

Perceived Causal Attributions and their Relationship  
to Grief Intensity in Early Miscarriage

by

MARSHA JOAN MCCALL  
B.Sc.N., The University of Alberta, 1977

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE IN NURSING

In

THE FACULTY OF GRADUATE STUDIES  
The School of Nursing

We accept this thesis as conforming  
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA  
April 1988  
© Marsha Joan McCall, 1988

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of School of Nursing

The University of British Columbia  
1956 Main Mall  
Vancouver, Canada  
V6T 1Y3

Date 88.04.19

## ABSTRACT

Grief and causal attribution are two of the most commonly observed reactions to early miscarriage, yet little is known about these reactions or whether a relationship exists between them. This exploratory and descriptive correlational study examined the maternal grief intensities, the causal attributions, and the relationship between them in a convenience sample of 15 women who spontaneously aborted at 16 weeks' or less gestation. Women responded to both a written questionnaire and a semi-structured interview at 6 to 10 weeks post-miscarriage. Their responses indicated both current and retrospective reactions to their miscarriages. Responses were analysed using nonparametric statistics and content analysis.

Maternal grief intensities were found to vary widely at the time of the miscarriage, but all decreased significantly 6 to 10 weeks later. All women reacted to their miscarriage with attribution-seeking behaviors. The explanations most women formed were comprised of more than one causal attribution. Attributions were observed to have four distinct characteristics. Causal attributions were found to be either philosophical or physically oriented; to be organic, non-specific or maternal/self-blaming in origin; to be either dominant or non-dominant, and/or to refer to causalities immediate or prior to the physical event.

At the time of the miscarriage a positive correlation between grief intensity and maternal/self-blaming attributions and between grief intensity and philosophical attributions was found. These relationships were not observed 6 to 10 weeks later. A positive correlation was found

between grief intensity and attributions to maternal emotions at both the time of the miscarriage and 6 to 10 weeks later.

## TABLE OF CONTENTS

	Page
Abstract .....	11
List of Tables .....	vii
List of Figures .....	viii
Acknowledgements .....	ix
Dedication .....	x
CHAPTER ONE INTRODUCTION .....	1
Context of the Problem .....	1
Statement of the Problem .....	4
Statement of the Purpose .....	5
Conceptual Framework .....	5
The Loss .....	5
Maternal Grief .....	7
Causal Attributions .....	8
Research Questions .....	9
Definition of Terms .....	10
Limitations .....	11
Overview of the Thesis Content .....	11
CHAPTER TWO REVIEW OF THE LITERATURE .....	13
Maternal Grief .....	14
Perceived Losses .....	15
Grieving Process .....	18
Grief Responses .....	20
Grief Reaction Intensity .....	24
Summary .....	25
Causal Attribution Reaction .....	27
Attribution Process .....	28
Causal Attributions .....	32
Summary .....	34
Summary of the Literature Review .....	35

CHAPTER THREE	METHODOLOGY .....	37
Sample .....		37
Setting .....		38
Data Collection Instruments .....		38
Questionnaire .....		38
The Grief Intensity Scale .....		39
Attribution Reaction Item .....		40
Origin of Attribution Scale Items .....		40
Demographic and Attribution Interview Guide .....		41
Human Rights and Ethical Considerations .....		42
Data Collection Procedure .....		43
Data Analysis .....		43
CHAPTER FOUR	PRESENTATION AND DISCUSSION OF	
RESULTS .....		46
Demographics of the Sample .....		46
Age, Marital, Education and Work Status .....		46
Past Obstetrical History .....		46
Characteristics of the Pregnancy and Miscarriage .....		47
Findings .....		49
Research Question One: The Intensity of the Maternal		
Grief Reactions .....		49
Research Question Two: The Causal Attribution		
Reaction .....		50
Causal Attributions .....		51
Dominant Causal Attributions .....		53
Origin of Attribution Scale Items .....		56
Research Question Three: The Relationship between		
Grief Intensity and Causal Attributions .....		57
Grief Intensity and Types of Causal		
Attributions .....		57
Grief Intensity and Origin of Dominant Causal		
Attributions .....		58
Discussion of Results .....		60
Intensity of the Grief Reaction .....		60
The Attribution Process Reaction .....		62
Causal Attributions .....		64
The Relationships between Grief Intensity		
and Causal Attributions .....		67
Summary .....		72

CHAPTER FIVE	SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS .....	76
Summary .....		76
Conclusions .....		78
Implications for Nursing Practice and Education .....		80
Recommendations for Further Study .....		82
REFERENCES .....		84
APPENDICES .....		90
Appendix A	Grief Intensity Scale .....	90
Appendix B	Attribution Reaction Item .....	95
Appendix C	Origin of Attribution Scale Items.....	97
Appendix D	Demographic and Causal Attribution Interview Guide .....	100
Appendix E	Introductory Letter for Physicians .....	104
Appendix F	Physician Consent Form .....	107
Appendix G	Introductory Letter for Women .....	109
Appendix H	Women's Consent Form .....	112

## LIST OF TABLES

Table		Page
1.	Distribution of Grief Intensity Scores for the Time of the Miscarriage and 6 to 10 weeks later .....	49
2.	Frequency of Spontaneously Mentioned Causal Attributions .....	52
3.	Types of Attributions Made about Miscarriage ..	54
4.	Frequency of Dominant Causal Attributions by Origin of Attribution .....	56
5.	Frequency of Attributions according to Origin of Attribution Scale .....	57
6.	Grief Intensity Scores by Origin of Dominant Causal Attribution at the Time of the Miscarriage .....	58
7.	Grief Intensity Scores by Origin of Dominant Causal Attribution 6 to 10 weeks post-Miscarriage .....	59



## LIST OF FIGURES

Figure		Page
1.	Conceptual Framework .....	6
2.	Restructured Conceptual Framework .....	73

## ACKNOWLEDGEMENTS

I would like to thank Dr. Ann Hilton and Sheila Stanton who generously shared with me their experience, expertise, and enthusiasm for research. My thanks also goes to Peter Schumacher for his statistical advice.

I would like to thank my family and friends for their help, support and encouragement, without whom, this project would have remained the insurmountable task it had once appeared.

I would also like to thank each of the fifteen women who shared this private and often painful experience with me, so that I, and others like me, might begin to understand.

## DEDICATION

This book is dedicated to my father, John Samuel McCall. With his passing, I learned to feel the words of grief I had, until then, only heard.

## CHAPTER ONE

### Introduction

A miscarriage may always be a death with no funeral, but it is not a nonevent. Until very recently, health care professionals led the public in viewing miscarriage as a simple gynecological problem. The wide variety of emotional reactions a woman could experience in its aftermath were rarely acknowledged. No one considered that miscarriages could have long-term consequences. Only in the last 20 years have attitudes begun to change (Herz, 1984). A slowly growing body of research and testimonial literature has documented two predominant emotional reactions to miscarriage. The first reaction is grief. The second reaction has been called the "Why me?" syndrome (Oakley, McPherson & Roberts, 1984) or the search for a causal attribution.

### Context of the Problem

Miscarriage is a frequent event. The estimates of its incidence range between 10 and 15% of all recognized pregnancies before 28 weeks of gestation (Hickman, 1985; Wallach & Kempers, 1985). Yet, despite this frequency, the research into women's experiences of miscarriage remains at an initial exploratory level. Pioneering researchers have far more questions than answers. For example, many researchers have found the experience of loss to be associated with miscarriage, but there is much less certainty about what is actually lost (Bryant, 1985; Simon, Rothman,

Goff & Senturia, 1969; Stack, 1980, 1984; Swanson-Kauffman, 1983). Most researchers have found that grief is a common emotional response to miscarriage (Corney & Horton, 1974; HuttI, 1986; Peppers & Knapp, 1980b; Simon, et al., 1969; Swanson-Kauffman, 1983; Wall-Haas, 1985). Whether this is the same experience that follows other losses has only been speculated upon. A few studies have identified the existence of relationships between miscarriage and subsequent mental illness (Corney & Horton, 1974; Simon, et al., 1968; Stack, 1980, 1984), and between miscarriage and later chemical dependencies (Busch, McBride, & Benaventura, 1986). However, no one is certain just what these relationships are. Even less is known about causal attributions.

