samples. It is possible, therefore, that nonsignificant associations obtained here might become significant with a larger sample. Further investigation is needed to determine the reliability and significance of the current findings.

Implications for Future Research and Theory

The results of this study have a number of implications for research into depression and marital functioning. These implications are considered below, together with the discussion of issues relevant to understanding study findings within existing theory.

Marital Problem-Solving Behavior

As discussed, current study findings indicate that conflictual interaction does not appear to characterize depressed-only couples during problem-solving tasks. Both the current study and that of Schmaling and Jacobson (1990) were designed to separate dysfunctional marital interaction patterns that were unique to depression from those that were associated with marital distress. Notably, both investigations support the conclusion that marital distress rather than depression was responsible for much of the dysfunctional interaction patterns found in depressed couples in past research.

Subsequent investigations will be required to clarify the aggressive behavior of depressed wives. As noted, the current study did not support the conclusions of Schmaling and Jacobson (1990) that depressed wives in nondistressed relationships resembled maritally distressed spouses in their high rates of aggressive content. Instead, except for the exhibition of depressive behavior by the depressed wives, depressed-only couples in the current study exhibited communication that did not differ significantly from what is typically observed in happily married couples. It will be necessary for future research to measure behavior at a finer level of analysis to resolve the issue of the depressed wives' aggression. More generally, the use of a finer level of behavioral analysis may yield information regarding subtle marital interaction patterns that are important in depression (e.g., Katz & Beach, 1997). The collection of several behavioral samples may also help to provide more definitive conclusions regarding the relationship between depression and marital interaction. Indeed, Heyman, Eddy, and Weiss (as cited in Weiss & Heyman, 1997) recommended that researchers obtain at least two behavioral

samples and emphasize only findings that were replicated between the two.

It is noteworthy that the depressive behavior which characterized depressed wives during problem-solving interactions is likely to be poorly suited to facilitating problem-resolution. Indeed, the depressed-only couples in the current study did report lower efficacy expectations regarding their ability to problem solve, as compared to control couples. This finding is consistent with the results of Christian, O'Leary, and Vivian (1994), who found that among distressed couples, depression was associated with poorer self-reported problem-solving skills, in both husbands and wives.

As discussed previously, living with a depressed individual is quite distressing (Coyne et al., 1987), and likely to pose significant challenges to couple adjustment. Indeed, depression has problematic implications for a couple's relationship, whether the depression follows from a long history of marital distress, or results from circumstances external to a satisfying marriage. Problem-resolution skills are generally viewed as critical to smooth relationship functioning (Gottman, 1993), and would seem especially important for the couple attempting to cope with a depression in one of the partners. Hence, the lower efficacy expectations reported by depressed-only couples in the current study, and the inadequacy of depressive behavior as a problem-solving strategy, highlight the question of how depressed-only couples maintain satisfactory and relatively well functioning relationships.

Of note, there is more to a satisfactory marital relationship than competence in problem-solving (Julien & Markman, 1991). Cutrona (1996), for example, proposed that social support promoted a sense of cohesion and connectedness between spouses,

provided protection from stress-related deterioration, and prevented destructive behaviors. Thus, it may be that in depressed-only couples, frequent support behaviors promote positive relationship functioning, despite deficiencies in problem-resolution. In the context of the inevitable disagreements that arise between spouses, supportive behaviors may prevent conflicts from becoming nonproductive or destructive (Cutrona, 1996). Support from the nondepressed spouse may also prevent the onset of aversive behaviors associated with depression that are damaging to relationships (e.g., irritability, loss of motivation, emotional withdrawal). In a related vein, maintaining marital satisfaction through episodes of depression may depend on spouses' acceptance of each other, through understanding the effects of the depression on the depressed partner, and on the relationship (Cordova & Jacobson, 1997). Working together as a couple to cope with the depression might be expected to foster intimacy and remove blame, thereby maintaining the quality of the relationship (Cordova & Jacobson, 1997). Consistent with this position, Bauserman et al. (1995) suggested that spouses who were not accepting of their partner's negative behavior (i.e., had expectations for change) were likely to be in distressed relationships when their partner was depressed. These investigators suggested that spouses with expectations for change had unrealistic expectations about how well their depressed partner was able to function, which fostered attempts to get the patient-partner to change. When attempts to change the depressed partner repeatedly failed, the spouse became increasingly critical and unaccepting, and the relationship became distressed.

The above explanations are speculative. Relatively little research attention has

been directed toward identifying the ways in which spouses cope effectively with depression, and this is clearly an area that merits future investigation. To date, research has tended to focus on negative factors such as the burden and distress of living with a depressed family member (e.g., Coyne et al., 1987). By studying resilient marriages and families, investigators can develop an understanding of the factors involved in positive adjustment and coping, information which will be useful in the treatment of depression. Indeed, in future, it will be important to develop theoretical models of depression that account for functioning in terms of what happens in the marital relationship and the family (Lee & Gotlib, 1994).

Finally, almost all marital interaction research to date has focussed on how couples manage the conflict that arises between them (Pasch & Bradbury, 1998). As noted, however, there is more to marital satisfaction than the successful management of conflict (Julien & Markman, 1991), and researchers are increasingly recognizing the contribution of social support to the well-being of relationships (e.g., Cutrona, 1996; Jacobson & Margolin, 1979; Pasch et al., 1997). Recent conceptualizations of depression in marriage have similarly highlighted the role of social support processes (e.g., Gotlib & Beach, 1995). Recent empirical research has also demonstrated the value of social support interactions for understanding marital functioning and depression (e.g., Davila et al., 1997; Pasch & Bradbury, 1998). Pasch and Bradbury (1998), for example, asked couples to participate in two interaction tasks: a problem-solving task in which spouses attempted to resolve a marital conflict, and a social support task in which spouses discussed personal nonmarital difficulties they wanted to change. Wives' support

solicitation and provision behaviors predicted marital outcomes two years later, independent of the negative behaviors exhibited during marital problem-solving discussions. Furthermore, couples who exhibited relatively poor skills in both behavioral domains were at particular risk for later marital dysfunction. Davila et al. (1997) found that wives with higher levels of dysphoria solicited, received, and provided support in a negative manner when interacting with their husbands, and that this behavior resulted in increased subsequent marital stress.

In sum, expanding the behavioral domain of marital interaction research to include support solicitation and provision will likely result in a more complete understanding of the marital relationships of depressed persons. Theoretically, in fact, it may be important to examine the interconnections between supportive and problem-solving behaviors.

Marital Cognition

Depression was associated with lower perceived efficacy expectations in the current investigation, the implications of which have already been discussed. Depression was not associated with maladaptive partner attributions. Depressed wives in the current study made causal and responsibility attributions for negative partner behaviors that did not differ from the attributions made by their nondepressed spouses and nondepressed wives. As discussed, while these findings fail to support the hypothesis that depression would recruit negatively valenced marital attributions, they are consistent with prior research which has demonstrated that the depressed person's negative thinking is applied primarily to the self, rather than to other people (e.g., Bargh & Tota, 1988). Notably, this

prior research would suggest that attributions for relationship events that clearly resulted from the depressed wife's behavior would be associated with depression (Fincham & Bradbury, 1993). More specifically, it might be expected that depressed wives would make unfavorable attributions for their own negative behaviors (Abramson, Seligman, & Teasdale, 1978). It remains for future researchers to examine the relationship of such attributions to depression and marital satisfaction.

