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The Relationship Between Grief and Depression in a Group of Polio Survivors

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THE RELATIONSHIP BETWEEN GRIEF AND DEPRESSION IN A GROUP OF POLIO SURVIVORS

by

Timothy Ting-Kuo Chiang

A DISSERTATION

Submitted to
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ABSTRACT

THE RELATIONSHIP BETWEEN
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The purpose of this study was to investigate the relationship between grief and depression in a group of polio survivors. A Beck Depression Inventory, a Response to Loss Inventory, and a Biographical Data Questionnaire were administered by mail to a group of former polio research participants. Background information on these individuals was also collected through an existing database at the University of Michigan. Based on a comprehensive model of reactions to loss, responses from this convenience sample of 33 men and 44 women were examined in terms of the hypothesized relationship between depression and each of the seven phasic components of grief. In addition, the potential impact of 6 selected demographic, 8 health, 8 biographical, and 12 disability variables on these relationships was explored in a series of post-hoc analyses.

The results of the study indicate that depression was positively correlated with the coping- and experience-oriented components and unrelated to the healing- and growth-oriented aspects of the grieving process. The generalizability of these relationships was supported by the overall results of post-hoc analyses. Given the extended

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period of time from the participants' initial polio diagnosis, and the end of their best post-polio physical functioning, these results were consistent with the predominant view in the psychological literature that conceptualizes depression as a trait rather than a state and as the failure to mourn. Among alternative interpretations provided here is a suggestion that, instead of a task to be accomplished once and for all, psychological adjustment to disability may be a cyclical process of responding to new meanings of disability in the context of changing developmental needs across the life span.

Post-hoc analyses of interaction effects indicate that, overall, the relationships between grief and depression seem to be stable across background variables, especially for the healing- and growth-oriented phases of grief.

Suggestions for further research are provided.

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DEDICATION

To my loving parents, Mr. Chyuan-Her Chiang and Mrs. Fen Chen Chiang, who introduced me to the human condition and have encouraged me to learn from the storms and the sun, the tears and laughters, and the support and challenge of a great adventure called "life."

ACKNOWLEDGEMENTS

The completion of this dissertation is the result of the collective efforts of a number of individuals and organizations, to whom a word of sincere gratitude has been long overdue. As the chair of my research committee, Dr. Michael Leahy has been an effective facilitator for this project. He has provided a tremendous amount of help in removing road blocks, managing the loose ends and ensuring that my research work proceed in an organized and systematic manner. Dr. John Schneider has been a valuable resource of ideas, practical wisdom, enthusiasm about the value of research and, above all, a precious friend. His comprehensive model of research has constituted the main thrust of this dissertation research, and he has been my research director for years before I started this project.

I feel fortunate to have Dr. Nancy Crewe on my research committee. She is a well respected researcher with a national reputation. Throughout this dissertation process, she has repeatedly ensured that I never lose sight of predominant views in the field of rehabilitation psychology no matter how much I may be inclined to think in terms of theories of counseling and clinical psychology. The quality of this research project has benefitted a great deal from the methodological expertise of Dr. Richard Coelho. As a research committee member, he has asked many thought-provoking questions that forced me to be precise and thorough in my research design. Dr. Denise Tate has been

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instrumental in introducing me to the idea of using a group of polio survivors instead of an acute disability group. She has also been an indispensable liaison for me to the polio participants in this study.

The quality of this project has also been enhanced by the expertise of a number of consultants. Mr. Kyle Fahrbach of the Measurement and Quantitative Methods Program at Michigan State University has been most directly involved and most helpful in ensuring accurate interpretation of data and the precision of my statistical terminology. Mr. Rafa Kasim of the Measurement and Quantitative Methods Program at MSU provided some initial and general explanations regarding the statistical reasoning of correlational and multiple regression analyses. Several consultants at the MSU Computer Laboratory have also been helpful in resolving technical difficulties. Mr. Randy Fotiu has been a knowledgeable user of the SPSS-PC+ software and has helped me successful detect a number of problems in my programming for statistical analysis. Mr. Jim Lebay has been a valued resource person for me on the use of the dBase IV software. Ms. Sandra Gross has been very helpful in proof-reading and editing my manuscript and making sure that the format of this report is consistent with accepted standards as set forth by the American Psychological Association and the MSU Graduate School.

A word of thanks is also due to several organizations. The Institutional Review Board at the University of Michigan

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Medical Center had a thorough review of my research proposal and allowed me conduct this study successfully with the assistance of staff at their facility. Dr. Aaron T. Beck at the Center for Cognitive Therapy in Philadelphia also granted permission to me as a graduate student to reproduce duplicates of the Beck Depression Inventory for the purpose of this study. Crucial funding for this study has been provided through a grant from the Michigan Health Care Education and Research Foundation, the philanthropic affiliate of Blue Cross-Blue Shield of Michigan.

A special word of thanks is also due for Ms. Joyce Schultz and Ms. Ladye Hahn. As members of the secretarial and support staff, they have facilitated my contact with my committee in an efficient manner.

Most important of all, I am deeply grateful to the participants of this study for sharing a personal and often painful part of their life experience with me. I am also grateful to people like Dr. Arnold Beisser who have courageously shared their experiences with a debilitating condition.

Finally, this acknowledgement section would not be complete without expressing my gratitude to people who have struggled with me. My classmate and friend, Peggy Parker, has been a wonderful peer and a cheer leader. My parents and my sisters probably have most accurate account on day-to-day struggle with this project. The bitterly strong Chinese tea that my parents have often fixed for my midnight

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oil burning sessions has served as a wonderful reminder that true happiness often comes after a series of difficult and challenging experience, both of which are parts of an integrated life. What a wonderful metaphor for the study of grief and depression, Thank you!

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CHAPTER 1

THE PROBLEM

Introduction

Adjustment to physical disability has long been an area of interest for practitioners and researchers in the field of rehabilitation psychology and rehabilitation counseling. A multitude of criteria have been used to define adjustment and the appropriateness of each of these criteria seems to depend on the helping model, philosophy, and roles selected by individual professionals (e. g., Poll & De Nour, 1980; Russell, 1981). Individuals embracing the medical model tend to use longevity and physical survival as a way of defining ultimate adjustment while vocational rehabilitation research often focuses attention on the employment status of individuals with disabilities. Other definitions of adjustment range from emotional coping, adaptation, and life satisfaction ratings by persons with disabilities to functional independence, successful management of activities of daily living, and the level and frequency of physical and social activities (Trieschmann, 1988).

Rapid advances in recent years in medical and rehabilitation technology have resulted in a great deal of interest in the physical treatment and management of individuals with physical disabilities. However, there appears to be a need for continued emphasis on the psychological aspects of the adjustment process for a number of practical, ethical, as well as theoretical reasons.

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First, there have been a number of studies which suggest a relationship between emotional reactions of persons with disabilities and their ultimate functional adjustment to the physical impairment (e. g., Anderson & Andberg, 1979; Fogel & Rosillo cited by Woodbury, 1978; Heijn & Granger, 1974). Second, although medical treatment and physical management constitute a major component of intervention, especially in the early phases of the rehabilitation process, many adjustment problems experienced by the individuals with disabilities are psychological in nature (Fitzgerald, 1983). Furthermore, studies have shown that certain indicators of adjustment such as the level and frequency of physical and social activities are not necessarily correlated with adequate psychological adjustment to physical disability. An implication of this finding is that our attempts to facilitate the functional adaptation and social integration of individuals with disabilities may be insufficient in fostering their emotional well-being.

Third, an ethical dilemma which frequently confronts helping professionals is the issue of determining if treatment goals and interventional efforts are primarily based on the experience of our clients, the recommendations of the helping expert, or the values and standards of our society (Ivey, 1980). The relevance of this dilemma to rehabilitation is apparent when one considers the medical complications which frequently accompany physical disabilities and the predominant roles of medical management

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and expert judgement in the treatment process. A recent development in the area of general clinical psychology which emphasizes the importance of the client's perspective is the emergence of a phenomenological approach to the facilitation of the grieving process for individuals suffering from traumatic experiences (Schneider, 1984, 1994). This approach is characterized by a high degree of affective sensitivity and an adequate understanding, appreciation and validation of feelings and coping needs as they are experienced by the traumatized individual.

Finally, it has been suggested both in clinical and rehabilitation literature that lack of sophistication and abilities on the part of the helping professional in recognizing, understanding, and working with the feelings of the client can result in significant interference with the individual's process of behavioral change and psychological adjustment. For example, a significant proportion of the clinical psychological literature deals with the traditional psychoanalytic concept of countertransference (Cashdan, 1988), which explains difficulties of clinicians in dealing with certain emotional reactions of their clients due to their need to avoid or act on related feelings of their own. A similar concern has been raised in the bereavement literature by Kubler-Ross, who points out that hospitals are not adequately designed to deal with the anger, bargaining and grief of terminally ill patients. She indicated that a potential contributing factor of this problem is the need of

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Trieschmann (1988) stated that a frequently neglected contributing factor of anger and depression seen in some rehabilitation patients may be the unnatural and impersonal nature of the treatment procedures and the hospital environment. It is conceivable that emotional reactions of these patients can be misinterpreted as part of the mourning process in order to help professionals avoid implications of their own inadequacies. The concept of the "requirement of mourning" as introduced by Wright (1960, 1983) describes situations where helping professionals impose unnecessary demands to grieve on their clients and reflects the need for greater sensitivity and understanding on the part of the helper regarding the personal meaning of a physical disability for the individual. The importance of acquiring a thorough understanding regarding the psychological aspects of adjustment to physical disabilities can not be over-emphasized.

Statement and Significance of the Problems

One of the widely accepted and frequently discussed concepts in the field of rehabilitation has been the process of loss and grief. In our attempts to account for the emotional reactions of individuals with disabilities, it is believed that adequate adjustment to disabilities depends on the successful completion of the grieving process. The linkage between adjustment and grief has not been

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empirically substantiated, however, for at least two reasons. First, it was not until recently that a systematic and comprehensive model existed for conceptualizing, monitoring, and facilitating the grieving process. Accompanying this lack of holistic conceptual knowledge is the fact that an extremely limited number of viable grief instruments have been developed, most of which do not seem to have satisfactory psychometric properties and tend to focus exclusively on one or two components of the grieving process. The lack of an objective, comprehensive and adequate measure of grief makes it necessary for clinicians to resort to their personal observations and clinical judgement, which may often be inaccurate. This observation is consistent with reported findings that staff ratings of client emotional reactions and psychological adjustment relate poorly to either the results of psychological inventories or self-ratings of individuals with disabilities (e. g., Albrecht & Higgins, 1977).

One of the problems significantly complicating the assessment of psychological reactions to physical disabilities is the difficulty in distinguishing grief from reactive depression. Contributing to the confusion seems to be a number of similarities between the two conditions in terms of their symptomatic manifestation. In addition to the dysphoric mood which is readily apparent to the observer, it was noted as early as 1917 by Freud that both grief and depression involved a lack of interest in the

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outside world, a loss of capacity to love, and an inhibition in activity. In contrast, important differences exist between grief and depression. The fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) clearly separates the grief reactions of uncomplicated bereavement from the affective disorder of depression. Mental health practitioners frequently define depression as anger turned inward towards the self and it has been generally accepted in the clinical literature that depression differs from grief in that it involves a lowering of self-regard, self-reproach, and the expectation of punishment (Schneider, 1980).

Perhaps one of the most compelling reasons for the differentiation of grief and depression lies in its clinical implications for the provision of appropriate treatment. Grief is generally considered to be a normal reaction to a significant loss. The concept describes the adjustment of the human organism to drastic changes in the psychosocial environment. Depression frequently results from the complex interaction of biological, genetic, developmental, and environmental factors. It involves a diverse set of symptoms such as dejection, apathy, sleep disturbances, and decreased sexual interest (Deutsch, 1982). These symptoms often interfere with the day-to-day functional behavior of the individual, suggesting the pathological nature of its developmental process. It has been discussed in the literature that early object loss and experiences of

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helplessness due to lack of adequate role models who foster the child's development of mastery over one's fate contribute to adult vulnerability to depression (Deutsch, 1982). The grieving process is facilitated by validating interpersonal support, whereas depression tends to require more direct and rigorous interventions which range from cognitive behavioral therapy to pharmacological treatment and hospitalization.

The importance of differential diagnosis and the use of differential therapeutics have been supported by a number of recent publications which suggest a relationship between grief and depression in the process of their development. Based on his model of grief as a normal reaction to loss experiences, for example, Schneider (1980) described depression as the inability to grieve. Deutsch (1982) reported that although depression accounted for 36.37% of variance in the awareness component of grief for two sample groups of college students who suffered from bereavement or separation from a family member or romantic partner, there appears to be a linkage between depression and avoidance of the normal grieving process through the separation of cognitive and emotional experience of loss. Furthermore, while individuals who are undergoing grief tend to elicit supportive response from others (Schneider, 1980), research based on interpersonal theories of depression (Coyne, 1976; Lewinsohn cited by Segrin, 1994) also indicates that depressed individuals tend to generate more negative

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feedback and less social support from others (Segrin, 1994). Validating support of others is described by Schneider (1984, 1994) as an important facilitating factors of normal grieving.

Grief and depression are familiar concepts for researchers and practitioners in the area of rehabilitation psychology. While these terms have been used very loosely in the literature, it appears that a lack of appropriate definitions and differentiation between these two conditions have contributed to a great deal of confusion and disagreement regarding proper psychosocial treatment of individuals with physical disabilities. Traditional psychological perspectives in rehabilitation consider the resolution of loss and grief issues as an important prerequisite for disability acceptance, and depression has been characterized as a major symptom associated with the grieving process. Many stage theories of adjustment also describe depression as one of the reactions which precede the acceptance of disability (e. g., Dunn cited by Woodbury, 1978; Feld cited by Woodbury, 1978; Hohmann, 1975; Peter cited by Woodbury, 1978; Seybold cited by Woodbury, 1978). On the other hand, beliefs in a linkage between depression and psychological resolution are inconsistent with the results of recent research. Fitzgerald (1983) reported, for example, that a significantly negative relationship exists between depression and acceptance of disability for a group of individuals with spinal cord injuries. Similar

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discrepancies can be found in the area of psychological treatment. Fordyce (1971) recommended, for example, that instead of allowing the person with a disability to have time to mourn for his/her loss, withdrawal behavior should be actively interrupted by presenting the individual with specific rehabilitation tasks. Siller (1969) expressed a great deal of concern that such a treatment procedure would be counterproductive and interfere with the individual's successful adjustment to his/her disability.

A highly controversial issue in the field of rehabilitation medicine is the prescription of psychotropic medications such as major tranquilizers to counteract the massive depression which some physicians believe would be undesirable following the onset of a physical disability (Trieschmann, 1988). It has been pointed out by Hohmann and Munoz-Mellowes (cited by Woodbury, 1978), for instance, that the use of MAO inhibitors with rehabilitation patients has hypertensive side effects which can be dangerous. Even the use of anti-depressants for a short period of time can result in significant side effects (Trieschmann, 1988) and psychopharmacological intervention without careful diagnosis and treatment planning can conceivably introduce unnecessary interference with normal grieving and significant negative outcome.

Although there exists a great deal of confusion and disagreement in the psychosocial literature in rehabilitation, a conceptual analysis emphasizing

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appropriate differentiation and relationship between grief and depression appears to offer some promise for clarification and consistency. For example, if it can be established that the mood of sadness commonly referred to as depression is actually a symptom of heightened awareness of loss during a process of active grieving, then a plausible interpretation of Fitzgerald's (1983) results is that depression and disability acceptance are negatively correlated since, as suggested by Deutsch (1982), depression may interfere with the normal grieving process. As of today, however, there has been no documentation of systematic research efforts directed at substantiating the validity of this conceptual distinction between grief and depression on an empirical basis.

Purpose of the Study

The purpose of this study is to explore the relationship between grief and depression in the process of adjusting to a physical disability in a group of rehabilitation patients. Rather than considering grief as a unitary entity, the primary focus of the study was placed upon a systematic examination of the relationships between depression and each phasic component of the grieving process for a group of individuals with post-polio conditions. Furthermore, attempts were made to explore the generalizability or consistency of these relationships regardless of variations in the life circumstances and experiences of these individuals.

Since both similarities and differences exist between grief and depression as reactions to loss and stressful events and since grief is a highly complex multidimensional process, Schneider's comprehensive model was used in the conceptualization of grief (Schneider, 1984, 1994). According to this model, the grieving process consists of the phases of coping, awareness, healing, and growth. These phases can be divided into the components of holding on to one's will to fight, the escape response of letting go, awareness of the loss, gaining perspective, mobilization and integration of resources for resolution, self-empowerment and transformation of one's world view. Moreover, reactions associated with each of these grief components can be categorized into the physical, behavioral, cognitive, emotional and spiritual dimensions. Assessment procedures based on Schneider's conceptual model yielded a matrix of indices instead of a single score regarding the grief reactions of the individual.

Two general research questions were explored in accordance with the purpose of this study. Seven research hypotheses were tested to address the issue of whether systematic patterns of relationships exist between depression and the seven phasic components of the grieving process. Secondly, a series of post-hoc analyses of interaction effects were performed to determine, as a preliminary test, if these patterns of relationships were

generalized across a number of demographic and biographical variables.

It is believed that the results of this study can be used in a number of ways. At the most basic level, the use of a comprehensive psychometrically based instrument of grief is intended to operationalize and substantiate empirically the concept of grief as a process and the generalizability of this general clinical concept to a rehabilitation population. The findings can be used to test the clinical working hypothesis that despite their remarkable similarities, grief and depression are two distinct types of reactions to stress and loss. As noted earlier, the validity of this hypothesis would have significant diagnostic and treatment implications in the provision of psychological services in mental health as well as rehabilitation settings.

The validity of different clinical assumptions and theoretical conjecture can then be examined regarding the various developmental, personality, and environmental factors associated with the differences between grief and depression. Further investigation can also be conducted to explore the differential effectiveness of specific interventions in the care of depressed and grieving individuals. Monitoring the individuals's rate and extent of change in the dimensions of grief and depression as a part of the intervention program would provide a reliable method of assessing treatment progress and a credible source

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As discussed above, a recent trend in clinical research is the investigation of resilience shown by some individuals in the face of extreme stress. It has been observed that a wide range of individual differences exist in the ability to deal with stressful or traumatic life events. An unsubstantiated parallel perspective can be found in the rehabilitation literature which argues that not all individuals with disabilities have to experience grief or depression. A number of questions remain, however, as to what are some of the adjustment processes utilized by the more resilient individuals. For example, do they focus their attention on their strength and the belief that they will overcome the various impediments imposed upon them by their disabilities? Do they rely on a way of cognitively minimizing the significance or impact of their disability experience or do they use other healthy adaptation strategies?

An adequate clarification of these issues would serve an important purpose since discussions of the grieving process in the rehabilitation literature today largely address some of the most apparent behavioral signs and symptoms such as shock, denial, anger, and sadness. Within the framework of a comprehensive model of grief found in the clinical literature, however, the exclusive focus of attention on one's ability to overcome the loss may be

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conceptualized as a fighting response while excessive investment of energy in minimizing the significance of the experience can be viewed as a flight response, both of which are commonly observed coping reactions during the early phases of the grieving process. By making use of the procedures of assessing grief, and depression proposed in this study, we may begin our attempts to separate depressed from grieving individuals as well as those who do not need to grieve from those who are actually grieving without exhibiting the most commonly recognized or obvious symptoms of grief. Researchers can then engage in a systematic exploration of resilience factors, predict who would need professional attention to the issues of loss and grief and identify rehabilitation patients who are at risk for developing psychopathological conditions such as depression.

Finally, it may be noted that the methodological aspects of the study have been designed to address a number of limitations in previous research. For example, instead of comparing average group scores which emphasize homogeneity of observations within a given disability group, a multiple regression analysis was used in the study in order to take into consideration individual differences. Rather than focusing on the variation of emotional reactions based on types of physical disabilities, the study attempts to explore patterns of the intensity of grief based on a clinically relevant concept of depression, which has been well accepted by mental health practitioners and empirically

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established. The emphasis on the process aspects of psychosocial adjustment to physical disabilities is reflected in the measurement of grief as a multiphasic response rather than a unidimensional entity.

It is believed that this comprehensive definition of grief would be important given the fact that both similarities and differences exist in the symptomatic manifestation of grief and depression and that the theoretical relationships between these two conditions today have remained at the level of speculation. It is likely that the result of this study would be a profile of somewhat different relationships between depression and the various components of grief, which may be consistent or inconsistent with some of the theoretical postulates which have been suggested in the literature. We can also be hopeful that such an empirically derived profile of relationships would have some heuristic value to rehabilitation researchers in encouraging further theoretical development on the issues of grief and depression.

Definition of Terms

Brief definitions of terms used in this study are provided below:

Loss: The absence of people, places, ideals or objects considered to be meaningful or valuable (Deutsch, 1982). The extent of the loss is determined by the intensity of the attachment, love, or bondedness to the loss object and the extent to which the life routine of the person who

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experiences the loss is disrupted (McGovern, 1983). For the purpose of this study, loss in rehabilitation patients refers to an absence or a compromise of physical functioning as a result of a disabling condition.

Grief: The process of a natural human response to the experience of a loss. Observable behavior associated with this complex loss reaction is the product of internal dynamics and the grieving process has been described by Schneider (1984, 1994) as involving the phases of coping, awareness, healing, and growth, each of which consists of the behavioral, cognitive, emotional, physical and spiritual dimensions.

Coping: An initial phase of grieving characterized by the individual's efforts to limit his/her vulnerability and his/her awareness of his/her loss. This phase can be divided into two components. Holding on reflects people's attempts to overcome or to see themselves as beating the loss. Letting go reflects people's attempts to escape from the stress and burden of their grief.

Awareness: A phase traditionally associated with grieving which deals with the extensiveness of the individual's actual experience of the loss.

Healing: A phase of grieving characterized by a process of recovery and the initiation of detachment from the intensity and stressfulness of grief. This phase can be divided into two components. Perspective is associated with the gaining of insights about the meaning and significance

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of the loss. Integration is related to the mobilization of resources to remember actively the loss, to "finish business" with it, or to make restitution, forgive, or begin rehabilitation.

Growth: A phase of grieving associated with the extent to which people attribute subsequent growth and realization of their potential to the loss. This phase includes two components. Self-empowerment refers to the increase of one's resourcefulness, flexibility, and responsivity as a reflection of the loss. Transformation refers to changes in one's world view and the nature of losses in general as a function of the loss.

Depression: An affective disorder characterized by a constellation of symptoms of at least one month in duration which involves no other major psychiatric disorder, the presence of dysphoria and five or more of the following (McGovern, 1983):

1. Decrease in appetite/weight
2. Agitation or retardation
3. Sleep difficulty (hypersomnia or insomnia)
4. Loss of interest in usual activities or libido
5. Recurrent thought of death or suicide
6. Guilt, self-reproach
7. Loss of energy, easy fatigue
8. Decreased ability to think or concentrate

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CHAPTER 2

A CRITICAL REVIEW OF RELEVANT LITERATURE

This chapter presents a review of the literature pertaining to the relationship between grief and depression and the role of this relationship in the process of adjusting to a physical disability. The review begins with a definition of adjustment. The impact of physical disabilities such as post-polio conditions is described in terms of the experience of loss and attempts are made to document the presence and role of grief and depression as responses to the loss. An observation is made regarding the pervasive confusion of terminology in the rehabilitation literature as it pertains to the distinction between grief and depression.

Attention is then turned to the clinical psychological literature where the relationship between grief and depression is addressed on two separate levels--the similarities and differences in the manifestation of grief and depression and various theoretical speculations regarding the mediating function of different developmental and process variables in the differential development of grief and depressive reactions. It is observed that the failure to mourn or unresolved grief as a contributing factor of depression is a general theme common to virtually all theoretical perspectives discussed. Conceptual parallels are drawn between this general assumption and the theory of disability acceptance.

As a basis for the post-hoc analysis of interaction effect proposed in Chapter 3, the final section of this review is concerned with the potential association between demographic and biographical variables and specific reactions of individuals with a physical disability. It is argued that although there has been research on the relationship between demographic variables and psychological reactions of the individual, little research has addressed the potential influence of these variables on the association between two psychological phenomena such as grief and depression.

The Concept of Adjustment

Adjustment to physical disability has long been a topic of interest for researchers and practitioners in the field of rehabilitation. A thorough understanding of the adjustment process has not been easy to accomplish, however, partly due to the comprehensive and multifaceted nature of this concept. Mechanic (cited by Bracken & Shepard, 1980) described what he believed to be three fundamental components necessary for successful adjustment. According to Mechanic, the adjusted individual has to have adequate coping abilities, be motivated to meet environmental demands, and maintain psychological equilibrium. A similar definition has been proposed more recently by Trieschmann (1980) who stated that adjustment or coping is a combination of survival skills, harmonious living, and productivity. Based on this perspective, adjustment is a term used to

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describe a multitude of the individual's behavior across a time period and it can not be assessed adequately by studying only one aspect of the individual's life out of the context of the person-environment interaction.

Disability as an Experience of Loss and Change

Consideration of a physical disability as an experience of change and loss appears to be a pervasive theme in the rehabilitation literature. In addition to the numerous personal and anecdotal accounts of the subject, the impact of a physical disability has been discussed from several conceptual perspectives. Bracken and Shepard (1980) described physical disability as the passage from physical well-being to total or partial paralysis which is among the most shocking of all human experiences. Siller (1969) considered the person's ties to the lost body part of functions, which are represented by hundreds of memories. Pedretti and Zoltan (1990) described the various impacts of a physical disability beyond the individual's loss of a body part or functions, including changes in the familial, occupational, and social spheres of life. They also discussed the necessity for the individual to give up autonomy and self-sufficiency temporarily or permanently.

Winston, Hirschenfang, Fine, and Stern (1969) addressed the loss of masculinity which is frequently associated with a physical disability. Trieschmann (1988) called attention to the loss of the "I am's" as a result of a disability. From a behavioral perspective, Michael (1970) and Fordyce

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(1971) view the onset of a disability as a punishment which is defined as the loss of positive reinforcers or the onset of adversive stimuli.

The Post-Polio Condition

One of the most well-known early studies on the psychological impact of polio was conducted by Davis (1963). Among the issues addressed in his study were the need for children with polio and their family for maintaining a sense of continuity and stability in their lives as well as conflicts between the hospital structure and home. With the availability of the Salk and Sabin vaccine in the 1960s, there was a period of relative moratorium in polio-related psychosocial literature until the early 1980s (Kohl, 1987). While observed to be employed at a higher rate than people with disability as a group (Codd, Mulder, Kurland, Beard, & O'Fallon, 1985) and better educated than the general population (Frick, 1985), adult polio survivors have been described as competitive overachievers with a perfectionistic tendency, experiences of chronic stress (Bruno & Frick, 1987), and exhibiting type A behavior (Friedman & Rosenman, 1974).

Among the other psychosocial issues of polio survivors discussed in the literature are unrealistic expectations for themselves and the medical community (Kohl, 1987); uncertainty about their functional capability in the context of increasing age in the polio survivors themselves as well as their physical care providers (Kaufert & Kaufert, 1984);

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the social consequences of a lifelong disability; loss of independence; a sense of heightened vulnerability (Locker & Kaufert, 1988); the psychology of a "second disability" (Frick, 1985); and chronic emotional stress, dependency, and unending struggle (Lewis, 1992). Based on a review of the psychosocial literature pertinent to the adjustment of polio survivors, Lewis (1992) reported a general impression that there has been limited research beyond firsthand accounts of the adjustment experience and the polio support group literature. She suggested that polio survivors could provide valuable insights into their unique experience and long-term disability. Particular areas of unmet research needs included coping and adaptational processes, supportive resources, and the meaning of illness.

The impact and stress associated with the polio condition as a loss experience was eloquently described by Arnold Beisser (1989) in a personal account of his disability adjustment process. The debilitating effect of this condition could profoundly change the most basic aspects of his moment-to-moment consciousness such as the perception of time, space, and relationships with others.

A potentially significant stress consideration associated with the post-polio condition is that it is typically considered and experienced as a chronic illness--a long-lasting disease often associated with some degree of disability (Anderson & Bauwens, 1981), incurable and likely to get worse over time (Perlmutter & Hall, 1985). According

to Lubkin (1986), the experience of chronic illness has significant impact on all facets of the self, including the social, cultural, economic, physical, as well as psychological dimensions. The problem of chronicity also impacts on the family and community. Among the common elements of most chronic conditions are the intrusive, uncertain, and long-term nature of their impact, a tendency to involve multiple diseases, requirement for a great deal of palliation, and many frequently expensive and fragmented supportive services (Anderson & Bauwens, 1981; Gerson & Strauss, 1975; Strauss, Corbin et al., 1984).

Grief and Physical Disability

It appears that although many early studies on psychological reactions to a physical disability appear to utilize a number of traditional psychological and somewhat pathology-oriented labels such as dependency, psychotic and psychopathic reactions (Nagler, 1950), a regressive trend (Dorken cited by Woodbury, 1978; Mosak cited by Woodbury, 1978; Ryan cited by Woodbury, 1978), pseudo-hysteria (Weiss & Diamond cited by Woodbury, 1978; Kaplan, Powell, Grynbaum, & Rusk cited by Woodbury, 1978), autistic dream content and substance abuse (Wittkower, Gingras, Mergler, Wigdor, & Lepine, 1954), a significant proportion of the psychosocial literature has been concerned with normal reactions to disabilities as an abnormal situation (Hohmann, 1975). Until recently, the rehabilitation literature has been dominated by a large number of publications on the stage

theory of adjustment (Trieschmann, 1988). Many stage theories have been introduced and discussed (e. g., Cohn cited by Woodbury, 1978; Dunn cited by Woodbury, 1978; Feld cited by Woodbury, 1978; Hohmann, 1975; Kerr & Thompson, 1972; Peter cited by Woodbury, 1978; Seybold cited by Woodbury, 1978).

Conceptual parallels have been suggested between these stage theories and Kubler-Ross's bereavement theory (Bracken & Shepard, 1980; Vincent cited by Woodbury, 1978). For example, application of this widely recognized stage theory was made in Beisser's reflections on his own adjustment to post-polio problems (Beisser, 1989). According to Bracken and Shepard (1980), research on disability adjustment has yielded a general agreement regarding the presence of and a lack of consensus on the sequence of these stage reactions. Bracken and Shepard also indicated a consensus of opinions in the literature regarding the normality of these reactions. Arguments have been made for the use of stage theories as a conceptual guide to our understanding of the adjustment process, lack of current knowledge and need for further research (Bracken & Shepard, 1980) and to the monitoring and support of client adjustment (Kerr & Thompson, 1972).

Additionally, there are a number of articles describing adjustment reactions such as shock (e. g., Bracken & Shepard, 1980; Gunther, 1969), denial (e. g., Guttmann, 1976; Mueller & Thompson, 1950; Roberts, 1972), and anger

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(e. g., Vincent; 1975). An assumption underlying the discussions on grief reactions of individuals with disabilities appears to be that as with the healing of a physical wound, which needs to be first anesthetized, then closed up with the least amount of scarring, grief and mourning needs to be experienced and resolved in order for the individual to be adjusted to the disability (Dembo, Leviton, & Wright, 1975; Siller, 1969) and gain motivation for participation in the rehabilitation process (Heijn, 1971). Roberts (1972) argued that helping professionals should provide accurate information on the prognosis of the individual's condition to avoid helping him/her set unrealistic expectations and postpone the grieving process. Wright (1983) cautioned that acceptance of such theoretical positions would require experimental verification.

Depression and Physical Disability

There appears to be some disagreement regarding the relationship between physical disabilities and depression. The presence of depression has been reported as a reaction to physical traumatization (e. g., Bracken & Shepard, 1980; Dinardo, 1971; Feld cited by Woodbury, 1978; Judd, Burrows, & Brown, 1986; Kalb, 1971; Lawson cited by Woodbury, 1978; Lswson, 1976, 1978; MacDonald, Nielson, & Cameron, 1987; Mueller, 1962; Mueller & Thompson, 1950; Nagler, 1950; Siller, 1969). In contrast, depression appears to be evident mostly in the initial phases of disability adjustment and the occurrence of prolonged or severe

depression has been considered to be rare (Guttmann, 1976; Mueller & Thompson, 1950; Nagler, 1950; Richards, 1986; Trieschmann, 1988; Vincent, 1975).

Attempts have been made to provide explanations for the occurrence of depression (e. g., Fordyce, 1971). Based on stage and coping theories, it has been suggested in the rehabilitation literature by a number of individuals that depression is a normal, expected, and even necessary part of the adjustment process (Bracken & Shepard, 1980; Roberts, 1972; Siller, 1969; Weiss & Diamond, 1966) and that the absence of depression should be a matter of concern (Siller, 1969; Weiss & Diamond, 1966). This perspective has been challenged (e. g., Goldiamond, 1973) and Woodbury (1978) has pointed out that data are quite limited at present regarding the validity of this argument.