In common usage, the term miscarriage describes a variety of pregnancy losses from miscarriages to stillbirths. To add to this confusion, two definitions of miscarriage are also formally in use in the professional literature. The first definition defines miscarriage as a spontaneous abortion or premature delivery of a non-viable fetus before the 20th week of gestation (Taber, 1984). The second definition, adopted by the World Health Organization, defines miscarriage as a spontaneous abortion before the 28th week of gestation. In research examining the experience of miscarriage, this difference in definition results in differences in the possibilities for awareness and interaction between a woman and her fetus. In order to more precisely examine the woman's experience of miscarriage, the term early miscarriage is used in this study to refer to spontaneous abortions occurring prior to 16 weeks' gestation or prior to fetal movement. Late miscarriage is used to refer to all other spontaneous abortions up to 28 weeks' gestation.

Early miscarriage appears to have some unique characteristics which make it unlike other pregnancy loss and grieving experiences. In all miscarriages, but particularly in early miscarriage, the loss is subjective (Bryant; 1985, Simon et al., 1969; Swanson-Kauffman, 1983). Women with early miscarriages have felt no fetal movement. There is no concrete evidence of the baby except perhaps as a flicker on an ultrasound screen. The only manifestations of this other person are in the pregnancy changes which have occurred in the woman's body, and in her predictions for her near future. In this absence of a concrete loss object, the losses created by early miscarriage can be perceived to be many and varied. The women in Swanson-Kauffman's (1983) study identified their losses as the following: a fetus, a blighted baby, the memory of a child, a baby, a baby boy, and a life. Concomitantly, these women also identified losses including a pregnancy, a dream, future expectations, a lifestyle, control, self-confidence, and self-esteem.

Grief is a physical, emotional, and social reaction to loss. Preliminary research on this phenomenon suggests that the grief of early miscarriage may also be unique. Some researchers have suggested that the acute grief phase of miscarriage is shorter than for other bereavements (Hardin & Urbanus, 1986; Swanson-Kauffman, 1983). Others have noted that the guilt phase of the grieving process is longer and more intense (Leppert & Pahlka, 1984; Peppers & Knapp, 1980b; Stack, 1984). Even the social context for grieving a miscarriage is unique (Herz, 1984; Peppers & Knapp, 1980b; Moore, 1984). Although the public commonly refers to a miscarriage as the loss of a baby, there are none of the rites of passage

which accompany other deaths to comfort mourning survivors. Often when women miscarry, they grieve alone.

Miscarriages are unpredicted and beyond control. Some suggest that is why women ask themselves Why me? Why did I miscarry? What went wrong? and What did I do, so I can prevent this from happening the next time? (Herz, 1984; Moore, 1984; Oakley, et al., 1984; Pizer & Palinski, 1980; Seibel & Graves, 1980). The process of attribution-seeking appears to be used to reestablish control over an unpredicted and adverse event. However, finding the actual cause of a miscarriage is usually beyond a woman's control. In many cases of early miscarriage, the actual cause cannot be physically determined. In addition, the available genetic investigations, which may or may not reveal a cause, are currently not performed until a woman has had three miscarriages. Hence, even if a cause could be ascertained, no attempt is made by the medical community to determine the cause for a considerable number of miscarriages. Consequently, when women who miscarry attempt to answer attribution-seeking questions, the answers they choose may or may not be based on any known facts. Once made, some women appear to maintain their attributions even despite frequent medical contradiction (Pizer & Palinski, 1980).

### Statement of the Problem

Investigations of maternal grief in early miscarriage are at an exploratory level. Even less is known about attribution-seeking behavior and causal attributions in early miscarriage. However, since grief and

causal attributions are common reactions to miscarriage, more knowledge is needed about these phenomena and their interactions.

### Statement of the Purpose

The purpose of this study is to identify the intensity of the maternal grief reactions and the causal attribution reactions that following early miscarriage. In addition, this study will investigate whether a relationship exists between causal attributions and the intensity of grief experienced following an early miscarriage.

### Conceptual Framework

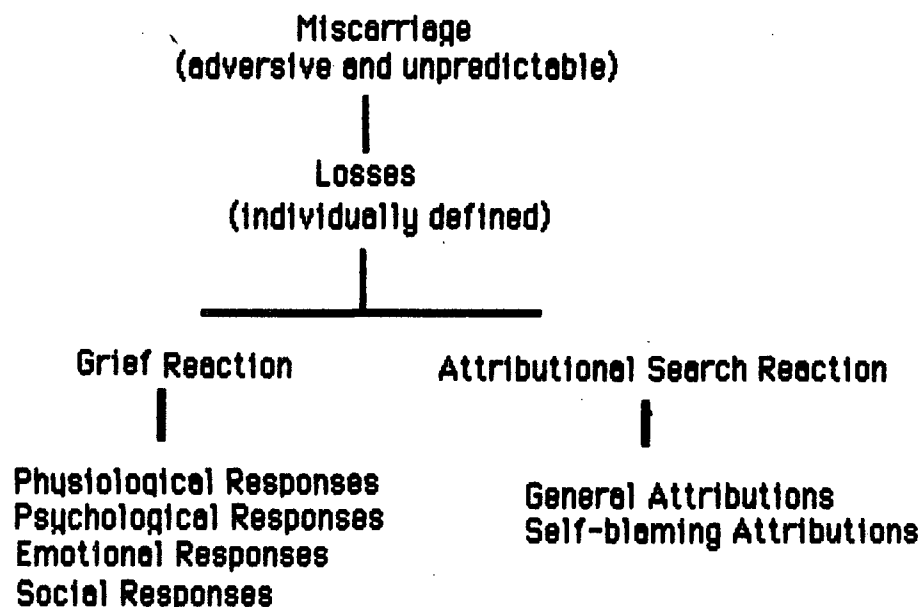
Miscarriage in this study is viewed as an unpredictable, adverse life event. Its unpredictable nature dictates that the individual's perception of control over this life event is always thwarted. Its adverse nature determines that it is associated with an experience of loss. These characteristics of the miscarriage event determine the two types of reactions experienced by women in the aftermath of miscarriage. The first reaction is the grief syndrome. The second reaction is the process of attribution-seeking. This conceptual framework is presented diagrammatically in Figure 1.

### The Loss

Miscarriage creates physical, psychological and social losses for the woman. At all levels, these losses can be different for different women.



Figure 1

Conceptual Framework.

At the physical level, according to Watson (1979), the losses are associated with the bleeding and pain, as well as the loss of a body part or fetus. The psychological loss results from the severing of an individually defined attachment bond that existed between the woman and her loss object. For some women, this bond is between a mother and a child, while others may have defined the bond as self/body part, and still others may have defined it as self/idea, self/dream, or self/future expectations (Berezin, 1982; Bryant, 1985, Swanson-Kauffman, 1983). This loss could also be defined as a loss of control over the course of a life event. This may be increasingly more significant today because of the current trend to plan, not only the timing of the pregnancy, but how that pregnancy and birth will proceed (Wallach & Kempers, 1985). The social losses cited by

Watson (1979) are those of the pregnant role and the future role of parent. Anecdotal literature suggests that the current social context of miscarriage may itself create a role loss. Many women experiencing miscarriages find that the mourning survivor role, which normally accompanies bereavements, is not condoned by society (Berezin, 1982; Herz, 1984; Moore, 1984; Stephany, 1982).