It may also be important for future investigators examining the attributions of depressed spouses to expand upon the assessment of the causal locus. In the current study only one statement assessed the locus dimension, inquiring about the extent to which the cause of negative partner behavior rested in the partner. It would be interesting, however, to determine the extent to which depressed individuals attributed the cause of negative partner behaviors to themselves, relative to their partners. Thus, two locus dimensions, attributions to self and attributions to partner, would be assessed, and considered relative to one another. Fincham and Bradbury (1993) examined the self-relative-to-partner locus dimension in a longitudinal study of marital satisfaction, depression, and causal attributions, and found no association between the dimension and depression. Depression in their study, however, was defined in terms of elevated scores on the BDI, and such scores might simply reflect general distress or dysphoria (Gotlib, 1984). Results for major depression await investigation. It may be that depressed spouses see themselves as the cause of negative self and negative partner behaviors, relative to the partner.

There is some evidence in the empirical literature that spouses evaluate their depressed partners negatively, independent of the level of marital distress. Sacco et al.

(1993), for example, as discussed, found that husbands of depressed relative to nondepressed wives rated their wives more negatively on personality traits, and reported more negative affect in response to negative events occurring to their wives. In the current study, however, the husbands of depressed wives did not make more maladaptive causal or responsibility attributions for their wives' negative behaviors, relative to the husbands of nondepressed wives. This finding is inconsistent with the view that spouses develop generalized negative views of their depressed partners (Sacco et al., 1993), and it suggests that some of the ways in which husbands assess their depressed wives are more benign. In future, it will be useful to examine how spouses view their depressed partners and their relationships across a variety of categories of cognition (e.g., Baucom et al., 1989), to determine those areas in which spouses' assessments of their depressed partners are negative versus more benign, and to explore the implications of these assessments.

The possibility that depression recruits other cognition relevant to the marital context remains for future investigation to determine (Beach et al., in press). There is a need for considerably more empirical investigation of selective attention, expectancies, assumptions, and standards, those categories of cognition that appear to play an important role in the development and maintenance of marital adjustment (Baucom et al., 1996). Studies are needed to test the relationship of each type of cognition to depression and to marital satisfaction, and to examine the relationship of types of cognitions to each other. Indeed, depression should be viewed as an important variable in this endeavor, given that similar cognitive processes may contribute to depression and marital distress (Epstein, 1985).

Marital Cognition and Problem-Solving Behavior

The study failed to support basic assertions of the contextual model regarding the role of attributions and perceived efficacy expectations in influencing spouses' problem-solving behavior. Notably, some inconsistent findings have already been observed in the literature addressing the cognition-behavior link. It will be important for future investigations to determine the conditions under which the association between cognitions and behavior does and does not hold, and to consider how the methodology (e.g., samples studied) utilized in an investigation might influence the association. Current study results did indicate that spouses' marital problem-solving behaviors covaried with relationship quality and level of depression, highlighting the value of examining both intraindividual variables (i.e., depression) and global relationship quality in understanding marital processes. These variables will need to be considered in future investigations assessing the relationship of other types of marital cognition to spouses' affective and behavioral responses to one another.

One issue raised by the failure to support the cognition-behavior link concerns the most appropriate means of measuring behavior. As discussed, it may be that the use of composite behavioral indices is premature. Because composite measures involve collapsing over several behaviors to produce a single measure, they may conceal important information, and thus eliminate the opportunity to learn about distinctions among behaviors. Indeed, as discussed, one investigation did note that problem-solving behaviors were distinguished by their association or lack of association with responsibility attributions (Bradbury et al., 1996). To the extent that summary codes fail

to capture theoretically meaningful behaviors or combine such behaviors with other types of communication, our understanding is likely to suffer (Hooley & Hahlweg, 1989). Investigations of the association between marital cognitions and problem-solving behaviors do not have a long history. Measuring behavior at a finer level of analysis may afford a more appropriate test of the cognitive-behavior link.

Analogous to the issue of the level of behavioral analysis is that of the conceptualization of cognition. The current literature is based primarily on a trait conceptualization of cognitive processes (Noller et al., 1997). It has been demonstrated, however, that a couple's cognitions about their relationship are variable and do not always demonstrate the consistency suggested by the trait model (Jacobson et al., 1982). Research based on trait conceptualizations has, in fact, assumed, rather than established, that general beliefs or global attributions actually affect the on-line cognitions that occur during a couples' interactions (Noller et al., 1997). Ultimately, a microanalysis of cognition and behavior occurring during the problem-solving discussion is needed (Fincham et al., 1990). Indeed, given that cognitive-behavioral therapists have recently been stressing the need to modify situationally specific cognitions, rather than general cognitive traits, more emphasis may need to be given to understanding these on-line cognitions (Noller et al., 1997).

The current study integrates the literatures on depression and marital relationships. A question raised by this integration concerns the types of attributions it might be useful to investigate in future research endeavors. To date, private attributions have been the primary focus in the marital literature. The primary interest in the

individual psychopathology literature, however, has been on overt or public attributions. Indeed, psychopathology research investigations have demonstrated that relatives' levels of critical, hostile, or emotionally over-involved attitudes towards a patient (i.e., expressed emotion) are associated with the public attributions they make about the causes of a patient's undesirable behavior (e.g., Barrowclough, Johnston, & Tarrier, 1994; Brewin, 1994; Brewin, MacCarthy, Duda & Vaughn, 1991; Hooley & Licht, 1997).

The individual psychopathology literature on public attributions is notable for several reasons. First, it has demonstrated an association between husbands' attributions and behaviors, contrary to the observation in the marital literature that husbands' attributions and behaviors are unrelated. Second, across all studies, regardless of methodology, this literature has consistently demonstrated a link between high criticism and attributions about controllability. Little attention has been given to the control dimension in the marital literature, despite its fundamental role in perceived causality (e.g., Weiner, 1985).

While a direct comparison of studies addressing private and public attributions is difficult (Bradbury & Fincham, 1990), the literature on public attributions suggests that it might be useful for marital researchers to include the dimension of control in the assessment of causal attributions. Perhaps, with the inclusion of the controllability dimension, causal attributions might assume more significance and reliability in the marital domain. The public attribution literature also suggests that there are conditions under which husbands' attributions are related to their behavior. In future, greater attention might be paid to the different types of attributions investigated, to the different

assessment procedures (Sabourin, Lussier, & Wright, 1991), and to the process by which private attributions come to be verbalized.

Conclusion

The current investigation has helped to clarify existing research on the marital relationships of depressed persons. Using control groups to isolate the effects of depression and those of marital distress, the study demonstrated that conflictual interaction during a problem-solving task was not characteristic of couples with a depressed wife. To the extent that dysfunctional interaction was observed in previous research with depressed couples, it was probably the result of the failure to control for marital distress.