Empirical findings have also been inconclusive regarding the role of depression in disability adjustment. In general, there appears to be no concrete support for the hypothesis that the experience of depression would contribute to the adjustment process. However, it has been reported that little relationship exists between depression experienced by individuals with a physical disability, such as spinal cord injury, during their hospitalization and life adjustment after discharge from the hospital (Kalb, 1971). In fact, research suggests the presence of a negative relationship between depression and satisfactory progress in rehabilitation (Heijn, 1971; Stern & Slattery cited by

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Woodbury, 1978), activities of daily living (Richards, Meredith, Nepomuceno, Fine, & Bennet, 1980), social activities (MacDonald, Nielson, & Cameron, 1987), ratings of adjustment by hospital personnel (Dinardo cited by Woodbury, 1978), and acceptance of disability (Fitzgerald, 1983). It appears that interference with progress in rehabilitation is observed especially when the reactive depression has extended to the rehabilitation phase and occurred on more than an episodic basis (Heijn, 1971; Stern & Slattery cited by Woodbury, 1978).

A Need for Conceptual Clarity

A critical review of current rehabilitation literature on the topics of grief and depression appears to reveal a great deal of confusion and inconsistency. For example, depression has been described in the rehabilitation literature as a stage of the normal grieving process, although depression and grief are considered to be two separate reactions in general clinical psychology and in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994). The theoretical assumption that grief is facilitative of adjustment to physical disability has been contradicted by reports of an inverse relationship between time spent in mourning and rehabilitation progress and community adjustment (e. g., Lawson, 1978). The early hypothesis concerning the association of denial with an absence of depression has been challenged (e. g., Dinardo, 1971), and the traditional

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belief in the facilitative role of depression appears to be inconsistent with recent findings of a negative relationship between depression and acceptance of disability (e. g., Fitzgerald, 1983). There has also been some confusion regarding the nature of specific psychological reactions on the normality-pathology continuum. For example, one of the more recent criticisms of the early description of adjustment (Wittkower, Gingras, Mergler, Wigdor, & Lepine, 1954) is the equating of the psychopathological response of denial with the normal and healthy reaction of hope (Trieschmann, 1988).

It appears that confusion also exists in the area of clinical diagnosis and treatment in rehabilitation. Cushman, Dijkers, and Harrison (1985) reported a disagreement among rehabilitation professionals regarding the signs and symptoms of depression and the relative importance of these symptoms. Ince (cited by Trieschmann, 1988) also found that the rehabilitation staff tend to vastly over-estimate the occurrence of depression in their requests for psychiatric consultation. It has been pointed out that the pathologically labeled symptoms may actually be the most sensible behavior possible under the difficult circumstances of the disability (Goldiamond, 1973) and that, based on Kalb's defining criteria, the term "grief" rather than "depression" would seem to be a more appropriate descriptive label (Trieschmann, 1988). Using Seligman's learned helplessness conceptualization of depression

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(Seligman, 1975), in contrast, Trieschmann (1975, 1976, 1978, 1980, 1988) suggested that the unnatural physical and social environment of the hospital treatment setting may contribute to the development of depression. Goldiamond (1973) points out that defining the patient's negative reactions can help the professional avoid looking at the effect of their own behavior.

In terms of treatment provision, it appears to be proposed by most traditional perspectives that individuals with disability should be allowed to react to and mourn for the loss. In this context, it would appear somewhat difficult to understand Fordyce's (1971) recommendation of actively interrupting the withdrawal behavior of the individual through the provision of rehabilitation tasks. A conceptual bridge has been provided by Trieschmann (1988), who noted that Fordyce's approach was similar to Seligman's directive therapy for the treatment of learned helplessness and depression (Seligman, 1975). What appears to be a contradiction between Fordyce's approach and the traditional perspectives of grief-oriented treatment actually may not exist since the former may be specific to the treatment of depression as a mental health problem whereas the latter constitutes an appropriate helping response in the normal process of grieving. In other words, grief and depression can be considered as two distinct psychological phenomena requiring different treatment strategies, which may adequately explain the discrepancy between Fordyce's active

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In attempting to resolve the confusion, Trieschmann (1988) advocated the use of more precise terminology. She points out that at present there is not unanimous agreement on the definition of depression, which is often defined as mourning for the loss of functions (e. g., Pedretti & Zoltan, 1990). Trieschmann suggested that the word "grief" may be a better alternative in describing the reactions of the individual and that, using the research reports of Fullerton, Harvey, Klein, and Howell (1981), Howell, Fullerton, Harvey, and Klein (1981) and Judd, Burrows, and Brown (1986) as positive examples, specific definitions should be provided in cases where the word "depression" is used.

In reviewing the current status of the rehabilitation literature, it appears that the distinction between grief and depression is not very clear and what Woodbury (1978) once said about our lack of knowledge regarding the role of grief and depression may still be valid. In the search for a sense of conceptual clarity, our attention is now turned to theoretical writings and empirical findings in the clinical psychological literature.

The Study of Grief

It was not until recently that the study of grief was given a legitimate and important emphasis in the psychological literature and in the training of helping

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professionals. The first systematic exploration of the grieving process is represented by Freud's writing on mourning and melancholia (Freud, 1917). The result of this systematic exploration was later integrated into his view on anxiety and inhibition symptoms. Although Freud affirmed that missing someone who is loved and longed for is the key to understanding anxiety, he believed that mourning was not a pathological process and, therefore, did not require medical treatment. Mourning was considered to be a natural process of recognizing that the dead person would no longer be a source of satisfaction and need fulfillment. It was also noted that mourning could occur with the loss of an ideal such as the fatherland or freedom.

As a result of her observations on the terminally ill, Kubler-Ross (1969) developed a five-stage theory of dying, which has been very popular among helping professionals. She subsequently expanded this model to include certain transcendental phenomena such as the afterlife. Part of the value of this aspect of her model is the concept of potential for growth from a loss experience.

Engel's study of the grieving process (Engel, 1961, 1962, 1967) was primarily concerned with the psychological processes involved in health and illness. He stated that object loss was a major psychological stressor which would elicit a psychological response or adaptation leading to health or illness. Much of his work was concerned with

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attempts to delineate factors influencing the outcome of mourning and its complications.

Lindemann (1944, 1945) developed a model of mourning based on observations of the 101 Coconut Grove fire survivors and their relatives. Observations were also made of individuals who had lost a significant person through war. The result of this work was the postulation of a set of distinct phenomena resulting from sudden traumatic loss. Concerned particularly with the biological manifestations of grief, Lindemann believed that mourning was caused by separation reactions, especially when the separation was created by death.

Parkes (1965a & b, 1972, 1981) carried out a number of studies on widows and widowers in Great Britain and in the United States. Through the use of controlled studies, the primary emphasis of his research was to distinguish typical grief and its variants. He investigated antecedent and concurrent variables which determined the course of mourning. Parkes considered mourning to be a response to the loss of a loved person through separation or death, although it could also be caused by the loss of a job, becoming physically disabled or divorce.

Marris (1958, 1974) made certain important contributions to a theoretical understanding of mourning, using widows and slum clearance as focused loss situations. He considered grief to be a response to the loss of something (death of a loved one, loss of housing) that gave

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life meaning and structure. Marris has been noted for the introduction of several key principles in grieving, such as the concept of denial as a conservative impulse.

Bowlby (1980) observed the attachment behavior of young children and primates. His phasic theory of healthy mourning emphasized the cognitive bias of the individual learned through interaction with early attachment figures during childhood development. These biases interact with other conditions affecting response to loss. Another contribution of Bowlby is his emphasis on the information-processing aspects of healthy mourning, which involves the ability of the individual to process accurately, completely and quickly information brought about by loss. This ability is affected and interacts with the cognitive biases developed in early attachment.

It appears that until recently the establishment of an objective basis for scientific inquiries into the grieving process has been somewhat difficult partly due to the lack of general measures which can be used to assess response to a variety of loss experience. Until the development of Schneider's Response to Loss Inventory, there have been two major studies in the past 20 years which are concerned with systematic assessment of grief reactions (Schneider, McGovern, & Deutsch, 1991). Parkes (1987) developed an interview-based approach to the assessment of grief. This procedure was used to compare widows in Boston and London who had sustained sudden losses with widows matched for age

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but whose losses were anticipated. This longitudinal study has been seen as an important beginning for research in grief. Parkes does not concern himself with generalizing grief issues beyond widows and does not consider the potential growth outcome of grief.

Saunders, Mauger, and Strong (cited by Schneider, McGovern, & Deutsch, 1991) developed a 136 item true/false grief experience inventory, making it possible to compare and contrast objectively the experiences among individual bereaved persons as well as groups. Again, the focus of this instrument is on grief resulting from deaths, especially those of spouse, parents, and children. Also, the theoretical model underlying the development of this particular scale does not take into account the dimensions of "growth" and "transformation." Additionally, the true/false format did not consider shifts in the degree of experience. Other attempts to assess the grieving process have been generated by single issues, such as the response of a parent to the death of a child. In general, instruments and approaches to the assessment of grief have been generated based on practitioners' clinical experience with a particular population from particular theoretical frameworks which tend to emphasize potential risk of pathological outcome (Schneider, McGovern, & Deutsch, 1990).

A Comprehensive Model of Grief

Based on a combination of comprehensive literature review and his own clinical work with individuals who have

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suffered from loss experiences, Schneider (1984) developed a holistic model of normal grieving which involves the major phases of coping, awareness, healing, and growth. Subcomponents exist for three of the four major phases and each of these phases is conceptualized to consist of the behavioral, cognitive, emotional, physical, and spiritual dimensions. The spiritual dimension is concerned with the impact of the loss on the person's values, attitudes, beliefs, and will to live. The other dimensions are categories of responses through which the individual's reactions to the loss experience are expressed. The "coping" phase of the grieving process is characterized by the individual's tendency to limit his/her vulnerability and awareness of the loss. Schneider identified two forms of coping response. "Holding on" is a "fight" response which helps the individual maintain a perception of beating the loss by keeping busy (behavioral), being angry (emotional), or believing that the loss is reversible (spiritual). The "letting go" response, in contrast, involves avoidance of stress and grief by excessive drinking (behavioral), using distraction (cognitive), being disgusted (emotional) or sleeping (physical).

"Awareness" is the second phase which involves many obvious signs and symptoms traditionally associated with the grieving response. "Healing" is the third phase of grieving in which the individual experiences a sense of recovery from the intensity and stress of grief. As one of the two major

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components of this phase, "perspective" is associated with the gaining of insights about the meaning and significance of the loss. "Integration" refers to the mobilization of resources to remember the loss actively, to "finish business" with it or to make restitution, to forgive oneself and others, and to rehabilitate oneself.

The final phase of the grieving process is referred to by Schneider as "growth," in which the person attributes subsequent growth and utilization of their potential to the loss. Two categories of growth response has been described by Schneider (1984). "Self-empowerment" refers to the increase of one's resourcefulness, flexibility, and responsivity as a reflection of the loss. "Transformation" is associated with changes in one's world view and the nature of losses in general as a function of this loss. A careful analysis would reveal that Schneider's model appears to be highly related to the disability acceptance theory of Dembo, Leviton, and Wright (1975), which emphasizes the acceptance of loss as a series of value changes. The concept of transformation and growth has been integrated in both perspectives and the theory of accepting disability assumes that acceptance is the result of resolved loss issues.

The Response to Loss Inventory is a self-rating instrument developed based on Schneider's comprehensive model of grief. Representing an objective approach to the assessment of grief reactions, the result of this inventory

yields a matrix of subscale scores, each corresponding to the various phasic as well as the dimensional components of the grief process. Split-half forms of the instrument are now available. Information regarding the statistical properties, reliability, and validity of the measure is presented in Chapter 3 of this report.

Depression

Depression is generally considered to be an affective disorder. There has been a great deal of controversy regarding the etiology of depression. Some authorities believe that it is psychogenic in origin; many others maintain that depression is an organic disorder. Still, there are those who argue for the social origin of depression while the others would accept the validity of all premises (Wetzel, 1984). According to Wetzel, the symptoms of depression can be divided into the affective, cognitive, behavioral, and physical areas. The affective symptoms include dysphoric mood, fearfulness, anxiety, inadequacy, anger, resentment, rage, guilt, confusion, tiredness, hopelessness, and irritability. Symptoms associated with the cognitive thought processes of the individual include negative view of the self, the world, and the future; irrational beliefs; recurrent thought of helplessness, hopelessness, and worthlessness; recurrent thoughts of death or suicide; self-reproach; low self-esteem; denial; indecisiveness; slow thinking; disinterest in activities, people, and pleasure; confused thought; poor concentration;

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and agitation. Behavioral symptoms may include dependence, submissiveness, non-assertiveness, poor communication skills, control by others, crying, withdrawal, inactivity, careless appearance, retarded motor response, poverty of speech, slowed body movements, and agitated motor response. The symptoms in the physical category include low energy, weakness, fatigue, sleep disturbance, insomnia or hypersomnia, weight loss or gain, appetite disturbance, indigestion, constipation, diarrhea, nausea, muscle aches and headaches, tension, agitated or slowed psychomotor reflexes, and sex drive disturbance.

Similarities and Differences Between Grief and Depression

Perhaps one of the predominant views on grief and depression most frequently discussed in the clinical literature has been Freud's well-known early work Mourning and Melancholia (Freud, 1917). Freud noted that grief and depression were similar to each other in that both involved "a profoundly painful dejection, cessation of interest in the outside world, loss of the capacity to love and the inhibition of all activity." However, he observed that depression could be distinguished from grief by a lowered self-regard "to a degree that finds utterance in self-reproaches and self-revelings and culminates in the delusional expectation of punishment." Another critical, but less apparent, distinguishing feature of depression discussed by Freud is ambivalence towards the lost person or object.

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Although the differentiation between grief and depression has not been a focused area of attention in the clinical literature until more recently, there have been a number of publications since Freud's 1917 work which acknowledge the similarities and emphasize the differences between grief and depression (e. g., Akiskal & Lemmi, 1983; Hagglund, 1981; Lehmann, 1983; Smith, 1985; Winokur, 1973; Wool, 1990a & b). At present, most clinicians appear to agree that grief reactions can be differentiated from depression and such a view is reflected in the inclusion of both uncomplicated bereavement and depressive disorders as separate categories in the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994).

One of the most systematic attempts at the identification of clinically significant differences between grief and depression is represented in Schneider's 1980 publication. In an updated version of this publication, which was presented at a recent conference on transformative grief (Schneider & Deutsch, 1992a & b), the differences between grief and depression were described based on a consideration of the literature, ongoing research on the issue of grief, and direct clinical observations. Depression is believed to be different from grief in that it may or may not involve the identification of a specific loss; the cognitive focus of the individual is on the self and may involve persistent and distorted perceptions of the

self, experiences, and the future; the affected person has negative fantasies and imageries rather than vivid, clear, and sometimes comforting dreams of the loss which tend to contribute to negative thinking and an intensified physical response; and the unmodulated physical response of the individual may lead to bodily damage and increased vulnerability to illness.

When compared with the depressed person, the individual undergoing the process of grief experiences a range of emotions in the same day instead of fixed mood of despair and withdrawal; shows variable rather than persistent restriction of pleasure; responds to interpersonal warmth and reassurance instead of promises, pressure, or urging; and feels reassured by the presence of close friends rather than losing connection with the self and others. In the spiritual dimension, the grieving person feels connected with something beyond the self and allows challenges to previously held beliefs, whereas the individual with depression experiences a persistent failure to find meaning and focuses on the unfairness of the loss.

Schneider and Deutsch (1992a & b) also compared the degrees of change and growth in grief and depression based on a set of criteria which roughly correspond to the phasic components of Schneider's grief model (Schneider, 1984). They indicated that grief does not require extensive use of denial, but typically involves the activities of initiating awareness of the loss, coping through both the fight and

flight responses, experiencing awareness of the loss, healing, gaining perspective, integrating the loss, reformulating the loss and transforming the loss. In contrast, depression is often associated with denial; may or may not entail the initiation of loss awareness; may be concerned with the flight but not the fight response; may or may not involve the experience of loss awareness; and does not result in healing, gaining perspective, integration, reformulation, and transformation of the loss.

A number of investigations have been reported on the similarities and differences between grief and depression. Most of these studies can be found in the bereavement literature and involve observations of bereaved individuals, comparisons of bereaved and nonbereaved control subjects, the differentiation of uncomplicated bereaved individuals from bereaved depressives, comparisons of bereaved subjects with nonbereaved depressives and comparisons between bereaved depressives with nonbereaved depressives (Robinson & Fleming, 1989). Based on a systematic review of these investigations, Robinson and Fleming (1989) reported a general consensus that the symptomatology of grief may be similar to a clinical depression up to the end of the first year of bereavement. It has been pointed out that the typical bereavement reactions of appetite and sleep disturbances, dysphoria, fatigue, and a loss of interest in previously enjoyed activities as discussed by Blanchard, Blanchard, and Becker (1976), Carey (1977), Clayton,

Desmarais, and Winokur (1968), Lindemann (1944), Maddison and Viola (1968), Marris (1958), Parkes (1972, 1975), Parkes and Brown (1972), and Sanders (1979, 1980, 1989) are noted in the DSM-IV as criteria for major depressive episode (American Psychiatric Association, 1994).

With regard to the differences between grief and depression, Clayton, Desmarais, and Winokur (1968), Lindemann (1944) and Parkes (1972, 1975) reported a relative absence of several symptoms in the grief response such as persistent condemnation of self, suicidal thoughts and general negative perceptions of the self. These symptoms have been observed as part of the clinical picture of a significant depression (American Psychiatric Association, 1994; Beck, Rush, Shaw, & Emery, 1979). A smaller number of disconfirming findings have also been discussed in the literature, although it appears that these findings tend to qualify rather than invalidate certain early statements concerning the difference between grief and depression.

Based on a review of relevant empirical evidence, for, example, Bowlby (1980) challenged Freud's view that ambivalence is present only in pathological states such as depression. His research showed that ambivalence toward the lost person was present in many cases in which mourning followed a healthy course, although he acknowledged that the ambivalence was more intense and more persistent in those that developed pathologically. Clayton, Herjanic, Murphy, and Woodruff (1974) compared the symptoms of 34 patients

with diagnosed primary affective disorders and 34 matched individuals who had lost their spouses by death for less than a month. Although the psychiatric patients exhibited more symptoms than the bereaved individuals, it was concluded that the two groups could not be differentiated due to a great deal of symptomatic overlap. It may be pointed out that an assumption underlying the design of the study is the homogeneity of psychological reactions within each of the two groups. In other words, the group of bereaved individuals were referred to as "grieving normals" while the psychiatric patients were assumed to have pathological conditions or disorders. Given the increasing number of publications in the literature regarding the accuracy and consistency of professionals' clinical judgment, the validity of this assumption appears to be a viable topic for further investigation.

Relationship Between Grief and Depression

Most of the available theoretical writings on the relationship between grief and depression are based on the psychodynamic framework. A review of these perspectives seems to point to Freudian concepts as a central point of reference. The self-criticisms observed in the symptomatology of depression lead Freud to the idea of the "critical agency" and, subsequently, the concept of the superego (Pedder, 1982). According to Freud, the self-reproaches are "reproaches against a loved object which have been shifted away from it on the patient's own ego."

Therefore, "the shadow of the object falls upon the ego" (Freud, 1917), and "both ego and object fall under the harsh judgement of the critical agency" (Pedder, 1982, p. 329). In other words, there is an identification of the ego with the lost object. Relevant to the individual's experience of ambivalence, Freud believed that the extent of hate combined with the feeling of love toward the lost object was related to the sadism of the internalized self-criticisms, as exemplified most dramatically by the internalization of murderous impulses, suicidal ideation, and self-destructive behavior.

An important follow-up to Freud's work on mourning and melancholia was undertaken by Melanie Klein (1940), who contended that the individual's course of mental health and vulnerability to depression in the face of loss later in life depends on the satisfactory negotiation of the "depressive position" with the establishment of good internal objects. As a major Kleinian concept, the depressive position is defined as a phase of human development in which "the infant recognizes a whole object and relates himself to this object" (Segal, 1964, p. 55). With the recognition of the primary caregiver such as the mother as a separate and whole person and the source of positive as well as negative experiences, the child comes to the realization that "his own destructive impulses may harm the object that he loves and totally depends on" and associated new feelings of "mourning and pining for the good

object felt as lost and destroyed, and guilt, a characteristic depressive experience which arises from the sense that he has lost the good object through his own destructiveness" (p. 57).

According to Klein (1940), "this early mourning is revived whenever grief is experienced in later life" (p. 311). Good early relationship experience results in the establishment of good internal objects in the world of the infant. This established internal representation of caring persons would then serve to help the individual in dealing with significant traumas in later life (such as the actual loss of loved persons) through which the strength of good internal objects is tested and the threat of losing these good objects is reactivated. Thus, the process of normal mourning can be viewed from this perspective as involving the re-building of the individual's inner world through which "it's re-instating that object as well as his loved internal object which he feels he has lost" (Klein cited by Pedder, 1982, p. 331).

Without the establishment of good internal objects in the early childhood, depressed individuals and those who do not mourn successfully are unable to "feel secure in their inner world when threatened with external loss" (Pedder, 1982, p. 331). It has been suggested that the nature of the individual's emotional difficulty is determined by whether or not he/she has "traversed the divide between the paranoid-schizoid and the depressive positions" (p. 331) in

that "if the depressive position has been reached and, at least, partially worked through, the difficulties encountered in the later development of the individual are not of a psychotic but of a neurotic nature" (Segal, 1964, p.61).

The Kleinian concept of the depressive position was discussed and reframed in Winnicott's (1962) work as the "capacity for concern" to emphasize the positive aspects of this developmental phase. He stated that "here, being depressed is an achievement and implies a high degree of personal integration and an acceptance of responsibility for all the destructiveness that is bound up with living, with instinctual life and with anger at frustration" (p. 176). Rather than underscoring complete establishment of early childhood processes, however, he acknowledged that these processes continued to be strengthened by the experience of growth in later childhood, adult life, and old age.

It may be said that a general agreement among the psychodynamic theorists discussed above is their emphasis on the individual's early awareness of the primary caregiver as a separate being and the concern about the effect of his/her impulses on the caregiver. Potentially important for conceptualizing the relationship between grief and depression is the suggestion that vulnerability to the development of psychopathology in general and depression in particular, is associated with unsuccessful attempts at the establishment of good internal objects which depends upon

the availability of "good enough" parenting to help contain the ambivalent feelings of love and hate. Therefore, depression is generally considered to be a response to an early stressful experience which is reactivated by a current loss (Stricker, 1983).

Application and adaptation of the psychodynamic perspectives presented above can be found in the literature both in the conceptualization and treatment of issues related to grief and depression. In accounting for the difficulty an individual may experience in relinquishing a loss object, for example, Lopez (1984) presented clinical cases of a 39-year-old woman in mourning and an adolescent with reactive depression to illustrate the relevance of the Kleinian concepts of libido adhesiveness and the mourning process as equivalent to the shift of defenses from the paranoid-schizoid to the depressive position. Smith (1985) introduced a gestalt therapist's perspective on grief and its differences from depression based on Freud's approach to mourning and melancholia. As an extension of this psychodynamic position, he introduced a three-dimensional schemata involving the intensity, duration, and type of loss and a gestalt therapy of supporting grieving.

Belitsky and Jacobs (1986) used attachment theory as the conceptual basis of a discussion on grief and the clinical complications of bereavement. They described the individual's reactions in terms of separation anxiety and the activation of intense attachment behavior, which were

considered a natural and inevitable response to the loss of an attachment figure. Complications of the bereavement process include unresolved grief, clinical depression, and anxiety disorders. Higher vulnerability to the development of these pathological grief reactions was suggested for individuals with early traumatic loss in childhood, obsessive personality style, a history of depression, or no prior experience with death.

Although theoretical speculation is generally not associated with behavioralism, a behavioral perspective on the relationship between normal and maladaptive response to loss is suggested by the morbid grief treatment approach of Lieberman (1978), Mawson, Marks, Ramm, and Stern (1981), and Ramsay (1977). According to Mawson et al. (1981), the treatment of unresolved bereavement issues is similar to that of phobic avoidance, which exposes the individual to painful memories, ideas, or situations both in imagination and real life. In other words, this approach of guided mourning requires an intensive reliving of avoided painful memories and feelings related to the loss.

One of the most frequently cited sociological studies relevant to the relationship between grief and depression is a study by Brown and Harris (1978), who explored the role of provoking agents, vulnerability factors, and symptom formation factors in the development of depression in 114 psychiatric patients and 458 women in the community. The provoking agents examined in this study included life events

such as losing a job, and long-term difficulties such as a husband's unemployment. The results indicated that almost all of the community residents who developed depression during the year of the investigation had experienced a severe life event or major difficulty; however, only a fifth of those with such provoking agents actually broke down.

The vulnerability factors found to contribute to depression included a lack of a confiding relationship with husband or others, loss of one's mother before the age of 11, having three or more children under age 14 living at home, and lack of employment outside the home. In the presence of a provoking agent, the rates of depression jumped from 10% in those with a confiding relationship regardless of their employment status to 63% in those with no intimate relationships, early loss of mother, and/or three or more children living at home, to 100% in those with all four vulnerability factors. Regarding the dimension of symptom formation factors, Brown and Harris (1978) reported that while past loss of any kind was found to influence the severity of depression, loss of mother before age 11 was found to have a remarkable effect on the form of depression. They stated that early loss of mother by death predisposed the individual to psychotic depression whereas loss by separation to neurotic depression. It should be noted that the dichotomy of psychotic and neurotic depression as discussed by Brown and Harris is similar to the conventional distinction between endogenous and reactive depression.

In interpreting the results of their study, Brown and Harris (1978) postulated that the provoking agents, vulnerability factors, and symptoms formation factors relate in different ways to a central experience of hopelessness, which then lead to depression. They define loss events as "the deprivation of sources of value and reward" and believe that "what is important about such a loss for the genesis of depression is that it leads to an inability to hold good thoughts about ourselves, our lives and those close to us" (p. 233). It was also suggested that "low self-esteem is the common feature behind all four [vulnerability] factors" (p. 236). Using a psychodynamic perspective, Pedder (1982) carried Brown and Harris's interpretation one step further by defining the concept of self-esteem as

> a two-person relationship: the esteem in which one part of the self is held by another part of the self--or in other words an internal object relationship, the sense of esteem or value in which the self is held by internal objects whether they are called Freud's critical agency, super-ego or internal parental images. (p. 333)

Additional perspectives on the relationship between grief and depression have been provided by a number of researchers who suggested the use of the grieving process in the conceptualization of unresolved issues and intervention in focused problem areas. Based on the model of Kubler-Ross (1969), for example, Breen (1985) described the psychological problems of children of alcoholics in terms of the repressed grieving process. According to this perspective, the child of the alcoholic may stay

indefinitely in the numbing and denial stages, anger can be internalized and expressed as guilt, and the stage of bargaining often takes the form of a spiritual or religious expression, which may become spiritual depletion in adulthood. Depression is manifested in the child's powerlessness to control the alcoholism of the parent and usually carries over into interpersonal relationships in adulthood. Interference with the normal grieving process is postulated because the psychological death of the alcoholic parent coupled with his/her physical presence is believed to result in a "passive nonacceptance" of the fact that the loss can not be repealed.

Bolton (1984) addressed the importance of applying common-sense principles of intervention, facilitating the grief process, and providing health care while survivors face the basic fears of guilt, loss, depression, shame, and shock in the aftermath of a family suicide. Factors believed to influence the healing of the individual include "basic self-esteem, ability to express feelings, positive or negative relationship with the suicide, knowledge, spiritual beliefs, experience with handling stress, and acceptance of humanness of the self" (p. 39). Bolton identified the principle of "Knowing something about the bereavement process" as the imperative of the "postvention" stage. In his discussion of "chronic pain as a third pathologic emotion," Swanson (1984) compared acute and chronic pain with grief and depression.

Finally, consensus can also be found in a number of practice-oriented publications regarding the role of unsuccessful grief in the development of depression and other psychological problems. For example, Hagglund (1981) used a case of a 30-year-old woman to illustrate the transition from depression to mourning, which was interpreted to be parallel to the transition from narcissistic preoccupation and rejection of the objects to the maturation of the psychic apparatus and communication with inner and outer objects. Volkan (1985) stated that complications can occur both in the acute and the chronic stages of the mourning process. Based on the assumption that complications in the chronic stages culminate psychologically in either reactive depression or established pathological grieving, a form of brief intensive "re-grief therapy" is recommended.

For the patient with unexplainable depression, chronic illness behavior or symptoms similar to those of a deceased relative or friend, Zisook and DeVaul (1985) suggest that the therapist needs to suspect the possibility of unresolved grief and explore the individual's loss experience and his/her feelings about them. In the short-term therapy of depression, Stricker (1983) suggested a focus on a specific area of precipitating events such as grief, role transition, interpersonal disputes, and interpersonal deficits. Eigen (1983) described his interpretation of a woman's depression as pseudo self-repair in a case of blocked mourning.

In comparison with studies on the symptomatic similarities and differences between grief and depression, there appear to be a smaller number of investigations on the theoretical relationship between the two psychological phenomena. However, reports of empirical studies available up to the present time seem to support some of the general theoretical assumptions discussed above. For example, O'Neil (1987) studied 744 university students and reported that 44% of those with both early and recent losses in comparison with 15% of those with either types of loss experience showed moderate depression on the Beck Depression Inventory. Their test of the interactional relationships between early loss, recent loss, and depression provide empirical support for the perspective of Freud that a recent loss can reactivate feelings of depression which is associated with earlier loss.

Additional support can be found in several recent studies on grief and depression which involve the use of the Response to Loss Inventory. Deutsch (1982) administered the Beck Depression Inventory and the Awareness subscale of the RTL to 152 individuals experiencing the loss of a relationship through death and separation. Three of her major findings appear relevant to the purpose of the present study. First, the RTL scores correlated significantly with the time since the loss for individuals with minimal experience of depression while no such correlation was found among the severely depressed subjects. Secondly, severely

depressed subjects obtained significantly higher scores on the physical dimension of the RTL when compared with minimally depressed individuals. Furthermore, it was found that the discrepancy between the emotional and the cognitive dimension scores on the RTL was significantly larger for the bereaved subjects who were considered to be depressed than for the nondepressed bereaved individuals.

McGovern (1983) studied two groups of alcoholic patients at a substance abuse treatment facility and reported an increase of grief scores and a decrease of depression scores upon completion of a treatment program. Schneider, Hoogterp, and Picone (1992) conducted a study on the depression and grief reactions of 23 patients in a psychiatry clinic at Michigan State University. The Beck Depression Inventory, the Response to Loss Inventory, and the Hamilton Depression Rating Scale were administered and both the interview format and paper-and-pencil measures were used. They obtained correlation coefficients of .55, .66, .68, -.28, -.52, -.57 and -.57 between scores on the BDI and those on the Holding On, Letting Go, Awareness, Perspective, Integration, Reformulation, and Transformation subscales of the RTL. Similarly, the coefficients of correlation between the Hamilton Depression Rating Scale and the 7 subscales of the RTL were .51, .48, .61, -.35, -.46, -.63 and -.30 respectively. The results of this study appear to be consistent with those of Schneider's preliminary validation study on the Response to Loss Inventory (Schneider,

McGovern, & Deutsch, 1991) and support the impression of general clusters of reactions in the grieving process--the coping- and awareness-oriented factor and the healing- and growth-based factor.

A State Versus Trait Distinction

A significant development in behavioral research has been the conceptualization of psychological reactions in terms of the state versus trait distinction. One of the most widely recognized application of this conceptual distinction has been Spielberger's (1971, 1985) theory of state and trait anxiety. An important result of his research is the construction of the State-Trait Anxiety Inventory, which has been used in more than 2000 studies on a multitude of anxiety-related issues ranging from physiological and biological processes, learning, and memory to psychotherapy. In addition to the development of this highly useful scale of anxiety, perhaps one of Spielberger's most important contribution is his emphasis on the importance of distinguishing between transitory emotional states and individual differences of being prone to certain psychological reactions such as anxiety as a personality trait. This conceptual distinction appears to provide an important insight in our search for converging themes in the theoretical literature on the relationships between grief and depression. As opposed to the dynamic reactions of grief, much of the discussion in the literature appears to be intended to account for the rigidity or persistence of

depressive symptoms, whether the underlying process considered is associated with the psychodynamic process of early relationship internalization or the concept of learned helplessness. As Schneider (1992) has suggested, the state versus trait distinction can be applied to the conceptual differentiation between grief and depression.