### Maternal Grief

Grief begins with the awareness of loss. Contemporary thought views grief as a normal syndrome comprised of a variety of emotional, physiological, behavioral and social responses to a perceived loss (Lindemann, 1944; Marris, 1974; Parkes, 1965; Peretz, 1970). The character, frequency and intensity of these responses varies over time (Engel, 1964; Lindemann, 1944; Marris, 1974; Parkes, 1965). Two grief theorists, Engel (1964) and Parkes (1981), have also described the use of attribution-seeking behaviors. Engel reported that these behaviors occur in the second stage of grieving, which begins within minutes or hours of a death. Through the process of grieving, the survivor adjusts to the loss and achieves some level of recovery (Carlson, 1978). How much time the grieving process takes is probably individually determined by the mourner and the social context of the grief (Carlson, 1978; Engel, 1964; Kubler-Ross, 1969; Lindemann, 1944; Marris, 1974; Parkes, 1965; Peppers & Knapp, 1980b).

While some research on miscarriage suggests that there are some unique characteristics to maternal grief (Herz, 1984; Leppert & Pahlka, 1984; Peppers & Knapp, 1980a, 1980b; Stack, 1984; Swanson-

Kauffman, 1983), most researchers have been content to analyze it using a variety of adult grief theories, including the works of Lindemann, Kubler-Ross, Parkes (Hutti, 1984) and Kavanaugh (Leppert & Pahlka, 1984; Peppers & Knapp, 1980b). The only unique definition of maternal grief found in the literature to date was written by Peppers and Knapp (1980a). These authors simply defined maternal grief as "a mother's highly variable emotional, psychological, physical, and social responses to the involuntary loss of her fetus" (1980a, p. 156).

### Causal Attribution

Simply put, attribution theory provides an explanation of how people answer questions beginning with Why? The theory attempts to describe the analysing of available information and the establishment of causal inferences (Kelley, 1973). The attribution-seeking process appears to occur spontaneously, particularly following situations of unpredicted failures and uncertainty (Weiner, 1985). Wong and Weiner (1981) state many investigators make the assumption that causal attributions are the result of a series of self-directed questions which culminate in the formulation of one or more hypotheses. These hypotheses are then tested, some are discounted and the remainder form the causal attributions (Wong & Weiner, 1981). Attributional searches have been shown to be selectively completed and influenced by the individual's existing belief structure (Rudy, 1980; Wong & Weiner, 1981).

The attribution process goes beyond mere explanation. The process of causal attribution is also thought to provide the individual with a means of "encouraging and maintaining effective exercise of control" over one's

world (Kelley, 1971, p.22). Therefore, attribution seeking is also an adaptive mechanism or coping behavior. It has been suggested that different types of causal attributions provide the attributor with varying degrees of control; this perceived control subsequently enhances or hinders adaptation (Weiner, 1985; Wong & Weiner, 1981; Rothbaum, Weisz & Snyder, 1982). For example, Bulman and Wortman (1977) found that spinal cord trauma victims who attributed blame to themselves had superior adjustment to their losses than those who attributed their loss to another person. None of the literature reviewed examines the use of attribution-seeking in grief resolution.

Women who miscarry react to the experience by grieving and by seeking to understand why it happened. Since different causal attributions have been shown to be both adaptive and maladaptive coping behaviors in response to other adverse life events, it is reasonable to expect that they have a similar potential in the aftermath of miscarriage. However, more needs to be learned about maternal grief, causal attributions and their relationship to each other before the effect of a specific attribution on the resolution of grief following miscarriage can be known.

### Research Questions

The specific research questions addressed in this study are:

1. What is the intensity of grief experienced following a miscarriage of 16 or fewer weeks' gestation?
2. What are women's perceptions of the cause(s) of their miscarriages?

3. Is there a relationship between grief intensity and the maternal attributions made by women following an early miscarriage?

### Definition of Terms

Causal attribution: The woman's perception of the cause(s) of her miscarriage.

Chance: A random uncontrollable event.

Early miscarriage: A spontaneous inevitable or missed abortion of 16 weeks gestation or less.

Genetics: Any or all of the following conditions which the woman perceives contributed to or was responsible for her miscarriage: anomalies of the fetus, parental chromosomal abnormalities, fertilization accidents, mutations

God: Some greater being or force which the woman believes ordains life events.

Maternal actions: Behaviors performed by the woman which she perceives contributed to or was responsible for her miscarriage.

Maternal emotions: The woman's feelings about her pregnancy or prevalent feelings during pregnancy which she thinks contributed to or were responsible for her miscarriage.

Maternal grief intensity: The sum total of the physiological, psychological and social responses a woman has to her miscarriage. This was operationally defined using the Peppers and Knapp Grief Intensity Scale (L.G. Peppers, personal communication, February, 1987).

Physical problem: A maternal condition or injury the woman perceives contributed to or was responsible for her miscarriage.

Someone else: Person(s) who performed or required the woman to perform some behavior she perceives contributed to or was responsible for her miscarriage.

### Limitations

Three factors limit the generalizability of the results of this study. First, a convenience method of sampling was used. A truly representative sample of the population may not be obtained by this method. Secondly, the very small sample size itself adds an additional constraint. Finally, the instrument used, the Peppers and Knapp Grief Intensity Scale, was the only tool found which examines grief intensity in this type of population. However, the reliability and validity of this tool have not been documented, although it has reportedly been used in a number of studies (L.G. Peppers, personal communication, February, 1987).

### Overview of the Thesis Content

This thesis is organized into five chapters. Chapter One reviews the context of the problem, the conceptual framework and outlines the purpose of the study. Chapter Two is a review of the relevant literature on grief and causal attribution following miscarriage. Chapter Three outlines the research methodology. The description of the sample, results of the data analysis and the discussion of the findings constitutes the fourth chapter.

The final chapter presents a summary of the study and conclusions. As well, future implications for nursing are examined.

## CHAPTER TWO

### Literature Review

The meager number of studies of the emotional sequelae of miscarriage is a revealing comment on its status as a nonevent. Studies of the emotional aspects of miscarriage began as recently as 1970 (Herz, 1984; HuttI, 1986). To date, this remains a relatively small, though growing, body of literature. Only two of the reviewed studies specifically examined the population of women who have experienced early miscarriage. While serious investigation of miscarriage has been developing slowly, since 1980 there has been a rapid proliferation of anecdotal and self-help literature. This experiential literature presents and describes maternal grieving and causal attribution as fundamental aspects of the miscarriage experience. The consistent confirmation of these two prevailing themes gives direction for research.

One probable reason miscarriage was considered a nonevent relates to the commonly held assumption that mother-infant attachment begins with quickening. Conventional wisdom of mother-infant bonding describes a phased process of attachment (Klaus & Kennel, 1982). In the first phase, the woman must accept and acknowledge the pregnancy. This phase is often characterized by emotional ambivalence. The second phase, which begins with fetal movement or quickening, is thought to mark the separation of the fetus from the woman's self concept. However, in Lumley's study of the thoughts and feelings of 30 primagravidae, it was found that 30% of the women between 8 and 12 weeks' gestation already



viewed the fetus as a baby (Klaus & Kennel, 1982). Research is providing new insights into the formation of attachment bonds in early pregnancy through its exploration of the losses associated with miscarriage (Peppers & Knapp, 1980a; Swanson-Kauffman, 1983). As a result of these investigations and others, miscarriage is beginning to be recognized as a source of significant loss and, therefore, significant grief.

Both the available research and experiential literature are examined in this chapter. The review is divided into two sections. A review the literature on maternal grief following miscarriage is included in the first section, while the second section explores the literature on causal attribution following miscarriage.