To build on the extant depression and marriage literature, the current study investigated both cognitive and behavioral functioning in wives and husbands, and examined the association between the cognitive and behavioral variables. Results were that depressed-only couples were characterized by lower perceived efficacy expectations regarding their ability to resolve marital problems, as compared to control couples. Depression was not, however, associated with maladaptive causal or responsibility attributions for negative partner behaviors. As expected, maritally distressed couples were characterized by dysfunctional problem-solving behaviors, maladaptive marital attributions, and low efficacy expectations, as compared to nondistressed couples. Problem-solving behavior during a conflict resolution task reflected global relationship satisfaction and level of depression for wives, and global relationship satisfaction for husbands. The study failed to demonstrate an association between spouses' attributions

and efficacy expectations and their problem-solving behavior. It was suggested that a microanalysis of the cognitions and behaviors occurring during a marital problem-solving task might afford a more appropriate test of the cognitive-behavior link.

References

Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. Journal of Abnormal Psychology, 87, 49-74.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

Arkowitz, H., Holliday, S., & Hutter, M. (1982, November). Depressed women and their husbands: A study of marital interaction and adjustment. Paper presented at the annual meeting of the Association for Advancement of Behavior Therapy, Los Angeles, CA.

Arthur, J. A., Hops, H., & Biglan, A. (1982). LIFE (Living In Familial Environments) coding system. Unpublished manuscript, Oregon Research Institute at Eugene, OR.

Bargh, J. A., & Tota, M. E. (1988). Context-dependent automatic processing in depression: Accessibility of negative constructs with regard to self but not others. Journal of Personality and Social Psychology, 54, 925-939.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social and psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology, 51, 1173-1182.

Barrowclough, C., Johnston, M., & Tarrier, N. (1994). Attributions, expressed emotion, and patient relapse: An attributional model of relatives' response to schizophrenic illness. Behavior Therapy, 25, 67-88.

Baucom, D. H., Epstein, N., Daiuto, A. D., Carels, R. A., Rankin, L. A., &

Burnett, C. K. (1996). Cognitions in marriage: The relationship between standards and attributions. Journal of Family Psychology, 10 (2), 209-222.

Baucom, D. H., Epstein, N., Sayers, S., & Goldman-Sher, T. (1989). The role of cognitions in marital relationships: Definitional, methodological, and conceptual issues. Journal of Consulting and Clinical Psychology, 57 (1), 31-38.

Bauserman, S. K., Arias, I., & Craighead, W. E. (1995). Marital attributions in spouses of depressed patients. Journal of Psychopathology and Behavioral Assessment, 17 (3), 231-249.

Beach, S. R. H., Fincham, F. D., & Katz, J. (in press). Marital therapy in the treatment of depression: Toward a third generation of therapy and research. Clinical Psychology Review.

Beach, S. R. H., Jouriles, E. N., & O'Leary, K. D. (1985). Extramarital sex: Impact on depression and commitment in couples seeking marital therapy. Journal of Sex and Marital Therapy, 11, 99-108.

Beach, S. R. H., Sandeen, E. E., & O'Leary, K. D. (1990). Depression in marriage: A model for etiology and treatment. New York, NY: Guilford Press.

Beach, S. R. H., Smith, D. A., & Fincham, F. D. (1994). Marital interventions for depression: Empirical foundation and future prospects. Applied and Preventive Psychology, 3, 233-250.

Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck depression inventory: Twenty-five years of evaluation. Clinical Psychology Review, 8, 77-100.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Biglan, A., Hops, H., Sherman, L., Friedman, L. S., Arthur, J., & Osteen, V. (1985). Problem-solving interaction of depressed women and their husbands. Behavior Therapy, (16), 431-451.

Blishen, B., Carroll, W., & Moore, C. (1987). The 1981 socioeconomic index for occupations in Canada. Canadian Review of Sociology and Anthropology, 24, 467-488.

Bradbury, T. N. (1990). Cognition, emotion, and interaction in distressed and nondistressed marriages (Doctoral dissertation, University of Illinois, 1990). U-M-I Dissertation Information Service, No. 9114180.

Bradbury, T. N. (1994). Unintended effects of marital research on marital relationships. Journal of Family Psychology, 8 (2), 187-201.

Bradbury, T. N., Beach, S. R. H., Fincham, F. D., & Nelson, G. M. (1996). Attributions and behavior in functional and dysfunctional marriages. Journal of Consulting and Clinical Psychology, 64 (3), 569-576.

Bradbury, T. N., & Fincham, F. D. (1990). Attributions in marriage: Review and critique. Psychological Bulletin, 107 (1), 3-33.

Bradbury, T. N., & Fincham, F. D. (1991). A contextual model for advancing the study of marital interaction. In G. J. O. Fletcher & F. D. Fincham (Eds.), Cognition in close relationships (pp. 127-147). Hillsdale, NJ: Erlbaum.

Bradbury, T. N., & Fincham, F. D. (1992). Attributions and behavior in marital interaction. Journal of Personality and Social Psychology, 63, 613-628.

Brewin, C. R. (1994). Changes in attribution and expressed emotion among the relatives of patients with schizophrenia. Psychological Medicine, 24, 905-911.

Brewin, C. R., MacCarthy, B., Duda, K., & Vaughn, C. E. (1991). Attribution and expressed emotion in the relatives of patients with schizophrenia. Journal of Abnormal Psychology, 100, 546-554.

Brown, G. W., & Harris, T. (1978). Social origins of depression: A study of psychiatric disorders in women. New York, NY: Free Press.

Christian, J. L., O'Leary, K. D., & Vivian, D. (1994). Depressive symptomatology in maritally discordant women and men: The rate of individual and relationship variables. Journal of Family Psychology, 8, 32-42.

Cordova, J. V., & Jacobson, N. S. (1997). Acceptance in couple therapy and its implications for the treatment of depression. In R. J. Sternberg & M. Hojjat (Eds.), Satisfaction in close relationships (pp. 307-335). New York, NY: Guilford Press.

Coyne, J. C. (1976). Toward an interactional description of depression. Psychiatry, 39, 28-40.

Coyne, J. C., Burchill, S. A. L., & Stiles, W. B. (1991). An interactional perspective on depression. In C. R. Synder & D. R. Forsyth (Eds.), Handbook of social and clinical psychology (pp. 327-349). Elmsford, NY: Pergamon Press, Inc.

Coyne, J. C., Kessler, R. C., Tal, M., Turnbull, J., Wortman, C. B., & Greden, G. F. (1987). Living with a depressed person. Journal of Consulting and Clinical Psychology, 55, 347-352.

Cutrona, C. E. (1996). Social support as a determinant of marital quality: The

interplay of negative and supportive behaviors. In G. R. Pierce, B. R. Sarason, & I. G. Sarason (Eds.), Handbook of social support and the family (pp. 173-194). New York, NY: Plenum Press.

Davila, J., Bradbury, T. N., Cohan, C. L., & Tochluk, S. (1997). Marital functioning and depressive symptoms: Evidence for a stress generation model. Journal of Personality and Social Psychology, 73 (4), 849-861.

Doherty, W. J. (1981a). Cognitive processes in intimate conflict: Efficacy and learned helplessness. The American Journal of Family Therapy, 9 (2), 35-44.

Doherty, W. J. (1981b). Cognitive processes in intimate conflict: Extending attribution theory. The American Journal of Family Therapy, 9 (1), 3-13.

Doherty, W. J. (1982). Attribution style and negative problem solving in marriage. Family Relations, 31, 201-205.

Epstein, N. (1985). Depression and marital dysfunction: Cognitive and behavioral linkages. International Journal of Mental Health, 13 (3-4), 86-104.