Acceptance of Disability

A concept frequently discussed in the rehabilitation literature is "acceptance of disability." Linkowski (1971) defined acceptance as conscious acknowledgement of inconveniences associated with a disability while recognizing many more important characteristics that give the individual meaning and a purpose in life. Although several theories of accepting disability have been delineated, Dembo, Leviton, and Wright (1975) presented the concept of accepting loss which appeared to have distinct advantages in that it was sufficiently explicated to lend itself to operationalization (Linkowski, 1971). Consistent with other concepts of acceptance is the emphasis that the theory places on the subjective meaning of disability to the impaired individual and the associated emotions and values. Wright (1960) summarized the process of accepting loss as a series of value changes, which included the enlargement of scope of values, subordination of physique, containment of disability effects, and transformation from comparative to asset values. A number of similarities between this perspective and the concept of the grieving process seem

readily apparent. For example, Linkowski's components which define acceptance such as "conscious acknowledgement of inconveniences," "recognizing many more important characteristics," and "meaning and purpose in life" appear to parallel conceptually the grieving tasks of acknowledging what has been lost, recognizing what is left, and achieving resolution and transformation through personal and spiritual growth (Schneider, 1992). Dembo, Leviton, and Wright (1975) also equated the acceptance of disability with the acceptance of loss. Their discussions of the various changes of values appear to be comparable to Schneider's concepts of gaining perspective and the transformation of values.

Additional theoretical support for the relationship between physical disability and the grief process comes from a comprehensive model of psychological reaction to loss. This model was proposed by Katz and Florian (1987) who drew a conceptual parallel among interpersonal loss, the loss of a limb or function, and environmental loss or loss of peace of mind which is frequently experienced by refugees and those forced to move from their homes. Acceptance of a physical disability was categorized as a reaction observed during the resolution phase of grief. An underlying assumption of this comprehensive model is that the dynamic processes experienced in one area of loss can be extrapolated and used in understanding other areas of loss.

The growth and transformative aspects of the grief process is not explicitly addressed by this model.

Influence of Biographical and Demographic Variables

One of the most extensively discussed issues in the rehabilitation literature relevant to psychological adjustment is the severity of disability. With a few notable exceptions, the majority of empirical studies do not support the hypothesis of relationship between the severity of the disability and psychological reactions of the individual. Bracken, Shepard, and Webb (1981) stated that emotional reactions such as anger and depression which are seen at the time of discharge from acute care hospitalization were all positively related to the severity of motor impairment, and to a lesser extent, the loss of sensory functions. Rosillo and Fogel (1970) studied 110 rehabilitation inpatients with mixed disabilities and reported that the discharge ratings of these individuals by psychiatrists were positively related to the severity of disability, discomfort, and pain.

Antler, Lee, Zaretsky, Pezenik, and Halberstam (1969) found that mildly physically disabled individuals rated the wheelchair more positively when compared with more severely disabled subjects. Hohmann (1966) also suggested a general reduction in emotionality among individuals with spinal cord injury which was greater the higher the lesion. In contrast, Hopkins (cited by Woodbury, 1978) reported that the results of their research did not support the hypothesis

that the suicide rate increases as the severity of disability increases. Meyerson (cited by Woodbury, 1978) indicated that the degree of disability was not significantly related to the internal versus external dimension of locus of control scores. An early study by Seymour (cited by Woodbury, 1978) showed that no differences existed between quadraplegics and paraplegics in terms of personality ratings by psychologists using the Rorschach diagnostic system.

It is somewhat surprising that a small proportion of findings available in the literature appear to be counter-intuitive. For example, Hopkins (cited by Woodbury, 1978) conducted a review of early research and concluded that the severity of injury was inversely related to the suicide rate in the spinal cord injury and the amputation populations. It has been reported that the level of spinal cord injury is not significantly related to successful mental adjustment (Kerr & Thompson, 1972), denial (Bracken, Shepard, & Webb, 1981), locus of control (Crisp, 1984), scores on the Beck Depression Inventory three weeks before, three months and one year after discharge from the hospital (Richards, 1986), scores on the Mini-Mult and the State-Trait Anxiety Inventory (Cook, 1979), and productivity among individuals with significant support (Kemp & Vash, 1971). Severity of disability among individuals with spinal cord injury has also been reported to be unrelated to the internal-external dimension of locus of control or satisfaction with life

(Swenson, 1976) or self-esteem (Green, Pratt, & Grigsby, 1984).

A range of demographic variables have been reported in the literature as correlates of psychological adjustment. Demographic factors reported in empirical studies include age, sex, education, length of time since injury, and the number of post-injury hospitalizations (e. g., Fitzgerald, 1983). In addition, a variety of criterion variables have been selected for the operationalization of psychological adjustment, ranging from the individual's ego strength to reports of adequate coping with environmental demands and life satisfaction. Based on the theoretical perspectives introduced in the preceding discussions, it may be suggested that these factors may all be related to the adjustment factor of disability acceptance, grief, and depression. It is important to note, however, that although a number of studies have been reported regarding the relationship between demographic variables and specific aspects of adjustment, little research has been attempted regarding the potential influence of demographic variables on the relationship between two psychological phenomena such as grief and depression. The interaction of factors in determining the psychological reactions and adjustment of individuals with disabilities appears to be a relatively unexplored area where further research may prove to be beneficial.

CHAPTER 3

DESIGN OF THE STUDY

Described in this chapter are the design of the study, the sample, the measures used, the research questions and hypotheses, the research procedures, and the statistical analyses conducted. Finally, a discussion concerning the limitations of the study is provided.

Research Design

The present investigation consisted of a cross-sectional correlational field study. Since the primary intent of the study was to examine the relationships between two naturally occurring psychological phenomena in a group of rehabilitation patients, no experimental treatment was introduced. The design of the study involved the following steps:

1. A list of 119 polio survivors were solicited for participation in the study.
2. 86 of these individuals signed their consent forms and volunteered to fully participate in the study.
3. Instruments were selected to collect information for analysis. These instrumented included the Biographical Data Questionnaire (BDQ), the Beck Depression Inventory (BDI), and the Response to Loss Inventory (RTL).
4. The research hypotheses were stated.

5. The subjects were assigned alternately to two groups based on the order in which the research instruments were administered.
6. The inventories were administered and data collected.
7. The data were entered into format readable by the microcomputer version of the Statistical Package for the Social Sciences (SPSS-PC+), and checked for accuracy.
8. The data were analyzed to test the main research hypotheses.
9. A series of post-hoc analyses were performed to investigate the generalizability of relationships between grief and depression, by exploring the influence of a number of subject background variables on these relationships.

Each component of the research design will be described in detail in the subsequent sections of this chapter.

Subjects

This study involved the use of a convenience sample, consisting of a group of individuals with post-polio conditions. With the assistance of researchers at the University of Michigan Medical Center in Ann Arbor, Michigan, recruitment of these research subjects was conducted by mail, using a list of 119 previous research participants generated from a database maintained at the

University of Michigan Medical Center. Respondents to the written invitation to the study who signed the Consent Form or the Limited Participation Consent Form were included in the study and the research questionnaires were administered to them. All research participants were adults and, based on an evaluation of available information about the 1989 post-polio study, were presumed to be within the normal range of intellectual functioning.

Decisions on the types and sources of subjects to be selected were based on four major considerations. First, the scope of the present study was limited to an exploration of reactions to a physical disability as a loss. Post-polio disability was considered to be one of the debilitating physical conditions seen in the rehabilitation setting which, unlike traumatic brain injury or multiple sclerosis, was uncomplicated by associated impairment of intellectual and emotional functioning. Second, with the ultimate goal of facilitating patient adjustment outside rather than within the hospital environment, it can be argued that professional accountability in rehabilitation dictates reliable monitoring of patient adjustment and progress in the context of their real-life situations. Collecting data by mail from the subjects in the privacy and familiarity of their home was believed to be consistent with this philosophical stance. The University of Michigan Medical Center is one the largest polio treatment and research

facilities in the country that maintain a relatively up-to-date database on their former patients. To the best knowledge of the investigator, the vast majority of the individuals on the polio research database did not have regular visits to the hospital and could be best contacted by mail.

Third, some of the background information in the polio research database consisted of disability ratings by rehabilitation professionals. It was believed that this use background information would complement the participant self-reports solicited by the three research questionnaires. Finally, after a somewhat deliberate attempt at recruiting research participants, polio survivors at the University of Michigan Hospital were one of the few groups of potential subjects available to the investigator.

The subjects were informed that the investigator was conducting a study on response to a physical disability. Although it was indicated that their contribution to this project as research subjects was expected to help achieve an enhanced understanding of the disability adjustment process, it was particularly emphasized that participation in this study was entirely voluntary. It was also explained that information regarding individual research participants would be kept strictly confidential and that the results of the study would be reported only in nonidentifiable and aggregate format. The subjects were advised that they could

choose to discontinue their participation in this study at any time and that choosing to participate or not to participate would not result in any treatment privilege or affect the services they received at the University of Michigan Medical Center.

The subjects were informed that the study would involve the utilization of three self-report questionnaires which would be administered to them by mail and could be completed in roughly an hour. They were asked to grant permission for the investigator to access background information about them through a database at the University of Michigan Medical Center. It was explained that the first of the three questionnaires which they were asked to complete would be a survey of additional information about their general background, life experience, and their disability history. One of the other questionnaires would require answering questions about their current feelings and thoughts. The third inventory would require the subjects to rate the accuracy of a series of statements regarding their reactions to their disabilities. The subjects were then asked to complete the standard research Consent Form as required by the Human Subjects Committees at both Michigan State University and the University of Michigan Medical Center. They were also informed that those who indicated an interest in the results of the study on the research consent form would be provided a brief summary of findings at the end of

the investigation. As a compensation for their time and involvement in this study, it was explained to the participants that a check for $10 would be provided to them upon receipt of their three completed questionnaires.

Measures Used in The Study

In addition to a biographical data questionnaire, two other measures were used in the study. The Beck Depression Inventory was selected as a widely reputable measure of depression and the Response to Loss Inventory was used to measure different aspects of the individual's grief reactions.

Biographical Data Questionnaire

Information regarding the background of the subjects was collected with the use of the Biographical Data Questionnaire. This is a survey instrument designed by the investigator specifically for the present study. Self-report items were included in the questionnaire to determine biographical variables such as current occupation and volunteer work activities, age and sex of children, initial awareness of the disability as a loss, and previous history of loss experience and depression (see Appendix A). Five-point rating scales were used to solicit information about the subjects' perceptions of their own general health status (excellent, very good, good, fair, or poor), emotional support from others (extremely dissatisfied, very dissatisfied, satisfied, very satisfied, or extremely

satisfied), the severity of their disabilities (not severe at all, not very severe, moderately severe, very severe, or extremely severe), and chance of complete cure from their physical disabilities (0%, 25%, 50%, 75% or 100% chance).

Beck Depression Inventory

The Beck Depression Inventory is an extensively researched instrument that has received wide acceptance by both researchers and clinicians. It is a 21-item, self-report questionnaire based on cognitive, emotional, motivational, and physical manifestations of depression. This measure was selected to operationalize the concept of depression because of its high reliability and validity, the short administration time required, and its wide use in both general behavioral and psychosocial rehabilitation research. Each of the items on the BDI consists of four evaluative self-statements in order of increasing severity. The subject is instructed to circle the statement that best describes his or her feelings.

The BDI is known to have acceptable levels of both reliability and validity. A split-half reliability coefficient of .86 has been reported on a sample of 97 depressed subjects (Beck & Beamesderfer, 1974). Item analysis demonstrated a positive correlation between each item of the BDI and the total score (Beck & Beamesderfer, 1974). In addition to its face validity, the content validity of the BDI has been rated as high (Stehouwer,

1985). It was also found to have a correlation of .65 with clinicians' global ratings regarding the depth of depression (Conoley, 1992). Nussbaum and Michaux (cited by Beck & Steer, 1987) reported that initial and final correlation coefficients between the depression subscale of the Minnesota Multiphasic Personality Inventory (MMPI D-Scale) and the BDI were .75 and .69 respectively. Construct validity of the BDI has been supported by the empirical validation of seven hypotheses regarding a number of characteristics of depression, including masochistic dream content, negative self-concept, identification with the loser on projective tests, history of deprivation, disproportional drop in self-esteem as a response to experimentally induced failure, high correlation between intensity of depression and suicidal intent, and significant subjective and objective improvement following a success experience.

Response to Loss Inventory

Although the issues of loss and grief have been recently given an increased amount of attention in the clinical literature, previous attempts at objective assessment of grief issues have utilized a very limited number of grief measures. Most of the available measures are geared towards particular types of loss experience such as bereavement. With the exception of Schneider's Response to Loss Inventory, none of these instruments appears

suitable for use with rehabilitation patients with physical disabilities such as polio and post-polio conditions.

As a result of a 10-year developmental process, the Response to Loss Inventory is a self-report questionnaire which includes 517 items in its entire scale. Two shorter alternative (split-half) forms of the total RTL have been developed to reduce the amount of time required for inventory administration and to aid future research efforts which involve pre-post or longitudinal treatment designs.

Each item on the RTL corresponds to one of the observable phenomena which have been identified as related to normal grieving in Schneider's model (Schneider, 1984, 1994). The task of the subject is to indicate on a 5-point scale if the statement contained in each item definitely, most of the time, some of the time, occasionally, or does not accurately describe his or her present feelings or reactions to a specific loss. The individual is instructed to skip the item if he/she believes that the statement is true about him/her but not a reaction to the loss. The score profile is separated into seven distinct subscales: Holding On, Letting Go, Awareness, Perspective, Integration, Self-Empowerment, and Transformation. Each of these scales correspond to one of Schneider's postulated phases of grieving.

The Awareness subscale has been of most interest to researchers and thus there is more information available

regarding its reliability and validity. Deutsch (1982) reported an internal consistency coefficient of .95 for the scale, and two empirical studies have contributed to the construct validation of the scale. McGovern (1983) found that across the time of alcoholism treatment, scores on the BDI decreased, while scores on an adapted version of the Awareness subscale of the RTL increased. This finding suggests not only a difference between the two constructs but possibly an inverse relationship between the two. Deutsch (1982) reported empirical confirmation of several theoretical hypotheses regarding the awareness of the grieving process, such as the prediction of the RTL Awareness subscale scores based on the impact of the loss and time since the loss, the differentiation of grief and depression based on depressed subjects' defensive system of separating cognition from emotions, and the association of depression and significantly higher scores on the Physical Index on the RTL Awareness subscale.

The most recent and systematic research efforts related to the reliability and validity of the RTL involved an investigation of 207 subjects selected from a variety of loss groups, clinical settings, classes, workshops, and therapy groups (Schneider, McGovern, & Deutsch, 1990, 1991). These subjects represented a wide range of age groups, living conditions, types and nature of loss experience, length of time since the loss, and certain subjective

factors such as the individuals' perceived presence or absence of choice. Partial results of this validation study were two sets of reliability coefficients for the different subscales of the RTL. The Cronbach's alpha reliability coefficients for these subscales range from .88 to .97, while Guttman split-half coefficients ranged from .90 to .96. Evidence of construct validity of the RTL was provided by constructing a intercorrelation matrix for the various subscales. The correlation matrix indicates two strong clusters of factors, confirming the clinical observations of Schneider and his colleagues, and lending support to the hypothesis that a major shift occurs in the grieving process that allows some people to distance themselves and grow from their losses. Additional research is needed to explore this hypothesis.

The RTL was selected for the present study for two primary reasons. First, it represented the most systematic and comprehensive approach to date to the assessment of grief experience. Second, the development of this instrument was based on a thorough review and consideration of the grief literature (Schneider, 1984), years of clinical observations (Schneider, McGovern, & Deutsch, 1990, 1991), a coherent theoretical framework (Schneider, 1984, 1994), and a great deal of effort on the repeated validation of the inventory items.

Research Questions and Hypotheses

The primary research question concerning the relationships between depression and grief was investigated in the hypothesis testing phase of this study. Specifically, attempts were made to address this general question by testing a total of seven hypotheses regarding the relationships between depression and each of the seven phasic components of the grieving process (see page 11 for a description of these phasic components).

Hypothesis I: Scores obtained on the Beck Depression Inventory are linearly related to scores on the RTL Holding On subscale. In other words, the subjects' attempts to beat their loss and stress experience were expected to be related to the intensity of their depression.

Hypothesis II: Scores obtained on the Beck Depression Inventory are linearly related to scores on the RTL Letting Go subscale. In other words, subjects' reported experiences of depression were expected to be related to their attempts to cope by minimizing the significance of their loss and stress experience.

Hypothesis III: Scores obtained on the Beck Depression Inventory are linearly related to scores on the RTL Awareness subscale. In other words, subjects' conscious experiences of loss, stress, and grief were expected to be associated with the intensity of depression.

Hypothesis IV: Scores obtained on the Beck Depression Inventory are negatively linearly related to scores on the Perspective subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Perspective subscale. In other words, individuals who reported a great deal of gain in their insight about the meaning of their disability were expected to indicate minimal experience of depression.

Hypothesis V: Scores obtained on the Beck Depression Inventory are negatively linearly related to scores on the Integration subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Integration subscale. In other words, individuals who reported active involvement in remembering and finishing business with their physical disabilities as a loss were expected to indicate minimal experience of depression.

Hypothesis VI: Scores on the Beck Depression Inventory are negatively linearly related to scores on the Self-Empowerment subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Self-Empowerment subscale. In other words, individuals who reported a great increase of resourcefulness, flexibility, and responsivity as a reflection of their physical

disability were expected to indicate minimal experience of depression.

Hypothesis VII: Scores on the Beck Depression Inventory are negatively linearly related to scores on the Transformation subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Transformation subscale. In other words, individuals who reported a great deal of changes in their world views and the nature of losses in general as a function of their physical disability were expected to indicate minimal experience of depression.

The seven corresponding null hypotheses were identical to the above research hypotheses except for the absence of any hypothesized linear association between BDI total scores and scores on the seven subscales of the Response to Loss Inventory.

In addition to the testing of the seven main research hypotheses, a series of post-hoc analyses were conducted. The subject background information collected through the use of the University of Michigan Medical Center database and the Biographical Data Questionnaire served as the source of independent variables in these analyses (see Tables 7-10). The rationale for including these variables in the analyses was that, although they had been discussed in the rehabilitation literature as factors influencing

psychosocial reactions and disability adjustment per se, only limited information was available regarding their roles in the association between two psychological phenomena. Particularly, virtually no discussion could be found concerning the impact of background factors such as demographic, biographical, and disability variables on the *relationships* between grief and depression. Since the existing literature had not provided a sufficiently solid theoretical or empirical basis for the formulation of *a priori* research hypotheses about such interactions, the primary purpose of the post-hoc analyses in this study was exploratory and heuristic in nature.

Research Procedures

The present study involved the use of a group of adult polio survivors as research subjects. With the assistance of researchers at the University of Michigan Medical Center, these participants were recruited from a group of 119 individuals who had participated in a previous study on post-polio adjustment in 1989. The process of obtaining informed written consent from the research subjects was implemented in two stages. First, a letter was sent along with a Consent Form to all of the prospective subjects soliciting their participation. Both the solicitation letter and the Consent Form contained a description regarding the purpose of the study, tasks for the subjects, the voluntary nature of participation in and withdrawal from

the study, safeguards for participant confidentiality and welfare, as well as expected compensation for their participation (see Appendices E and F). Individuals who agreed to participate in the study were asked to indicate their intent to do so by endorsing the appropriate choice and providing their signature on the Consent Form and returning it in a pre-addressed postage-paid envelope prior to the initiation of any formal data collection activities.

Second, in order to understand the life situations of individuals who expressed a sense of ambivalence or reluctance about the study, those who indicated their decision not to participate on the Consent Form were asked to consider partial participation and the signing of a Limited Participation Consent Form. It was explained that the Limited Participation Consent Form could be used to indicate their interest in completing only the Biographical Data Questionnaire and/or grant the investigator access to background information about them through the University of Michigan Medical Center database. Both the full and limited participation consent forms were accompanied by explanations about the nature of the consent and safeguards for them as research participants.

Upon receipt of the returned Consent Form, participants were sent and asked to complete a packet of three inventories: The Biographical Data Questionnaire, the Beck Depression Inventory, and the Response to Loss Inventory.

Instructions to the participants were designed to be self-explanatory so that the inventories could be completed independently. In order to control for the potential confounding effects of inventory administration conditions such as the order of inventory presentation, a counter-balancing design was employed assigning subjects to two groups; the first group would receive the BDQ, the BDI, and lastly the RTL, while the second group would receive the BDQ, the RTL, and finally the BDI. Assignment to groups was based on alphabetical listings of batches of returned questionnaires; every other entry in a list would be assigned to the same group.

The purpose of administering the BDQ first was to help the subjects become accustomed to the research task. It was also hoped that the relatively factual nature of information solicited would minimize potential response bias introduced by possible individual differences in the subjects' rate of adjustment to the research situation.

Upon completion of the three research inventories, the last question in the research inventory packet was introduced to solicit the participants' overall reactions to the research task. Each individual was asked to indicate on a 5-point scale if he/she felt "not positive at all," "not very positive," "positive," "very positive," or "extremely positive" about completing the three research

questionnaires. The subjects were also encouraged to provide open-ended explanations for their ratings.

Safeguards for the confidentiality of individual participant information was implemented in this study at a number of levels. First, cabinets and a briefcase with locks were used by the investigator and his assistants in the storage and transportation of all identifiable information gathered for this study. Second, individuals not directly related to this study did not have access to completed research instruments and other identifiable subject information. In addition, with the exception of the Consent Form and the Limited Participation Consent Form, all research instruments were assigned the subject codes (e. g., P-F1, P-F2, etc.) instead of identifying information such as the subjects' names and social security numbers. The list of subject identification numbers and corresponding names of individual participants were maintained by the investigator and his assistants at a separate and locked location. Finally, the results of this study were discussed only in a group or aggregate format. No individual subjects were identified in any research report.

Statistical Analyses

The present study required a one-time administration of three self-report instruments to all of the research participants. The collection and manipulation of information from these instruments yielded four sets of

variables: The BDI total scale scores, representing the intensity of depression; the subject background characteristics; the product of these two types of variables as indicators of interaction effects; and the RTL subscale scores corresponding to the seven phasic components of grief. The RTL scores were always considered the outcome variable, and the other scores, predictors.

A set of seven regression models was used to test the seven main research hypotheses on the relationships between grief and depression, using only the total score on the Beck Depression Inventory as the predictor variable in each model. The generalizability of these findings was also investigated by searching for evidence that the relationships between grief and depression differed between different populations. For instance, perhaps the relationship between Awareness and depression differed within male and female populations of post-polio subjects. Or, perhaps the strength of the relationship between Holding On and depression increases with subjects' age. For the purpose of exploring these possibilities, interaction terms were created (as described above) and checked for significance within a regression format.

To address the question of whether the relationships between depression and the seven phasic components of grief are generalizable across demographic, health, disability, and biographical characteristics, a preliminary examination

of potential interaction effects was conducted through a five-step procedure of post-hoc data selection and analysis. First, a number of subject background variables were selected for analysis based on a logical judgment regarding the theoretical and practical significance of their potential impact on the grief-depression relationships. Due to statistical limitations associated with the subject requirements of regression analysis and the sample size of the study, nominal scale background variables with multiple categories such as marital status were converted into dichotomous variables (e.g., 1 = Married and 2 = Not Married). The categories of each dichotomous variable were assigned values of 0 or 1 prior to the creation of the interaction terms. Second, each of the selected background variables was multiplied by the BDI total score to create a corresponding set of interaction variables. For the variable of gender, for example, all male participants were assigned a value of 0 and all female subjects, a value of 1 before the product of the gender variable value and the BDI total scores was obtained. Third, correlation coefficients were obtained between the newly created interactional effect variables and the scores on the seven grief scales from the RTL.

Although coefficients in this correlation matrix could serve as estimates of interaction effects, there is a problem if the interaction term is correlated with either

the BDI total score or the background variable that is one of its factors. For instance, in the case where the interaction term of interest is GenderXBDI score, if Gender is correlated with the interaction term, or BDI score is correlated with the interaction term, there is a problem with multicollinearity. A significance test of the interaction term may merely indicate that one of the main effects was in fact related to the outcome. This problem of multicollinearity is common when interaction terms are created by multiplying continuous variables (such as BDI score) by *either* categorical or continuous variables. And, as stated above, the BDI score was used in the creation of every interaction term.

However, it would be poor practice to handle the problem by automatically including both main effects and the interaction term in a regression and then testing for the interaction. When there is high multicollinearity, it reduces the chance of finding a significant interaction effect (or main effect). Thus, a hierarchical approach to deletion of main effects terms was employed.

Before hierarchical procedures began, it was assumed that 238 regressions (34 main effects X 7 grief subscales) would be run. Each regression would include a background variable, BDI total score, and a term representing the interaction between the two main effects. As stated above, however, if multicollinearity existed, it would lead to a

low likelihood of determining a significant interaction effect. If either main effect were found to be unrelated to the outcome (not holding the interaction constant), it would be justified to drop it from the analysis, thus reducing the effect of multicollinearity on the remaining terms. Thus, the following procedure was employed:

First, a correlation matrix was generated showing the correlations between BDI score and the seven grief subscales, and between the background variables and the seven grief subscales.

Second, it was determined, for each of the 238 regressions, whether the BDI score was significantly correlated with the outcome at the .05 level. If it was not, it was deleted from the interaction analysis.

Third, it was determined, for each of the 238 regressions, whether the background variable was significantly correlated with the outcome at the .05 level. If it was not, it was deleted from the interaction analysis.

Using the procedure above protects against finding significant interactions, when in fact it is the main effects which are significant; however, it also increases the power of finding significant interactions if they indeed exist.

After deletion of the variables, each of the 238 regressions was run, testing for an interaction at the .01 level. Since separate testing of interaction effects for

each of the selected background variables for all of the grief components requires a large number of regression equations, using the commonly recognized probability level of .05 as the threshold of statistical significance would probably result in the type 1 error of considering nonexistent interactional effect to be significant. However, using a combined α of .05 across all regression equations might lead to the type 2 error of not finding true interaction effect. For instance, if the Bonferroni procedure (e.g., see Hamilton, 1992, p. 132) was used to set the overall type 1 error rate to .05, the comparison-based alpha would be set to .05/238 = .00021. Given a two-tailed test and a full sample size of 77 (although some correlations, due to missing data, utilized fewer subjects), the power to detect a correlation of .30 would be only .18. The power to detect a correlation of .40 in such a situation is only .51, and the power to detect a correlation of .5 (considered large by Cohen, 1988) is .88. Considering that in the social sciences correlations of less that .40 are most common, use of a comparison-based alpha of only .00021 would likely lead to the retaining of many false null hypotheses of no correlation. A pragmatic compromise was the probability level of .01 as an acceptable threshold of statistical significance for each regression equation. The personal computer version of the Statistical Package for the

Social Sciences software was employed in all of the data analyses in this study.

Limitations of the Study

It is important to note a number of limitations in this study. Many of these limitations are related to the type and source of the research sample employed. For example, all of the subjects involved in this study were adults. It may be argued that the developmental stage, need structure, cognitive framework, and coping patterns of children and adolescents may be so different from those of adults that the results of this study may have limited relevance to the psychosocial situations of youths. Similarly, the scope of explorations in the present study is restricted to the psychological reactions of adult polio survivors, most of whom experienced minimal intensity of depression. The generalizability of findings regarding the relationships between grief and depression to individuals with a different disability, acute rather than chronic debilitating health problems, alternative loss issues or greater intensity of depression needs to be determined through further empirical investigations.

Moreover, like most other research endeavors in the social sciences, participation in this study is entirely voluntary. It is possible that differences exist in terms of coping styles and the degrees of denial, depression, and grief between the research subjects and those individuals

who were not recruited for or declined to participate in the study. Investigations of unwilling subjects and uncooperative patients present the researcher with a great technical challenge and an ethical dilemma and, at present, no attempts have been made to apply the research procedures and findings of the present study to this group of individuals.

Several comments can be made regarding the limitations of the study due to the research design used. First, as with virtually all correlational field research, the results of this study are intended to be used for making relational observations rather than causal inferences. Given the current state of our research technology, no legitimate causal assertions can be made concerning grief and depression until further investigation is conducted that involves longitudinal observation of levels of grief and depression in various individuals. Furthermore, the primary focus of the present study is a one-time exploration of relationships between depression and grief. Any statements made on the basis of this cross-sectional study with regard to the process of grief, depression, and variations in the relationships between the two variables over time is speculative at best.

The stimulation of observations and theoretical conjectures associated with the process of grief, depression, and their relationships is a major purpose of

the post-hoc portion of data analysis. At this time, however, the validity of any such observations will need to be tested in future studies, preferably those involving longitudinal research designs. Finally, the definition of grief used in this study is primarily based on the theoretical model of Dr. John Schneider. While it is assumed that this comprehensive model incorporates various aspects of the grieving process discussed in the literature, this assumption does not exclude the possibility that readers who subscribe to a different theoretical or conceptual approach may need to re-interpret the results of the study to fit their particular theoretical framework.

The present study represents an initial step in a long series of empirical explorations needed to help us better understand the process of grief, depression, adjustment to disabilities, and the interrelationship among these variables. It is hoped that the findings of this study provide an impetus for the exploration of these issues in future research efforts.

CHAPTER 4

RESULTS

This chapter presents the results of the study. Included in this chapter are a description of subject characteristics, the outcome of hypothesis testing, and findings from a series of post-hoc exploratory analyses.

Subject Characteristics

Response Rate

A letter of invitation to the study was sent to 119 individuals who had participated in a previous post-polio study in 1989. This initial mailing was returned for twelve of these prospective participants by the U.S. Postal Service because it was considered to be "undeliverable." One recipient of the invitation letter indicated an interest in partial involvement with this study by completing only the Biographical Data Questionnaire and granting research access to the background information through the University of Michigan database. Of the 91 respondents who agreed to participate in the current study, 86 individuals returned the questionnaire packet and 77 participants completed all three research instruments.

After receiving the questionnaire packet, one prospective participant did not fill out the Beck Depression Inventory, six declined to complete the Response to Loss Inventory, and two individuals withdrew their involvement with this study. Explanations offered by these individuals for their decision not to complete the questionnaires

included the absence of a significant disability or functional impairment, a sense of irrelevance between the issues addressed by the research questionnaires and their perceptions of their post-polio condition as primarily a physical disability, and a lack of interest in an exploration of their psychological reactions.

Basic Demographics

Data analysis for the study was conducted utilizing a final sample of 33 men and 44 women whose ages ranged from 38.48 to 80.70 years with a mean age of 53.91 years. As indicated in Table 1, approximately 49% of the 77 participants were employed, 31% engaged in volunteer work and 20% reported having received services from Michigan Rehabilitation Services, the state public vocational rehabilitation program. Approximately 69% of the individuals had educational attainment beyond high school graduation. These subject demographic data appear to be consistent with a recent report by the National Center for Health Statistics (1989) which described polio survivors overall as "middle class, well educated, and employed" with an age range of 30s to 80s and average age of late 40s to early 60s.

Health Characteristics

Selected participant health characteristics are presented in Table 2. Current general health ratings of "good," "very good," or "excellent" were provided by 63.7%

Table 1

Selected Participant Demographic Characteristics

Variable	Percentage	Mean	Standard Deviation	N
Age		53.91	9.10	77
Marital Status				77
Married	81.8			
Widowed	3.9			
Divorced	6.5			
Separated	1.3			
Never married	6.5			
Number of Children		2.27	1.52	77
Living Situation				77
Alone	10.4			
In a household	89.6			
Education				77
Some high school	7.8			
Finished high school	23.4			
Some college	28.6			
Finished college	27.3			
Finished grad. school	13.0			
Frequency of Religious Service Attendance				77
More than once a week	13.0			
Once a week	33.8			
2-3 times per month	5.2			
Once a month	7.8			
A Few times per year	23.4			
Never	16.9			
Importance of Religious Beliefs				77
Very important	46.8			
Quite important	26.0			
Somewhat important	14.3			
Not Very important	6.5			
Not At All important	6.5			

Table 1 (Continued)

Variable	Percentage	Mean	Standard Deviation	N
Currently Employed	49.4			77
Hours of Work per Week		40.62	12.15	37
Type of Occupation				77
Professional	23.4			
Managerial	5.2			
Sales	10.4			
Clerical	2.6			
Operative	2.6			
Other	5.2			
Current Job Satisfaction				77
Extremely dissatisfied	2.6			
Very dissatisfied	3.9			
Satisfied	14.3			
Very satisfied	24.7			
Extremely satisfied	7.8			
Experience of Job Termination of Denial Due to Disability	22.1			77
Currently Engaged in Volunteer Work	31.2			77
Hours of Volunteer Work per Week		6.51	7.67	21
Volunteer Work Satisfaction				77
Satisfied	15.6			
Very satisfied	13.0			
Extremely satisfied	2.6			
Personal Income				77
Under $5000	7.8			
$5000-9999	9.1			
$10,000-14,999	7.8			
$15,000-19,999	3.9			
$20,000-29,999	18.2			
$30,000-39,999	13.0			
$40,000-59,999	13.0			
$60,000-79,999	3.9			
$80,000 or more	1.3			
Previous Service From State Vocational Rehab.	19.5			77

Table 2

Selected Participant Health Characteristics

Variable	Percentage	Mean	Standard Deviation	N
General Health				
Self-Rating				77
Poor	3.9			
Fair	32.5			
Good	37.7			
Very good	16.9			
Excellent	9.1			
Physical Health				
Number of Co-morbidities		2.78	1.71	77
Diabetes	7.8			77
Respiratory disease	19.5			77
Cancer/Leukemia	2.6			77
High blood pressure	36.4			77
Cardiac problems	13.0			77
Circulatory problems	37.7			77
Gastrointestinal Diseases	29.9			77
Urinary tract disorders	35.1			77
Stroke or neuromuscular Problems	9.1			77
Scoliosis	36.4			77
Arthritis/Rheumatism	50.6			77
Emotional Well-Being				
Life Satisfaction Rating (on a scale of 1=very satisfied) to 7= very dissatisfied)		2.68	1.52	77
Satisfaction With Support (on a Scale of 1=extremely dis-satisfied) to 5= extremely satisfied)				
From doctor(s		2.91	.95	77
From family		3.44	1.08	77
From friends		3.51	.81	76
In general		3.30	.68	73

of the subjects, and 82.2% described themselves as "satisfied," "very satisfied," or "extremely satisfied" with the amount of general emotional support from others. This positive account of their health circumstances is consistent with data collected approximately four years prior to the present study in which 74% of the same individuals described themselves as more satisfied than neutral or dissatisfied with their life. Of the eleven types of co-morbidity addressed in the 1989 post-polio study, 54.5% of the subjects indicated three or more health problems other than their post-polio conditions. Among the most frequently reported health problems were arthritis, circulatory difficulties in the extremities, hypertension, and scoliosis. Current contact with a psychotherapist was indicated by 6.5% of the subjects, and participation in a support group was reported by 24.7%.