### Maternal Grief

One of the most notable features of the miscarriage literature is its insistence that grief is a common, if not universal reaction to the losses of miscarriage (Herz, 1984; Hutt, 1984; Leppert & Pahlka, 1984; Moore, 1984; Peppers & Knapp, 1980a, 1980b; Reed, 1984; Stack, 1980, 1984; Stephany, 1982; Swanson-Kauffman, 1983; Wetzel, 1982; Wilkinson, 1987). Yet maternal grief also remains an enigma. Borg and Lasker (1981) commented that "although miscarriage is the most common type of failed pregnancy, the grief associated with it is probably the least understood" (p. 35).

The enigma of miscarriage grief is due to the nature of the event, as well as the ambiguity of the object of the loss. Swanson-Kauffman's (1983) study of 20 women experiencing early miscarriage found all women experienced loss and all uniquely defined their loss or losses. Numerous

other authors concur with this finding that miscarriage losses are individually perceived (Bryant, 1985; Friedman & Gradstein, 1982; Wall-Haas, 1985). According to Swanson-Kauffman, the emotional aftermath of miscarriage is coming to know and deal with these varied losses.

### Perceived Losses.

The literature indicates women who miscarry experience not only physical losses but also psychological and social losses. In early miscarriage, even the actual physical loss is difficult to define. In reality, there may never have been a fetus, let alone a child to mourn. Wall-Haas referred to this as the "amorphic nature of the death" (1985, p. 52). Coping with this ambiguity is unique to women who miscarry and is not encountered by other mourners (Stack, 1980, 1984). With so much uncertainty, it should not be surprising that women who miscarry may make any number of possible interpretations of their loss.

The physical losses identified in the literature generally refer to losses that can be categorized into three types: those where the loss is perceived as separate from the mother but "not really a baby" (Swanson-Kauffman, 1983), those where the loss is perceived as a body part (Stack, 1984), and finally, those where the loss is perceived as a potential or real child (Herz, 1984; Stephany, 1982). Women who define their loss as "not really a baby" generally perceive it to be the loss of a pregnancy, placental tissue, an abnormal egg or a fetus (Swanson-Kauffman, 1983). There is substantial support in the literature that having this perception of loss is associated with lower grief intensity; however, no studies were cited to support this hypothesis.

Other authors have noted that women describe their loss as a loss of self (Stack 1980, 1984; Swanson-Kauffman, 1983). Stack (1984) concluded that a woman may actually grieve for herself because the cognitive separation of the woman from her fetus has not yet occurred in early miscarriage. In Stack's opinion, the loss of oneself is a more difficult loss to resolve than that of an external object.

A number of authors have concluded that the lack of physical evidence of an infant in early pregnancy, particularly its fetal movements, does not prohibit the formation of mother/infant attachment bonds (Peppers & Knapp, 1980a; Swanson-Kauffman, 1983; Wall-Haas, 1985). As indicated in the introduction, it was once thought that mother-infant attachments did not form until after quickening (Klaus & Kennel, 1982). The Peppers and Knapp's study (1980a) of grief intensities of women with different types of pregnancy losses was one of the first studies to challenge this assumption. Since then, others have also concluded that strong mother-infant attachment bonds form for many women in early pregnancy (Swanson-Kauffman, 1983; Herz 1984; Peppers & Knapp, 1980a, 1980b; Wall-Haas, 1985). Friedman and Gradstein stated that for some women "deciding to have a child is the first step in the process of attachment" (1982, p.4). Herz (1984) added that the use of sonography in early pregnancy probably enhances this bonding process.

The formation and subsequent severing of these attachment bonds by miscarriage result in women perceiving their loss to be the loss of an infant. Herz (1984) observed that a woman in early pregnancy forms a "mental image of the child composed of fantasies, expectations and hopes with an intense emotional investment" (p. 454). Bryant(1985) concurred,

noting that it was not uncommon for families to have chosen names and have formulated preliminary expectations about the child's gender even in early pregnancy. In Swanson-Kaufmann's study of women who had early miscarriages, 15 out of 20 women identified their loss as either a child or a "potential" child. Much of the literature contends it is these women who experience the most intense grief reactions; however, no studies were found to support this stand.

Literature examining the social and psychological losses associated with miscarriage is virtually nonexistent. Most authors only mention that these losses also exist. The social losses are generally described as losses of lifestyle or desired changes in lifestyle (Herz, 1984; Swanson-Kauffman, 1983). Slightly more literature identifies the psychological losses which are primarily losses of self esteem, self-concept, and control (Bryant, 1985; Leppert & Pahlka, 1984; Stephany, 1982; Swanson-Kauffman, 1983; Wall-Haas, 1985)

Literature exploring perceived losses of control following miscarriage are of particular relevance to this study since attributional searches are thought to deal with the reestablishment of control following an unpredicted and uncontrollable event. Several of the reviewed authors mentioned this type of loss (Hardin & Urbanis, 1986; Herz, 1984; Leppert & Pahlka, 1984; Stack, 1980; Wall-Haas 1985). Herz commented that this is particularly an issue for career-minded women who have delayed pregnancy until later in their reproductive lives. Leppert and Pahlka noted that women often ask "Why me?" when they express their "intense feelings of vulnerability" associated with a perceived loss of control.

This section of the literature review suggests that a woman's

perception of her fetal loss may influence the intensity of her grief reaction. However, the authors have also identified many other possible losses. Losses of control are particularly significant to this study since the attribution reaction has been associated with this type of perceived loss.

### Grieving Process.

Many theorists have attempted to map out the natural history of the grief syndrome (Lindemann, 1944; , Kavanaugh, 1974; Parkes, 1965; Engel, 1964). Using these theories as a framework, many authors and researchers have attempted to compare the grief responses following miscarriage with that of other bereavements. Several unique features of the maternal grieving process following miscarriage have been noted (Herz, 1984; Swanson-Kauffman, 1983, Hardin & Urbanis, 1986, Leppert & Pahlka, 1984; Peppers & Knapp, 1980b).

Stack (1984) commented that like all sudden deaths, the sudden and unpredictable nature of miscarriage prohibits the use of anticipatory grieving to reduce the intensity of the actual grief reaction. However, it could be argued that in cases of threatened abortion, which have only a 50% chance of continuing to term, anticipatory grief may occur. No literature was found which compared the experiences of women with threatened miscarriages to those with sudden miscarriages.

The most notable difference between the maternal grief experience and other grief experiences is the apparent difference in the length of the acute grief phase. To date, Swanson-Kauffman (1983) has performed the most extensive research of this facet of the maternal grieving process

following early miscarriage. The findings from her qualitative study of 20 women indicated that the acute grief phase averaged approximately four weeks (Range: 1 day to 16 weeks,  $M = 3.8$  weeks). Comparing this experience to work of Lindemann (1944) and Parkes (1965) who studied widows and widowers, the investigator concluded that the maternal grieving period is considerably shorter than that of other bereavements. A finding that suggests a similar conclusion was identified by Leppert and Pahlka (1984). They found all 22 women in their sample to be in the last stages of the grieving process within three to four months post-miscarriage. Similar observations about the rapid resolution of the acute phase of grief were also reported by Borg and Lasker (1981), Friedman & Gradstein (1982), Hardin and Urbanus (1986), and Peppers & Knapp (1980b). Both Friedman and Gradstein and Borg and Lasker ascribed this rapid decrease to the lack of concrete memories associated with the loss.

Several authors reported that despite this apparent rapid resolution of grief, many women stated they felt they would never totally resolve their grief (Oakley et al., 1984; Swanson-Kauffman, 1983; Peppers and Knapp, 1980b). Peppers and Knapp refer to this phenomenon as "shadow grief." This grief experience was defined as a constant "dull ache" of unresolved grief, not a debilitating, dysfunctional grief (1980b, p. 47). The authors also noted that this experience is not unique to miscarriage or child-bearing losses.