Fincham, F. D., Beach, S. R. H., & Bradbury, T. N. (1989). Marital distress, depression, and attributions: Is the marital distress-attribution association an artifact of depression? Journal of Consulting and Clinical Psychology, 57, 768-771.

Fincham, F. D., & Bradbury, T. N. (1987a). Cognitive processes and conflict in close relationships: An attribution-efficacy model. Journal of Personality and Social Psychology, 53 (6), 1106-1118.

Fincham, F. D., & Bradbury, T. N. (1987b). The impact of attributions in marriage: A longitudinal analysis. Journal of Personality and Social Psychology, 53 (3),

510-517.

Fincham, F. D., & Bradbury, T. N. (1992). Assessing attributions in marriage: The relationship attribution measure. Journal of Personality and Social Psychology, 62 (3), 457-468.

Fincham, F. D., & Bradbury, T. N. (1993). Marital satisfaction, depression, and attributions: A longitudinal analysis. Journal of Personality and Social Psychology, 64 (3), 442-452.

Fincham, F. D., Bradbury, T. N., & Scott, C. (1990). Cognition in marriage. In F. D. Fincham & T. N. Bradbury (Eds.), The psychology of marriage: Basic issues and applications (pp. 118-149). New York, NY: Guilford Press.

Fletcher, G. J. O., Fitness, J., & Blampied, N. M. (1990). The link between attributions and happiness in close relationships: The roles of depression and explanatory style. Journal of Social and Clinical Psychology, 9 (2), 243-255.

Foley, S. H., Rounsaville, B. J., Weissman, M. M., Sholomaskas, D., & Chevron, E. (1989). Individual versus conjoint interpersonal psychotherapy for depressed patients with marital disputes. International Journal of Family Processes, 10, 29-42.

Gollan, J. K., Gortner, E. T., & Jacobson, N. S. (1996). Partner relational problems and affective disorders. In F. W. Kaslow (Ed.), Handbook of relational diagnosis and dysfunctional family patterns (pp. 322-337). New York, NY: John Wiley & Sons Inc.

Gotlib, I. H. (1984). Depression and general psychopathology in university students. Journal of Abnormal Psychology, 93 (1), 19-30.

Gotlib, I. H., & Beach, S. R. H. (1995). A marital/family discord model of depression: Implications of therapeutic intervention. In N. S. Jacobson & A. S. Gurman (Eds.), Clinical handbook of couple therapy (pp. 411-436). New York, NY: Guilford Press.

Gotlib, I. H., & Hooley, J. M. (1988). Depression and marital distress: Current status and future directions. In S. W. Duck (Ed.), Handbook of personal relationships: Theory, research and interventions (pp. 543-570). Chicester, England: John Wiley & Sons Ltd.

Gotlib, I. H., & Whiffen, V. E. (1989). Depression and marital functioning: An examination of specificity and gender differences. Journal of Abnormal Psychology, 98, 23-30.

Gottman, J. M. (1993). The roles of conflict engagement, escalation, and avoidance in marital interaction: A longitudinal view of five types of couples. Journal of Consulting and Clinical Psychology, 61 (1), 6-15.

Hahlweg, K., Reisner, L., Kohli, G., Vollmer, M., Schindler, L., & Revenstorf, D. (1984). Development and validity of a new system to analyze interpersonal communication: Kategoriensystem fur partnerschaftliche interaction. In K. Hahlweg & N. S. Jacobson (Eds.), Marital interaction: Analysis and modification. New York, NY: Guilford Press.

Hammen, C. L. (1991). The generation of stress in the course of unipolar depression. Journal of Abnormal Psychology, 100, 555-561.

Hautzinger, M., Linden, M., & Hoffman, N. (1982). Distressed couples with and

without a depressed partner: An analysis of their verbal interactions. Journal of Behavior Therapy and Experimental Psychology, 13, 307-314.

Heim, S. C., & Snyder, D. K. (1991). Predicting depression from marital distress and attributional processes. Journal of Marital and Family Therapy, 17 (1), 67-72.

Hinchliffe, M., Hooper, D., & Roberts, F. J. (1978). The melancholy marriage. New York, NY: Wiley.

Holtzworth-Munroe, A., Jacobson, N. S., Fehrenbach, P. A., & Fruzzetti, A. (1992). Violent married couples' attributions for violent and nonviolent self and partner behaviors. Behavioral Assessment, 14, 53-64.

Hooley, J. M. (1987). The nature and origins of expressed emotion. In K. Hahlweg & M. J. Goldstein (Eds.), Understanding mental disorder: The contribution of family interaction research (pp. 176-194). New York, NY: Family Process Press.

Hooley, J. M. & Hahlweg, K. (1989). Marital satisfaction and marital communication in German and English couples. Behavioral Assessment, 11, 119-133.

Hooley, J. M., & Licht, D. M. (1997). Expressed emotion and causal attributions in the spouses of depressed patients. Journal of Abnormal Psychology, 106 (2), 298-306.

Hooley, J. M., Richters, J. E., Weintraub, S., & Neale, J. M. (1987). Psychopathology and marital distress: The positive side of positive symptoms. Journal of Abnormal Psychology, 96 (1), 27-33.

Hooley, J. M., & Teasdale, J. D. (1989). Predictors of relapse in unipolar depressives: Expressed emotion, marital distress and perceived criticism. Journal of Abnormal Psychology, 98, 229-237.

Horneffer, K. J., & Fincham, F. D. (1996). Attributional models of depression and marital distress. Personality and Social Psychology Bulletin, 22, 678-689.

Jacobson, N. S., Dobson, K., Fruzzetti, A. E., Schmaling, K. B., & Salusky, S. (1991). Marital therapy as a treatment for depression. Journal of Consulting and Clinical Psychology, 59 (4), 547-557.

Jacobson, N. S., Follette, W. C., & McDonald, D. W. (1982). Reactivity to positive and negative behavior in distressed and nondistressed married couples. Journal of Consulting and Clinical Psychology, 50 (5), 706-714.

Jacobson, N. S., & Margolin, G. (1979). Marital therapy: Strategies based on social learning and behavior exchange principles. New York, NY: Brunner/Mazel.

Johnson, S. L., & Jacob, T. (1997). Marital interactions of depressed men and women. Journal of Consulting and Clinical Psychology, 65 (1), 15-23.

Julien, D., & Markman, H. J. (1991). Social support and social networks as determinants of individual and marital outcomes. Journal of Social and Personal Relationships, 8, 549-568.

Karney, B. R., Bradbury, T. N., Fincham, F. D., & Sullivan, K. T. (1994). The role of negative affectivity in the association between attributions and marital satisfaction. Journal of Personality and Social Psychology, 66, 413-424.

Katz, J., & Beach, S. R. H. (1997). Self-verification and depressive symptoms in marriage and courtship: A multiple pathway model. Journal of Marriage and the Family, 59, 903-914.

Kendall, P. C., Hollon, S. D., Beck, A. T., Hammen, C. L., & Ingram, R. E.

(1987). Issues and recommendations regarding use of the Beck Depression Inventory. Cognitive Therapy and Research, 11 (3), 289-299.

Kirk, R. E. (1982). Experimental design (2nd ed.). Belmont, CA: Wadsworth, Inc.

Kowalik, D. E., & Gotlib, I. H. (1987). Depression and marital interaction: Concordance between intent and perception of communication. Journal of Abnormal Psychology, 96 (2), 127-134.