Disability Characteristics

Selected participant disability characteristics are presented in Table 3. Approximately 32.5% of the participants rated their own disability as "not severe at all" or "not very severe." This proportion is roughly comparable to the 31.4% who rated the amount of deterioration from their post-polio period of best physical functioning in 1989 as "none," "not much," and "a little." As indicated in Table 4, the participants' self-ratings

Table 3

Selected Participant Disability Characteristics

Variable	Percentage	Mean	Standard Deviation	N
Years Since Polio Diagnosis		41.75	2.71	77
Age of Polio Diagnosis		11.99	9.46	77
Years Since End of Best Physical Functioning		15.64	7.81	73
Type of Polio				77
Bulbar	6.5			
Spinal	54.5			
Bulbar and spinal	31.2			
Expert Rating of Gait Abnormality				77
Normal	23.4			
Equivocal	13.0			
Mildly abnormal	18.2			
Moderately abnormal	22.1			
Severely abnormal	6.5			
Expert Rating Regarding Extent of Disability				77
No significant disability	37.6			
Mild disability	39.0			
Moderate disability	16.9			
Severe disability	6.5			
Self-Rating Regarding Severity of Disability				77
Not severe at all	13.0			
Not very severe	19.5			
Moderately severe	50.6			
Very severe	15.6			
Extremely severe	1.3			

Table 3 (Continued)

Variable	Percentage	Mean	Standard Deviation	N
Self-Assessed Deterioration From Physical Best				77
None	10.4			
Not much	10.4			
A little	10.4			
Some	14.3			
A fair amount	20.8			
Quite a bit	18.2			
A great deal	15.6			
Self-Rated Increase of Pain Since Physical Best				77
None	18.2			
A little	14.3			
Some	28.6			
Quite a bit	20.8			
A great deal	18.2			
Pain at Its Worst				77
Mild	1.3			
Discomforting	16.9			
Distressing	36.4			
Horrible	20.8			
Excruciating	10.4			
Self-Assessed Chance of Complete Cure From Physical Disability				77
0 percent	90.9			
25 percent	2.6			
50 percent	1.3			
100 percent	5.2			

Table 3 (Continued)

Variable	Percentage	Mean	Standard Deviation	N
Initial Awareness of Disability				77
As an irreversible change	74.0			
Having specific memory of when this occurred	40.3			
Number of years since this occurred		32.28	14.23	31
As a loss	64.9			
Number of years since this occurred		29.70	14.47	32
Feeling of Being Responsible for Disability				77
Not responsible at all	81.8			
Not very responsible	7.8			
Moderately responsible	7.8			
Very responsible	2.6			

Table 4

A Matrix of Correlations Among Selected Indicators of Severity of Disability

	Deter. From End	Pain Increase Since End	Expert Rated	Life	Expert	Self-

Table 4

A Matrix of Correlations Among Selected Indicators of Severity of Disability

Selected Indicators of Severity of Disability	Deter. From End of Best Physical Funct.	Pain Increase Since End of Best Physical Funct.	Pain at Its Worst	Expert Rated Gait Abnormality	Life Satisfaction Rating	Expert Rated Extent of Disability	Self-Rated Severity of Disability
Deterioration From the End of Best Physical Functioning	1.0000**	.6609**	-.1741	.4810**	.4864**	.6987**	.6134**
Increase of Pain Since the End of Best Physical Functioning	.6609**	1.0000**	-.1894	.3246*	.4663**	.5996**	.3297*
Pain at Its Worst	-.1741	-.1894	1.0000**	.1079	-.0446	-.0206	-.1013
Expert Rating of Gait Abnormality	.4810**	.3246*	.1079	1.0000**	.1887	.4659**	.4824**
Life Satisfaction Rating	.4864**	.4663**	-.0446	.1887	1.0000**	.5018**	.3480*
Expert-Assessed Extent of Disability	.6987**	.5996**	-.0206	.4659**	.5018**	1.0000**	.5264**
Self-Rated Severity of Disability	.6134**	.3297*	-.1013	.4824**	.3480*	.5264**	1.0000**

Minimum pairwise N of cases: 77 2-tailed Significance: * - .01 ** - .001

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regarding the severity of their disability were found to significantly positively correlate with expert ratings of gait abnormality and extent of disability which were obtained in 1989.

Polio diagnosis by age 10 was reported by 49.4% of the subjects, and by age 20 80.5% were diagnosed as having polio. The number of years between the subjects' initial illness and diagnosis of polio and the subsequent onset of best physical functioning ranged from 0 to 29 with a mean of 7.42 and a standard deviation of 6.15. The average duration of this period of best physical functioning is 18.85 years with a standard deviation of 8.77. The end of this period occurred less than 5 years ago for 12.3% and less than 10 years ago for 21.9% of the participants. Although more than 90% of the subjects believed that the chance of complete cure from their physical disability was nonexistent, the recognition of their disability as a loss was acknowledged in an appreciably smaller proportion of participants, 64% of whom reported specific memory of when this recognition had occurred.

Biographical Characteristics

Participant biographical characteristics are presented in Table 5. Experience of their own life-threatening illness was reported by 61% of the participants; 19.7% of the illness occurred before age 10 and 38.2% before age 20. While 79.2% of the subjects reported the death of a parent,

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Table 5

Selected Participant Biographical Characteristics

Variable	Percentage	Mean	Standard Deviation	N
Previous Loss Experiences				
Participants' Own Life-Threatening Illness	61.0			77
Age it first occurred		18.57	13.55	47
Death of Partner/Spouse	6.5			77
Death of a Child	7.8			77
Death of a Grandchild	1.3			77
Death of a Parent	79.2			77
Age it first occurred		35.16	14.76	61
Death of a Grandparent	55.8			77
Age it first occurred		20.88	9.74	41
Death of a Friend	37.7			77
Age it first occurred		30.10	16.48	29
Death of a Brother/Sister	23.4			77
Age it first occurred		37.33	18.34	18
Loss of a Job	28.6			77
Age it first occurred		39.18	12.48	22
Loss of Partner Other Than By Death	14.3			77
Loss of Home/Homeland	3.9			77
Financial Loss	9.1			77
Loss of a Parent Other Than by Death	6.5			77
Loss of a Child Other Than by Death	9.1			77

Table 5 (Continued)

Variable	Percentage	Mean	Standard Deviation	N
Loss of Self Due To Trauma	2.6			77
Other Loss	13.0			77
Number of Previous Losses		3.47	1.83	77
History of Depression				
Before Disability	10.4			77
Age it first occurred		30.00	16.77	10
Diagnosis by				
A psychiatrist	1.3			77
A counselor	1.3			77
A medical Doctor	5.2			77
Family	5.2			77
Friend(s)	1.3			77
Self	10.4			77
History of Depression				
After Disability	53.2			77
Number of years since post-polio depression		12.86	12.93	30
Duration in months		12.32	15.52	33
Diagnosis by				
A psychiatrist	10.4			77
A psychologist	9.1			77
A counselor	7.8			77
A social Worker	3.9			77
A medical Doctor	13.0			77
A priest	2.6			77
Family	9.1			77
Friend(s)	13.0			77
Self	36.4			77
Self-Injurious/Suicidal Ideation and Behavior				
Thoughts of Hurting Self	14.3			77
Years since self-injurious thoughts		11.53	13.33	9
Actual Act of Hurting Self	5.2			77
Thoughts of Killing Self	22.1			77
Years since suicidal thoughts		18.36	17.07	14

Table 5

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Table 5 (Continued)

Variable	Percentage	Mean	Standard Deviation	N
Actual Attempts To Kill Self	5.2			77
Substance Abuse Problems				
Current Alcohol Problems	2.6			77
Current Drug Problems	2.6			77
Current Substance Abuse Support Group				
Alcoholic Anonymous	1.3			77
Alanon	1.3			77

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only 55.8% acknowledged the previous loss of a grandparent by death. The loss of a partner or spouse due to reasons other than death (e. g., divorce) was reported by 14.3% of the subjects, and 53.2% indicated an experience of depression subsequent to the onset of their disability. Previous thoughts of hurting themselves reportedly occurred in 14.3% and suicidal ideation was experienced by 22.1% in comparison with 5.2% of the participants who actually acted on their self-destructive impulses. Previous experience of substance abuse was indicated by 2.6% of the subjects.

Primary Research Instrument Score Distribution

In addition to the Biographical Data Questionnaire, the Beck Depression Inventory, and the Response to Loss Inventory were administered by mail to the participants as measures of primary interest in this study.

Beck Depression Inventory

Distribution of scores on the Beck Depression Inventory and the Response to Loss Inventory are presented in Table 6. A comparison with the distribution of Beck Depression Inventory scores for six normative groups (Beck & Steer, 1978) indicated that the average BDI total score for the post-polio participants was 1.42 standard deviations below the mean score of individuals with mixed psychiatric diagnoses, 1.82 standard deviations below that of individuals displaying a single episode of major depression, 1.56 standard deviations below that of those with recurrent

Table 6

Distribution of Scores on the Beck Depression Inventory and the Response to Loss Inventory

Beck Depression Inventory

BDI Score	Percent of Participants	Mean Score	Standard Deviation	N
BDI Total Score		9.10	6.65	77
Severity of Depression				77
Within normal range	59.7			
Mild to moderate	28.6			
Moderate to severe	11.7			

Response to Loss Inventory

Present Investigation

RTL Subscale	Mean Percentage Intensity	Standard Deviation	N
Holding On	22.50	10.77	73
Letting Go	24.53	14.58	70
Awareness	22.43	18.06	69
Perspective	43.21	18.82	62
Integration	41.67	17.99	65
Self-Empowerment	42.79	20.59	63
Transformation	50.76	25.89	57
Total RTL Score	28.28	13.76	75

Normative Group Data (N = 207)

RTL Subscale	Mean Percentage Intensity	Minimum Score	Maximum Score
Holding On	23.0	4	45
Letting Go	15.7	3	40
Awareness	25.0	11	55
Perspective	40.5	17	65
Integration	36.8	11	65
Self-Empowerment	39.0	21	60

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major depression, 1.17 standard deviations below that of those with dysthymic disorder, .45 standard deviations below that of those suffering from alcoholism, and .44 standard deviations below that of heroin addicts. Based on Beck's intensity rating guidelines, 40.3% of the subjects were judged to be within the mild to the moderate-severe range of depression with a maximum individual BDI total score of 29. The standard deviation of BDI total scores found in the present study is less than those of all of Beck's normative groups and most similar to that of individuals with dysthymic disorder.

Response to Loss Inventory

Analysis of the Response to Loss Inventory data was conducted after a score adjustment procedure was implemented to limit the biasing effect of outliers. However, a small number of participants failed to respond to a large number of items on the Response to Loss Inventory, resulting in a small number of extremely low subscale scores and an increased chance of distorted group average on these scales. A decision was made upon consultation with the primary developer of the RTL, Dr. John Schneider, to eliminate from analysis the Holding On, Letting Go, and Awareness subscale scores of less than 5% intensity, if at least 75% of the subscale items were omitted by the subject. Also, among the Perspective, Integration, Self-Empowerment, and Transformation subscales, scores of less than 10% intensity

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which involved at least 50% of the subscale items omitted were also deleted from the analysis.

The main rationale for the use of two different sets of selection criteria for score deletion was that given the average temporal distance of more than 41 years from their polio diagnosis and more than 15 years from the end of their best post-polio physical functioning, the research participants were expected to be currently investing a much higher level of energy in the healing- and growth-oriented phases than the initial phases of coping with and experiencing their disability as a loss. Therefore, the subjects were anticipated to endorse a large number of items with higher ratings in the second half of the RTL. Contrary to this expectation, however, it was noted that response omission appeared to occur more frequently in the second half of the RTL than in the first half. Precise frequency counts of response omission could not be obtained, since the RTL allows the subject to skip items containing statements believed to be true about the individual but not a reaction to his/her disability. Impressions of response omission were based on observations of a large number or even an entire section of consecutively skipped items.

Upon the implementation of the score adjustment procedure described above, a comparison of the resulting data set with the RTL normative group statistics (Schneider, McGovern, & Deutsch, 1991) indicated that the mean scores of

the post-polio subjects appeared to be comparable to the normative average of 23.0 on the Holding On subscale, appreciably higher than the normative average of 15.7 on the Letting Go subscale, slightly lower than the normative average of 25.0 on the Awareness subscale, slightly higher than the normative average of 40.5 on the Perspective subscale, slightly higher than the normative average of 36.8 on the Integration subscale and slightly higher than the normative average of 39.0 on the Self-Empowerment subscale. Normative data on the Transformation subscale was not available.

Note that after a much longer period of years since the onset of their loss experience, the mean of the post-polio subjects' scores on the Letting Go subscale is appreciably higher than those of the normative group. The implications of this observation are discussed in the next chapter.

Table 7 presents a matrix of correlations among the 7 phasic subscales of the Response to Loss Inventory. Data in this table indicate two clusters of subscale scores. The RTL subscales of Holding On, Letting Go, and Awareness were found to significantly positively correlate with one another at significance level of less than .001. A similar pattern of relationships were found among the RTL subscales of Perspective, Integration, Self-Empowerment, and Transformation.

Table 7

A Matrix of Correlations Among Seven Subscales of the Response to Loss Inventory

	Holding	Letting	Numb-	Pang-	Integra-	Self-	Trans-

Table 7

A Matrix of Correlations Among Seven Subscales of the Response to Loss Inventory

RTL Subscale	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
Holding On	1.0000**	.6092**	.5773**	.4058*	.1195	.1333	.1818
Letting Go	.6092**	1.0000**	.8312**	.1538	-.1463	.0528	.1779
Awareness	.5773**	.8312**	1.0000**	.1982	-.1013	.0642	.1688
Perspective	.4058*	.1538	.1982	1.0000**	.6934**	.5012**	.5127**
Integration	.1195	-.1463	-.1013	.6934**	1.0000**	.5359**	.4531**
Self-Empowerment	.1333	.0528	.0642	.5012**	.5359**	1.0000**	.7003**
Transformation	.1818	.1779	.1688	.5127**	.4531**	.7003**	1.0000**

Minimum pairwise N of cases: 52 2-tailed Significance: * - .01 ** - .001

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Upon the completion of the three questionnaires, the participants were asked to indicate their reactions to these research instruments. On a 5-point scale with 5 representing extremely positive feelings toward the research questionnaires, the average rating was 3.20 with a standard deviation of 1.05. The subjects were also encouraged to provide open-ended explanations for the ratings they had provided. A desire to be helpful to the investigator or other individuals with a disability was expressed in the open-ended explanations by 20.8 of the participants without any specific prompt for doing so.

Hypothesis Testing

A total of seven research hypotheses were proposed for the present study, each concerned with the relationship between depression and one of the seven phasic components of the grieving process. These research hypotheses were individually tested using seven linear regression analysis equations. The results of hypothesis testing are presented in Table 8.

Research Hypothesis I stated that scores obtained on the Beck Depression Inventory would be linearly associated with scores on the RTL Holding On subscale. In other words, the subjects' attempts to overcome their experience of loss and stress was expected to be related to the intensity of their depression. This research hypothesis was supported by the results of data analysis (r = .35288, beta = .570774,

Table 8

Results of Hypothesis Testing:
Depression Versus Grief Subscales

Hypo-	Dependent	n	Standard	Proba-

Table 8

Results of Hypothesis Testing:
Depression Versus Grief Subscales

Hypothesis	Dependent Variable	r	R Square	F	beta	Standard Error of beta	T	Probability of T
1	Holding On	.35288	.12453	10.09901	.570774	.179608	3.178	.0022
2	Letting Go	.54367	.29557	28.53246	1.178533	.220634	5.342	.0000
3	Awareness	.69923	.48892	64.09444	1.877378	.234499	8.006	.0000
4	Perspective	.15148	.02295	1.40905	.465315	.391998	1.187	.8800
5	Integration	-.17665	.03121	2.02933	-.516118	.362304	-1.425	.0796
6	Self-Empowerment	.05378	.00289	.17692	.179626	.427049	.421	.6622
7	Transformation	.20253	.04102	2.35260	.862757	.562489	1.534	.9346

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p = .002, two-tailed). The significant positive correlation between the BDI total score and the Holding on subscale score suggested that individuals acknowledging a more intense experience of depression tend to exhibit stronger attempts to cope with their post-polio condition by conquering the issues of loss and stress associated with their physical disability.

Research Hypothesis II stated that scores obtained on the Beck Depression Inventory would be linearly associated with scores on the RTL Letting Go subscale. In other words, subjects' reported experience of depression was expected to be related to their attempts to cope by minimizing the significance of their disability as a loss. As with the preceding hypothesis, this research hypothesis was supported by the results of data analysis (r = .54367, beta = 1.178533, p < .0001, two-tailed). At a higher level of statistical significance relative to research Hypothesis I, the positive correlation between the BDI total score and the Letting Go subscale score on the Response to Loss Inventory suggested that individuals acknowledging a more intense experience of depression tended to exhibit stronger attempts to cope with their post-polio condition by minimizing the significance of disability based experience of stress and loss.

Research Hypothesis III stated that scores obtained on the Beck Depression Inventory would be linearly associated

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with scores on the RTL Awareness subscale. In other words, subjects' conscious experience of loss, stress, and grief was expected to be associated with the intensity of their depression. Of the seven research hypotheses proposed in this study, statistical testing of Hypothesis III yielded the most significant results (r = .69923, beta = 1.877378, p < .0001, two-tailed). The positive correlation between the BDI total scores and scores on the Awareness subscale of the Response to Loss Inventory suggested that individuals acknowledging a more intense experience of depression tended to report more intense consciousness of their loss and stress issues.

Research Hypothesis IV stated that there would be a negative linear association between subjects' scores on the Beck Depression Inventory and scores on the Perspective subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Perspective subscale. In other words, individuals who reported a great deal of gain in their insight about the meaning of their disability were expected to indicate minimal experience of depression. This research hypothesis was not supported by the results of data analysis (r = .15148, beta = .465315, p = .8800, one-tailed indicating a lack of evidence for the existence of a systematic relationship between depression and the gaining of insight in the process of grieving.

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Research Hypothesis V proposed a negative linear association between subjects' scores on the Beck Depression Inventory and scores on the Integration subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Integration subscale. In other words, individuals who reported active involvement in remembering and finishing business with their physical disabilities as a loss were expected to indicate minimal experience of depression. The results of data analysis also failed to support this hypothesis (r = -.17665, beta = -.516118, p = .0796, one-tailed), although certainly there is some evidence that such a relationship might exist. Further analysis with a larger sample may result in a finding of significant negative relationship between depression and the grief component of Integration.

Research Hypothesis VI proposed a negative linear association between subjects' scores on the Beck Depression Inventory and their scores on the Self-Empowerment subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Self-Empowerment subscale. In other words, individuals who reported a great increase of resourcefulness, flexibility, and responsivity as a result of their experience with physical disability were expected to indicate minimal experience of depression.

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Again, the results of data analysis failed to support this research hypothesis and no systematic relationship was found between depression and the self-empowerment phase of the grieving process (r = .05378, beta = .179626, p = .6622, one-tailed).

Research Hypothesis VII proposed a negative linear association between subjects' scores on the Beck Depression Inventory and scores on the Transformation subscale of the Response to Loss Inventory. High scores obtained on the Beck Depression Inventory were anticipated to be associated with low scores on the RTL Transformation subscale. In other words, individuals who reported a great deal of change in their world views and perceptions regarding the nature of losses in general as a function of their physical disability were expected to indicate minimal experience of depression. Statistical testing of this research hypothesis failed to yield any finding of systematic relationship as proposed (r = .20253, beta = .862757, p = .9346, one-tailed).

Two distinct groups of findings can be delineated from the outcome of hypothesis testing; the positive findings all come from scales associated with coping and experiencing, while the null findings are associated with healing and growth scales.

Post-Hoc Analyses

In addition to the statistical testing of the seven main research hypotheses described above, a series of post-

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hoc data analyses were performed in an attempt to explore the generalizability of relationships between depression and the seven phasic components of grief. A total of 34 interaction effect variables were created for this purpose, by multiplying the BDI total score with each of the 6 demographic variables, 8 health factors, 8 biographical issues, and 12 disability characteristics selected for analysis based on judgments regarding the theoretical and practical significance of their potential impact on grief-depression relationships. A correlation matrix was obtained (Table 9) as a set of preliminary estimates of interaction effects. However, as discussed in chapter 3, significant correlations in this matrix could merely reflect associations of the seven grief components with the BDI scores and/or subject background variables, due to multicollinearity. For example, the BDI total score had a correlation of .99 with the interaction term associated with time since polio diagnosis and BDI score. Table 9 shows the correlations between BDI score and the interaction terms investigated in this study). Thus, the three-step procedure outlined in chapter 3 was implemented.

Following this procedure, it was found that the BDI total score was correlated with the first three subscales (Holding On, Letting Go, and Awareness), and uncorrelated with the remaining four (Perspective, Integration, Self-Empowerment, and Transformation) (Table 10). Thus,

Table 9

Relationships Between Grief and Interaction Effect Variables

Interaction Effect Variable (BDI Multiplied by)	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
Demographics							
Gender (0=men, 1=women)	.1986	.3290*	.3992**	-.0028	-.1086	-.0128	.1528
Education	.4028**	.5580**	.5911**	.0586	-.1634	-.0116	.2279
Current Employment	.1915	.2612	.1789	-.0044	-.2020	-.1580	-.0090
Current Volunteer Work	.3154*	.3778**	.3840**	.1238	.0876	.1170	.1967
Health Characteristics							
Health Deterioration From 1974 to 1989	.2820	.4272**	.5606**	-.0567	-.2276	-.0801	.1193
Number of Co-Morbidities	.3262*	.2611	.4999**	-.0309	-.1535	-.0172	.1178
Self-Rated General Health	.3351*	.4609**	.4770**	.0416	-.1731	-.0220	.1921
Satisfaction with Support							
From family	.2749	.3813**	.5004**	.0118	-.2468	-.0585	.1922
From friends	.3500*	.4165**	.5015**	.1047	-.1519	.0382	.2382
Support group(s)	.2990*	.3607*	.5512**	.1895	.0644	.1396	.2184
From doctor(s)	.3805**	.3471*	.5651**	.0931	-.0708	.0455	.1439
Life Satisfaction (1989)	.2668	.3769**	.5631**	.0400	-.1402	-.0206	.1364
BIOGRAPHICAL CHARACTERISTICS							
Number of Previous Losses	.2887	.3310*	.4881**	.0637	-.1151	.0208	.1557
Own Life-Threatening Illness	.1630	.1552	.3521*	-.0940	-.1268	-.0225	.0885
Death of a Parent	.1776	.2419	.4812**	-.1227	-.2798	-.1479	.0410
Experience of Depression							
before polio diagnosis	.1024	.2639	.4487**	-.1677	-.2488	-.1781	-.1672
after polio diagnosis	.2848	.3959**	.5704**	-.0612	-.2698	-.0815	.1072

Table 9 (Continued)

Interaction Effect Variable (BDI Multiplied by)	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
Thoughts of Hurting Self	.1252	.3358*	.4482**	-.1275	-.2289	-.0897	.0383
Thoughts of Killing Self	.1341	.3682*	.4655**	-.1286	-.2687	-.1246	.0133
Attempt to Hurt Self	.0867	.1835	.3136*	-.0936	-.2043	-.1009	-.0146
Attempt to Kill Self	.1654	.3263*	.3070*	.0047	-.1110	-.0219	.1004
Disability Characteristics							
Years Since Polio Diagnosis	.3556*	.5017**	.6377**	-.0271	-.2383	-.0550	.1866
Expert-Assessed Extent of Disability	.3314*	.4109**	.6354**	.0199	-.1816	-.0528	.1200
Period of Best Physical Functioning							
Age at end of	.2547	.4055**	.6170**	-.0632	-.2633	-.0613	.2020
Years since end of	.1591	.2493	.3922**	-.2356	-.3582*	-.2180	.0006
Deterioration from	.3201*	.4403**	.6312**	-.0261	-.1434	-.0181	.1712
Increase of pain since	.3130*	.3989**	.5700**	-.0498	-.1987	-.0483	.1541
Pain at Its Worst	.3274*	.4518**	.6308**	-.0313	-.2325	-.0464	.1611
Self-Rated Severity of Disability	.3666*	.5361**	.6774**	.0297	-.1808	.0126	.2290
Self-Rated Chance of Cure from Disability	.2929*	.2047	.3018*	.0184	-.1391	-.0489	.0820
Recognition of Disability							
As irreversible	.2605	.3206*	.5341**	-.0151	-.0808	.0400	.1632
As a loss	.3385*	.3616*	.5592**	.0438	-.1275	-.0339	.1128
Feeling Responsible for Onset of Disability	.3424*	.3663*	.5529**	.1091	-.0702	.0762	.1628

Minimum pairwise N of cases: 73 2-tailed Significance * - .01 or less

Table 10

Relationships of Grief With Depression and Participant Background Variables

Participant Background Variables	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
BDI Total Score	.3529*	.5437**	.6992**	.1515	-.1767	.0538	.2025
Demographics							
Gender (0=men, 1=women)	-.0292	.1373	.0800	.0861	.2298	.1350	.1007
Education (1989)	-.0640	.0176	-.0852	-.0214	.0672	-.0520	-.0972
Age	-.1683	-.2556	-.0820	-.1206	.1982	-.0718	.1814
Married (0=no, 1=yes)(89)	.0383	-.0491	-.0483	.0005	-.0650	-.1321	.0686
Current Employment	-.0544	-.0456	-.1478	-.1407	-.2376	-.1222	-.3735*
Current Volunteer Work	.1475	.0951	.1326	.0493	.1413	.1029	.2273
Health Characteristics							
Health Deterioration from 1974 to 1989	-.0293	.0638	.0774	.0635	-.0528	-.1083	-.0438
Number of Co-Morbidities	.1378	-.0661	.0437	-.0140	.0341	.0866	.0046
Self-Rated General Health	-.1509	-.2952	-.4339**	.0755	.2622	.0630	-.1066
Satisfaction with Support							
From family	-.1654	-.3534*	-.3442*	-.1761	.0291	-.1210	-.0377
From friends	.0023	-.3072	-.3544*	.1189	.2200	.1129	.1127
Support group(s)	.1559	.1521	.2773	.0641	-.0739	.0774	.2010
From doctor(s)	.1736	-.1597	-.0194	.2860	.3126	.2078	.0032
Life Satisfaction (1989)	.1659	.2270	.3708*	.1435	-.0735	-.0993	.0723
Biographical Characteristics							
Number of Previous Losses	.0051	.0132	.1379	.1990	.2194	.2170	.1743
Own Life-Threatening Illness	-.0774	-.0406	.0347	-.0122	.1234	.1957	.0661

Table 10 (Continued)

Participant Background Variables	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
Experience of Depression							
before polio diagnosis	.1145	.2424	.4285**	-.1209	-.1713	-.1284	-.2894
after polio diagnosis	.1629	.2501	.3934**	-.0125	-.2359	.0574	.0668
Thoughts of Hurting Self	.1045	.4156**	.4858**	.0639	-.1880	-.0112	.1192
Thoughts of Killing Self	.0435	.3023	.3546*	-.1410	-.2488	-.1221	.0137
Attempt to Hurt Self	.0946	.2059	.3139	.0972	-.0953	.0487	.1870
Attempt to Kill Self	.1323	.3053	.2877	.0053	-.1306	-.0160	.1334
Disability Characteristics							
Years Since Polio Diagnosis	-.0146	-.0865	-.0470	-.1463	-.1421	-.0681	.0407
Period of Best Physical Functioning							
Age at end of	-.1400	-.1502	-.0223	.0035	.2807	-.0069	.2267
Years since end of	.0073	-.0953	-.0677	-.1312	-.1298	-.0683	-.0946
Deterioration from	.1338	.1770	.2828	-.1437	-.1667	-.1724	.0363
Increase of pain since	.1436	.1321	.2335	-.1096	-.3000	-.0105	-.0128
Pain at Its Worst	.0148	-.1010	-.0104	.1429	.1404	.0687	-.0392
Expert-Assessed Extent of Disability	.1272	.0871	.2187	-.0809	-.1928	-.2153	-.1644
Self-Rated Severity of Disability	.1429	.2217	.2327	-.1240	-.2690	-.1869	.0582
Self-Rated Chance of Cure From Disability	.0809	-.1603	-.0677	.3119	.2076	.0955	-.0247
Recognition of Disability							
As irreversible	.1273	.0193	.1363	-.0124	.1042	.0161	.0223
As a loss	.1787	.1443	.2608	.0259	-.1581	-.2767	-.0642
Feeling Responsible for Onset of Disability	.2597	.0137	.1472	.1423	.0524	.1285	.0829

Minimum pairwise N of cases: 54 2-tailed Significance: * - .01 ** - .001

regressions with the first three grief variables as outcomes included a main effect of BDI score, and regressions with one of the last four grief variables as an outcome did not include BDI score as a main effect. Also, there were only ten significant correlations ($p<.01$) between background variables and the seven grief subscales (Table 11). Thus, for the 10 regressions using these background variables with these outcomes, the background variable in question was kept in the regression. For the other 228 regressions, the background variables were omitted. This procedure thus provided

1. Ten regressions using the BDI score, a background variable main effect, and the interaction term.

2. 92 regressions using *only* the BDI score and an interaction variable

3. 136 regressions using *only* an interaction term

Table 11 provides the t-values for the interaction terms in these regressions, and Table 12 provides the p-values. Positive t-values indicate a change of the grief-depression relationships in the positive direction as a function of associated subject background characteristics, suggesting that individuals who acknowledged stronger grief reactions also tended to report a more intense experience of depression if they possessed or scored higher on associated background characteristics. Conversely, negative t-values indicate a change of grief-depression relationships in the

Table 11

Interaction Effect
Regression Analysis T Statistics

Interaction Effect Variable (BDI Multiplied by)	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
Demographics							
Gender (0=men, 1=women)	-.685	-.058	-.575	1.524	.588	1.303	2.500
Education	1.141	2.186	.352	1.563	-.798	.629	2.135
Age	- 2.870*	-4.399*	-.991	1.376	-.683	1.051	2.472
Married (0=no, 1=yes)	-.037	-1.585	-.414	.769	-1.151	-.039	.950
Current Employment	1.286	1.573	.063	.375	-1.849	-1.113	-.020
Current Volunteer Work	1.504	.912	.498	1.090	.881	1.190	1.549
Health Characteristics							
Health Deterioration From 1974 to 1989	- 1.157	-.714	-.345	1.632	-.728	.925	1.741
Number of Co-Morbidities	1.080	-1.992	.541	1.681	.024	1.333	1.640
Self-Rated General Health	.400	.370	-1.361	1.624	-.779	.757	2.031
Satisfaction with Support							
From family	-.458	- .906	-1.252	1.028	-1.413	.408	2.023
From friends	.233	- 2.028	-3.176*	2.438	-.303	1.516	2.616*
Support group(s)	1.146	.978	3.484*	1.085	.042	.769	1.069
From doctor(s)	.776	- 2.538*	-.198	2.346	.438	1.388	1.408
Life Satisfaction (1989)	-.539	-.876	-.364	1.691	-.219	.706	1.512
Biographical Characteristics							
Number of Previous Losses	.949	-.784	.419	2.363	.652	1.893	2.155
Own Life-Threatening Illness	-.131	-1.267	.440	1.626	.955	1.257	1.689
Experience of Depression							
before polio diagnosis	-.721	- .343	-.797	-.004	-.846	-.393	-.643
after polio diagnosis	-.383	- .883	.591	1.848	-.956	.818	1.916