Several authors have commented that early miscarriage grief parallels the natural history of other forms of bereavement ( Borg & Lasker, 1981; Friedman & Gradstein, 1982; Leppert & Pahlka, 1984; Swanson-Kauffman, 1983; Wall-Haas, 1985 ) In other words, maternal

grief is typified by the same distinct, recognizable stages of resolution as are other grieving situations. The only authors who commented specifically on the grieving process were Leppert and Pahlka (1984). Using Kavanaugh's theoretical grief framework for their discussion of observations of 22 women, the authors noted that while the first three stages of grief resolved quickly, the fourth stage, the stage of guilt, resolved more slowly. This slowed resolution was ascribed to the use of self-blaming causal attributions.

The review of the literature in this section identified that maternal grief resolution occurs more rapidly than resolution after other grief-inducing events. In addition, the literature suggests that causal attributions may have an effect on the resolution of grief.

### Grief Responses

Lindemann (1944) was the first researcher to identify the physical, psychological and emotional responses that are now believed to characterize the normal grief syndrome. The responses Lindemann identified were: altered sensorium, fatigue, weakness, digestive changes, preoccupation, guilt, irritability, hostility, difficulty concentrating and increased dependency. Similar responses have been found in studies of early miscarriage. Swanson-Kauffman (1983) provided descriptions of: preoccupation with thoughts of the loss, decreased energy levels and fatigue, depression, crying, sadness, numbness and failure to accept reality and loneliness. Wall-Haas (1985) attempted to quantify some of these responses. The investigator found, from a sample of nine women with first trimester miscarriages, that, in most cases, the somatic grief responses

were few and minor while the psychological and emotional responses (including sadness, preoccupation, thinking and dreaming about the baby, irritability, disbelief and anger) were more frequent and intense. Friedman and Gradstein (1982) added that women are often surprised by the intensity of these grief responses.

While the intent of this study is to examine the grief reaction as a whole and not as specific grief responses, discussion of the responses of guilt and anger was found to be relevant to this study. All of the authors discussed guilt, and no matter how brief their discussion, it was always in the context of self-blaming causal attributions. Although the response of anger was not directly related to causal attributions in the literature, it was directly related to guilt, and since many of the authors viewed anger as an externalized expression of guilt, anger would appear to be in some way related to causal attributions (Herz, 1984).

The investigators of the only studies of early miscarriage made a few specific observations about the responses of guilt and anger: Swanson-Kauffman (1983) found that guilt was not an "overwhelming" response in her subjects who had all just recently miscarried (less than three months). She suggested this low incidence and intensity of guilt was due to the women being informed that miscarriage was "a purely chance, genetic induced, process of nature" (1983, p. 252). She did notice, however, that three women who seemed to experience more intense guilt responses were those who did not have access to this information and "were most convinced that their actions had led to their loss," (p.252.). While Swanson-Kauffman suggested that a correlation between perceived loss and grief intensity appears to exist, she did not suggest that a correlation between the



intensity of the guilt response and the intensity of the grief reaction exists. However, Swanson-Kauffman did suggest that a woman's social context might be an intervening variable. Although Swanson-Kauffman did not discuss this aspect, the three women she identified as having more intense guilt were also women with histories of repeated pregnancy loss. Both Pizer and Palinski (1980) and Oakley and colleagues (1984) have suggested that repeated losses affect the type and intensity of emotional responses that follow miscarriage, particularly the guilt response.

Wall-Haas' (1985) completed a retrospective study of nine women with first trimester miscarriages. The time interval since the loss was not specified by the investigator, however, since subsequent pregnancies of some sample members were discussed, it must be inferred that considerable time had passed. Wall-Haas' purpose was to quantify the intensity of specific grief responses. One of the responses examined was anger, and while not addressing guilt specifically, Wall-Haas asked women to identify the use of self-blaming attributions. As will be discussed in more detail later, a common consequence of these attributions is guilt. Both the responses of anger and self-blame were rated as "moderate to big problems" for just over 50 percent of the women in her sample. The apparent difference in the incidence and intensity of these responses compared to Swanson-Kauffman's study could be due to differences in measurement, in times since the miscarriage, and/or in the sample characteristics specifically, the number of women with repeated miscarriages.

Both studies suggest that causal attribution is a common reaction to early miscarriage. Both studies also indicate that the origin of the causal attribution may influence some grief responses. The impact of different

causal attributions on the overall grief intensity remains, however, unknown.

The general consensus conveyed by this literature is that guilt is an unnecessary and negative emotional response to miscarriage. As a result, self-blaming causal attributions are viewed as maladaptive reaction to miscarriage. Consequently, many authors admonish health professionals to provide women with factual information to dispel the causal misperceptions that lead to self-blame (Bryant, 1985; Pizer & Palinski, 1980; Wilkinson, 1987). Yet, the testimonial accounts of several habitual aborters describe women experiencing at least an initial willingness to accept guilt in order to regain control of the miscarriage experience (Pizer & Palinski, 1980). Adding some support to this contention, Harris (1984), in a discussion of dysfunctional grieving following childbearing losses, noted that while it is common for health care professionals to assume that guilt is always a negative coping behavior, attributional guilt theorists suggest that guilt may be a positive response in some grieving situations. Harris contends the role of self-blaming attributions in grief resolution has yet to be determined.

The issue, whether self-blaming attributions are adaptive or maladaptive raises other questions that remain unanswered in the literature. Could self-blaming attributions, and therefore, guilt and anger, be adaptive at one point in time and not at another? Is the experience of guilt simply a normal grief response that should abate over time, or is guilt following a miscarriage in some way unique and therefore, persistent? Alternatively, does the miscarriage situation and its unique social context,

as Swanson-Kauffman suggested, effect the expression of guilt and self-blaming causal attributions?

The literature did not to provide much insight into these questions for two reasons. First, many of the authors actually do conceptualize guilt in different ways. Some saw it is as a grief response (Herz, 1984; Leppert & Pahlka, 1984; Swanson-Kauffman, 1983; Wall-Haas, 1985) while others viewed it as a independent reaction (Bryant, 1985; Stack, 1984; Stephany, 1982). Second, few authors differentiated between recent and long-term loss responses. Therefore, it was unclear if descriptions of guilt and causal attributions involved grief responses which had or had not abated or if these responses were independent reactions and therefore might have their own resolution process and might be influenced by other factors.

The literature indicated that guilt and anger are prevalent following miscarriage and appear closely related to self-blaming causal attributions. Therefore, it is logical to conclude that the causal attribution reaction must also be prevalent following miscarriage. The literature identified two forms of causal attributions following miscarriage: non self-blaming attributions that are thought to be adaptive and support grief resolution and self-blaming attributions that are thought to be maladaptive and responsible for persistent and intense guilt and anger responses and delayed grieving. However, there is some controversy about the belief that self-blaming causal attributions are always maladaptive.

#### Grief Reaction Intensity.

Few researchers have attempted to obtain an understanding of the intensity of the maternal grief experience as a whole. Those that have,

have used a variety of different tools and populations, thereby making comparison difficult.

The only researchers who examined the grief reaction intensity of women who miscarry were Peppers and Knapp (1980a). The purpose of their retrospective, correlational study was to determine if significant differences existed between grief intensity experiences of women who had had miscarriages, stillbirths or neonatal deaths. Using their own tool, the Grief Intensity Scale, they observed that the average grief intensity of women who miscarried was the same as the grief intensity of women who had stillbirths and neonatal deaths.

No study of the population of women who miscarry was found which examined correlations between grief intensity and any relevant variables.

### Summary.

It is apparent from this review of the literature that maternal grief following miscarriage does have some unique characteristics. The definition of the loss must be assumed to be unique to each woman. This factor is thought to account substantially for the wide range of grief reactions which are associated with early miscarriage (Swanson-Kauffman, 1983). It should also be noted that one type of psychological loss frequently associated with miscarriage is a loss of control. This factor may account for the frequent use of attributional searches following miscarriage. The second way grief associated with miscarriage is thought to be different is in its natural history. Several authors have identified that the natural history of the maternal grief is shorter following miscarriage than following other bereavements (Friedman &

Gradstein, 1982; Hardin & Urbanis, 1986; Leppert & Pahlka, 1984; Swanson-Kauffman, 1983;). Only Leppert and Pahlka (1984) suggested that phases of the grieving process might be different than those following other bereavements. The phase they identified as being the slowest to resolve was the phase which involves attribution seeking behaviors.