Lee, C. M., & Gotlib, I. H. (1994). Mental illness and the family. In L. L'Abate (Ed.), Handbook of developmental family psychology and psychopathology (pp. 243-264). New York, NY: John Wiley & Sons, Inc.

Margolin, G., & Wampold, B. E. (1981). Sequential analysis of conflict and accord in distressed and nondistressed marital partners. Journal of Consulting and Clinical Psychology, 49 (4), 554-567.

Markman, J. J., & Notarius, C. I. (1987). Coding marital and family interaction: Current status. In T. Jacob (Ed.), Family interaction and psychopathology: Theories, methods, and findings (pp. 329-390). New York, NY: Plenum.

Maxwell, S. E., & Delaney, H. D. (1990). Designing experiments and analyzing data: A model comparison perspective. Belmont, CA: Wadsworth Publishing Company.

McCabe, S. B., & Gotlib, I. H. (1993). Interactions of couples with and without a depressed spouse: Self-report and observations of problem-solving situations. Journal of Social and Personal Relationships, 10, 589-599.

Miller, G. E., & Bradbury, T. N. (1995). Refining the association between attributions and behavior in marital interaction. Journal of Family Psychology, 9, 196-

208.

Miller, P. C., Lefcourt, H. M., Holmes, J. G., Ware, E. E., & Saleh, W. E. (1986). Marital locus of control and marital problem solving. Journal of Personality and Social Psychology, 51, 161-169.

Monroe, S. M., Bromet, E. J., Connell, M. M., & Steiner, S. C. (1986). Social support, life events, and depressive symptoms: A one year prospective study. Journal of Consulting and Clinical Psychology, 54, 424-431.

Murphy, G. E. (1986). Suicide and attempted suicide. In G. Winokur & P. Clayton, (Eds.), The medical basis of psychiatry (pp. 562-579). Philadephia: Saunders.

Murphy, J. M., Monson, R. R., Olivier, D. C., Sobol, A. M., & Leighton, A. H. (1987). Affective disorders and mortality. Archives of General Psychiatry, 44, 473-480.

Nelson, G. M., & Beach, S. R. H. (1990). Sequential interaction in depression: Effects of depressive behavior on spousal aggression. Behavior Therapy, 21, 167-182.

Noller, P., Beach, S. R. H., & Osgarby, S. (1997). Cognitive and affective processes in marriage. In W. K. Halford & H. J. Markman (Eds.), Clinical handbook of marriage and couples interventions (pp. 43-72). Chichester, England: John Wiley & Sons Ltd.

O'Leary, K. D., Christian, J. L., & Mendell, N. R. (1994). A closer look at the link between marital discord and depressive symptomatology. Journal of Social and Clinical Psychology, 13 (1), 33-41.

Pasch, L. A., & Bradbury, T. N. (1998). Social support, conflict, and the development of marital dysfunction. Journal of Consulting and Clinical Psychology, 66

(2), 219-230.

Pasch, L. A., Bradbury, T. N., & Sullivan, K. T. (1997). Social support in marriage: An analysis of intraindividual and interpersonal components. In G. R. Pierce, B. Lakey, I. G. Sarason, & B. R. Sarason (Eds.). Sourcebook of social support and personality (pp. 229-256). New York, NY: Plenum Press.

Paykel, E. S., Myers, J. K., Dienelt, M. N., Klerman, G. L., Lindenthal, J. J., & Pepper, M. P. (1969). Life events and depression: A controlled study. Archives of General Psychiatry, 21, 753-760.

Pretzer, J., Epstein, N., & Fleming, B. (1991). Marital Attitude Survey: A measure of dysfunctional attributions and expectancies. Journal of Cognitive Psychotherapy: An International Quarterly, 5 (2), 131-148.

Pyszczynski, T., Holt, K., & Greenberg, J. (1987). Depression, self-focused attention, and expectancies for positive and negative future life events for self and others. Journal of Personality and Social Psychology, 52, 994-1001.

Rehm, L. P. (1988). Assessment of depression. In A. S. Bellack & M. Hersen (Eds.), Behavioral assessment: A practical handbook (3rd ed., pp. 313-364). New York, NY: Pergamon Press.

Robins, L. N., & Regier, D. A. (Eds.). (1991). Psychiatric disorders in America: The epidemiologic catchment area study. New York, NY: The Free Press.

Romano, J. M., Turner, J. A., Friedman, L. S., Bulcroft, R. A., Jensen, M. P., & Hops, H. (1991). Observational assessment of chronic pain patient-spouse behavioral interactions. Behavior Therapy, 22, 549-567.

Rounsaville, B. J., Weissman, M. M., Prusoff, B. A., & Herceg-Baron, R. L. (1979). Marital disputes and treatment outcome in depressed women. Comprehensive Psychiatry, 20, 483-490.

Ruscher, S. M., & Gotlib, I. H. (1988). Marital interaction patterns of couples with and without a depressed partner. Behavior Therapy, 19, 455-470.

Sabourin, S., Lussier, Y., & Wright, G. (1991). The effects of measurement strategy on attributions for marital problems and behaviors. Journal of Applied Social Psychology, 21, 734-746.

Sacco, W. P., Dumont, C. P., & Dow, M. G. (1993). Attributional, perceptual, and affective responses to depressed and nondepressed marital partners. Journal of Consulting and Clinical Psychology, 61 (6), 1076-1082.

Schmaling, K. B., & Jacobson, N. S. (1990). Marital interaction and depression. Journal of Abnormal Psychology, 99, 229-236.

Senchak, M., & Leonard, K. E. (1993). The role of spouses' depression and anger in the attribution-marital satisfaction relation. Cognitive Therapy and Research, 17 (4), 397-409.

Shaw, B. F., Vallis, T. M., & McCabe, S. B. (1985). The assessment of the severity and symptom patterns in depression. In E. E. Beckham and W. R. Leber (Eds.) Handbook of depression: Treatment, assessment, and research (pp. 372-407). Homewood, IL: Dorsey Press.

Sher, T. G., & Baucom, D. H. (1993). Marital communication: Differences among maritally distressed, depressed, and nondistressed-nondepressed couples. Journal of

Family Psychology, 7 (1), 148-153.

Skre, I., Onstad, S., Torgersen, S., & Kringlen, E. (1991). High inter-rater reliability for the Structured Clinical Interview for DSM-III-R Axis I (SCID-I). Acta Psychiatrica Scandinavica, 84, 167-173.

Smith, A. L., & Weissman, M. M. (1992). Epidemiology. In E. S. Paykel (Ed.), Handbook of affective disorders (2nd ed., pp. 111-129). New York, NY: Guilford Press.

Spaner, D., Bland, R. C., & Newman, S. C. (1994). Major depressive disorder. Acta Psychiatrica Scandinavica, 89 (Suppl. 376), 7-15.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. Journal of Marriage and the Family, 38, 15-28.

Spitzer, R. L., Williams, J. B. W., Gibbon, M., & First, M. B. (1990). Structured Clinical Interview for DSM-III-R (SCID). Washington, DC: American Psychiatric Press.

Vincent, J. P., Friedman, L. C., Nugent, J., & Messerly, L. (1979). Demand characteristics in observations of marital interaction. Journal of Consulting and Clinical Psychology, 47 (3), 557-566.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. Psychological Review, 92 (4), 548-573.