Table 11 (Continued)

Interaction Effect Variable (BDI Multiplied by)	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
Thoughts of Hurting Self	- 1.816	-2.322	-1.605	.315	-1.237	-.027	1.058
Thoughts of Killing Self	- 1.950	-2.425	-2.099	.717	-.656	.355	1.376
Attempt to Hurt Self	- 1.382	- .597	-.392	-.258	-1.539	-.241	.963
Attempt to Kill Self	-.177	.629	-.385	.287	-.869	.047	1.201
Disability Characteristics							
Years Since Polio Diagnosis	-.158	- .884	.083	1.555	-.970	.914	2.253
Period of Best Physical Functioning							
Age at end of	- 1.420	-1.867	1.036	.923	-1.157	.550	2.092
Years since end of	- 2.065	-3.337*	-3.354	.492	-1.530	.521	1.183
Deterioration from	- .247	- .529	1.639	1.390	-.303	.902	2.123
Increase of pain since	- 1.139	-2.406	-1.022	1.382	-.951	.737	1.942
Pain at Its Worst	- 1.139	-1.395	.641	1.417	-.869	.970	2.202
Expert-Assessed Extent of Disability	-.241	-1.523	1.007	1.665	-.852	.515	1.472
Self-Rated Severity of Disability	.272	1.219	1.732	1.430	-1.182	.721	2.109
Self-Rated Chance of Cure from Disability	.463	-1.330	-1.284	2.303	.177	1.149	1.604
Recognition of Disability							
As irreversible	.324	- .947	1.416	1.599	.775	1.379	2.204
As a loss	.498	.301	1.667	1.890	-.161	.252	.923
Feeling Responsible for Onset of Disability	.669	- .907	.740	1.745	-.139	1.349	1.376

Significance: * - .01 or less

Table 12

Tests of Interaction Effect
Levels of Statistical Significance

Interaction Effect Variable (BDI Multiplied by)	Holding On	Letting Go	Aware-ness	Pers-pective	Integra-tion	Self-Empower-ment	Trans-form-ation
DEMOGRAPHICS							
Gender (0=men, 1=women)	.4956	.9537	.5676	.1329	.5585	.1974	.0154
Education	.2580	.0324	.7262	.1235	.4279	.5318	.0372
Age	.0055*	.0000*	.3254	.1741	.4968	.2974	.0165
Married (0=no, 1=yes)	.9710	.1179	.6801	.4447	.2539	.9693	.3462
Current Employment	.2027	.1205	.9501	.7092	.0691	.2701	.9843
Current Volunteer Work	.1373	.3649	.6199	.2799	.3818	.2386	.1271
Health Characteristics							
Health Deterioration From 1974 to 1989	.2512	.4779	.7311	.1079	.4695	.3585	.0873
Number of Co-Morbidities	.2837	.0506	.5903	.0980	.9809	.1874	.1068
Self-Rated General Health	.6901	.7127	.1782	.1096	.4390	.4520	.0471
Satisfaction with Support							
From family	.6487	.3685	.2151	.3079	.1625	.6847	.0480
From friends	.8167	.0466	.0023*	.0179	.7632	.1349	.0115*
Support group(s)	.2559	.3315	.0009*	.2824	.9669	.4449	.2898
From doctor(s)	.4406	.0135*	.8439	.0224	.6630	.1704	.1648
Life Satisfaction (1989)	.5915	.3841	.7173	.0962	.8271	.4830	.1362
Biographical Characteristics							
Number of Previous Losses	.3458	.4359	.6768	.0214	.5164	.0632	.0356
Own Life-Threatening Illness	.8964	.2096	.6612	.1095	.3430	.2136	.0969
Experience of Depression							
Before polio diagnosis	.4738	.7329	.4284	.9969	.4010	.6956	.5233
After polio diagnosis	.7033	.3805	.5564	.0697	.3429	.4165	.0606

Table 12 (Continued)

Interaction Effect Variable (BDI Multiplied by)	HOLDING ON	LETTING GO	AWARE-NESS	PERS-PECTIVE	INTE-INTEGRA-ATION	SELF-EMPOWER-MENT	TRANS-FORM-ATION
Thoughts of Hurting Self	.0739	.0235	.1137	.7542	.2207	.9784	.2949
Thoughts of Killing Self	.0556	.0182	.0399	.4763	.5143	.7242	.1748
Attempt to Hurt Self	.1715	.5528	.6963	.7971	.1288	.8101	.3398
Attempt to Kill Self	.8600	.5315	.7016	.7754	.3881	.9624	.2348
Disability Characteristics							
Years Since Polio Diagnosis	.8750	.3800	.9344	.1253	.3358	.3641	.0283
Period of Best Physical Functioning							
Age at end of	.1605	.0666	.3042	.3599	.2519	.5846	.0414
Years since end of	.0430	.0014*	.0014	.6245	.1311	.6044	.2424
Deterioration from	.8056	.5987	.1059	.1698	.7625	.3706	.0383
Increase of pain since	.2586	.0190	.3106	.1723	.3451	.4641	.0573
Pain at Its Worst	.2587	.1679	.5238	.1616	.3880	.3362	.0319
Expert-Assessed Extent of Disability	.8103	.1327	.3175	.1012	.3972	.6082	.1466
Self-Rated Severity of Disability	.7864	.2269	.0881	.1579	.2417	.4739	.0395
Self-Rated Chance of Cure From Disability	.6449	.1882	.2039	.0248	.8598	.2552	.1144
Recognition of Disability							
As irreversible	.7468	.3471	.1618	.1152	.4411	.1731	.0318
As a loss	.6203	.7645	.1004	.0637	.8730	.8023	.3599
Feeling Responsible for Onset of Disability	.5058	.3679	.4621	.0861	.8895	.1822	.1745

Significance * - .01 or less

negative direction as a function of background variables, suggesting that, in comparison with the other research participants, individuals with associated background characteristics tended to report a lower intensity of depression while acknowledging greater involvement with the process of grief or vice versa.

Specifically, the significant findings were as follows:

1. The relationship between depression and the grief component of Letting Go was stronger in subjects who manifested lower satisfaction ratings of emotional support from their doctors

2. The relationship between depression and the grief component of Awareness was stronger in subjects giving a positive appraisal of emotional support from their support groups

3. The relationship between depression and the grief component of Awareness was stronger in those who felt less satisfied with the amount of emotional support from their friends

4. The relationship between depression and the grief component of Transformation was stronger in those who felt more satisfied with the amount of emotional support from their friends

5. The relationship between depression and the grief component of Holding On was stronger in people in the sample who were younger

6. The relationship between depression and the grief component of Letting Go was stronger in people in the sample who were younger

7. The relationship between depression and the grief component of Letting Go was stronger for those subjects who were closest in time from the period of their best physical functioning

A general review of the results presented in Tables 9 and 10 reveals two findings. First, the relationship between depression and the seven phasic components of grief appear to be generalizable across subject background characteristics, as suggested by the fact that only 7 or 2.9% of the 238 interaction effect tests yielded significant results. One must guard against thinking that this implies strong evidence of generalizability, however. There are three problems: First, for 102 of the regressions run, main effect variables that were sometimes highly collinear with the interaction terms were used, due to the significant correlations between these main effects and the outcome. When collinear terms are in the same regression together, the chance of finding a significant effect decreases sharply.

Second, there may be some interaction between two background variables that results in different relationships between grief and depression. For instance, perhaps among older females, the relationship between depression and

Letting Go is very high, while it is not so high for males and younger females. However, the number of background variables of interest and the small sample size precluded any investigation relating combinations of background variables to grief-depression relationships. Third, there is a power issue; 238 regressions were run, each at an α = .01. Within the 136 regressions with only the interaction term and a grief outcome, the power for finding a correlation of .30 or greater was only .65, given a sample size of 75 and this alpha. Unfortunately, a larger sample size was not available, and increasing this alpha would greatly increase the type 1 error rate.

The second finding regarding the interaction effects was that six of the seven observations of significant interaction were associated with the grief components of Holding On, Letting Go, and Awareness, suggesting that the relationship between depression and the healing and growth aspects of the grieving process may be less susceptible to the influence of background considerations, compared to the coping- and experience-oriented components. This differentiated pattern of the grief-depression relationship generalizability appears to parallel the two groups of hypothesis testing findings discussed previously and further supports the conceptual distinction of coping- and experience-based reactions from the healing- and growth-

oriented grief reactions in the process of adjusting to post-polio conditions.

Care needs to be exercised so as not to overinterpret these findings of specific interaction effects, as a very small percentage of post-hoc analyses yield significant results. The relatively small research sample used, in combination with the use of a very large number of tests in this phase of data analysis increases the risk of rejecting a true null hypothesis. In general, the results of post-hoc data analysis support the generalizability of relationships between depression and the seven phasic components of grief across a large number of background variables, with a possibility of a few exceptions after taking into consideration (and attempting to minimize) multicollinearity.

Summary of Findings

The results of hypothesis testing yielded findings of significant positive relationships of depression with the coping- and experience-based grief components of Holding On, Letting Go, and Awareness, as well as a lack of significant relationships with the healing- and growth-oriented grief components of Perspective, Integration, Self-Empowerment, and Transformation. Post-hoc analyses suggested that depression interacted with few (five) subject background considerations in its relationship with the coping- and experience-based components of Holding On, Letting Go, and

Awareness, and even fewer (one) with the healing- and growth-oriented components of Perspective, Integration, Self-Empowerment, and Transformation. With less than 3% of its 238 regression analysis equations yielding results of significant interaction effects ($\alpha = .01$), and the increased chance of type 1 error due to the large number of analyses, the post-hoc data analysis generally supports a hypothesis of generalizability of the relationships between depression and the seven phasic components of the grieving process.

Of the seven regression equations resulting in findings of significant interaction effects, two were associated with the background factor of age and four with self-reported satisfaction with the amount of emotional support from friends and support groups, suggesting a potentially salient mediational role played by these background considerations in the relationships between grief and depression. Specific results of post-hoc analysis prompt several interesting observations regarding the potential mediational role of background variables. Due to an increased chance of type 1 error associated with the large number of interaction effect analyses performed and the relatively small research sample employed in this study, however, these specific results need to be interpreted with extreme caution.

CHAPTER 5

DISCUSSION

This chapter presents a discussion of the results of the study and its implications. Included in this discussion are the general theoretical basis of the study, an interpretation of the hypothesis testing and post-hoc findings, what these results suggest concerning the differentiation between grief and depression, and implications for clinical practice. The chapter concludes with a number of recommendations for future research.

A Summary of the Theoretical Rationale

The purpose of the present study was to explore the relationships between depression as a pathological mental health condition, and the normal process of grieving, as represented by Schneider's (1984, 1994) seven phases of grief. This operationalization of grief, as a nonunitary construct, goes beyond the traditional view of grief found in the literature, where it is seen as a global phenomenon. Two unique elements of the current investigation were the selection of individuals with post-polio conditions as research subjects for an exploration of long-term adjustment issues and the incorporation of Schneider's comprehensive model of reactions to loss in the conceptualization of grief. Using the Beck Depression Inventory to operationalize the amount of depression and the Response to Loss Inventory to operationalize the amount of involvement in the seven phasic components of grief, seven research

hypotheses were developed to examine the relationships between depression and grief. These research hypotheses stemmed from a critical review of the literature, which appeared to support three general themes.

First, while to some professionals grief and depression appear to have similar symptomatic manifestations, important differences between the two exist. At a deeper level, professionals often believe that depression stems from blocked or complicated grieving, associated with a lack of internal capacity for dealing effectively with traumatic change or inadequate resolution of loss issues in the individual's psychosocial history. Finally, a conceptual parallel seems to exist between the concept of disability acceptance in the rehabilitation literature and the healing- and growth-oriented aspects of the grieving process, as illustrated by the final four phasic components of Schneider's grief model. These three themes combined to suggest an investigation of the relationship of depression with more specific measures of grief, as measured by the RTL.

Interpretation of Results

Hypothesis Testing

The hypothesis testing supported the existence of positive relationships between depression and the Holding On, Letting Go, and Awareness components of the grieving process. In other words, individuals with post-polio

conditions who acknowledged a strong attempts to cope with their disability by conquering it or minimizing its significance also tended to report a more intense experience of depression. Similarly, those who acknowledged strong experience of loss associated with their disability tended to report a more intense experience of depression. These findings yield a number of particularly significant interpretations when the time since the participants' initial polio diagnosis and the end of their best physical functioning was taken into account.

In a typical case of normal grieving, one may expect to see a relatively high degree of involvement with attempts to cope with and awareness of loss issues during the first year, but a lower level of involvement with these coping- and awareness-based experiences approximately two to five years after the loss event. However, subjects in this sample had scores on the Holding On, Letting Go, and Awareness subscales either basically equivalent to or higher than the sample of 207 individuals used in Schneider, McGovern, and Deutsch (1991); these 207 individuals were, on the average, less than five years from their loss event. The fact that the subjects in this study showed relatively high degrees of involvement with coping- and awareness-oriented experiences more than 41 years after their initial polio diagnosis and 15 years after the end of their best physical functioning, combined with the finding of positive

correlations between depression and the three grief subscales mentioned above, tends to support the state-versus-trait theory of grief-depression differentiation. In other words, individuals who display relatively significant amounts of what appear to be early grief reactions, without an appreciable reduction in their intensity over a long period of years, may actually be exhibiting persistent symptoms of depression.

Furthermore, the finding of significant positive relationships between depression and the coping-oriented components of grief also lends support to clinicians' prevalent working definition of depression as an outcome of blocked or complicated grief. Although attempts to conquer problems associated with a physical disability may serve an important function of modulating the extent of loss awareness as an adaptive initial reaction to disability, the finding of a significant positive relationship between depression and the grief component of Holding On indicates that excessive use of this fighting response over an extended period of years may interfere with the normal progression of the grieving process and lead to the formation of depressive symptoms. The significant positive relationship between depression and the grief component of Letting Go validates the clinical observation of Schneider (1995), regarding the pertinent role of the avoidance or flight coping response in the development of depression. It

may be suggested that premature attempts at detachment from the experience of loss, by minimizing the significance of disability, may contribute to the symptoms of denial, self-reports of feeling immobilized, and fixed emotional states, which have been discussed as among the unique features of depression (Schneider & Deutsch, 1992a & b).

As the phasic component whose manifest characteristics have been most frequently discussed in the literature as symptoms of the grief response, awareness of loss was found to have a strong positive relationship with depression. This finding supports the idea that the considerable similarity between grief and depression may explain the lack of consistency in the literature regarding the role and treatment of depression in the process of disability adjustment. Consistent with the preceding discussions, one way of resolving this confusion regarding the psychological reactions of the post-polio subjects is to consider the coping- and experience-based components of grief to be indicators of depression as a mental health problem. Clearly, this is a pathologically oriented approach to data interpretation, for which indirect support can be found from several subject characteristics.

For example, the absence of a severe physical disability was indicated for nearly three-fourths of the subjects based on expert judgment and one-third of the subjects according to their self-appraisal. In the absence

of severe physical disability, considering the participants' self-reported negative psychological reactions to be indicators of depression is consistent with the clinical belief and theoretical postulate that grief is a normal reaction to an objectively significant loss while depression is related to a distress source of an internal and unrealistic nature or the lack of an adequate internalized coping structure. In summary, pathologically focused interpretations concerning the positive relationships between depression and the coping-oriented grief components of Holding On and Letting Go, as well as the experience-based grief component of Awareness, argue that signs that a subject is in a coping or experience-oriented phase of the grieving process may actually indicate a pathological phenomenon of depression, especially when there is an absence of a severe disability, a history of blocked or complicated grief, and an inadequate internal structure for dealing with change and stress.

The interpretations of results provided above are largely based on the predominant views of the nature of grief and depression in the clinical psychological literature. It is important to note that, although rationales exist for considering early signs of grief as indicators of depression, support can be found for treating what appear to be depressive symptoms as a part of normal grieving. A careful consideration of the phenomenology of

post-polio conditions as a chronic illness and the life development context of disability adjustment in general suggests several alternative (and perhaps more benign) explanations for the significant positive relationships between depression and the grief components of Holding On, Letting Go, and Awareness.

Unlike acute and yet relatively stable disabling conditions such as traumatic amputation, for example, one of the unique aspects of the post-polio experience is a sense of lacking closure regarding the ultimate extent and impact of the resulting disability. It is possible that the unpredictability of polio symptom relapse and concerns over the possible occurrence of a "second disability" (Frick, 1985) can generate such a significant amount of distress that a heightened awareness of disability-related loss issues and a strong need for coping become a salient part of the ongoing life experience for these polio survivors. If this perspective on the nature of post-polio adjustment is valid, then a logical interpretation of the significant positive relationships between depression and the grief components of Holding On, Letting Go, and Awareness is that, given the remarkable similarities between depression and initial signs of grief, the BDI scores of the subjects may actually reflect nothing more than a somewhat higher intensity of loss awareness and coping needs. These higher intensities of loss awareness and coping needs may very well

be necessary, adaptive, and a perfectly normal part of long-term adjustment to post-polio conditions as a chronic illness with an uncertain future.

Evidence of support for seeing the subjects' psychological reactions as normal come from a number of characteristics found in most of the participants, including positive perceptions of their own general health; emotional support from others, and their lives in general despite three or more health problems in addition to their post-polio conditions; a self-reported history of post-disability depression, possibly indicating some openness to the working through of disability-related loss issues; a realistic self-appraisal regarding the chance of complete cure from their physical disability as nonexistent; BDI total scores within the normal range of depression; the absence of ongoing reliance on the service of a psychotherapist or emotional support from a support group; and the willingness to engage in an exploration of their psychological reactions as the primary task in their participation in this study.

An alternative interpretation supporting the premise of the subjects' normal psychological reactions resulted from speculations on the potential impact of life span development issues as a context for disability adjustment. Traditional views in the rehabilitation literature such as stage theory consider disability adjustment as a process of linear progression toward an end point of resolution or

disability acceptance. In contrast, it would appear to be consistent with clinical intuition to entertain the possibility that individuals who have lived with a physical disability for a significant portion of their lives may have once felt concerned about their social desirability as teenagers due to their unusual physique, their employability as young adults due to unfavorable social attitudes toward people with disabling conditions, their ability to assume certain child care responsibilities as new parents due to realistic limitations associated with demands for strenuous physical activities, and their capacity for day-to-day functional independence due to the compounding effect of their disability and diminishing physical strength and mental competence as a part of the aging process. The potential interference of physical disability with the accomplishment of normal developmental tasks across the life span leads to speculations on the emergence, processing and resolution of new loss issues at different stages of adult development, providing a plausible explanation for the results of the study as discussed above.

Given the fact that the majority of the subjects were above the age of 50 at the time of their research participation, it is possible that their relatively high scores on the coping and loss awareness aspects of grief actually reflect normal reactions to a new set of polio-related loss issues, as they enter and attempt to adapt to

the late stages of their lives. Issues of life span development have been discussed by Schneider (1989) as a salient context of the loss and grief process, and the ongoing nature of life span development appears to have important implications for our conceptualization of disability adjustment. It can be suggested from this perspective that the meaning of physically disabling conditions may vary over time for people with disability as a function of their changing developmental priorities across the life span. Instead of a task to be accomplished with an end stage of disability acceptance as suggested by such traditional views in the rehabilitation literature as stage theory, disability adjustment may be considered to be a lifelong and cyclical process of initial awareness, coping, conscious experiencing, healing, and growing from continually emerging loss issues at different stages of change and development.

Statistical testing of research hypotheses 4 through 7 failed to yield significant relationships between depression and the healing-oriented grief components of Perspective and Integration, as well as the growth-oriented grief components of Self-Empowerment and Transformation. This outcome on the surface contradicts previous findings of Schneider, Hoogterp, and Picone (1992) regarding the existence of negative relationships between depression and the grief components of Perspective, Integration, Self-Empowerment,

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and Transformation among psychiatric patients; however, note that the population of interest in their study (psychiatric patients) differs from those in the present investigation. The null results for hypotheses 4 through 7 are also inconsistent with the theoretical premise that depression is a result of blocked or complicated grieving and that it can be differentiated from normal grief by a consistent absence of healing- and growth-oriented reactions, such as the ability to see meaning for the disability as a loss. A number of explanations can be proposed for this surprising outcome.

One of the more parsimonious explanations is that the post-polio sample may be inadequate for the study of grief and depression. Emphasized by this interpretation are the limitations of the subject group employed in the study. It can be argued that a possible outcome of these limitations is that scores on the Beck Depression Inventory and the Response to Loss Inventory could have reflected characteristics of the participants other than depression or grief reactions. Since the Beck Depression Inventory includes a number of items on the physical symptoms of depression, for example, the BDI total score as a measure of depression could have been inflated due to the individuals' endorsement of such items as complaints of physical aches and pain, inability to work, and fatigue, which may be a very realistic and understandable part of their post-polio

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condition. It is also possible that after an extended period of years since their polio diagnosis and the end of their best physical functioning, the participants may have long resolved their loss issues, and scores on the coping-oriented RTL subscales of Holding On and Letting Go may have merely reflected their long-standing style of solving problems or coping with stress in general rather than their reactions of grief to their disability.

Another possibility is that despite the participants' attempts to focus their attention on issues relevant to their disability, their responses to the research questionnaires might have included reactions to a range of unrelated issues in their lives as a potential source of data contamination. There are at least two reasons for a serious consideration of this possibility with the post-polio population. As the vast majority of polio survivors is over the age of 30, the focus of these individuals' consciousness may be on a variety of middle and late adulthood issues unrelated to their post-polio conditions, such as issues of their children's separation and individuation from them, the deterioration of cognitive capabilities, nagging minor health problems and related physical pain, as well as the health problems or even recent death of their friends and relatives.

In addition, the extended period of years since their polio diagnosis and the end of their best physical

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functioning could mean that issues of disability were far less relevant to them than the day-to-day stress of living with various types of frustration and irritation in our complex society. The multitude of problems unrelated to their disability could affect their thoughts and feelings and cloud their consciousness of disability-related issues. Therefore, in spite of the participants' best effort to restrict their responses to the research questionnaires to reactions to their disability, it is conceivable that the information they provided on the BDI and the second half of the relatively long RTL may have, at times, included reactions to the intruding issues of their immediate life situations.

Other interpretations can be proposed for the lack of significant relationships between depression and the healing/growth-oriented grief components of Perspective, Integration, Self-Empowerment, and Transformation. Although more conservative explanations may be preferred by empirically inclined researchers, a decision has been made by the investigator to include these interpretations as conceivable underlying phenomena in the current discussion in the hope of stimulating further theoretical speculations and investigative efforts. At present, much is still unknown about the process of psychological adjustment to disability as well as the relationship between grief and depression. In attempting to explore this uncharted

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territory, an openness to all possible explanations is an important part of scientific inquiry, as much as is careful empirical verification and rigorous scrutiny.

Perhaps one of the most intriguing alternative explanations for the finding of null relationships associated with research hypotheses 4 through 7 is that a substantial proportion of the post-polio subjects may have been highly oriented toward coping with or defending against their awareness of disability based loss issues and, as a result, minimally or inconsistently invested in accurately responding to the healing- and growth-based items in the second half of the Response to Loss Inventory. What has prompted this speculation are several observations.

In reflecting on the participants' attitudes toward the research task in this study, it was noted that more than 75% of those solicited to participate in this study expressed an interest to do so, suggesting an high response rate. This combined with the fact that these individuals had been involved in previous research in 1989 shows a relatively strong interest in research participation. This research interest may have an altruistic motivational base, as suggested by more than 20% who expressed their desire to be helpful to the investigator and other individuals with a disability without any specific prompt. Instead of hoping to gain psychological benefit for their own disability adjustment, this altruistic interest could conceivably serve

to maintain an external rather than internal focus of the participants' focus of consciousness and reflect a coping rather than growth orientation. The possibility of the participants' limited or inconsistent investment in responding accurately to items in the second half of the Response to Loss Inventory corresponds to the observation that response omission appeared to occur more frequently for inventory items in the second half of the RTL than those in the first half. This is consistent with the observation of Scott (1992) that lupus patients in his study appeared to systematically skip questions in their response which were related to the issues of death and dying.

The heuristic value of this interpretation is further suggested by its agreement with a couple of clinical observations regarding the group dynamics of persons with chronic debilitating conditions. It has been observed that many support groups for individuals with chronic health problems tend to normalize and encourage a strong coping orientation (Schneider, 1995) and that many individuals with multiple sclerosis who experience intense reactions of anger and sadness tend to leave their multiple sclerosis support groups prematurely due to a sense of incompatibility with the strong group focus on overcoming, managing, and coping with their disability (Plavnick, 1995). In fact, some of these support groups may discourage reactions of grief and even harbor resentment toward members who decide to leave

with a sense of resolution, healing, and growth beyond their loss issues.

As with these individuals, the possibility that the post-polio participants in the present study as a group exhibited a predominantly coping rather than growth orientation even after an extended period of years since their diagnosis and end of best physical functioning not only provides an account for the lack of relationships pertaining to research hypotheses 4 through 7, but it may have significant implications regarding the existence of unique human psychological response to chronic health problems compared to other types of loss experiences and acute disabling conditions.

Another interpretation of nonsignificant results pertaining to research hypotheses 4 to 7 is that rather than an absence of relationships, there might be a combination of two distinct counterbalancing patterns of positive and negative relationships. In other words, the failure to find significant relationships does not negate the possibility that the results contain two relationships of opposite directions in two sub-groups of the research participants. For example, negative relationships may exist between depression and the healing- and growth-oriented components of grief for participants who are relatively aware of and have worked through loss issues associated with their disability, while positive relationships can be found

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between the same set of variables for those who persistently invest a major proportion of their energy into the restriction of their loss awareness through excessive attempts to cope with their disability. Based on this concept of defense against loss awareness, the tendency of individuals in the latter sub-group to indicate positive changes of healing and growth despite their relatively high intensity of depression may be considered a sign of pseudo-healing, pseudo-growth, and pseudo-adjustment to their disability.

An additional alternative interpretation is based on the fact that a small number of participants omitted response to a large number of items on the Response to Loss Inventory and that the healing- and growth-oriented RTL subscales of Perspective, Integration, Self-Empowerment, and Transformation consist of the last 43% of the 259-item questionnaire. This points to the potential cumulative effects of such factors as subject inattention, fatigue, or other similar difficulties in responding to the RTL items as potential sources of erratic response bias and, consequently, contributors of non-significant findings. Another potential source of subject response bias may be a diminished sense of involvement with the healing and growth aspects of the grieving process due to the remarkable length of time since the onset of their disability. Stated differently, a flip-side of the old saying that time heals

all wounds is that time can sometimes make us forget and fail to appreciate how much change and growth we have gone through. Whether feeling depressed or not, most of us tend to look into the future for further experience of success rather than stopping to count the blessings in our past, and problems in helping people sustain the benefits of positive changes in their past such as therapeutic gain are familiar challenges for mental health practitioners.

In reflecting on additional alternative interpretations, it is important to point out that an optimal characteristic of data distribution in the investigation of relationships is an adequate amount of variability in both the independent and dependent variables. The variability of data in the present study is less desirable than that found in the study by Schneider, Hoogterp, and Picone (1992); for instance, the variance of the BDI scores in their study was 86.1, while most participants in the present study were in the normal range of depression (with a variance of 44.22). It might be possible for significant relationships to be found between depression and the healing- and growth-oriented components of grief if this study was replicated on a group with a greater variability and intensity of both grief and depressive reactions; however, considering that only one of the correlations found (for depression and Integration) was

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negative, it is unlikely that increasing variation would lead to findings of significant *negative* correlations.

Finally, there certainly exists the possibility that there truly is no relationship between these four phases of grief and amount of depression within the population studied. Given that this population is somewhat unique (with the majority over 50, all with one specific disability) it may be that earlier findings in the literature do not generalize to this group.

Post-Hoc Analyses

General findings. As an exploration of generalizability regarding the relationships between depression and the seven phasic components of the grieving process, a series of post-hoc analyses of interaction effects were conducted. These set interactions incorporated a total of six demographic variables, eight health factors, eight biographical issues, and twelve disability characteristics. More than 97% of the 238 tests failed to yield significant findings (α=.01) of an interaction effect, a general pattern consistent with the premise that regardless of whether one prefers to emphasize the similarities or differences between grief and depression, the relationships between these two intrapersonal psychological phenomena overall appear to be relatively independent from external life circumstances.

A second general finding from post-hoc analysis is that upon a review of the seven statistically significant findings, there appeared to be a slight difference in the number of interaction effects between the coping/experience-oriented and healing/growth-oriented phasic components. This observation tends to reinforce the conceptualization of the seven phasic components of grief as comprising two global factors, and further suggests that the two global factors of grief may be qualitatively different from each other. This two-factor conceptualization of grief is supported by the correlations presented in Table 7. While eight of the background variables were significantly correlated with the coping/experience-oriented components of grief, only one correlated with the healing/growth-based components of grief (see Table 8). A plausible interpretation of this pattern of main and interaction effects is that, in terms of the nature of the subjects' responses to their disability as a loss, the healing- and growth-based aspects appear to be more impervious to changes in life and environmental circumstances than the coping- and experience-oriented phasic components. A possible theoretical explanation for these findings may be that while coping responses and experience of loss are susceptible to the influence of ongoing changes in the individual's relatively immediate life circumstances, a characteristic of transition to healing and growth in the grieving process is

a shift from an external to an internal focus of attention and energy investment (Schneider, 1995). This speculation is consistent with the finding that adjusted patients in cancer remission reportedly considered the issue of how long they would be able to live as no longer personally relevant to them (Werner, Schwartz, Lezotte, & Chojnacki, 1985).

The line of reasoning presented above prompts a number of questions regarding the assessment and facilitation of disability adjustment. Do interventional efforts directed at changes in the individual's external environment truly facilitate disability adjustment beyond the perpetuation of coping responses? How do we know if the individual is truly adjusted? Why are some individuals more adjusted than others when there is no significant differences in rehabilitation services provided for them? How do the "hardiness factors" mentioned in the initial sections of this report relate to internal versus external focus of attention? How should we facilitate the individual's shift to an internal focus as a strategy of helping them change, heal, and grow from the disability experience?

An emerging argument from the present discussion seems to be the use of attentional shift from an external to an internal focus as a viable sign of adjustment to disability as a loss. This premise appears to have important implications both in the areas of clinical practice and disability research, given the emphasis of most

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rehabilitation services today on encouraging coping responses of the individual and limiting the negative impact of disability through medical and environmental manipulation. There seems to be a need for increased attention to the internal psychological processes and phenomenological aspects of the individual in addition to such interventions as physical and occupational therapy, provision of assistive devices and vocational placement, removal of architectural barriers, active schedules of social activities, and equal opportunity legislation or social policies against discrimination.

A third observation considers the importance of the few findings of interaction effects on interpreting the difference between grief and depression in selected sub-samples. For instance, the number of years subjects were from the end of their best physical functioning has been found to have a negative interaction effect on the relationship between scores on the BDI and scores on the grief subscale of Letting Go. Thus, while the mean correlation between BDI scores and scores on Letting Go was .54, lending confusion to differentiating between grief and depression for most subjects, because of the negative interaction term, among the subjects furthest away from their best physical functioning, there is in fact almost no relationship whatsoever between scores on the BDI and scores on Letting Go. One might hypothesize, then, that among

subjects who are farthest away from the end of their best physical functioning, we can best differentiate between grief and depression. When these subjects score high on the BDI, it seems more likely that they are truly suffering from depression, rather than simply grieving normally for their loss. If the present study can be replicated on a different group of polio survivors with the same seven findings of interaction effect, then it would suggest the advisability of considering the six associated background characteristics in the differential evaluation of grief and depression. Obviously, further research is needed to confirm the utility of this assessment approach.

The observed mediational role of age in the relationships between depression and the coping-oriented aspects of grief is understandable given the salience of life-span development issues (Schneider, 1989) and the concept of growth over life experiences. After nearly a lifetime of collecting pearls of wisdom about how to deal with and grow from change, loss, and other traumatic events in life, there seem to be good reasons to suggest that compared with younger individuals, older people may tend to exhibit healthier or more normal grieving responses as they attempt to cope with their disability and other life stress with a lower intensity of depression. Those displaying significant signs of depression despite the benefit of their lifetime learning experiences may be truly depressed, have

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long-term susceptibility to stress, and need special attention and possible treatment. The point is that among this population and with this outcome (the coping-oriented phasic components of grief) we may expect there to be considerably less of a relationship between grief and depression.