Self-blaming causal attributions were found to be consistently associated with the prevalent responses of guilt and anger in the aftermath of miscarriage. Most authors describe self-blaming attributions as indicative of maladaptive coping (Borg & Lasker, 1981; Bryant, 1985; Peppers & Knapp (1980b); Stack 1980, 1984;). However, a few authors have suggested that this may not necessarily be an accurate portrayal of the role attributional guilt plays in grief resolution (Harris, 1984). More research in this area is needed, therefore, to guide the delivery of health care. This is particularly so because recommendations for intervention are currently being made without full understanding of the consequences of self-blaming causal attributions and their effect on the grieving process.

Finally, no studies were found which examined the effect of any variables on grief intensity following miscarriage, although it is commonly contended that the woman's definition of her fetal loss does influence grief intensity. The only tool found which had been used to measure the intensity of the grief reactions of the population of women who miscarry was designed by the Peppers and Knapp (1980a). This tool is the Grief Intensity Scale.

### Causal Attribution Reaction

As the previous discussion of maternal grief indicated, causal attribution appears intricately woven with the grief responses that follow miscarriage. Yet, no studies were found which specifically investigated causal attributions or the attribution-seeking behaviors of women who miscarry. However, two of the studies reviewed asked one question each in this area. Most of the documentation of this reaction is found in the experiential literature.

Many authors, of both the professional and public presses, have commented on the prevalence of attribution-seeking behaviors following miscarriage (Berezin, 1982; Borg & Lasker, 1981; Bryant, 1985; Ewy & Ewy, 1984; Friedman & Gradstein, 1982; Herz, 1984; Lachelin, 1985; Leppert & Pahlka, 1984; Oakley et al. 1984; Pizer & Palinski, 1980; Stack, 1980, 1984). Selbel and Graves (1980) reported, following a survey of 92 women, that knowing what had happened was a predominant and immediate concern of most of the women in their sample. Seventy-seven per cent of the women wanted to know the cause of the miscarriage and 71 % of the women said that "knowing more about the cause" would help them "feel better" (1980, p. 164.). Wall-Haas' (1985) study of first-trimester miscarriages attempted to determine the presence of self-blaming causal attributions. This investigator found that all women in her sample had performed an attributional search. Four women reported self-blame was a mild problem, two recorded it as a moderate problem, and three found it to be a big problem. In the discussion of her findings, Wall-Haas commented that women seemed to "desperately need" explanations for why their miscarriage had occurred. Oakley and colleagues (1984) also

reported, following their survey of 137 women, that while the emotional aftermath of miscarriage may vary tremendously, attributional searches are a consistent and dominant reaction to miscarriage. These authors called this reaction the "why me? syndrome". This syndrome was defined as an "urge to make sense of the experience, to settle on an explanation as to why it happened" (p. 24).

### The Attribution Process.

The literature on miscarriage provides remarkably consistent descriptions of the causal attribution process. This process appears to begin with either the threat of loss or the loss of the pregnancy itself. Several authors have depicted women meticulously reviewing the events and activities of their early pregnancies in order to respond to questions like: Why me? What went wrong? Is it my fault? Is it my body's fault? (Borg & Lasker, 1981; Ewy & Ewy, 1984; Friedman & Gradstein 1982; Lachelin, 1985; Oakley et al., 1984; Pizer & Palinski, 1980). Friedman and Gradstein, stated "you try one explanation, then another, then another" (1982, p 12), thus suggesting that a hypothesis testing or a discounting approach is used to select an acceptable causal attribution. Borg and Lasker noted this process also involves information seeking behaviors. They reported that women look for clues and "scrutinize news items" (1981, p. 32 ).

Borg and Lasker (1981) and Friedman and Gradstein (1982) also observed that many causal attributions are based on misunderstandings about miscarriage. They noted that often the belief in these inappropriate causal attributions is reinforced by others during the vulnerable period of

the attributional search. Herz (1984) extended this sentiment, by stating that the current social context of miscarriage also reinforces many misattributions. Friedman and Gradstein (1982) ascribed the persistent, and high incidence of misunderstandings and misattributions to both the lack of medical certainty about the cause of miscarriage, and a "general tendency to see woman's health problems as having psychological origins" (p.28).

Although it is not clear from the literature if attribution-seeking following miscarriage is always associated with a loss of control; causal attribution is seen by many authors as a coping behavior used by women to reestablish control over the events of their lives (Borg & Lasker, 1981; Friedman & Gradstein, 1982; Pizer & Palinski, 1980). As Borg and Lasker stated, causal attribution is an "effort to regain control over their [the parents] lives, to give sense and order to a chaotic situation even if it also contributes to the feeling that they might have been responsible" (1982, p. 21). Included in Borg and Lasker statement, is a reference to the type of causal attributions that are thought to provide women with this needed sense of control. These attributions are self-blaming and, as indicated earlier, are thought to induce guilt. Friedman and Gradstein (1982) described attribution-seeking behavior as part of "an endless cycle of uncertainty, blame and guilt" (p.16).

A variety of explanations exist in the literature to account for the prevalence of self-blaming and guilt-inducing causal attributions. As already mentioned regaining a sense of personal control is one explanation. Authors like Borg and Lasker (1981) and Pizer and Palinski,(1980) found the need to control the event could be so strong that some women would



blame themselves, even though they also knew they were not responsible. Herz (1984), on the other hand, hypothesized that self-blaming attributions are a conditioned response to cause and effect thinking in the absence of any real cause. Stack (1980, 1984) ascribed these attributions to a form of survivor syndrome or "self-condemnation over having lived while others died" (Lifton & Olsen, 1976, p. 297). Therefore, while there may be speculation about the exact reason for this type of causal attribution, most authors appear to think self-blaming attributions are a very common form of causal attribution following miscarriage. Lachell found them so common, the author stated it is "normal for the woman to feel that she is in some way responsible for the miscarriage" (1985, p.66).

Bryant (1985), after an extensive review of the literature, categorized self-blaming causal attributions into three main categories. Those categories were, biological (referring to chromosomal defects of either parent), emotional (presence of ambivalence or negative emotions about the pregnancy), and instrumental (referring to the woman's actions, including physical activity, dietary or drinking habits, adherence or non-adherence to medical advice or sexual activity) (1985, p. 1110). Bryant's findings suggest that self-blaming attribution in miscarriage generally refer to the woman's activities or behaviors, but the author has also identified some self-concept traits that may contribute to guilt. Attribution theorists refer to these different types of self-blaming attributions as behavioral or characterological attributions (Janoff-Bulman, 1979). The distinction is based on the degree of control and consequential effects of these attributions. Behavioral (state) self-blame provides the woman with control. While guilt may exist over the lost

pregnancy, by avoiding the ascribed behavior in the next pregnancy women have the potential for a sense of control. However, characterological (trait) self-blaming attributions offer no control and are thought to diminish the self-concept. Wall-Haas (1985) commented that women who are informed that they had a blighted ovum, believe their bodies at fault and experience a diminished self-concept. Possibly, this type of self-blaming attribution offers women no control and leads them to consider themselves as reproductive failures.