Weiss, R. L. (1984a). Cognitive and behavioral measures of marital interaction. In K. Hahlweg & N. S. Jacobson (Eds.), Marital interaction: Analysis and modification (pp. 232-252). New York, NY: Guilford Press.

Weiss, R. L. (1984b). Cognitive and strategic interventions in behavioral marital therapy. In K. Hahlweg & N. S. Jacobson (Eds.), Marital interaction: Analysis and

modification (pp. 337-355). New York, NY: Guilford Press.

Weiss, R. L. (1992). MICS-IV: Marital Interaction Coding System: Training and reference manual for coders. University of Oregon, Eugene, OR.

Weiss, R. L., & Heyman, R. E. (1997). A clinical-research overview of couples interactions. In W. K. Halford & H. J. Markman (Eds.), Clinical handbook of marriage and couples interventions (pp. 13-42). Chichester, England: John Wiley & Sons Ltd.

Weiss, R. L., & Tolman, A. O. (1990). The Marital Interaction Coding System - Global (MICS-G): A global companion to the MICS. Behavioral Assessment, 12, 271-294.

Weissman, M. M. (1987). Advances in psychiatric epidemiology: Rates and risks for major depression. American Journal of Public Health, 77, 445-451.

Williams, J. B. W., Gibbon, M., First, M. B., Spitzer, R. L., Davies, M., Borus, J., Howes, M. J., Kane, J., Pope, H. G., Rounsaville, B., & Wittchen, H. U. (1992). The Structured Clinical Interview for DSM-III-R (SCID): Multiple test-retest reliability. Archives of General Psychiatry, 49, 630-636.

Appendix A

Personal Information Questionnaire

Sex____ Age____

Education:

Highest grade completed (please circle): 1 2 3 4 5 6 7 8 9 10 11 12

College\University (years completed): 1 2 3 4 5 6 7 8+

Employment Status: (please describe)

____

Occupation____________________________________

Marital and Family Data:

How long have you been married to your current partner? ________years.

Number, sex, and age of children:

1.____________________________

2.____________________________

3. ___________________________

4.____________________________

Are you currently experiencing problems in your marriage? Yes No (please circle)

If yes, for how long have you had these problems?_________________

Have you or your partner ever used physical violence to settle conflicts with each other (e.g., pushing partner, shoving partner, hitting partner, throwing something at your partner, using a weapon against your partner)? Yes No (please circle)

(appendix continues)

Mental Health History:

Are you currently in therapy or counseling for emotional difficulties, or have you received therapy or counseling in the past? Yes No (please circle)

If yes, please describe. ____

____

____

Are you currently taking any medication (or have you in the past) for stress or any emotional problems? Yes No (please circle) If yes, please describe.

____

Appendix B

Beck Depression Inventory

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out one statement in each group which best describes the way you have been feeling the past week, including today: Circle the number beside the statement you picked. If several statements apply equally well, circle each one. Be sure to read all the statements in each group before making your choice.

1. 0 I do not feel sad.
   1 I feel sad.
   2 I am sad all the time and I can't snap out of it.
   3 I am so sad or unhappy that I can't stand it.
2. 0 I am not particularly discouraged about the future.
   1 I feel discouraged about the future.
   2 I feel I have nothing to look forward to.
   3 I feel that the future is hopeless and that things cannot improve.
3. 0 I do not feel like a failure.
   1 I feel I have failed more than the average person.
   2 As I look back on my life, all I can see is a lot of failures.
   3 I feel I am a complete failure as a person.
4. 0 I get as much satisfaction out of things as I used to.
   1 I don't enjoy things the way I used to.

(appendix continues)

2 I don't get real satisfaction out of anything anymore.

3 I am dissatisfied or bored with everything.

5. 0 I don't feel particularly guilty.

1 I feel guilty a good part of the time.

2 I feel quite guilty most of the time.

3 I feel guilty all of the time.

6. 0 I don't feel I am being punished.

1 I feel I may be punished.

2 I expect to be punished.

3 I feel I am being punished.

7. 0 I don't feel disappointed in myself.

1 I am disappointed in myself.

2 I am disgusted with myself.

3 I hate myself.

8. 0 I don't feel I am any worse than anybody else.

1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.

3 I blame myself for everything bad that happens.

9. 0 I don't have any thoughts of killing myself.

1 I have thoughts of killing myself, but I would not carry them out.

2 I would like to kill myself.

(appendix continues)

3 I would kill myself if I had the chance.

10. 0 I don't cry anymore than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can't cry even though I want to.

11. 0 I am no more irritated now than I ever am.

1 I get annoyed or irritated more easily than I used to.

2 I feel irritated all the time now.

3 I don't get irritated at all by the things that used to irritate me.

12. 0 I have not lost interest in other people.

1 I am less interested in other people than I used to be.

2 I have lost most of my interest in other people.

3 I have lost all of my interest in other people.

13. 0 I make decisions about as well as I ever could.

1 I put off making decisions more than I used to.

2 I have greater difficulty in making decisions than before.

3 I can't make decisions at all any more.

14. 0 I don't feel I look any worse than I used to.

1 I am worried that I am looking old or unattractive.

2 I feel that there are permanent changes in my appearance that make me look unattractive.

(appendix continues)

3 I believe that I look ugly.

15. 0 I can work about as well as before.

1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.

3 I can't do any work at all.

16. 0 I can sleep as well as usual.

1 I don't sleep as well as I used to.

2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

3 I wake up several hours earlier than I used to and cannot get back to sleep.

17. 0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18. 0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all now.

19. 0 I haven't lost much weight, if any lately.

1 I have lost more than 5 pounds.

2 I have lost more than 10 pounds.

3 I have lost more than 15 pounds.

I am purposely trying to lose weight by eating less.

Yes____ No____

(appendix continues)

20. 0 I am no more worried about my health than usual.
    1 I am worried about physical problems such as aches and pains; or upset stomach; or constipation.
    2 I am very worried about physical problems and it's hard to think of much else.
    3 I am so worried about my physical problems, that I cannot think about anything else.
21. 0 I have not noticed any recent change in my interest in sex.
    1 I am less interested in sex than I used to be.
    2 I am much less interested in sex now.
    3 I have lost interest in sex completely.

Appendix C

Dyadic Adjustment Scale

Most persons have disagreements in their relationship. Please indicate below the approximate extent of agreement or disagreement between you and your partner for each item on the following list.

5	4	3	2	1	0
Always agree	Almost always agree	Occasionally disagree	Frequently disagree	Almost always disagree	Always disagree

1.____Handling of family finances

2.____Matters of recreation

3.____Religious matters

4.____Demonstrations of affection

5.____Friends

6.____Sex relations

7.____Conventionality (Correct or proper behavior)

8.____Philosophy of life

9.____Ways of dealing with parents or in-laws

(appendix continues)

10.____Aims, goals, and things
believed important

11.____Amount of time spent together

12.____Making major decisions

13.____Household tasks

14.____Leisure time interests
and activities

15.____Career decisions

Please indicate below the approximate amount of time for you and your partner for each item on the following list.

0	1	2	3	4	5
All the time	Most of the time	More often than not	Occasionally	Rarely	Never

16.___ How often do you discuss or have you considered divorce, separation, or terminating your relationship?