Specific post-hoc results. In comparison with the task of accounting for the four general findings discussed above, interpretation of specific results of post-hoc analysis appears to be more difficult and problematic. In addition to the absence of repeated observations and the resulting sense of reinforced confidence in the observations, several of these findings appeared to be inconsistent with intuitive judgment and present a challenge for creative data interpretation. As indicated by the change of relationship between depression and the coping-oriented grief component of Letting Go in the negative direction, for example, the interactional effect of self-reported predisability depression appears to be inconsistent with the state-versus-trait perspective in differentiating between grief and depression. Perhaps one of the most parsimonious alternative interpretation is that given the common mistake of describing normal grief reactions as depression, self-reported predisability depression was, in fact, a successfully negotiated experience of normal grieving, which may have enhanced the participants' ability to deal with

loss and stress and reduced their susceptibility to depression. Based on this explanation, individuals who reported high intensity of depression with low coping responses were probably suffering from an earlier experience of unsuccessful grieving, which increased their vulnerability to depression. A second possible explanation is that perhaps a significant change of therapeutic nature occurred after the predisability experience of depression, which resulted in an increase of resilience and provide protection against the development of depression. It is possible that their experience of dealing with and transforming the loss of their disability was responsible for this therapeutic change.

A second potentially perplexing finding was that the relationship between depression and the grief component of awareness changed in a positive direction as a function of the participants' self-reported satisfaction with the amount of emotional support from their support groups. In other words, the more satisfied the individuals with the emotional support of their support groups, the stronger the positive association between depression and awareness of loss. This finding is not consistent with the belief that emotional support would lead to successful negotiation of the grief process and, therefore, a more differentiated response pattern of grief versus depression instead of increased symptomatic overlap between the two psychological phenomena.

In searching for a plausible explanation for this unexpected finding, it may be helpful to consider the meaning and function of support groups. As suggested by the term, support groups appear to address the need of individuals who need some form of practical or emotional support, and speaking positively about the help that they have received from the group along with complaints of depression and feelings of loss and grief seems to constitute a most favorable interpersonal posture for receiving more support from others. In other words, instead of only reporting their experience of loss awareness and depression, there is a possibility that subjects who had a relatively strong need to seek support from others might have unwittingly let their responses to the research questionnaires include certain aspects of their typically pleasing interpersonal style.

A third somewhat surprising finding of specific interactional effect was that the relationship between depression and the grief component of Transformation changed in the positive direction as a function of self-reported satisfaction with the amount of emotional support from friends. In other words, the more satisfied with support from friends, the stronger the positive association between depression and Transformation of loss. Given the supposedly grief-facilitating role of emotional support, one might have expected a change of this relationships between depression and Transformation in the negative direction toward a

response pattern of differentiation. The reasoning of an alternative view is similar to the interpretations discussed above. Again, the assumption is that a report of depression on the Beck Depression Inventory along with satisfaction with support of others suggests an inability to utilize interpersonal resources for coping, a potentially significant sign of depression. High degrees of self-reported involvement with loss Transformation in the context of depression suggests a possible inner struggle for movement toward the positive and may be a reflection of pseudo-growth and pseudo-Transformation.

Nonsignificant findings. In addition to a review of significant results, considerations of nonsignificant findings also lead to some interesting and important discoveries. Given the traditional emphasis of rehabilitation services on returning the individual to full-time employment and the focus of social work interventions on the marital and family relationships, for example, the nonsignificant effect of both marital and employment status appear to have some treatment implications. As indicated in Tables 8 and 9, neither marital nor current employment status was found to have any interactional effect on the grief-depression relationships or relate to these psychological factors in any significant way. Obviously, these observations suggest a need to focus more diagnostic, treatment, and service attention on the internal processes

and phenomenological world of our clients if we believe that their feelings matter to us and that psychological adjustment is as important as adaptation to the external environment. Clearly, there is a need for us to evaluate our working assumption that environmental interventions can lead to psychological adjustment.

A word of caution. It should be emphasized that without the benefit of *a priori* prediction based on sound theoretical foundation, the results of post-hoc analysis should be interpreted very conservatively. Interpretations for the four general post-hoc observations were presented with a sense of confidence as hypotheses pending further research verification because all of them were based on patterns of observations rather than a particular finding alone. Without the confirmation of repeated observations, however, single findings of significant interaction effects should be interpreted with care. Furthermore, considering the relatively small sample of this study for the purpose of large-scale systematic explorations and the large number of interactional effect tests used in the post-hoc analysis of data, the relevance of this word of caution cannot be overemphasized. Until thorough scrutiny and a systematic verification through further research efforts, the primary value of the specific results of post-hoc analysis and interpretation is primarily heuristic in nature.

Differentiation Between Grief and Depression

As stated earlier, a major impetus for the present investigation has been a lack of semantic precision and consistent empirical evidence in the identification and differentiation of depression from grief, which is believed to be responsible for much of the confusion concerning the role of depression in the process of psychological adjustment to disability. Through the testing of seven research hypotheses on the relationships between depression and the seven phasic components of grief, it was hoped that the results of this study would lead to patterns of observations that would facilitate an empirically substantiated differentiation between grief and depression. The reasoning underlying the design of this correlational field study was relatively straightforward. It was expected that significant findings of positive relationships would serve to define the similarities and significantly negative relationships would highlight the differences between grief and depression. Based on a critical review of relevant literature, the prediction was made that although grief and depression could be similar in the early phases of disability adjustment, significant negative relationships should be found between depression and the healing-oriented components of Perspective and Integration and the growth-based components of Self-Empowerment and Transformation.

The results of hypothesis testing confirmed a great deal of symptomatic overlap between depression and the first three phasic components of grief, but failed to yield any findings of a negative relationship; in fact, three of the four correlations that were "supposed" to be negative were actually positive in nature, although generally very small. Thus, while not all hypotheses were met, and the lack of negative relationships for the last four grief subscales challenges some of observations of Schneider and Deutsch (1992a), there is some indication that for the latter stages of grief, grief and depression tend to be fairly independent. Thus, one of the basic premises of the present research, namely that grief is not a singular construct, has been supported. The use of seven subscales of the grief measure can be seen as an step towards the conceptualization, operationalization, and exploration of this multifaceted process.

However, a closer review of previous discussions in the literature suggests that this effort was probably insufficient for at least two reasons. First, it appears that practitioners and researchers in general and developers of both the Beck Depression Inventory as well as the Response to Loss Inventory did not include systematic considerations of differential diagnosis in their instruments at the time of their construction. It is quite understandable that a natural first attempt at the

development of a new instrument is to try to capture the primary characteristics of the concept or phenomenon the instrument purports to measure. Considerations of differential diagnosis seems to become important only after this initial task of defining characteristics is successfully accomplished, which is a rather ambitious and frequently long-term goal in social science research. Therefore, although the use of the seven subscales of grief instead of a global measure appears to be a meaningful improvement, the subscales used seem to still address the characteristic features of grief rather than its differences from depression. In this case, the dramatic overlap of typical symptoms between grief and depression appeared to interfere with the delineation of differences. An implication of this observation seems to be the inclusion of criteria for differential diagnosis as a reasonable next step in the refinement of both the grief and the depression measures.

Toward this systematic exploration of empirically verifiable criteria for differential diagnosis, a review of suggested differences between grief and depression in the literature seems to point to three general directions. First, much of the discussion on the differences between grief and depression appears to be at the level of specific behavior rather than any particular scale or general concept. For example, a characteristic which distinguishes

grief from depression in the transition from loss awareness to healing is a sense of looking better though not feeling better; depressed individuals frequently cannot even manage to look better (Schneider, 1995). Although a systematic compilation of these diagnostically relevant behaviors into a single scale would be conceivable some time in the future, most of the current discussions in the literature and clinicians' attention appear to center on a micro-analysis of the individual's behavioral presentations. Second, differentiation of grief from depression appears often to involve considerations of process dynamics or changes of behavior over time rather than merely the tabulation of current symptoms, which seems to be a common strategy of the paper-and-pencil approach of evaluation. An example of such process considerations is the inability to consider pleasure which seems to change over time in normal grief but remain somewhat constant in depression.

A third observation on the issue of differentiation between grief and depression is that theoretically driven perspectives on the differentiation of grief and depression often include considerations of the individual's developmental experiences and psychosocial history. Not surprisingly, this is probably most apparent in psychodynamically based approaches. Finally, there still seems to be a great deal that we do not know about differentiating grief from depression. At times, one can

not help getting the impression that conceptual distinction between these two phenomena is assumed without any clear stipulation of what exactly constitute the difference. Clearly, there is still a great deal that we need to learn from our clients and there may be much merit to the idea of soliciting their involvement in our search for answers. In the absence of a set of clear guidelines, there is a need for a thoughtful evaluation and careful application of view points and available empirical findings in one's formulation of an approach to grief-depression differentiation.

An important step in the empirical exploration of grief and depression has been the advent of the Response to Loss Inventory as a reliable and comprehensive measure of grief reactions. Using this measure as a basis for systematic comparison and the accumulation of knowledge, the present study can be seen as part of a series of investigative efforts toward the delineation of similarities and differences between grief and depression. Based on a study of college students with relationship loss and bereavement experiences, Deutsch (1982) reported that individuals with high intensity of depression tended to invest the majority of their energy in only physical, cognitive, emotional or behavioral dimension of the grieving process, suggesting a split or lack of integrated response to loss as a characteristic of depression. McGovern (1983) indicated a decrease in depression scores and an increase in grief

awareness scores as a result of an alcoholism treatment program, suggesting that increased access to grief seemed to be associated with diminished depression and that depression could be conceptualized as an inability to tolerate loss awareness and an inability to grieve.

Schneider, Hoogterp, and Picone (1992) found that depression correlated positively with the grief components of Holding On, Letting Go, and Awareness and negatively with the healing- and growth-oriented grief components of Perspective, Integration, Self-Empowerment, and Transformation. This study on a combined group of depressed and grieving individuals suggested that depression might be defined as the inability to consider the healing and growth aspects of loss. Results of the present investigation confirm the symptomatic overlap between depression and the coping/experience aspects of grief, support the generalizability of grief/depression relationships, and point to interaction effects related to several important issues. This study suggests that inclusion of pertinent background considerations such as self-reported satisfaction with emotional support from others and the age factor could facilitate the differential diagnosis of depression. In other words, symptoms of depression may be especially meaningful for diagnostic purposes when the psychosocial context of the individual is taken into consideration. It is suggested that these empirically supported findings from

this series of inquiry can be incorporated into the diagnostic and conceptual framework of clinicians and researchers in the rehabilitation as well as the mental health professions.

Finally, the current discussion on the differentiation between grief and depression would not be complete without a consideration of the nature of reactive depression. Although not a focus of the present study, the relevance of this issue needs to be acknowledged because the differentiation between grief and depression appears to parallel and may very well be identical to the distinction between reactive and endogenous depression (Nelson & Charney, 1980). The reasoning behind this view is that, from a strictly trait-versus-state perspective, reactive depression can be distinguished from its endogenous counterpart based on the relatively short duration of symptoms and, therefore, should be considered to be the same as the phenomenon of normal grief. In other words, depression can be differentiated from grief based on the persistence of symptoms rather than the presence or absence of specific symptoms. Although this argument is consistent with the finding of positive relationships between depression and the grief components of Holding On, Letting Go, and Awareness, it does not provide a specific explanation for the negative relationships in the study of Schneider, Hoogterp, and Picone (1992) and the lack of

relationships in the present investigation between depression and the grief components of Perspective, Integration, Self-Empowerment, and Transformation.

In addition, it appears to contradict discussions of symptoms such as self-reproach (Freud, 1917), unmodulated physical response, a lack of shifting emotional states within the same day, a lack of favorable response to interpersonal warmth, and negative fantasies or imageries (Schneider & Deutsch, 1992b) which are believed to differentiate depression from normal grieving. Before definitive evidence becomes available, the nature of reactive depression is clearly an area in need of further investigation as we attempt to achieve a more refined differentiation between grief and depression.

Implications for Clinical Practice

Certainly, one of the most significant findings of this study was the symptomatic overlap between the early stages of grief and depression, and, in contrast, the lack of overlap between depression and the later stages of grief. Of the seven phasic components of grief, awareness has been most commonly referred to as a depressive symptom and the fact that it was found to have the highest positive correlation with depression in this study appears to convey a message of mixed blessing for mental health and rehabilitation practitioners. Given the empirically verified similarities of symptoms between these two types of

psychological reactions, identifying intense conscious experience of loss issues as depression or vice versa based on typical manifest symptoms is not entirely unreasonable and, in fact, reflects some accurate perceptions of primary problem characteristics. In an era where credibility and professional prestige for health care providers tends to be associated with the concrete demonstratability of their diagnostic reasoning and interventional efficacy and the basis of psychologically oriented services is often considered to be little more than intuitive manipulation of abstract theoretical constructs, it is encouraging for rehabilitation and mental health practitioners to see clear support of empirical reality for some of their diagnostic impressions.

If past clinical wisdom and the converging themes of time-tested psychological theories demands the conceptualization of grief and depression as two qualitatively different phenomena, however, the significant symptomatic overlap presents a remarkable challenge for the practitioner in the area of differential diagnosis and treatment. Toward the resolution of this problem, it is important to point out that adequate differential diagnosis of any condition or disorder should be the result of a careful consideration of both inclusion and exclusion criteria. As with the diagnosis of any condition involving overlapping symptoms, it may be suggested that inaccurate

identification of the awareness component of grief as depression or vice versa probably results from an excessive reliance on the inclusion criteria of diagnosis. While it is logical to emphasize the importance of considering the exclusion criteria of diagnosis, a major problem pertaining to the differential diagnosis of depression and the grief component of awareness is that even with the use of depression and grief measures of empirically tested reliability, the present study failed to yield any significant finding of negative relationships between the two constructs. With a very limited number of empirically verified differences from other studies at present, rehabilitation and mental health practitioners will have to continue relying mostly on criteria for differential diagnosis that have yielded clinical rather than scientific validity.

Certain amounts of unfounded theoretical bias and personal preference may be inevitable in the selection and use of these diagnostic criteria, and it would be important for clinicians to be extremely open to the possibility of error and scrutinize their judgment on a regular basis regarding the differential diagnosis of grief and depression. If realistically possible, it may be advisable to seek routine consultation with a colleague. If the clinician subscribes to a trait-versus-state distinction between depression and grief, it would be helpful to review

client progress, his/her diagnostic judgment, and treatment plan at regular intervals on a longitudinal basis. However, he/she must also be sensitive to the client's changing life span developmental needs, how the satisfaction of these needs may be interfered by the disability, and how interventions should be adjusted, modified or redesigned as a result.

The finding of positive association between depression and the grief component of Holding On has provided an impetus for several intriguing speculations regarding the role of rehabilitation services and the personal growth issues of helping professionals. It appears that much of medical treatment and rehabilitation services is intended to help enhance clients' coping ability through the encouragement of the fight response. To the extent possible, many primary treatment components such as physical and occupational therapy, instructions on activities of daily living, scheduling of recreational and socialization activities, vocational rehabilitation services, and the emphasis on "I can" rather than "I no longer can" are all directed to the return of the individual to the premorbid level of functioning despite the negative impact of the disability, which may be considered a type of "Holding On" response. Although there have been many published reports on the facilitative impact of these service activities in the process of disability adjustment, the effect of the

fight response over an extended period of years is not very clear.

An interpretation of the results of the present investigation based on the trait-versus-state perspective of depression-grief differentiation appears to suggest that fixation on the coping response may be related to a failure to grieve and, consequently, the development of depressive symptoms.

It is conceivable that some rehabilitation professionals may attempt to justify their activity orientation and coping emphasis by arguing that the learned helplessness theory would refute the preceding interpretation unless the emphasis on the "I can" is futile. However, it appears that this justification is based on an inappropriate application of Seligman's (1975) theory and an inadequate understanding of the grieving process rather than true client treatment needs for at least five reasons. First, a pervasive emphasis on coping based on a theory of depression rather than a model of normal grieving and adjustment implies that rehabilitation clients are more susceptible to depression than the general population, an assumption which contradicts a preponderance of evidence in the empirical literature. Second, introducing interventions on a large scale to counteract learned helplessness without consistent and specific evidence of depressive symptoms in each individual client constitutes a violation of the

concept of individualized treatment and questionable clinical judgment. Third, as Trieschmann (1988) has pointed out, what is important in Seligman's theory is the belief helplessness rather than a seemingly helpless external circumstance. An adequate understanding regarding this aspect of Seligman's theory suggests a primary focus on the phenomenological world of the individual rather than his/her day-to-day activities.

The fourth reason is that a salient therapeutic principle in mental health practice is to play to the strength of rather than assume weakness in our clients. Given the observation that people differ from one another in their susceptibility to the belief of helplessness (Trieschmann, 1988), a reasonable goal in rehabilitation should be to understand better the process of developing resilience and help our clients learn from their more adaptive peers rather than to provide interventions on a large scale based on the psychopathological susceptibility of a small number of highly vulnerable individuals in our client population. The pervasive activity and "I can" orientation seen in many rehabilitation settings today appears to be based on the overprotective assumption that our clients would suffer from learned helplessness and depression without such an emphasis. Finally, indiscriminate emphasis on the "I can" is not only less than sophisticated but may be counterproductive if the helping

professional does not have a thorough understanding of the psychodynamics of individual clients and a theoretical framework for ongoing appraisal of their treatment needs.

This last reason is in need of elaboration. The emphasis on "I can" has been discussed in the literature as a desirable practice and the concept of "ability rather than disability" is frequently introduced by direct service programs for individuals with disability and disability support groups. It is the observation of the investigator, however, that although usually with the intention of helping encourage positive attitudes and facilitating post-disability adjustment, these concepts are often introduced as catch phrases with little attention to or conceptualization of how they may be interpreted and what psychological reactions are generated as a result.

According to Schneider (1994), the process of normal grieving essentially involves the reactions of discovering and acknowledging what is loss, what is left, and what is possible. Relative to the concept of "I can", these phasic reactions can be translated to the statements of "I no longer can", "but I still can," and "as a result of learning to change and grow from my disability, now I can." For individuals in the process of developing the second and third types of phasic reactions discussed here, the concept of "I can" may be, indeed, facilitative of psychological adjustment to disability. For those in the initial phase of

the grieving process and in need of developing a healthy degree of loss awareness, however, prematurely and persistently encouraging the belief of "I can" may actually prompt the individual to employ and fixate on the mechanism of denial at the expense of successfully negotiating the grieving process and ultimate post-disability psychological adjustment.

The primary purpose of discussing the "I can" concept here is not to challenge fundamentally its potential utility and the activity orientation; rather, it is hoped that such a discussion can effectively highlight the importance of providing interventions based on a thorough understanding of our clients' internal world, careful ongoing appraisal of their treatment needs, and an adequate theoretical framework for conceptualizing client reactions. It is the belief of the investigator that the activity orientation, the "I can" concept, and Seligman's theory of learned helplessness may be the conceptual and interventional strategies of choice in the treatment of depression. Since the occurrence of depression is more the exception than the rule in the general population and in the absence of consistent evidence for significantly higher incidence and prevalence of depression among individuals with disability, however, one cannot overlook the possibility that the pervasive activity and coping orientation in many rehabilitation settings today

may be a response to the needs of the helping professionals instead of the true treatment priorities of their clients.

In an open-ended search for potential contributors on the part of the helper for the activity emphasis, it is worthwhile to note a parallel between the large proportion of coping-oriented treatment components in a typical rehabilitation setting and the observation that a significant proportion of helping professionals rely on the strategy of "Holding On" in their personal as well as professional lives (Schneider, 1995). It is a commonly accepted assumption among those directly involved in the training of mental health service providers that their trainees often enter into the helping profession with unresolved personal problems of a psychological nature and that attempts to resolve or avoid these problems at a sub-conscious level which impedes their sensitivity to the treatment needs of their clients is often associated with the phenomenon of progress-interfering countertransference. Considering the possibility that professional helpers often live vicariously through their clients' problems and that these problems often interact with their own psychological needs, the importance for practitioners to have a thorough understanding of their own unresolved psychological issues and needs, an accurate or undistorted perception of their clients' needs, and a healthy sense of professional

boundaries between their clients and themselves can not be overemphasized.

Beyond the obvious rationale of anticipated and the empirically verified treatment efficacy hoped for, the helping professional needs to consider the possibility of any personal motivation that he/she may have for the selection and use of particular treatment strategies. To do so, he/she needs to have a fairly high level of self-awareness and practiced commitment to authentic living and personal growth. To the extent possible, administrative policies and supervisory relationships in the rehabilitation setting should also incorporate strategies for supporting practitioners' self-reflections on an ongoing basis. For example, time should be made available for such self-reflections, and practitioners should be encouraged to participate in personal growth workshops with special continuing professional development credit provided. Particular attention should be directed toward the review of cases involving the use of holding on coping strategies for individuals who have been disabled for an extended period of years with limited recent deterioration of functioning. If the provision of such services is justified on the ground of recent changes in the individual's life circumstances or developmental needs, the clinician needs to have specific knowledge of the change and the time that it occurred. For clients with a chronic disability such as post-polio

conditions, the suitability of using holding on oriented indicators of disability adjustment such as the frequency of recreational activities in the local community, level of physical activities, and employment status may need to be carefully reevaluated.

As with the phasic components of Awareness and Holding On, the finding of a positive relationship between depression and the grief component of Letting Go also seems to pose a special challenge for rehabilitation practitioners in the area of differential diagnosis. Consistent with predominant views in the traditional psychological literature, the results of the study point to excessive use of the flight or avoidance response to disability over an extended period of years as a correlate of depression. Although this finding is highly compatible with the trait-versus-state and the failure-to-grieve perspectives on depression, actual diagnosis of this persistent maladaptive flight response to disability may be more difficult, the reason being that minimization of the significance of disability as a core feature of Letting Go appears to bear some resemblance to the subordination of physique which has been described as a characteristic of disability acceptance (Dembo, Leviton, & Wright 1975). Again, research evidence to date does not provide specific guidelines for differential diagnosis in this area.

Given the need to rely on clinical judgment, three logical strategies can be proposed to facilitate the differentiation of depression and the grief components of Letting Go. First, individuals excessively employing the Letting Go response may exhibit subtle signs of tension, anxiety or avoidance when they are asked to consider the extent of their loss whereas disability acceptance may be characterized by a sense of openness or resolution. Secondly, Letting Go may be characterized by a sense of pessimism or negativism while subordination of physique may convey a positive message of growth and change. Thirdly, the other characteristics of disability acceptance can be incorporated into the assessment process along with the subordination of physique, including an enlargement of scope of values, containment of disability effects, and Transformation from comparative to asset values. The principles of comparing clients' self-report with their behavior and exercising careful clinical judgment is especially relevant when considering the failure of the study to yield any significant linear association between depression and the healing-based grief components of Perspective and Integration as well as the growth-oriented components of Self-Empowerment and Transformation.

Since individuals who acknowledged an equivalent extent of experience with the healing- and growth-oriented aspects of the grieving process have been observed to report various

intensity of depression, self-reports of change, and growth should not be assumed to indicate favorable psychological adjustment to disability until ample collaborating evidence of adequate reliability and validity can be obtained and carefully considered. As a logical extension of validity concerns regarding self-reported aspects of grief as indicators of adequate adjustment, it may also be important to have a healthy sense of skepticism concerning the clinical validity and utility of widely presumed signs of adjustment such as full employment status; mastery of activities of daily living; high frequency of active physical and social activities; and self-reports of emotional coping, adaptation, and life satisfaction in the assessment of disability adjustment and psychological adjustment in particular.

The results of post-hoc analysis appear to be highly relevant to clinical practice. The practitioner can incorporate into the diagnostic process background considerations associated with the more differentiated response patterns of grief versus depression, as indicated by significant *t*-values in Tables 9 and 10. For instance, among older polio survivors, it may be easier to differentiate between grief and depression than for younger survivors. Among younger survivors, scores on the two measures are highly related, and it will be difficult for a practitioner to diagnose a younger person coming in with

both high scores on depression and grief as definitely being depressed or definitely grieving. However, for the older person, differentiation between depression and grief will be easier, given that in that population, there seems to be little relationship between the two constructs. Because the results of the present study do not rule out the factor of age as a covariate of and merely a reflection of other variables such as the length of time since the end of best physical functioning, a healthy sense of skepticism is recommended for clinicians in their day-to-day work with individual polio survivors.

Since external life circumstances such as marital and employment status were not found to be related to involvement with the grieving process in general and the aspects of healing and growth in particular, adequate psychological adjustment can not be assumed on the basis of such progress indicators as successful vocational placement, increased levels of physical activity, and heightened involvement with social and recreational activities. Diagnosis, monitoring, and treatment of psychological concerns should be considered to be an ongoing and essential part of the rehabilitation process.

Finally, since the reliability of specific post-hoc findings is pending further research verification, the exercise of thoughtful clinical judgment is crucial.

Suggestions for Further Research

A range of alternatives can be suggested in terms of directions for further research. Given the fact that the results of the present study are somewhat inconsistent with the report of Schneider, Hoogterp, and Picone (1992) regarding the existence of negative relationships between depression and the healing/growth-oriented grief components of Perspective, Integration, Self-Empowerment, and Transformation, it is recommended that this study be replicated on a different group of adult polio survivors. Verification of results through a replication of the study is also needed because the depression and grief data used in the present investigation included a number of extremely low scores. If the results of the study can be empirically verified, the generalizability of these findings can be explored through similar studies on individuals with other chronic disabling conditions and comparisons made with individuals with other loss issues such as acute forms of disability, bereavement and relationship loss.

A major limitation of the study appears to be the favorable socioeconomic status of the subjects and their willingness to participate in psychological research. Since the concepts of defense against loss awareness, tolerance of unpleasant affect, and openness to external influences such as emotional support from others are highly relevant in the study of depression and grief, the use of responses from

subjects who are ambivalent about the exploration of their psychological reactions may result in an increased range of depressive symptoms and intensity. Given the fact that much of social science research tends to involve correlational field studies, this expanded range of participant reactions would conceivably enhance the probability of finding significant and relevant results and the quality of future research. Although technically desirable, the recruitment of depressed individuals and those who feel ambivalent about the explorations for psychological research would understandably present an ethical dilemma and a great logistical challenge for researchers.

Considering the diagnostic and possibly treatment value of the Beck Depression Inventory and the Response to Loss Inventory and pertinence of sensitivity to reactions of grief and depression in the rehabilitation setting, one suggested solution to this problem would be the incorporation of both of these instruments into the ongoing process of assessment, monitoring, and treatment evaluation. Using assessment tools with empirically tested reliability and validity for clinical purposes would help clients gain a sense of reciprocity and concrete benefit for their investment in the research, and the incorporation of research data gathering with clinical practice may help prevent a compartmentalization of the helping profession into academic versus clinical sectors as well as an

accompanying sense of isolation and even hostility between them, which seems to be such a common part of our professional reality.

Our current difficulties in the empirical differentiation between grief and depression also suggest a few directions for future research. As a focus of discussion in much of the relevant literature to date (e. g., Schneider & Deutsch, 1992b), a logical next step should be an empirical verification of diagnostic utility for each of the specific discriminating symptoms of depression such as fixed mood of despair and withdrawal rather than a range of emotions; negative fantasies and imageries rather than vivid, clear, and sometimes comforting dreams; persistent rather than variable restriction of pleasure; responsiveness to promises, pressure, or urging rather than interpersonal warmth and reassurance; a loss of connection with the self and others rather than a sense of reassurance by the presence of close friends; and unmodulated physical response which tends to increase one's vulnerability to illness.

Given the very limited amount of systematic and comprehensive research today on the nature of the grieving process, its relationships with and differentiation from depression, and the change of these reactions across an extended period of time, the use of both the Beck Depression Inventory and the Response to Loss Inventory with subjects

with different disabilities and those with other loss issues in a series of longitudinal studies with repeated measure designs should result in a body of knowledge that would be invaluable in both general clinical and rehabilitation psychology. As a follow-up to the post-hoc findings of this study, the sensitivity of researchers to the potential influence of early and life span development issues, family relationships as well as psychiatric history may greatly enhance our understanding regarding the roles of these salient contextual considerations in the process of adjustment to disability and traumatic life events in general. Since our knowledge on the differentiation and relationships between grief and depression is very sketchy at present and much can be learned from open-ended explorations of research participants' reactions, it may be helpful to incorporate into future studies the use of unstructured or semistructured interviews.

As stated earlier, a major stimulus for the present study has been a discrepancy of perspectives on the role and proper treatment of depression in the process of adjustment to disability. It is expected that a refined and empirically based definition of depression as differentiated from grief through the use of both a grief and a depression measure of established reliability and validity would eventually result in the resolution of this discrepancy. With the limitations of research technology and our current

knowledge in this area, the present study is merely a beginning step in a series of needed investigative efforts toward this goal. It is further believed that adequate delineation of similarities, differences, and relationships between grief and depression through rigorous research verification would not only contribute to this resolution of discrepancy in rehabilitation but also have broader implications for the mental health profession. One of the questions frequently challenging our observational ability is the issue of why some individuals seem to be more capable or robust than others in the area of dealing with stress and traumatic life events such as a physical disability. In an era of somewhat limited mental health resources, this question about the individual difference of resilience should be highly relevant to the day-to-day clinical and administrative decisions of who should receive more therapeutic attention and environmental support than others.

Given our widespread perception of grief as a normal adjustment process and depression as a potentially pathological condition, it appears that once adequately differentiated, the individual's grief and depression scores can be used as a criterion for treatment and support resource allocation. The diagnostic utility of grief and depression can be explored by correlating them with other indicators of adjustment. Correlations of grief and depression with subsequent progress and adjustment can also

be used for predicting success and identifying at-risk individuals for more intensive treatment. The use of grief and depression measures before and after certain treatment procedures also provides a method of treatment and progress evaluation. Studies exploring the relationships of grief and depression with other psychological variables such as external versus internal locus of control and type A personality can also stimulate further insight into the inner world of people with disability and the process of adapting to change in general.

A Concluding Statement

> When life fits our expectations, we think of it as an opportunity; when it does not, we think the world failed us--not our expectations. ... There are many diseases and disabilities of the body, but there is only one plague of the mind. It is to believe that one's life is not enough. ... What became new and exciting was this idea that perhaps the power to determine how I look upon life was within me. ... To accept, gracefully, something that is awful seems impossible and a contradiction in terms. But once you get the hang of experiencing things from the inside, anything becomes possible. ... When you try to explain the unexplainable, you can not. Then you are forced to give up your narrow and literal beliefs. Out of the confusion can emerge a truth beyond words and stories--one that casts the individual into a higher plane of consciousness (Beisser, 1989).

Exploring the relationships between grief and depression represents an attempt at addressing a much broader question: How can we help our clients benefit from the growth and transformative experience of their adjusted peers? Seeking answers to this question is not only professionally

important but personally relevant. As Arnold Beisser so eloquently pointed out, "it is better to be a doctor than a patient, and not only because it is more blessed to give than to receive." For those of us who have a clear awareness of our own inner dynamics, it probably should not be a surprise that our career decisions as helping professionals are not entirely altruistic. Scholars in the field of animal science believe that learning about the behavior of other animals is a way of learning about ourselves.

It is the personal conviction of the investigator that one of the greatest benefits of living and working with people from a different culture is that the discovery of differences provides a mirror on our own behavior; an excellent opportunity for gaining insight into our own needs, motivation, and conflicts; a repetitive reminder of such salient issues of change such as choice, personal responsibility, and consequences; and a new horizon of alternatives for personal growth. Similarly, the potential growth-promoting utility of countertransference reactions and the patient as the therapist of the professional helper are not new concepts in the psychological literature. In some ways, witnessing and experiencing the trials and tribulations of adjustment to a physical disability is a privilege. For Beisser, the adjustment to disability is a process of learning about the "grace to accept with serenity

the things that can not be changed, courage to change the things which should be changed, and the wisdom to distinguish the one from the other" (Niebuhr cited by Beisser, 1989). Most of us can readily see the relevance of these personal growth issues in our own lives. It is this recognition of universality of experiences and the resulting commitment to the ongoing process of self-exploration that helps us develop a healthy sense of respect for our clients, appreciate the psychological dimension and the phenomenological aspects of the disability adjustment process and guard against our acting on our feelings of undesirable countertransference to the detriment of people we intend to help. It is with this sense of humility and authenticity that we can most effectively uncover with our clients the secrets of changing, growing and, in the words of Beisser, "flying without wings."

APPENDICES

APPENDICES

APPENDIX A

BIOGRAPHICAL DATA QUESTIONNAIRE

BIOGRAPHICAL DATA QUESTIONNAIRE

Please answer all of the following questions

1. Today's Date: _____/_____/_____
(Month) (Day) (Year)

2. Do you have any children? ___Yes ___No
   - (If no, please skip to question 3 below.)
   - If yes, please indicate below the sex and age of each child and whether he/she is currently living with you.