Despite indicating that self-blaming attributions may provide women with a sense of control, overall, the authors appear to contend that self-blaming attributions are maladaptive. Many authors have cited recommendations for health professionals to provide guilt-relieving information to the women to decrease the use of self-blaming attributions (Bryant, 1985; Leppert & Pahlka, 1984; Pizer & Palinski, 1980; Stack, 1980; Wall-Haas, 1985; Wilkinson, 1987). Other authors have suggested that the guilt caused by self-blaming attributions leads to long-term adjustment problems (Herz, 1984; Stack, 1980, 1984)

The authors of this reviewed literature have suggested that attribution-seeking is a common behavior following miscarriage. The process of attribution-seeking used by women who miscarry involves both reviewing the events of the earlier pregnancy and obtaining information about pregnancy losses in order to determine the possible cause of their miscarriage. Attributional searches appear to be performed as a coping behavior, possibly to deal with a loss of control, although some controversy exists on this point. Most of the authors who have discussed causal attributions discuss only those attributions which blame the

woman and induce guilt. Many of the authors view these attributions as maladaptive.

### Causal Attributions.

Many authors have mentioned examples of causal attributions made by women who miscarry (Bryant, 1985; Borg & Lasker, 1981; Friedman & Gradstein, 1982; Leppert & Pahlka, 1984; Pizer & Palinski, 1980; Wilkinson, 1987), but only two authors actually report actual attributions and their incidence. Seibel and Graves (1980) surveyed 92 women to establish their list of causal attributions. In response to the following question "What do you think happened?" they reported the following:

Most answered either "I don't know" (36.6%), or gave no response at all (18.3%). Of those who offered some explanation, the largest number (19.4% of all patients) identified hard work or heavy lifting. Almost one in ten (9.7%) attributed the abortion to a medical problem, and the remainder (16.1%) cited trauma, nervousness or pressure. About a fourth of the patients (25.8%) felt they were personally responsible for the abortion. A small number (7.5%) felt the abortion had been caused by sexual intercourse, and an even smaller number (5.4%) held the father of the child responsible (1980, p. 163.).

The authors did not attempt to correlate these attributions with any variable but did ascribe self-blaming attributions, such as sexual intercourse to "misinformation and partial truths" (1980, p. 164). The authors also alluded that the causal attributions that were used by the women were "difficult to express in statistical terms" (1980, p. 164).

Oakley and colleagues (1984) provided the most extensive investigation of causal attributions following miscarriage. In their survey of 137 women, the authors asked each woman "whether she had any

idea as to what had caused the miscarriage" (1984, p. 201). Seventy five percent of the sampled women reported one or more attributions. The findings of their survey are cited in the following table from their book (Oakley et al., 1984, p. 114):

<u>What do you think caused your miscarriage?</u>	<u>% women mentioning</u>
Abnormal fetus	19
Illness/accidents/medications in early pregnancy	11
Overdoing it (e.g., moving house)	11
Hormone imbalance	10
Incompetent cervix	5
The pill (taking it 'too long', getting pregnant 'too soon' after stopping it)	5
The coil (became pregnant with it in place)	3
Placental insufficiency	3
Shock/worry	3
Getting pregnant too soon after baby/miscarriage	2
Sexual intercourse	1
Age	1
Blighted ovum	1
Antepartum haemorrhage*	1
Don't know	23

\* bleeding occurring during pregnancy after 28 weeks

Oakley and colleagues also compared their attribution list to a similar one compiled in 1819 by Granville (Oakley et al., 1984). They observed that women in 1819 were more certain of the cause (only 3% didn't know). They also noted that while the ascribed proportions were different, many of the misattributions are still the same. This comparison reveals that societal influences effect a woman's causal attributions.

Finally, these authors noted, like Pizer and Palinski (1980) that a woman's attributions may change over time and as a result of repeated

pregnancy losses. Although this was not explored, several examples of changed attributions were cited.

This section on causal attributions discussed the attributions identified by a number of women in two different samples. Comparative analysis of attributions made in different eras indicate that the formation of causal attributions are influenced by the societal context. Although attribution-seeking appears to be a common behavior, between one quarter and one third of the examined samples indicated they did not know the cause. This raises the question, do all attributional searches result in the formation of a causal attribution? Finally, this discussion revealed the possibility that attributions change with over time and are influenced by other events.

### Summary.

This review confirms that attributional searches are common in the aftermath of miscarriage. While numerous examples of causal attributions have been cited, it is evident that the significance of causal attributions following miscarriage is thought to depend on whether they are self-blaming and therefore induce heightened guilt and anger responses during grief. The majority of the authors reviewed contend this kind of causal attribution is a maladaptive response in the grieving process. However, no actual studies support this claim and some controversy exists. More needs to be learned about the process of the attributional search, the causal attributions themselves, and their relationship to grief in miscarriage.

### Summary of the Literature Review

Miscarriage is an unpredictable event surrounded by uncertainty. It is also a uniquely personal experience. The literature suggests that loss is always associated with miscarriage. However, the loss is uniquely defined by each woman. Many authors believe that the type and intensity of the reactions that follow miscarriage losses are also determined by the woman's definition of the loss. The literature suggests that the majority of women experience two types of reactions to miscarriage. The first reaction is grief. The second reaction is an attributional search.

Grief following miscarriage has been shown to be potentially as intense as that following any other type of bereavement. However, unlike other grief, the acute phase of the maternal grief syndrome appears to resolve faster. Yet, many authors feel that for some women total resolution is never achieved. The physiological, social, emotional and psychological responses of the maternal grief syndrome are thought to resemble those of other grief syndromes. The literature also suggests that the staged process of maternal grieving resembles the grief syndrome following other losses. However, there is some support for the conclusion that the grieving process may be hampered by heightened guilt and anger responses which originate from self-blaming causal attributions. However, there is some controversy over this point and no research was found which examined this relationship. Other authors add that the unique social context that surrounds miscarriage may also impede grief resolution.

The causal attribution is thought to be a method of adapting to adverse, unpredicted, and uncertain life events. The literature suggests

this occurs in response to losses of control experienced by women who miscarry. The attribution process these women use was reported to be composed of information-searching and hypothesis-testing behaviors performed in response to a variety of cause-related questions. Causal attributions were shown to be influenced by both a woman's societal and social contexts. Women who miscarry were reported to frequently form attributions of self-blame in the absence of any knowable cause. It was noted by a few authors that women often form more than one causal attribution and that these attributions may change over time.

From the literature review, three areas which require further examination in order to better understand women's experiences of miscarriage were identified. An absence of studies examining variables that may effect the intensity of the grief experience following miscarriage was noted. The literature review also provided only minimal information about the specific causal attributions women make following miscarriage. However, the literature reviewed indicated several hypotheses exist about the impact causal attributions have on the woman's miscarriage experience. One author suggested that the phenomenon of causal attribution following miscarriage is more complex than current data would indicate and further research is needed. Finally, the literature review raised questions about the relationship between the causal attributions formed following a miscarriage and the grief reaction and its resolution. This study was designed to add to the current knowledge of a woman's experience of miscarriage in these three areas.

## CHAPTER THREE

### Methodology

The research design which best suited this study of the experience of early miscarriage was an exploratory and correlational descriptive design. All data were collected by the investigator from either the subject's written responses to a questionnaire or taped responses given during a semi-structured interview.

This chapter will review the sampling criteria, setting and instruments used in conducting this study. In addition, the ethical review, data collection process, and data analysis procedures will be outlined.

### Sample

A convenience sample of 15 women was selected on the basis of seven sampling criteria:

1. The women had experienced incomplete spontaneous or missed abortions of a naturally conceived pregnancy of 16 weeks or less.
2. The women were available for interview within three months of experiencing their miscarriages.
3. The women had no previous pregnancy losses, therapeutic abortions or perinatal deaths (including neonatal deaths of up to 1 month).
4. The women were between 20 and 38 years of age.
5. The women lived in metropolitan Vancouver, British Columbia.
6. The women were in a permanent relationship.