17.___ How often do you or your mate leave the house after a fight?

18.___ In general, how often do you think that things between you and your partner are going well?

19.___ Do you confide in your mate?

20.___ Do you ever regret that you married?

(appendix continues)

21.___ How often do you and your partner quarrel?

22.___ How often do you and your mate "get on each other's nerves"?

23.____ Do you kiss your mate? (please circle)

4	3	2	1	0
Every day	Almost every day	Occasionally	Rarely	Never

24.____Do you and your mate engage in outside interests together? (please circle)

4	3	2	1	0
All of them	Most of them	Some of them	Very few of them	None of them

How often would you say the following occur between you and your mate:

Never	Less than once a month	Once or twice a month	Once or twice a week	Once a day	More often
0	1	2	3	4	5

25.___Have a stimulating exchange of ideas

26.___Laugh together

27.___Calmly discuss something

(appendix continues)

28.___Work together on a project

These are some things about which couples sometimes agree and disagree. Indicate if either item below caused differences of opinions or were problems in your relationship during the past few weeks. (Check yes or no.)

	Yes	No	
29.	0	1	Being too tired for sex
30.	0	1	Not showing love

31.The dots on the following line represent different degrees of happiness in your relationship. The point, "happy", represents the degree of happiness in most relationships. Please circle the dot that best describes the degree of happiness, all things considered, of your relationship.

Extremely unhappy	Fairly unhappy	A little unhappy	happy	Very happy	Extremely Happy	Perfect
0	1	2	3	4	5	6
.	.	.	.	.	.	.

32. Which of the following statements best describes how you feel about the future of your relationship (please circle):

5 I want desperately for my relationship to succeed and would go to almost any lengths

(appendix continues)

to see that it does.

4 I want very much for my relationship to succeed and will do all that I can to see that it does.

3 I want very much for my relationship to succeed and will do my fair share to see that it does.

2 It would be nice if my relationship succeeded, and I can't do much more than I am doing now to help it succeed.

1 It would be nice if it succeeded, but I refuse to do any more than I am doing now to keep the relationship going.

0 My relationship can never succeed, and there is no more that I can do to keep the relationship going.

Appendix D

Relationship Attribution Measure

Husband Version

This questionnaire describes several things that your spouse might do. Imagine your spouse performing each behavior and then read the statements that follow it. Please circle the number that indicates how much you agree or disagree with each statement, using the rating scale below.

1	2	3	4	5	6
Disagree strongly	Disagree	Disagree somewhat	Agree somewhat	Agree	Agree strongly

YOUR WIFE DOES NOT COMPLETE HER CHORES:

1 2 3 4 5 6 My wife's behavior was due to something about her (e.g., the type of person she is, the mood she was in).

1 2 3 4 5 6 The reason my wife did not complete her chores is something not likely to change.

1 2 3 4 5 6 The reason my wife did not complete her chores is something that affects other areas of our marriage.

1 2 3 4 5 6 My wife did not complete her chores on purpose, rather than unintentionally.

1 2 3 4 5 6 My wife's behavior was motivated by selfish rather than unselfish concerns.

1 2 3 4 5 6 My wife deserves to be blamed for not completing her chores.

(appendix continues)

Stimulus Events:

8-item version: Your wife criticizes something you say; Your wife begins to spend less time with you; Your wife does not pay attention to what you are saying; Your wife is cool and distant; Your wife does not complete her chores; Your wife makes an important decision that will affect the two of you without asking for your opinion; Your wife doesn't give you the support you need; Your wife is intolerant of something you say.

Filler items: Your wife compliments you; Your wife treats you more lovingly.

(appendix continues)

Wife Version

This questionnaire describes several things that your spouse might do. Imagine your spouse performing each behavior and then read the statements that follow it. Please circle the number that indicates how much you agree or disagree with each statement, using the rating scale below.

1	2	3	4	5	6
Disagree strongly	Disagree	Disagree somewhat	Agree somewhat	Agree	Agree strongly

YOUR HUSBAND CRITICIZES SOMETHING YOU SAY:

1 2 3 4 5 6 My husband's behavior was due to something about him (e.g., the type of person he is, the mood he was in).

1 2 3 4 5 6 The reason my husband criticized me is something not likely to change.

1 2 3 4 5 6 The reason my husband criticized me is something that affects other areas of our marriage.

1 2 3 4 5 6 My husband criticized me on purpose, rather than unintentionally.

1 2 3 4 5 6 My husband's behavior was motivated by selfish rather than unselfish concerns.

1 2 3 4 5 6 My husband deserves to be blamed for criticizing me.

(appendix continues)

Stimulus Events:

8-item version: Your husband criticizes something you say; Your husband begins to spend less time with you; Your husband does not pay attention to what you are saying; Your husband is cool and distant; Your husband does not complete his chores; Your husband makes an important decision that will affect the two of you without asking for your opinion; Your husband doesn't give you the support you need; Your husband is intolerant of something you say.

Filler items: Your husband compliments you; Your husband treats you more lovingly.

Appendix E

Perceived Efficacy Expectations Scale

Please indicate the extent to which you agree or disagree with the following statements concerning the disagreements that arise in your marriage.

(1) I have little control over the conflicts that occur between my partner and I.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

(2) There is no way that I can solve some of the problems in my marriage.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

(3) When I put my mind to it I can solve just about any disagreement that comes up between my partner and I.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

(4) I often feel helpless in dealing with the problems that come up in my marriage.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

(5) Sometimes I feel that I have no say over issues that cause conflict between us.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

(6) I am able to do the things needed to settle our conflicts.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

(7) There is little I can do to resolve many of the conflicts that occur between my partner and I.

STRONGLY DISAGREE 1 2 3 4 5 6 7 STRONGLY AGREE

Appendix F

Consent Form for Screening Assessment

Research Project: Depression and Marital Study

Investigators: Dr. Keith Dobson and Ms. Susan Jackman Cram, M.Sc.

Institutions Involved: The Foothills Hospital

The University of Calgary

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you the basic idea of what the research project is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take your time to read this carefully and to understand any accompanying information.

The purpose of this research project is to study differences in how couples communicate with and think about their partners in different types of marriages. For this reason, couples will be recruited from marriages in which the female partner is depressed, from distressed marriages, and from happy marriages.

The first part of the project, the screening assessment, will require the completion of three questionnaires (enclosed). It is important that you and your partner complete the questionnaires independently. The first questionnaire asks for information about your family, education, work history, and mental health history; the second inquires about your current mood, and the last asks about your marital satisfaction. Some wives will also be

(appendix continues)

asked to complete a structured interview which assesses mental health. The interviews will be audiotaped for examination by a psychologist or psychiatrist to determine the reliability of diagnosis, and will then be destroyed. Participation in the study will be offered only to a subset of the couples who complete the screening assessment due to the need for couples with certain characteristics.

The study itself will require the participation of you and your partner in an approximately 2 hour session. The session will require that you and your partner answer several questionnaires. The questionnaires will ask you about the reasons you believe your partner acts the way he or she does and about how well you feel you deal with problems that come up in your marriage. After completion of the questionnaires, you will be asked to engage in a 10-minute discussion with your partner in which you attempt to resolve a problem you have identified in your relationship.