	Sex		Age	Living with you?	
a.	___Male	___Female	_____	___Yes	___No
b.	___Male	___Female	_____	___Yes	___No
c.	___Male	___Female	_____	___Yes	___No
d.	___Male	___Female	_____	___Yes	___No
e.	___Male	___Female	_____	___Yes	___No
f.	___Male	___Female	_____	___Yes	___No
g.	___Male	___Female	_____	___Yes	___No
h.	___Male	___Female	_____	___Yes	___No

3. Are you currently employed? ___Yes ___No
   - (If no, please skip to question 4 below.)
   - If yes:

   a) How many hours per week do you work? _____

   b) Your current occupation: _____

   c) How satisfied do you feel about your current job situation? (Please check only one)
      ____ 1. Extremely dissatisfied.
      ____ 2. Very dissatisfied.
      ____ 3. Satisfied.
      ____ 4. Very satisfied.
      ____ 5. Extremely satisfied.

4. Are you currently doing any volunteer work? ___Yes ___No
   - (If no, please skip to question 5 on the next page.)
   - If yes:

   a) How many hours per week do you work? _____

   b) Type of volunteer activity: _____

c) How satisfied do you feel about your current volunteer work situation? (Please check only one)

____ 1. Extremely dissatisfied.
____ 2. Very dissatisfied.
____ 3. Satisfied.
____ 4. Very satisfied.
____ 5. Extremely satisfied.

5. Currently, how would you rate your general health? (Please check only one)

____ 1. Poor.
____ 2. Fair.
____ 3. Good.
____ 4. Very good.
____ 5. Excellent.

6. How severe do you believe your physical disability is? (Please check only one):

____ 1. Not severe at all.
____ 2. Not very severe.
____ 3. Moderately severe.
____ 4. Very severe.
____ 5. Extremely severe.

7. What do you believe is your chance of complete cure from your physical disability? (Please check only one)

____ 1. 0 percent chance.
____ 2. 25 percent chance.
____ 3. 50 percent chance.
____ 4. 75 percent chance.
____ 5. 100 percent chance.

8. How satisfied do you feel about the amount of emotional support that you have received from (Please check only one for each of the following):

a) Your doctor(s)

____ 1. Extremely dissatisfied.
____ 2. Very dissatisfied.
____ 3. Satisfied.
____ 4. Very satisfied.
____ 5. Extremely satisfied.

b) Your family
____ 1. Extremely dissatisfied.
____ 2. Very dissatisfied.
____ 3. Satisfied.
____ 4. Very satisfied.
____ 5. Extremely satisfied.

c) Your friends
____ 1. Extremely dissatisfied.
____ 2. Very dissatisfied.
____ 3. Satisfied.
____ 4. Very satisfied.
____ 5. Extremely satisfied.

d) Your counselor or psychotherapist
____ ** I do not have a counselor or psychotherapist.
____ 1. Extremely dissatisfied.
____ 2. Very dissatisfied.
____ 3. Satisfied.
____ 4. Very satisfied.
____ 5. Extremely satisfied.

e) Support group(s)
____ ** I do not participate in a support group.
____ 1. Extremely dissatisfied.
____ 2. Very dissatisfied.
____ 3. Satisfied.
____ 4. Very satisfied.
____ 5. Extremely satisfied.

9. <u>Reactions to Your Physical Disability:</u>

a) How responsible do you feel you were for how your physical disability occurred? (Please check <u>only</u> one)
____ 1. Not responsible at all.
____ 2. Not very responsible.
____ 3. Moderately responsible.
____ 4. Very responsible.
____ 5. Extremely responsible.

b) Has there ever been a time when you realized that you were not going to be the same physically as you had been before your disability? ___Yes ___No
- If yes, do you have a specific memory of when this realization first happened? ___Yes ___No
  - If yes, when was that? ____/____/____
    (Month) (Day) (Year)

c) Have you thought of your disability as a loss (absence of something valuable or meaningful for you)? ___Yes ___No
- If yes, when did this first occur?
_____/_____/_____
(Month) (Day) (Year)

10. Previous Loss Experience - Please check (X) below all that you have experienced and indicate at what age each loss happened.

Loss Experience	At What Age?
___ my own life threatening illness.	_____
___ death of a partner/spouse.	_____
___ death of a child.	_____
___ death of a grandchild.	_____
___ death of a parent.	_____
___ death of a grandparent.	_____
___ death of a friend.	_____
___ death of a brother/sister.	_____
___ loss of job.	_____
___ loss of partner/spouse other by death.	_____
___ loss of home, homeland, culture.	_____
___ financial loss (e. g., bankruptcy).	_____
___ loss of freedom (e. g., arrest).	_____
___ loss of parents other than through death.	_____
___ loss of children other than through death.	_____
___ loss of self due to traumatic experience (e. g., crime, rape, incest, war, other disasters, etc.)	_____
___ Other: _____	_____

11. Prior to your disability:

a) Did you ever suffer from depression? ___Yes ___No
If yes, how old were you when it happened for the first time? _____ years old.

b) How long did your depression last? _____

c) Was the depression diagnosed by a (Check all that apply):
___ psychiatrist ___ psychologist ___ counselor
___ social worker ___ medical doctor ___ priest
___ family ___ friend(s) ___ yourself
___ other (Please specify): _____

12. Since your disability:

a) Have you suffered from depression? ___Yes ___No

b) If yes, approximately when? _____/_____/_____
(Month (Day) (Year)

b) How long did your depression last? _____

c) Was the depression diagnosed by a (Check all that apply):
___ psychiatrist ___ psychologist ___ counselor
___ social worker ___ medical doctor ___ priest
___ family ___ friend(s) ___ yourself
___ other (Please specify): _____

13. Have you ever:

a) Thought of hurting yourself? ___Yes ___No
- If yes, when? (Please fill in appropriate numbers)
___ years ____ months ago.

b) Tried to actually hurt yourself? ___Yes ____No
- If yes, when? (Please fill in appropriate numbers)
___ years ____ months ago.

c) Thought of killing yourself? ___Yes ___No
- If yes, when? (Please fill in appropriate numbers)
___ years ____ months ago.

d) Tried to actually kill yourself? ___Yes ___No
- If yes, when? (Please fill in appropriate numbers)
___ years ____ months ago.

14. Use of Substance:

a) Are you currently experiencing any alcohol problems?
___Yes ___No

b) Are you currently experiencing any drug problems?
___Yes ___No
- If yes, what substance are you using now? (Please list) _____

c) Are you currently participating in a substance abuse treatment program? ___Yes ___No

d) Are you currently participating in a substance abuse support group e. g., A.A.)? ___Yes ___No
   - If yes, please provide the name of the support group: _____

15. Are you filling out this questionnaire by yourself or with the help of another person? (Please check one)
   ___ By myself
   ___ With the help of another person
   Relationship of your assistant to you (My helper is my):
   _____

APPENDIX B

RESPONSE TO LOSS INVENTORY

January 25, 1993

RESPONSE TO LOSS:

ODD

Taking the RTL is voluntary. You may choose not to participate at all, or not answer certain questions without penalty. You indicate your willingness to participate by filling out and returning the answer sheets.

RESPONSE TO LOSS (RTL)
Questionnaire Instruction

This is an inventory of ways people respond to losses in their lives. All of the questions reflect the normal process of grieving, although, of course, none of us reacts in all of these ways to any given loss. Responding to this Inventory may help you identify your current reactions to significant changes in your life, particularly losses. You may find responding to this questionnaire difficult because some questions may bring up memories or feelings which are painful. You may not wish to finish this inventory. You are not required to do so.

_ For the purpose of the present study, you are asked to indicate your reactions which are strictly related to your physical disability. Therefore, when responding to items in this questionnaire, please keep in mind that the word "loss" refers only to your physical disability.

_ Since this inventory asks you only how you are doing right now, you may find that you have changed from how you would have responded even a few days or a few months ago.

_ It might be helpful to discuss your reactions with someone. You are invited to record your thoughts about taking the inventory at the end of your answer sheets.

_ As you read each question, ask yourself if the statement is true about you right now, or in the past few days or weeks. You can indicate the degree to which you are having these responses according to the following scheme:

I = this isn't true about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is true at>out my current responses to this loss.

NOTE: If a statement is true about you, but is not a response to the loss, leave it blank.

Please respond to all questions, even if you leave some of them blank. You may find it helpful to take one or more breaks while you are filling out the questionnaire. It does not need to be filled out in one day, but within a few days. If the loss has occurred recently, or if filling out these items provokes strong feelings, you may postpone filling out this questionnaire.

ATTENTION:

When responding to items in this questionnaire, please keep in mind that the word "loss" refers to your physical disability.

1 = this isn't accurate about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is accurate about my current responses to this loss.

REMINDER: If a statement is true about you, but is not a response to the loss, leave it blank.

Since the time of this loss,
1. Keeping active and busy helps me feel less anxious about this loss..
2. I am smoking more.
3. Taking care of others distracts me from thinking about my loss.
4. I want/need to tell others what happened.
5. If I tried hard enough, I can bring back what I lost.
6. I'm looking for who made this loss happen.
7. I avoid being alone.
8. I look just as good as I always did.
9. I've found someone or something to replace what/who I've lost.
10. I don't believe that this loss really happened.
11. I keep thinking something could be done to bring back what I lost.
12. I try to figure out how it could have been different.
13. I try to figure out why this loss happened to me.

Since this loss, I think
14. If I don't concentrate on remembering what has happened, I'll forget it.
15. If I'm good enough, nobody I love will ever die.
16. It will all work out in the long run.
17. Every cloud has a silver lining.
18. People get the respect they deserve in this world.
19. The show must go on.
20. Idle hands are the devil's workbench.
21. If I am good enough or perfect enough, what was lost will come back.
22. I think I am responsible for this loss.
23. I wish things were the way they were before this loss occurred.
24. I'm scared to share what I've been thinking, feeling and doing.
25. I feel guilty or disloyal when I forget this loss.
26. I don't remember what I did and/or didn't do just before the loss happened.
27. Being in control helps me feel less overwhelmed.
28. I can't control my feelings when I'm with those who share my loss.
29. I want someone punished for this loss.
30. I'm afraid I'll forget my loss if I stop thinking about it.
31. I'm not ready to let go of my feelings about what happen.
32. I ignore the physical pain just to keep going.
33. I keep myself from having sex.
34. I don't eat as much.
35. I am sleeping less.

In light of this loss,
36. I dream that something has happened to reverse my loss.
37. Life seems unfair.
38. I believe something good will come out of this.
39. I can outlast any intruder
40. I can still find meaningful and supportive relationships.
41. I know I will not be tested beyond my capacity to endure.
42. I wonder if I really deserve what I have.
43. I know I won't give up.
44. I will make those responsible pay for this.
45. This loss must be changed.

1 = this isn't accurate about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is accurate about my current responses to this loss.

Since this loss,
46. I avoid people who remind me of this loss.
47. I refuse to discuss this loss.
48. I don't spend as much time with my family.
49. I act as though this doesn't really matter to me.
50. I drink to forget my loss.
51. I lose or misplace things that relate to this loss.
52. I avoid reminders of this loss.
53. I can be physically abusive when others remind me of the loss.
54. I am not interested in getting involved.

Since the time of this loss, I have thought
55. Something else is going to go wrong.
56. I cannot imagine how anything positive could come out of this loss.
57. If I don't look out for myself, no one else will.
58. Very few people are worth my time and energy now.
59. No one can change what's already happened.
60. I lack the energy to make sense out of it.
61. It's best not to dwell on the past.
62. Nobody really understands how this loss affects me.
63. My thinking has been critical and judgmental.
64. I've focused on the present.

In considering this loss, I believe:
65. Why get involved? You just get hurt.
66. It's God's will. Learn to accept it.
67. Why try? It won't make any difference.
68. There's no such thing as a free ride.
69. Out of sight, out of mind.
70. It's best just to forget it. Nothing you can do about it.
71. Do your own thing.
72. Fate is against me.
73. To succeed is to die.

When I am reminded of this loss,
74. I feel overwhelmed.
75. I try not to let anything affect me.
76. I feel detached and separate from others.
77. I feel bored with life.
78. People irritate me easily.
79. I feel frustrated.
80. If I let myself, I get so unhappy I can't stand it.
81. I get upset with myself for the way I have behaved.
82. I am revolted by the way people have responded.

As a result of this loss
83. I don't want to be touched.
84. I'm more clumsy and accident prone.
85. I have felt sick to my stomach.
86. I exercise less
87. I sleep more.
88. I wish I could be saved from having to deal with this experience.
89. I wonder what point there is in going on.
90. No one could ever pay enough for causing this loss to happen.

1 = this isn't accurate about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is accurate about my current responses to this loss.

As a result of this loss
91. My life doesn't seem to have a purpose.
92. Nobody cares how I am doing.
93. There's no sense thinking or worrying about what happened.
94. I've lost respect for myself.
95. If people important to me knew my contribution to this loss, they would be shocked.
96. I've had fantasies of being dead.
97. It wasn't my fault this happened.
98. I can't be expected to be responsible at times like this.

Since the time of this loss,
99. It's been hard to concentrate.
100. I get so preoccupied that I forget where I am going.
101. It's hard for me to make decisions.
102. I am less confident.
103. I talk about how it's been for me since the time of this loss.
104. I avoid being in new situations.
105. I avoid getting close to others.
106. My friends have been avoiding me.
107. My friends avoid talking about my loss.

When I think about this loss,
108. I lose track of what's going on.
109. I can't imagine how things will get better.
110. I'm struck by how trivial everyday life seems.
111. I am overwhelmed at how real and inescapable this loss seems.
112. It seems hopeless to try to understand what really happened.
113. I think about how my life has been changed.
114. I'm reminded how little I really control.
115. I think about the dreams that will never come true.
116. My feelings just come.
117. I really miss it/him/her.
118. I miss expressing my love.
119. Joy is missing in my life.
120. I feel sad.
121. I feel empty, like a shell, like I am just existing.
122. Music can stir up my feelings.
123. Looking at old photos stirs up painful feelings.

Since the time of this loss,
124. I feel restless.
125. I use up much more energy than I did before.
126. I am exhausted by any effort.
127. I feel pangs.
128. I cry.
129. I wake up feeling stiff and achy, as if I'd been tense all night.
130. I wake up during the night.
131. My dreams remind me of my loss.
132. I lack a sex life.
133. When someone touches me, my feelings come to the surface.
134. I feel sick.
135. My stomach really churns.

1 = this isn't accurate about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is accurate about my current responses to this loss.

Since the time of this loss,
136. I have aches and pains which remind me of my loss.
137. I would rather die than go on experiencing this.
138. No amount of money could ever replace it.
139. The future seems empty.
140. What I value most in life has been destroyed.
141. I question the existence of the God I used to believe in.
142 I cannot continue life the same way as before.
143. I realize my life will never be totally free from pain and suffering.
144. I know I will lose things and people important to me.
145. There are parts of me that are missing.
146. I am not the loving, caring, trusting person I was.
147. When I'm convinced things can't get any worse, they do.
148. It seems like I have lost my desire to live.

REMINDER: If a statement is true about you, but is not a response to the loss, leave it blank.

In the time since this loss,
149. Hearing about other's experiences with similar losses helps.
150. There is at least one person I can count on for support.
151. Being by myself has been healing.
152. I take long walks and just daydream.
153. Activities like getting a massage, painting or music are soothing.
154. Talking or writing about it gives me relief and release.
155. I can let things turn out the way they will.
156. I realize that I've lost a lot, but I haven't lost everything.
157. I think about how I have changed, what is different.
158. I'm not as responsible as I thought I was for what happened.
159. I have already passed the lowest point.
160. My fears about dying are less.
161. I am able to express my feelings about the loss.
162. My feelings still catch me by surprise, but they don't last as long.
163. My guilt has lessened.
164. I'm not so sad.
165. My disgust over what happened has lessened.
166. I realize that sadness and peacefulness can co-exist.
167. I can enjoy simple pleasures of life again.

In considering this loss,
168. The aches and pains I used to have with this loss have lessened.
169. I enjoy being touched and held once again.
170. It takes less energy to do things than it used to.
171. I notice how things smell and taste again.
172. I have learned to accept that losses and changes are a part of life.
173. My life will continue.
174. My dreams seem to help me understand and accept what happen.
175. My faith or spiritual understanding helped me with this experience.
176. My life does seem to have meaning.
177. Whatever I contributed to this loss, I did not want it to happen.
178. Life seems more fragile and precious.
179. My past will always be a part of me.
180. The fond memories are there along with the painful ones.

1 = this isn't accurate about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is accurate about my current responses to this loss.

As a result of this loss,
181. I've found ways to get back my integrity.
182. I don't depend as much on others.
183. I've remembered what I really want to remember about it.
184. I've finished things related to my loss as completely as I can.
185. I've taken steps to forgive those involved.
186. I am making restitution for my contributions to this loss.
187. I like being with people again.
In light of this loss,
188. Putting my thoughts into words has helped me recover.
189. It's important to have times of celebration and remembrance before it's too late.
190. My life has more to it.
191. I've felt all I can feel about this loss.
192. I've found effective ways to express my feelings.
193. I've experienced this loss in ways that were healing.
194. I've let go of the guilt.
195. I've let go of the anger.
196. I can make sense out of the messages from my body.
197. I don't push my body beyond limits.
198. I relax.
199. I sleep well.
200. I eat sensibly.
201. I can be sexually or romantically interested.
202. I know my life is important.
203. My dreams are restful, playful and helpful.
204. I've restored or regained part of what I had lost.
205. I feel the presence of what/who I lost.
206. I have forgiven myself for what happened.
207. I have forgiven others for what happened.
208. I would not want my loss reversed if it meant giving up all my growth from it.
209. I feel confident enough in myself to move on to other things.
REMINDER: If a statement is true about you, but is not a response to the loss, leave it blank.
As a result of this loss,
210 It takes less effort and thought to do what I need to do.
211. I enjoy being alone.
212. I'm nicer to myself.
213. I'm not as serious a person.
214. I'm able to take risks again.
215. I'm more self-disciplined.
216. I don't place limits in front of myself as readily as I did before this loss.
217. I am more able to give to others.
218. I have time for my family and friends and time for me.
219. I can express myself in many ways.
220. I can appreciate the paradoxes and seeming contradictions in my life.
221. I feel more confident.
222. I've grown.
223. I see the past as just as important as what is happening now.
224. Past, present and future are equally important.
225. I feel challenged to keep on going.

1 = this isn't accurate about my current response to this loss
2 = occasionally this is true about my responses to this loss.
3 = some of the time this is true about my responses to this loss.
4 = most of the time this is true about my responses to this loss.
5 = this definitely is accurate about my current responses to this loss.

As a result of this loss,
226. I trust my ways of thinking.
227. I don't avoid my feelings.
228. I've found new ways to express my feelings.
229. I feel loving and affectionate.
230. Sadness reminds me how important this loss was to me.
231. I am curious about many things.
232. I listen to what my body tells me.
233. I enjoy making love.
234. I feel strong.
235. I am active in caring for myself physically.
236. What I eat is healthy.

When I think of this loss
237. I feel warm all over.
238. I have what is meaningful within me.
239. I've learned to respect myself.
240. I feel like a whole person.
241. I've discovered that there is more to me than what meets the eye.
242. My dreams make sense.
243. I live as fully as I can.
244. What is important to me has changed.
245. I have fewer conditions on my love.
246. I realize I can do destructive things.
247. I feel lovable.
248. I've challenged and altered some of my most cherished and long standing assumptions and beliefs.

REMINDER: If a statement is true about you, but is not a response to the loss, leave it blank.

249. I know I want other people in my life.
250. I want to share with others who have these life experiences.
251. What I own isn't as important.
252. I know the cycles of life have times of birth and death.
253. I am sometimes surprised by what I know and say.
254. I feel connected to the world and to nature.
255. I know that things in my life can change and life can still be meaningful.
256. I am curious about what will happen after I die.
257. I realize that I can't live without loving myself.
258. I discovered some essential parts of me.
259. My life has times of joy.

END OF QUESTIONS

NAME OR CODE:_____ ORTL ODD

PLEASE RECORD YOUR ANSWERS ON THIS ANSWER SHEET

1. 1 2 3 4 5	46. 1 2 3 4 5	91. 1 2 3 4 5	136. 1 2 3 4 5
2. 1 2 3 4 5	47. 1 2 3 4 5	92. 1 2 3 4 5	137. 1 2 3 4 5
3. 1 2 3 4 5	48. 1 2 3 4 5	93. 1 2 3 4 5	138. 1 2 3 4 5
4. 1 2 3 4 5	49. 1 2 3 4 5	94. 1 2 3 4 5	139. 1 2 3 4 5
5. 1 2 3 4 5	50. 1 2 3 4 5	95. 1 2 3 4 5	140. 1 2 3 4 5
6. 1 2 3 4 5	51. 1 2 3 4 5	96. 1 2 3 4 5	141. 1 2 3 4 5
7. 1 2 3 4 5	52. 1 2 3 4 5	97. 1 2 3 4 5	142. 1 2 3 4 5
8. 1 2 3 4 5	53. 1 2 3 4 5	98. 1 2 3 4 5	143. 1 2 3 4 5
9. 1 2 3 4 5	54. 1 2 3 4 5	99. 1 2 3 4 5	144. 1 2 3 4 5
10. 1 2 3 4 5	55. 1 2 3 4 5	100. 1 2 3 4 5	145. 1 2 3 4 5
11. 1 2 3 4 5	56. 1 2 3 4 5	101. 1 2 3 4 5	146. 1 2 3 4 5
12. 1 2 3 4 5	57. 1 2 3 4 5	102. 1 2 3 4 5	147. 1 2 3 4 5
13. 1 2 3 4 5	58. 1 2 3 4 5	103. 1 2 3 4 5	148. 1 2 3 4 5
14. 1 2 3 4 5	59. 1 2 3 4 5	104. 1 2 3 4 5	149. 1 2 3 4 5
15. 1 2 3 4 5	60. 1 2 3 4 5	105. 1 2 3 4 5	150. 1 2 3 4 5
16. 1 2 3 4 5	61. 1 2 3 4 5	106. 1 2 3 4 5	151. 1 2 3 4 5
17. 1 2 3 4 5	62. 1 2 3 4 5	107. 1 2 3 4 5	152. 1 2 3 4 5
18. 1 2 3 4 5	63. 1 2 3 4 5	108. 1 2 3 4 5	153. 1 2 3 4 5
19. 1 2 3 4 5	64. 1 2 3 4 5	109. 1 2 3 4 5	154. 1 2 3 4 5
20. 1 2 3 4 5	65. 1 2 3 4 5	110. 1 2 3 4 5	155. 1 2 3 4 5
21. 1 2 3 4 5	66. 1 2 3 4 5	111. 1 2 3 4 5	156. 1 2 3 4 5
22. 1 2 3 4 5	67. 1 2 3 4 5	112. 1 2 3 4 5	157. 1 2 3 4 5
23. 1 2 3 4 5	68. 1 2 3 4 5	113. 1 2 3 4 5	158. 1 2 3 4 5
24. 1 2 3 4 5	69. 1 2 3 4 5	114. 1 2 3 4 5	159. 1 2 3 4 5
25. 1 2 3 4 5	70. 1 2 3 4 5	115. 1 2 3 4 5	160. 1 2 3 4 5
26. 1 2 3 4 5	71. 1 2 3 4 5	116. 1 2 3 4 5	161. 1 2 3 4 5
27. 1 2 3 4 5	72. 1 2 3 4 5	117. 1 2 3 4 5	162. 1 2 3 4 5
28. 1 2 3 4 5	73. 1 2 3 4 5	118. 1 2 3 4 5	163. 1 2 3 4 5
29. 1 2 3 4 5	74. 1 2 3 4 5	119. 1 2 3 4 5	164. 1 2 3 4 5
30. 1 2 3 4 5	75. 1 2 3 4 5	120. 1 2 3 4 5	165. 1 2 3 4 5
31. 1 2 3 4 5	76. 1 2 3 4 5	121. 1 2 3 4 5	166. 1 2 3 4 5
32. 1 2 3 4 5	77. 1 2 3 4 5	122. 1 2 3 4 5	167. 1 2 3 4 5
33. 1 2 3 4 5	78. 1 2 3 4 5	123. 1 2 3 4 5	168. 1 2 3 4 5
34. 1 2 3 4 5	79. 1 2 3 4 5	124. 1 2 3 4 5	169. 1 2 3 4 5
35. 1 2 3 4 5	80. 1 2 3 4 5	125. 1 2 3 4 5	170. 1 2 3 4 5
36. 1 2 3 4 5	81. 1 2 3 4 5	126. 1 2 3 4 5	171. 1 2 3 4 5
37. 1 2 3 4 5	82. 1 2 3 4 5	127. 1 2 3 4 5	172. 1 2 3 4 5
38. 1 2 3 4 5	83. 1 2 3 4 5	128. 1 2 3 4 5	173. 1 2 3 4 5
39. 1 2 3 4 5	84. 1 2 3 4 5	129. 1 2 3 4 5	174. 1 2 3 4 5
40. 1 2 3 4 5	85. 1 2 3 4 5	130. 1 2 3 4 5	175. 1 2 3 4 5
41. 1 2 3 4 5	86. 1 2 3 4 5	131. 1 2 3 4 5	176. 1 2 3 4 5
42. 1 2 3 4 5	87. 1 2 3 4 5	132. 1 2 3 4 5	177. 1 2 3 4 5
43. 1 2 3 4 5	88. 1 2 3 4 5	133. 1 2 3 4 5	178. 1 2 3 4 5
44. 1 2 3 4 5	89. 1 2 3 4 5	134. 1 2 3 4 5	179. 1 2 3 4 5
45. 1 2 3 4 5	90. 1 2 3 4 5	135. 1 2 3 4 5	180. 1 2 3 4 5

NAME OR CODE:_____ ORTL ODD

PLEASE RECORD YOUR ANSWERS ON THIS ANSWER SHEET

181.	1 2 3 4 5	226.	1 2 3 4 5
182.	1 2 3 4 5	227.	1 2 3 4 5
183.	1 2 3 4 5	228.	1 2 3 4 5
184.	1 2 3 4 5	229.	1 2 3 4 5
185.	1 2 3 4 5	230.	1 2 3 4 5
186.	1 2 3 4 5	231.	1 2 3 4 5
187.	1 2 3 4 5	232.	1 2 3 4 5
188.	1 2 3 4 5	233.	1 2 3 4 5
189.	1 2 3 4 5	234.	1 2 3 4 5
190.	1 2 3 4 5	235.	1 2 3 4 5
191.	1 2 3 4 5	236.	1 2 3 4 5
192.	1 2 3 4 5	237.	1 2 3 4 5
193.	1 2 3 4 5	238.	1 2 3 4 5
194.	1 2 3 4 5	239.	1 2 3 4 5
195.	1 2 3 4 5	240.	1 2 3 4 5
196.	1 2 3 4 5	241.	1 2 3 4 5
197.	1 2 3 4 5	242.	1 2 3 4 5
198.	1 2 3 4 5	243.	1 2 3 4 5
199.	1 2 3 4 5	244.	1 2 3 4 5
200.	1 2 3 4 5	245.	1 2 3 4 5
201.	1 2 3 4 5	246.	1 2 3 4 5
202.	1 2 3 4 5	247.	1 2 3 4 5
203.	1 2 3 4 5	248.	1 2 3 4 5
204.	1 2 3 4 5	249.	1 2 3 4 5
205.	1 2 3 4 5	250.	1 2 3 4 5
206.	1 2 3 4 5	251.	1 2 3 4 5
207.	1 2 3 4 5	252.	1 2 3 4 5
208.	1 2 3 4 5	253.	1 2 3 4 5
209.	1 2 3 4 5	254.	1 2 3 4 5
210.	1 2 3 4 5	255.	1 2 3 4 5
211.	1 2 3 4 5	256.	1 2 3 4 5
212.	1 2 3 4 5	257.	1 2 3 4 5
213.	1 2 3 4 5	258.	1 2 3 4 5
214.	1 2 3 4 5	259.	1 2 3 4 5
215.	1 2 3 4 5		
216.	1 2 3 4 5		
217.	1 2 3 4 5		
218.	1 2 3 4 5		
219.	1 2 3 4 5		
220.	1 2 3 4 5		
221.	1 2 3 4 5		
222.	1 2 3 4 5		
223.	1 2 3 4 5		
224.	1 2 3 4 5		
225.	1 2 3 4 5		

APPENDIX C

BECK DEPRESSION INVENTORY

BECK INVENTORY

Name_____ Date_____

On this questionnaire are groups of statements. Please read each group of statements carefully. Then pick out the one statement in each group which best describes the way you have been feeling the PAST week, INCLUDING TODAY! Circle the number beside statement you picked. If several statements in the group seem to 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.
	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 worst 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.
	3	I would kill myself if I had the chance.
10	0	I don't cry any more 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 anymore.
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.
	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 anymore.

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___

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 D

SUBJECT OVERALL RATING SHEET

ONE FINAL QUESTION

How positive do you feel about completing the three questionnaires? (Please check one.)

_____ 1. Not positive at all
_____ 2. Not very positive
_____ 3. Positive
_____ 4. Very positive
_____ 5. Extremely positive

Please explain: _____

(Please use the reverse side if more space is needed.)

*** THANK YOU FOR YOUR PARTICIPATION IN THIS RESEARCH STUDY ***

APPENDIX E

LETTER OF INVITATION TO PROSPECTIVE PARTICIPANTS

University of Michigan
Medical Center

Department of Physical
Medicine and Rehabilitation
University of Michigan Hospitals
1500 East Medical Center Drive
Ann Arbor, Michigan 48109-0042
(313) 936-7785

Theodore M. Cole, M.D.
Professor and Chairman

Administration
Electroneuromyography
Occupational Therapy
Orthotic and Prosthetic Services
Physical Therapy
Physician's Outpatient Clinic
Rehabilitation Engineering
Rehabilitation Psychology and Neuropsychology
Speech-Language Pathology

Dear Prospective Participant:

Two years ago you may have participated in a research project about the secondary characteristics of polio conducted by Dr. Maynard, Sunny Roller and myself at the University of Michigan Medical Center. We are currently in the process of writing the findings of that study. While every day we are learning about the late effects of polio, we would like to ask you to consider being a participant in another new study that looks at reactions to loss and disability.

Your input in this study will be especially valuable in helping us better understand the human potential for adaptation and the process of response to physically debilitating conditions. We strongly believe that the results of this study will help heighten our sensitivity to the treatment needs of different individuals and upgrade the quality of our services. The information you provide about your own experience may also be very helpful for people confronted with a similar experience of physical disability in the future. We would very much appreciate your participation in this study.

Your role in this study will be to complete by mail, a biographical data questionnaire, a Response to Loss Inventory and the Beck Inventory, which asks you to rate your current level of distress. This activity will probably take you about an hour. Information you give us for the purpose of this study will be treated in strict confidence, and you are not personally identified in any reports.

As a token of compensation for your time and involvement in this study, a check for $10.00 will be sent to you upon our receipt of your three completed research questionnaires.

Your participation is completely voluntary. You can withdraw your participation at any time. Choosing to participate or not to participate will not affect your receiving services at the University of Michigan Medical Center in any way now or in the future.

We would appreciate your response if you can take a moment to fill out, sign and return to us the "Consent Form". Thank you in advance for your cooperation and support.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

DGT:br

APPENDIX F

CONSENT FORM

* * * PLEASE COMPLETE AND RETURN THIS FORM. THANK YOU! * * *

CONSENT FORM

1. I have read the enclosed letter regarding the study of Dr. Denise Tate and Timothy Chiang on reactions to a physical disability as a response to loss. The results of this study will help upgrade the quality of treatment recommendations for persons with disabilities like myself.

2. The nature of this study has been explained to me, and I understand that my participation will involve completing by mail a Biographical Data Questionnaire, a Response to Loss Inventory and the Beck Inventory. This activity will take about an hour. I understand that the three questionnaires are used to collect information about my general life experience (background information) as well as my feelings and my reactions concerning my physical disability. In addition, I grant the investigators direct access to the demographic information about me which was collected approximately two years ago as part of a post-polio research project at the University of Michigan. I further allow the investigators to have direct access to and research use of my mailing address with the understanding that my right to privacy will be respected and that this information will not be shared with any person unrelated to this research study without my explicit written consent.

3. I understand that as a token of compensation for my time and involvement in this study, a check for $10 will be sent to me upon the investigators' receipt my three completed research questionnaires.

4. I understand that my participation is completely voluntary, and that I can discontinue participation in this research at any time.

5. I understand that choosing to participate or not to participate will not affect my receiving treatment at the University of Michigan Medical Center now or in the future. I understand that involvement in this study does not guarantee any special benefits to me.

6. I understand that except in potentially life-threatening situations, the data resulting from this research will be kept confidential and I will not be personally identified in any report of this study.

7. I understand that I have the option of requesting a one-page summary of the general group results to be sent to me upon completion of the study.

Please check only one of the following:

_____ I agree to participate in this study.

_____ I prefer not to participate in this study.

_____ (Signature of Patient)

_____ Check here if patient is unable to sign and verbal authorization is given. (Two witnesses required.)

_____ (Please Print Your Name)

_____ (Signature of First Witness)

Date: _____ Time: _____

_____ (Signature of Second Witness)

Your Mailing Address: _____

_____

Would you like to have a one-page summary of the general group results sent to you upon completion of the study? ___Yes ___No

APPENDIX G

FOLLOW-UP LETTERS

University of Michigan
Medical Center

Department of Physical
Medicine and Rehabilitation
University of Michigan Hospitals
1500 East Medical Center Drive
Ann Arbor, Michigan 48109-0042
(313) 936-7185

Theodore M. Cole, M.D.
Professor and Chairman

Administration
Electroneuromyography
Occupational Therapy
Orthotic and Prosthetic Services
Physical Therapy
Physician's Outpatient Clinic
Rehabilitation Engineering
Rehabilitation Psychology and Neuropsychology
Speech-Language Pathology

Dear Participant:

Thank you for your recent decision to participate in our study on reactions to a physical disability as a response to loss. This study is a joint effort of the University of Michigan and Michigan State University, and it is our strong belief that the information you provide as a research participant will be very helpful for individuals confronted with a similar experience of physical disability and the professionals who work with them.

Enclosed are the three questionnaires which you have agreed to complete. The following steps are recommended in your processing of these research materials:

1. **Find a comfortable place away from distraction.**

2. **Complete the three questionnaires strictly in the order in which they appear in your packet, responding to all of the items in each questionnaire. To ensure adequate validity of our data, please take no more than several days to complete all three questionnaires.**

3. **Return all research materials together in the enclosed self-addressed postage-paid envelope.**

We would appreciate your filling out the three questionnaires and returning them to us at your earliest convenience. As a token of compensation for your precious time and involvement in our study, we will send you a check for $10 upon our receipt of your three completed questionnaires. Upon the completion of this study, a one-page summary of the general group results will be made available to you at your request.

Again, let us thank you for your participation in this study. We are looking forward to receiving your completed questionnaires soon.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

DGT:tc

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Dear Prospective Participant:

Thank you for your response to our recent letter which invited you to participate as a research subject in a study on reactions to a physical disability as a response to loss.

We understand that you do not wish to participate in our study at the present time. As an alternative to the full implementation of our research plan, we would like to inform you that we are also collecting information about the general background and life situations of individuals with disabling conditions. Therefore, we would like to ask for your help. It is our hope that your assistance would enable professionals to better understand the life situations of individuals like you and enhance the quality of their services.

Your involvement with this data collection process will take about 5-10 minutes, and there are two options available to you:

1. **Please complete the attached "Biographical Data Questionnaire" and the "Limited Participation Consent Form". The consent form allows you to indicate your permission for us to access demographic or general background information about you which was collected approximately two years ago as part of a post-polio research project at the University of Michigan.**

2. **If you prefer not to complete any questionnaire, you can simply fill out the attached "Limited Participation Consent Form" to grant us access to the demographic data about you through the University of Michigan post-polio project database.**

The information you grant and/or provide to us for the purpose of this data collection process will be treated in strict confidence and you are not personally identified in any report. Both your permission for data collection through the University of Michigan post-polio project database and your completion of the Biographical Data Questionnaire are entirely voluntary. You may choose to withdraw your consent for the use of the information you grant and/or provide at any time. Choosing to withdraw or not to withdraw your consent will not affect your receiving services at the University of Michigan Medical Center in any way now or in the future.

We would very much appreciate your assistance if you can take a moment to review the attached materials and then indicate your preferred level of involvement on the "Limited Participation Consent Form" and return the completed form to us at your earliest convenience. Again, thank you in advance for your cooperation and support.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

DGT:tc

* * * PLEASE COMPLETE AND RETURN THIS FORM. THANK YOU! * * *

LIMITED PARTICIPATION CONSENT FORM

1. I have declined to participate in the entire study of Dr. Denise Tate and Timothy Chiang on reactions to a physical disability as a response to loss, but/and (please check one of the options below)

   ___ I agree to complete the Biographical Data Questionnaire. I further grant the investigators direct access to the demographic information about me which was collected approximately two years ago as part of a post-polio research project at the University of Michigan.

   ___ I do not wish to complete the Biographical Data Questionnaire. However, I grant the investigators direct access to demographic information on me through the University of Michigan post-polio project database.

   ___ I would prefer that the investigators of this study do not collect or access any information about me.

2. I grant my permission for the investigators to have direct access to and research use of my mailing address with the understanding that my right to privacy will be respected and that this information will not be shared with any person unrelated to this research study without my explicit written consent.

3. I understand that my permission for the use of the information which I grant and/or provide by the investigators is completely voluntary, and that I can withdraw this permission at any time I choose.

4. Involvement or lack of involvement in this data collection process will not affect my receiving treatment at the University of Michigan Medical Center in any way now or in the future. I understand that involvement in this data collection process does not guarantee any special benefits to me.

5. I understand that except in potentially life-threatening situations, the data resulting from this data collection process will be kept confidential. I further understand that I will not be personally identified in any report.

_____ (Signature of Patient)

____ Check here if patient is unable to sign and verbal authorization is given. (Two witnesses required.)

_____ (Please Print Your Name)

_____ (Signature of First Witness)

Date: _____ Time: _____

_____ (Signature of Second Witness)

Address: _____

_____ Phone: (___) _____

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Dear Participant:

A packet of three questionnaires was sent to you about two weeks ago in response to your agreement to participate in a research study at the University of Michigan Medical Center. As you may recall, the purpose of the study is to explore reactions to a physical disability as a response to loss.

As a follow-up to your agreement to participate in this study, I am writing to verify that you have received the packet of questionnaires and to ask that you return the completed questionnaires at your earliest convenience. Your prompt completion and return of these questionnaires will greatly enhance the validity of our study.

If you have not received the packet of questionnaires for this study, I would appreciate your completing the enclosed "Request for Inventory Packet" form and returning it in the self-addressed postage-paid envelope. If you have already completed and returned all three questionnaires, please disregard this letter. As a token of compensation for your precious time and involvement in this study, a check for $10 will be sent to you upon our receipt of your three completed questionnaires.

Thank you very much for your participation in this study. I am looking forward to hearing from you soon.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

DGT:tc

REQUEST FOR INVENTORY PACKET

Please complete this form and return it in the self-addressed postage-paid envelope if you have not received a packet of three questionnaires for our study on reactions to a physical disability as a response to loss. If you have already completed and returned all three questionnaires, please disregard this form.

I have not received a packet of three research questionnaires for your study. Please send me the packet as soon as possible.

Your Name: _____

Mailing Address: _____

_____

_____

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Dear Participant:

About a couple of months ago, a packet of three questionnaire was sent to you in response to your agreement to participate in a study on reactions to a physical disability as a response to loss. As a follow-up contact with our current research participants in this study, I am writing to ask for your completion and return of these questionnaires at your earliest convenience.

I can not overemphasize the potential value of the information that you have agreed to provide in the three research questionnaires. In addition to the direct benefit of helping us complete this study, we strongly believe that the data which we have been collecting from you and the other research participants will be helpful for individuals confronted with a similar experience of physical disability and the professionals who work with them.

The development of research procedures used in this study involved a serious consideration of participant welfare. Except in potentially life-threatening situations, for example, the results of this study will be treated in strict confidence, and you are not personally identified in any reports. Your participation in this study is completely voluntary, and you are free to withdraw your participation at any time you wish. In addition, we will send you a check for $10 upon our receipt of your three completed questionnaires as a token of compensation for your precious time and involvement in our study. Upon the completion of the study, a one-page summary of the general group results will be made available to you at your request.

For your convenience, we have enclosed a duplicate packet of the three questionnaires which you have agreed to complete. Please process these research materials according to the following recommended steps:

1. **Find a comfortable place away from distraction.**

2. **Complete the three questionnaires <u>strictly</u> in the order in which they appear in your research participant packet, responding to all of the items in each questionnaire. Please take no more than several days to complete all three questionnaires.**

3. **Return all research materials together in the enclosed self-addressed postage-paid envelope.**

We would appreciate your filling out the questionnaires and returning them to us at your earliest convenience. Again, thank you for your participation in this study. I am looking forward to receiving your response.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

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Dear Prospective Participant:

A letter was sent to you about three months ago inviting you to participate in a research study on reactions to a physical disability as a response to loss. Since we have not received your response to this invitation, I am writing to inform you that we would appreciate your consideration of participating in this study.

I can not overemphasize the potential value of your participation in this study. In addition to the direct benefit of helping us complete this study, we strongly believe that the results of our study will be of help for individuals confronted with a similar experience of physical disability and the professionals who work with them.

As I indicated in my previous letter to you, your role in this study will be to complete by mail, a biographical data questionnaire, a Response to Loss Inventory and the Beck Inventory, which asks you to rate your current level of distress. This activity will probably take you about an hour.

The development of research procedures used in this study involved a serious consideration of participant welfare. Except in potentially life-threatening situations, for example, the results of this study will be treated in strict confidence, and you are not personally identified in any reports. In addition, we will send you a check for $10 upon our receipt of your three completed questionnaires as a token of compensation for your precious time and involvement in our study. Upon the completion of the study, a one-page summary of the general group results will be made available to you at your request.

Your participation is completely voluntary. You are also free to withdraw your participation at any time you wish. Choosing to participate or not to participate will not affect your receiving services at the University of Michigan Medical Center in any way now or in the future.

Please take a moment to indicate if you are willing to participate in this study by filling out the enclosed "Consent Form" and returning it to us in the self-addressed postage-paid envelope. Thank you for your cooperation and support.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

DGT:tc

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Dear Participant:

As a token of compensation for your precious time and in appreciation for your participation in our study on reactions to a physical disability as a response to loss, please accept our gratitude for your contribution and a check for $10. We are glad to inform you that the three research questionnaires which you have completed for the study are currently being processed.

You have provided some very valuable information and assistance toward the completion of our study. It is our strong belief that the results of this study will be of help for individuals confronted with an experience of physical disability and the professionals who work with them.

Upon the completion of the study, a one-page summary of the general group results will be made available to you at your request. Please feel free to contact us if you have any further questions about this study.

Again, thank you for your participation in this study.

Sincerely,

Denise Tate

Denise G. Tate, Ph.D.
Assistant Professor

DGT:tc

REFERENCES

References

Akiskal, H.S., & Lemmi, H. (1983). Clinical, neuroendocrine, and sleep EEG diagnosis of "unusual" affective presentations: A practical review. Psychiatric Clinics of North America, 8, 69-83.

Albrecht G., & Higgins, P. (1977). Rehabilitation success: The interrelationships of multiple criteria. Journal of Health and Social Behavior, 18, 36-45.

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

Anderson, T.P., & Andberg, M.M. (1979). Psychosocial factors associated with pressure sores. Archive of Physical Medicine and Rehabilitation, 60, 341-346.

Anderson, S.V., & Bauwens, E. E. (1981). Chronic health problems: Concepts and application. St. Louis: Mosby.

Antler, L., Lee M., Zaretsky, H., Pezenik, D., & Halberstam, J. (1969). Attitudes of rehabilitation patients towards the wheelchair. Journal of Psychology, 73, 45-52.

Beck A.T., & Beamesderfer, A. (1974). Assessment of depression: The Depression Inventory. In P. Pichot (Ed.). Modern problems in pharmacopsychiatry (pp. 15-169). Basel, Switzerland: Karger.

Beck, A.T., Rush, A., Shaw, B., & Emery, G. (1979). Cognitive therapy of depression. New York: Guilford.

Beck, A.T., & Steer, R.A. (1987). Beck Depression Inventory manual. San Antonio: Psychological Corporation.

Beisser, A.R. (1989). Flying without wings: Personal reflections on being disabled. New York: Doubleday.

Belitsky, R., & Jacobs, S. (1986). Bereavement, attachment theory, and mental disorders. Psychiatric Annals. 16, 276-280.

Blanchard, C.G., Blanchard, E.B., Becker, J.V. (1976). The young widow: Depressive symptomatology throughout the grief process. Psychiatry. 39, 394-399.

Bolton, I. (1984). Families coping with suicide. Family Therapy Collections. 8, 35-47

Bowlby, J. (1980). Attachment and loss: Vol. 3. Loss. New York: Basic Books.

Bracken, M.B., & Shepard, M.J. (1980). Coping and adaptation following acute spinal cord injury: A theoretical analysis. Paraplegia, 18, 74-85.

Bracken, M.B., Shepard, M.J., & Webb, S.B. (1981). Psychological response to acute spinal cord injury: An epidemiological study. Paraplegia, 19, 271-283.

Breen, J. (1985). Children of alcoholics: The subterranean grieving process. Psychotherapy Patient. 2(1), 85-94.

Brown, G.W., & Harris, T. (1978). Social origins of depression. London: Tavistock.

Bruno, R.L., & Frick, N.M. (1987). Stress and type A behavior as precipitants of post polio sequelae. In L. S. Halstead, & D.O. Wiechers (Eds.). Research and clinical aspects of the late effects of polio. White Plains, NY: March of Dimes.

Carey, R.G. (1977). The widowed: A year later. Journal of Counseling Psychology. 24(2), 125-131.

Cashdan, S. (1988). Object relations therapy: Using the relationship. New York: Norton.

Clayton, P., Desmarais, L., & Winokur, G. (1968). A study of normal bereavement. American Journal of Psychiatry, 125, 168-178.

Clayton, P., Herjanic, M., Murphy, G., & Woodruff, R. (1974). Mourning and depression: Their similarities and differences. Canadian Psychiatric Association Journal, 19, 309-312.

Codd, M.B., Mulder, D W., Kurland, L.T., Beard, D.M., & O'Fallon, W. M. (1985). Poliomyelitis in Rochester, Minnesota, 1935-1955: Epidemiology and long term sequelae: A preliminary report. In L. S. Halstead, & D. O. Wiechers (Eds.). Late effects of poliomyelitis (pp. 11-31). Miami, FL: Symposia Foundation.

Cohen, J. (1988). Statistical power analysis for the social sciences. Hillsdale, NJ: Lawrence Erlbaum.

Conoley, C.W. (1992). Review of the Beck Depression Inventory (Revised Edition). In J.J. Kramer & J.C. Conoley (Eds.), The eleventh mental measurements yearbook (pp. 78-79). Lincoln, NE: Buros Institute.

Cook, D.W. (1979). Psychological adjustment to spinal cord injury: Incidence of denial, depression, and anxiety. Rehabilitation Psychology, 26, 97-104.

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

Crisp, R. (1984). Locus of control as a predictor of adjustment to spinal cord injury. Australia Disability Review, 1, 53-57.

Cushman, L., Dijkers, M., & Harrison, C. (1985). Do rehabilitation staff misperceive depression in SCI patients? Poster presented at American Congress of Rehabilitation Medicine, Kansas City.

Davis, F. (1963). Passage through crisis. New York: Bobbs Merrill.

Dembo, T., Leviton, G. L., & Wright, B. A. (1975). Adjustment to misfortune: A problem of social-psychological rehabilitation. Rehabilitation Psychology, 22, 1-100.

Deutsch, D.K. (1982). The development, reliability and validity of an instrument designed to measure grief. Unpublished doctoral dissertation, Michigan State University.

Dinardo, Q. (1971). Psychological adjustment to spinal cord injury. Unpublished doctoral dissertation, University of Houston.

Eigen, M. (1983). Depression as pseudo self-repair in a case of blocked mourning. American Journal of Psychoanalysis. 43(1), 81-83.

Engel, G.L. (1961). Is grief a disease? Psychosomatic Medicine, 23, 18-23.

Engel, G.L. (1962). Psychological development in health and disease. Philadelphia: Saunders.

Engel, G.L. (1967). The psychological setting of somatic disease: The giving up given up complex. Proceedings of the Royal Society of Medicine, 60, 553-555.

Fitzgerald, D.B. (1983). Relationship between depression and adjustment in spinal cord injury. Unpublished doctoral dissertation, Nova University.

Fordyce, W. (1971). Behavioral methods in rehabilitation. In W. Neff. Rehabilitation psychology (pp. 74-108). Washington, DC.: American Psychological Association.

Freud, S. (1917). Mourning and melancholia (Standard edition, Vol. 14). London: Hogarth Press.

Frick, N. M. (1985). Post polio sequelae and the psychology of a second disability. Orthopedics, 8 (7), 851-853.

Friedman, M., & Rosenman, R.H. (1974). Type A behavior and your heart. New York: Knopf.

Fullerton, D. T., Harvey, R.F., Klein, M. H., & Howell, T. (1981). Psychiatric disorders in patients with spinal cord injuries. Archive of General Psychiatry, 38, 1369-1371.

Gerson, E., & Strauss, A. (1975). Time for living. Social Policy, 6, 12-18.

Goldiamond, I. (1973). A diary of self modification. Psychology Today, 7, 95-102.

Green, B.C., Pratt, C.C., & Grigsby, T.E. (1984). Self-concept among persons with long-term spinal cord injury. Archive of Physical Medicine and Rehabilitation, 65, 751-754.

Gunther, M. (1969). Emotional aspects. In R. Reuge (Ed.). Spinal cord injuries. Springfield, IL: Charles C. Thomas.

Guttmann, L. (1976). Significance of sport in rehabilitation of spinal paraplegics and tetraplegics. Journal of the American Medical Association, 236, 195-197.

Hagglund, T.B. (1981). From depression to mourning. Scandinavian Psychoanalytic Review. 4(1), 17-26.

Hamilton, L.C. (1992). Regression with graphics. Pacific Grove, CA: Brooks/Cole.

Heijn, C. (1971). Some emotional factors influencing rehabilitation in patients with spinal cord injury. Proceedings of the 18th Veterans Administration Spinal Cord Injury Conference, 18, 196-198.

Heijn, C., & Granger, C.V. (1974). Understanding motivational patterns: Early identification aids rehabilitation. Journal of Rehabilitation, 40(6), 26-29.

Hohmann, G. (1966). Some effects of spinal cord lesions on experienced emotional feelings. Psychophysiology, 3, 143-156.

Hohmann, G. (1975). Psychological aspects of treatment and rehabilitation of the spinal injured person. Clinical Orthopsychiatry, 112, 81-88.

Howell, T., Fullerton, D. T., Harvey, R. F., & Klein, M. H. (1981). Depression in spinal cord injured patients. Paraplegia, 19, 284-288.

Ivey, A.E. (1980). Counseling and psychotherapy: Skills, theories and practice, Englewood Cliffs, NJ: Prentice-Hall.

Judd, F.K., Burrows, G.D., & Brown, D.J. (1986). Depression following acute spinal injury. Paraplegia, 24, 358-363.

Kalb, M. (1971). An examination of the relationship between hospital ward behaviors and post-discharge behaviors in the spinal cord injury patients. Unpublished doctoral dissertation, University of Houston.

Katz, S., Florian, V. (1987). A comprehensive theoretical model of psychological reaction to loss. International Journal of Psychiatry in Medicine. 16, 325-345.

Kaufert, P.L., & Kaufert, J.M. (1984). Methodological and conceptual issues in measuring the long term impact of disability: The experience of poliomyelitis patients in Manitoba. Social Science in Medicine, 19, 609-618.

Kemp, B., & Vash, C. (1971). Productivity after injury in a sample of spinal cord injured persons: A pilot study. Journal of Chronic Disability, 24, 259-275.

Kerr, W., & Thompson, M. (1972). Acceptance of disability of sudden onset in paraplegia. International Journal of Paraplegia, 10, 94-102.

Klein, M. (1940). Mourning and its relation to manic-depressive states. In E. Jones (Ed.). Contribution to psycho-analysis. London: Horgarth.

Kohl, S. J. (1987). Emotional responses to the late effects of poliomyelitis. In L. S. Halstead, & D. O. Wiechers (Eds.). Research and clinical aspects of the late effects of polio. White Plains, NY: March of Dimes.

Kubler-Ross, E. (1969). On death and dying. New York: Macmillan.

Lawson, N. (1976). Depression after spinal cord injury: A multimeasure longitudinal study. Unpublished doctoral Dissertation, University of Houston.

Lawson, N.C. (1978). Significant events in the rehabilitation process: The spinal cord patient's point of view. Archive of Physical Medicine and Rehabilitation, 59, 573-579.

Lehmann, H.E. (1983). The clinician's view of anxiety and depression. Journal of Clinical Psychiatry, 44, 3-7.

Lewis, A.H. (1992). Life histories of adult survivors of childhood polio. Unpublished doctoral dissertation, University of Pennsylvania.

Lieberman, S. (1978). Nineteen cases of morbid grief. British Journal of Psychiatry, 132, 159-163.

Lindemann, E. (1944). Symptomatology and management of acute grief. American Journal of Psychiatry, 101, 141-148.

Lindemann, E. (1945). Psychiatric factors in the treatment of ulcerative colitis. Archives of Neurology and Psychiatry, 53, 322.

Linkowski, D.C. (1971). A scale to measure acceptance of disability. Rehabilitation Counseling Bulletin, 14, 236-244.

Locker, D., & Kaufert, J. (1988). The breath of life: Medical technology and careers of people with post respiratory poliomyelitis. Sociology of Health and Illness, 10, 23-40.

Lopez, R.E. (1984). Libido adhesiveness and working through during pathological mourning. Scandinavian Psychoanalytic Review. 7(1), 35-48.

Lubkin, I.M. (1986). Chronic illness. Boston: Jones Bartlett.

MacDonald, M.R., Nielson, W.R., & Cameron, M.G.P. (1987). Depression and activity patterns for spinal cord injured patients living in the community. Archive of Physical Medicine and Rehabilitation, 68, 339-343.

Maddison, D., & Viola, A. (1968). The health of widows in the year following bereavement. Journal of Psychosomatic Research, 12, 297-306.

Marris, P. (1958). Widows and their families. London: Routledge & Kegan Paul.

Marris, P. (1974). Loss and change. New York: Pantheon.

Mawson, D., Marks, I.M., Ramm, L., & Stern, R.S. (1981). Guided mourning for morbid grief: A controlled study. British Journal of Psychiatry. 138: 185-193.

McGovern, T.F. (1983). The effects of an inpatient alcoholism treatment program, with two variations, on measurements of depression, hopelessness, loss and grief. Unpublished doctoral dissertation, Texas Tech. University.

Michael, J. (1970). Rehabilitation. In C. Neuringer, & J. Michael (Ed.). Behavior modification in clinical psychology. New York: Appleton Century Crofts.

Mueller, A. (1962). Pain study of paraplegic patients: The Rorschach test as an aid in predicting pain relief by means of chordotomy. Archive of Neurology, 7, 355-358.

Mueller, A.D., & Thompson, C.E. (1950). Psychological aspects of the problems of spinal cord injuries. Occupational Therapy and Rehabilitation, 29, 86-95.

Nagler, B. (1950). Psychiatric aspects of cord injury. American Journal of Psychiatry, 107, 49-56.

National Center for Health Statistics (1989). Advance data, 12. Washington, DC: U.S. Government Printing Office.

Nelson, J.C., & Charney, D.S. (1980). Primary affective disorder criteria and the endogenous-reactive distinction. Archive of General Psychiatry. 37, 787-793.

O'Neil, M.K. (1987). Loss and depression: A controversial link. Journal of Nervous and Mental Disease, 175, 354-359

Parkes, C.M. (1965a). Bereavement and mental illness, Part I. A clinical study of the grief of bereaved psychiatric patients. British Journal of Medical Psychology, 38, 1-12.

Parkes, C.M. (1965b). Bereavement and mental illness, Part II. A classification of bereavement reactions. British Journal of Medical Psychology, 38, 13-26.

Parkes, C.M. (1972). Bereavement: Studies of grief in adult life. London: Tavistock.

Parkes, C. (1975). Determinants of outcome following bereavement. Omega, 6, 303-323.

Parkes, C.M. (1981). Psychosocial care of the family after the patient's death. In P. Margolis, et al. (Eds.). Acute grief. New York: Columbia University Press.

Parkes, C.M. (1987). Bereavement: Studies of grief in adult life. Madison, CT: International Universities Press.

Parkes, C., & Brown, R. (1972). Health after bereavement: A controlled study of young Boston widows and widowers. Psychosomatic Medicine, 34, 449-461.

Pedder, J.R. (1982). Failure to mourn, and melancholia. British Journal of Psychiatry. 141, 329-337.

Pedretti, L.W., & Zoltan, B. (1990). Occupational therapy: Practice skills for physical dysfunction. St. Louis: C. V. Mosby.

Perlmutter, M., & Hall, E. (1985). Adult development and aging. New York: Wiley.

Plavnick, S.L. (1995). Personal communication.

Poll, I.B., & De Nour, A.K. (1980). Locus of control and adjustment to chronic hemodialysis. Psychological Medicine, 10, 153-157.

Ramsay, R.W. (1977). The stress of bereavement: Components and treatment. In C.D. Spielberger & I.G. Sarason (Eds), Stress and anxiety (Vol. 4, pp. 53-64). Washington, DC: Hemisphere.

Richards, J.S. (1986). Psychologic adjustment to spinal cord injury during the first postdischarge year. Archive of Physical Medicine and Rehabilitation, 67, 362-365.

Richards, J.S., Meredith, R.L., Nepomuceno, C., Fine, P.R., & Bennet, G. (1980). Psycho-social aspects of chronic pain in spinal cord injury. Pain, 8, 355-366.

Roberts, A.H. (1972). Spinal cord injury: Some psychological considerations. Minnesota Medicine, 55, 1115-1117.

Robinson, P.J., & Fleming, S. (1989). Differentiating grief and depression. Special Issue: Bereavement care: A new look at hospice and community based services. Hospice Journal. 5(1), 77-88.

Rosillo, R.H., & Fogel, M.L. (1970). Correlation of psychologic variables and progress in physical rehabilitation. I. Degree of disability and denial of illness. Archive of Physical Medicine and Rehabilitation, 51, 227-233.

Russell, R.A. (1981). Concepts of adjustment to disability: An overview. Rehabilitation Literature, 42, 330-338.

Sanders, C. (1979). Comparison of adult bereavement in the death of a spouse, child, and parent. Omega, 10, 303-322.

Sanders, C. (1980). Comparison of younger and older spouses in bereavement outcome. Omega, 11, 217-232.

Sanders, C.M. (1989). Grief: The mourning after. New York: Wiley.

Schneider, J.M. (1980). Clinically significant differences between grief, pathological grief and depression. Patient Counseling and Health Education, 161-169.

Schneider, J.M. (1984). Stress, loss and grief: Understanding their origins and growth potential. Rockville, MD: Aspen Systems.

Schneider, J.M. (1989). Psychology of loss and grief. Unpublished manuscript, Michigan State University, East Lansing.

Schneider, J.M. (1992). Personal communication.

Schneider, J.M. (1994). Finding my way: Healing and transformation through loss and grief. Colfax, WI: Seasons Press.

Schneider, J.M. (1995). Personal communication.

Schneider, J.M., & Deutsch, D. K. (1992a). Grief and depression: When do they appear. Handout from "Duet for One" workshop on transformative grief, Michigan State University, East Lansing.

Schneider, J.M., & Deutsch, D. K. (1992b). Key differences between grief and depression. Handout from "Duet for One" workshop on transformative grief, Michigan State University, East Lansing.

Schneider, J.M., Hoogterp, A., & Picone, D. (1992). Grief and depression in a psychiatric population. Unpublished manuscript, Colleges of Medicine, Michigan State University, East Lansing.

Schneider, J.M,, McGovern, T., & Deutsch, D. (1990). Understanding the transformative potential of grief: Construct validation of the Response to Loss Inventory. Unpublished manuscript, Colleges of Medicine, Michigan State University, East Lansing.

Schneider, J.M,, McGovern, T., & Deutsch, D. (1991). Understanding the transformative potential of grief: Construct validation of the Response to Loss Inventory. Unpublished manuscript, Colleges of Medicine, Michigan State University, East Lansing.

Scott, J.J. (1992). A study of lifelong transitions, experiential learning, and coping responses of six female systemic lupus erythematosus patients between the ages of 20 and 51 years. Unpublished doctoral dissertation, Michigan State University, East Lansing.

Segal, H. (1964). Introduction to the work of Melanie Klein. London: Heinemann.

Segrin, C. (1994). Negative reactions to depressive behaviors: A communication theories analysis. Journal of Abnormal Psychology, 103, 655-668.

Seligman, M. (1975). Helplessness: On depression, development, and death. San Francisco: Freeman.

Siller, J. (1969). Psychological situation of the disabled with spinal cord injuries. Rehabilitation Literature, 30, 290-296.

Smith, E.W. (1985). A Gestalt therapist's perspective on grief. Psychotherapy Patient. 2(1), 65-78.

Spielberger, C.D. (1971). Trait-state anxiety and motor behavior. Journal of Motor Behavior, 3, 265-279.

Spielberger, C.D. (1985). Assessment of state and trait anxiety: Conceptual and methodological issues. Southern Psychologist, 2(4), 6-16.

Stehouwer, S. (1985). Beck Depression Inventory. In D.J. Keyser & R.C. Sweetland (Eds.), Test critiques (Vol. 2, pp. 83-87). Kansas City, MO: Test Corporation of America.

Strauss, A., Corbin, J., Fagerhaugh, S., Glaser, B.G., Maines, D., Suczek, B., & Wiener, C.L. (1984). Chronic illness and the quality of life (2nd ed.). St. Louis: Mosby.

Stricker, G. (1983). Some issues in the psychodynamic treatment of the depressed patient. Professional Psychology Research and Practice. 14, 209-217.

Swanson, D. W. (1984). Chronic pain as a third pathologic emotion. American-Journal-of-Psychiatry. 141, 210-214.

Swenson, E. (1976). The relationship between locus of control expectancy and successful rehabilitation of the spinal cord injured. Unpublished doctoral dissertation, Arizona State University.

Trieschmann, R. (1975). Systematic programming of the patient treatment environment interaction. Paper presented at the American Association for the Advancement of Science, New York City.

Trieschmann, R. (1976). Ecological influences on the motivation of the person with spinal injury. Paper presented at the American Congress of Rehabilitation Medicine, San Diego.

Trieschmann, R. (1978). The role of the psychologist in treatment of spinal injury. Paraplegia, 16, 212-219.

Trieschmann, R. (1980). Spinal cord injuries: The psychological, social, and vocational adjustment. Elmsford, NY: Pergamon.

Trieschmann, R.B. (1988). Spinal cord injuries: Psychological, social and vocational rehabilitation. (2nd ed.) New York: Demos Publications.

Vincent, P.J. (1975). Treatment of patients with spinal cord injuries. Canadian Nurse, 71, 26-30.

Volkan, V. D. (1985). Complicated mourning. Annual of Psychoanalysis, 12-13 323-348.

Weiss, A., & Diamond, M.D. (1966). Psychologic adjustment of patients with myelopathy. Archive of Physical Medicine and Rehabilitation, 47, 72-76.

Werner, A., Schwartz, K.A., Lezotte, L.W., & Chojnacki, M. J. (1985). Psychosocial adaptation to lymphoma: From active treatment through survival. Paper presented at the annual meeting of the Academy of Psychomatic Medicine, Chicago.

Wetzel, J.W. (1984). Clinical handbook of depression. New York: Gardner.

Winnicott, D.W. (1962). A personal view of the Kleinian contribution. In D.W. Winnicott (Ed.). The maturational processes and the facilitating environment. London: Hogarth.

Winokur, G. (1973). The types of affective disorders. Journal of Nervous and Mental Disease, 37(3), 165-167.

Winston, A., Hirschenfang, M.S., Fine, L., & Stern, F. (1969). Patterns of psychological decompensation in patients with spinal cord syndromes. Diseases of the Nervous System, 30, 824-832.

Wittkower, E., Gingras, G., Mergler, L., Wigdor, B., & Lepine, A. (1954). A combined psychosocial study of spinal cord lesions. Canadian Medical Association Journal, 71, 109-115.

Woodbury, B. (1978). Psychological adjustment to spinal cord injury: A literature review, 1950-1977. Rehabilitation Psychology, 25, 119-134.

Wool, M.S. (1990a). Understanding depression in medical patients: I. Diagnostic considerations. Special Issue: An evolution: Clinical social work in health care. Social Work in Health Care. 14(4), 25-38.

Wool, M.S. (1990b). Understanding depression in medical patients: II. Clinical intervention. Special Issue: An evolution: Clinical social work in health care. Social Work in Health Care. 14(4), 39-52.

Wright, B.A. (1960). Physical disability: A psychological approach (1st Ed.). New York: Harper & Row.

Wright, B.A. (1983). Physical disability: A psychological approach (2nd Ed.). New York: Harper & Row.

Zisook, S., & DeVaul, R. (1985). Unresolved grief. American Journal of Psychoanalysis. 45, 370-379.