The discussions will be videotaped for purposes of coding. Coding involves counting up the frequencies of certain kinds of statements that people make; for example, counting up 10 statements that showed agreement, and 10 statements that showed disagreement. The tapes will be sent to the Oregon Marital Studies Program for coding. There will be no disclosure of your name, and no identifying information on the tapes. After they have been coded, the tapes will be returned to the primary investigator, and will be stored in a locked cabinet in the primary investigator's office. The questionnaires will be scored by the primary investigator, and will be stored in a locked cabinet in the primary investigator's office.

(appendix continues)

Confidentiality will be protected by assigning a code number to each subject at the time of the initial assessment. All information collected will be identified only by a subject's code number, and will contain no identifying information. There will be no disclosure of your name, and no identifying data released about you.

For your participation in the study, you will receive an invitation to a workshop dealing with depression and marital issues, and $25.00 to cover transportation and child care costs. Through your participation in this study you and your partner may learn more about one another, and your relationship. You will also have participated in a research project that will advance our understanding of depression and marriage.

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in this research project, and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time without jeopardizing your health care. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this research, please contact:

Susan Jackman Cram	Dr. Keith Dobson
Psychology Department	Psychology Department
Phone: 220-3697	Phone: 220-5096

(appendix continues)

If you have any questions concerning your rights as a possible participant in this research, please contact the Office of Medical Bioethics, Faculty of Medicine, The University of Calgary at 220-7990.

Name of Subject:______________________________

Signature of Subject:______________________________

Name of Witness:______________________________

Signature of Witness:____________________________

Date:__________________________

Your Mailing Address:______________________________

____

Telephone: _____________________________________

Please return the completed questionnaires and consent form in the enclosed envelop. You will be contacted by Susan Jackman Cram when your questionnaires have been reviewed. A copy of this consent form will be mailed to you. Please keep it for your records and future reference.

Appendix G

Study Flyer

Depression and Marital Study

Dear Couple:

The Foothills Hospital and the Psychology Department of the University of Calgary is looking for couples interested in participating in a research project studying marital communication, depression, and marital distress. We are interested in speaking with depressed women and their spouses. We are also interested in speaking with couples whose marriages are presently unhappy or distressed. The aim of our research is to learn more about depression in women and marriage, and marital unhappiness.

Your participation in this research project is voluntary, and is in no way related to your health care at this facility. Furthermore, if you decide to participate in this study, you are free to withdraw at any time without jeopardizing your health care.

The study consists of two parts. In the first part, the couple will be asked to complete three brief questionnaires asking about their family, work, occupation, health, current mood, and marital relationship. A depressed woman will also be interviewed about her depression. In the second part, the couple will be asked to participate in an approximately two hour session at the University. This session will require that you and your partner answer several questionnaires about your relationship and then discuss an issue which has been a problem in your relationship.

Only a sample of couples who complete the first part will be asked to complete

(appendix continues)

the second part. This is because of the need for couples with certain characteristics. Couples completing the first part will receive an invitation to a workshop at the University dealing with depression and marital issues (i.e., communication, problem-solving). For participation in the second part of the study, couples will also receive $25.00 to cover their transportation and child care expenses.

We would be pleased to answer any questions you might have concerning this study, and your potential involvement. If you are interested, please call:

Susan Jackman Cram	Or	Dr. Keith Dobson
Psychology Department		Psychology Department
University of Calgary		University of Calgary
220-3697		220-5096

Appendix H

Consent Form for Participation

Research Project: Depression and Marital Study

Investigators: Dr. Keith Dobson and Ms. Susan Jackman Cram, M.Sc.

Institutions Involved: The Foothills Hospital

The University of Calgary

This consent form, a copy of which has been given to you, is only part of the process of informed consent. It should give you the basic idea of what the research project is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take your time to read this carefully and to understand any accompanying information.

The purpose of the research project is to study differences in how couples communicate with and think about their partners. Couples will be recruited from happy marriages, distressed marriages, and marriages in which the female partner is depressed. In particular, the project is interested in studying how couples talk to each other and think about each other in marriages where one of the partners is depressed or the relationship is maritally distressed. The aim of the study is to advance our understanding of depression, and of marriage; and to further understand marital communication in relationships where there is depression or marital distress. The study of the marital relationships of individuals who are depressed or maritally distressed holds promise to contribute to

(appendix continues)

programs designed for the treatment and prevention of depression and marital distress.

The study will require the participation of you and your partner in an approximately 2 hour session. The session will require that you and your partner answer several questionnaires and later discuss a problematic issue in your relationship. The questionnaires will ask you about the reasons you believe your partner acts the way he or she does, and ask how well you feel you are able to solve the problems that come up in your relationship.

You will be asked to engage in a 10-minute discussion with your partner. The discussion will involve talking about a problem you have in your marriage, and trying to generate a solution. You may experience some distress during the problem-solving discussion.

The discussions will be videotaped for purposes of coding. Coding involves counting up the frequencies of certain kinds of statements that people make; for example, counting up 10 statements that showed agreement, and 10 statements that showed disagreement. The tapes will be sent to the Oregon Marital Studies Program for coding. After they have been coded, the tapes will be returned to the primary investigator, and will be stored in a locked cabinet in the primary investigator's office at the University of Calgary.

There will be no disclosure of your name, and no identifying information on the tapes. The questionnaires will be scored by the primary investigator, and will be stored in a locked cabinet in the primary investigator's office. Confidentiality will be protected by

(appendix continues)

assigning a code number to each subject at the time of the initial assessment. Questionnaire data and videotapes will be identified only by the subjects' code number. There will be no disclosure of your name, and no identifying data released about you in reporting the results of this study in scientific or professional literature.

For your participation in this study, you will receive an invitation to a workshop dealing with depression and marital issues (i.e., communication, problem-solving) and $25.00 to cover transportation and child care costs. Through your participation in this study you and your partner may learn more about one another, and your relationship. You will also have participated in a research project that will advance our understanding of depression and marriage.

You will be mailed information regarding the results of this research at your request. In addition, the investigators will be available to discuss the results with you at your request.

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in this research project, and agree to participate as a subject. In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time without jeopardizing your health care. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation. If you have further questions concerning matters related to this

(appendix continues)

research, please contact:

Susan Jackman Cram	Dr. Keith Dobson
University of Calgary	University of Calgary
Psychology Department	Psychology Department
Phone: 220-3697	Phone: 220-5096

If you have any questions concerning your rights as a possible participant in this research, please contact the Office of Medical Bioethics, Faculty of Medicine, The University of Calgary at 220-7990.

Name of Subject:________________________________

Signature of Subject:________________________________

Name of Witness:________________________________

Signature of Witness:______________________________

Date:____________________________

A copy of this consent form will be given to you. Please keep it for your records and future reference.

Appendix I

Instructions for the Problem-Solving Task

The problem-solving task was preceded by the following instructions:

> I would like you to chose a moderate sized problem that causes conflict within your relationship. Once you have decided on the problem, I am going to ask you to discuss it for a 10 minute period. Don't start discussing the problem now, simply identify it so you don't lose time in your 10 minute period trying to define a problem for the discussion.

After the couple had chosen a problem, the following instructions were given:

> I would like you to take 10 minutes and try to solve the problem you identified. Try to come up with an agreement as to how you will handle this problem in the future. You may feel somewhat uncomfortable with being videotaped, but try as much as possible to act as you normally would.