7. The women had not decided to therapeutically terminate the pregnancy prior to the miscarriage.

All women were screened first by unit nursing staff for the first five sampling criteria and, if suitable, these candidates were screened by the investigator for the last two criteria. Of the 27 women approached, 10 declined to participate. The remaining 17 women agreed to participate, however, only 15 were available to participate at the time of the data collection interview.

### Setting

Most women in the sample were admitted to a large western Canadian hospital for dilatation and curettage following their miscarriages. This hospital performed 336 such procedures for women experiencing missed and inevitable abortions in 1987. Because of the emergent nature of miscarriage, the women in this sample came from the ethnic and socio-economically diverse population of the surrounding metropolitan area.

### Data Collection Instruments

#### Questionnaire

The questionnaire was designed in three parts. The first part consisted of the Peppers and Knapp Grief Intensity Scale. The second part of the questionnaire was a single item used to determine the presence and intensity of the attribution reaction. The questionnaire concluded with

seven Origin of Attribution Scale items which determined the presence of attributions of selected origins.

### The Grief Intensity Scale.

The Grief Intensity Scale developed by Peppers and Knapp has its theoretical grounding in the work of Lindemann and Parkes (see Appendix A). The original 16 item tool was an expansion of a mourning scale developed by Kennel, Slyter, and Klaus (1970) for use with women who had experienced a perinatal death (Peppers & Knapp, 1980a). The scale used in this study is a later edition of the The Grief Intensity Scale which asks women to rate their experience on 17 emotional, physiological and social grieving response items retrospectively for the time of the miscarriage and at the time of the data collection interview (L. G. Peppers, personal communication, February, 1987). Ratings of the response items are completed using nine-point Likert scales. The ratings are then summed to give two distinct grief-score totals, one retrospective for the time of the miscarriage and the second for the intensity of grief at the time of the interview. The possible scores at each point in time are a minimum of 17 and a maximum of 153.

Peppers reported that this tool had been used in a number of studies, some of which have been published (Peppers & Knapp, 1980a; L.G. Peppers, personal communication, February, 1987). No data about its reliability or validity, however, was available. Since no other grief intensity scales were found which had been used with populations similar to woman who miscarry, this tool was selected. A review of the literature published concerning the grief experience following miscarriage has confirmed that the tool has content validity for the population of women who miscarry. In addition,

internal reliability analysis for this study was completed. Alpha coefficients for both the time of the miscarriage and 6 to 10 weeks later indicated high internal reliability (alpha coefficient = .88, .81 respectively).

#### Attribution Reaction Item.

The question used to determine the presence and intensity of the attribution reaction was developed by the investigator. The phrase "wondering what went wrong" was used in this item because it appeared to be commonly associated with attribution seeking behavior. This phrase was found to head sections on causes of miscarriage in a number of popular miscarriage books (Ewy & Ewy, 1984; Friedman & Gradstein, 1982; Oakley et al., 1984; Pizer & Palinski, 1980). In addition, this phrase reflects an attribution-seeking question that does not direct the placement of blame. Like the Grief Intensity Scale, the attribution reaction item used a nine-point Likert scale format. Two distinct values were also produced for the intensity of attribution-seeking activity, one for the time of the miscarriage and the second for the time of the data collection interview (see Appendix B.).

#### Origin of Attribution Scale Items

The origin of attribution scale items, which identified seven possible causal attribution origins, concluded the interview. The subjects rated the degree to which they felt each of these attributions was responsible for their miscarriage. The rating was completed using a five-point Likert scale (see Appendix C). In addition, the subjects were also asked to discuss the

reason for their rating selections. From this discussion it became clear that the seventh attribution question was confusing for several women.

The seventh attribution origin was "god - some greater being or force that ordains life events." The confusion stemmed from the term "responsibility." Some women saw this term as a synonym for both "blame" and an "ordained event." Yet "blame" and an "ordained event" were viewed as being very different phenomena. Hence, these women felt they should choose both 1 (no responsibility) and 5 (a great deal of responsibility), for this attributional origin. This question was omitted from further data analysis.

#### Demographic and Attribution Interview Guide.

The interview guide directed the collection of demographic, obstetric history, and maternal attribution data (see Appendix D). This guide included both open-ended and closed-ended questions. The open-ended questions were used primarily to direct the exploration of the maternal attributions and their sources. While the focus of the questioning was on determining the woman's perceptions of the cause of her miscarriage, her perception of what health care professionals and other people identified as the cause was also solicited.

All questions in the guide were reviewed for clarity by two nurses experienced in research. In addition, a pilot test of the interview guide was conducted with three volunteers who had miscarried within the previous six months. This information was used to revise the questionnaire.

### Human Rights and Ethical Considerations

Participation in this study was voluntary. Prior to subjects being contacted by the researcher, the research proposal received ethical review approval from the University of British Columbia's Behavioral Sciences Screening Committee and implementation approval from the hospital's Research Committee. In addition, 11 of the hospital's actively practicing gynecologists received letters explaining the study (Appendix E). Their permission was requested to contact any women in their case load who met the sampling criteria. All doctors gave their approval by signing a consent form (Appendix F). Four more gynecologists were contacted either in person or by telephone to obtain their verbal permission to contact women who were identified as potential participants by nursing unit staff. Once medical approval was obtained, all women were approached by the investigator and given a letter of explanation about the study (Appendix G). Any questions that were raised were answered, and those women who agreed to participate signed a consent form (Appendix H).

Once consent was obtained, the women retained both the information letter and a business card with the researcher's name and phone number in the event of further questions or concerns. At the request of the hospital's research committee, all physicians of consenting subjects were notified by letter of the approximate date of the data collection interview. This was to enable the physicians to provide additional support to the woman if she sought their help.

In addition, safeguards were taken to protect the participants' confidentiality. All interview tapes, transcripts and questionnaires were

carefully coded. All tapes, transcripts and questionnaires will be destroyed on completion of this study.

### Data Collection Procedure

Nursing unit staff screened women according to the first five sampling criteria. The investigator then screened women for the final two sampling criteria: (1) the women were in a permanent relationship, and (2) the women had not made plans to therapeutically terminate their pregnancies. Information about these criteria was obtained from one of three sources, the woman's physician, the nursing unit staff, or the woman herself.

Women who agreed to participate in the study were contacted by telephone at about five weeks post-miscarriage and an appointment made for the data collection interview. Interviews were arranged at the woman's convenience and ranged from 6 to 10 weeks post-miscarriage. They were held in locations selected by the subjects for comfort and convenience. The majority of interviews were held in the subjects' homes. Three interviews were held at the woman's place of work and one interview was held in the investigator's home.

Each participant began the interview by completing parts one and two of the questionnaire. They were then interviewed by the investigator according to the semi-structured interview guide. Completion of the third part of the questionnaire concluded the formal interview.

### Data Analysis

The data analysis techniques used in this study included content analysis, descriptive statistics, and non-parametric statistical testing. Non-parametric statistical tests were selected for this study because the convenience sampling technique does not permit the assumption of a normally distributed population. In addition, the obtained data was only at nominal and ordinal levels. Therefore, the distribution-free, non-parametric statistical model was more appropriate (Seigel, 1956).

Descriptive statistics were used to examine the demographic and obstetrical history data gathered in the interview and the scores on grief intensity collected in response to research question one. Measures of central tendency, dispersion and frequency distributions were most commonly used.

The taped responses to the open-ended questions about causal attributions were transcribed and subjected to a content analysis. All spontaneous causal attributions were identified from the transcripts and coded. These transcripts were then reanalyzed to determine if, using a discounting process, the women had eliminated some of these causal attributions. The remaining attributions were then classified according to their attributional type and origin according to the developed content structure.

The final question examined the relationship between the identified spontaneous maternal causal attributions and the grief intensity scores for both the time of the miscarriage and the time of the interview, six to 10 weeks later. Data analysis comparing different types of causal

attributions were completed using the Median Test and the Fisher Exact Probability Test. Using the Statview computer program (Feldman & Gagnon, 1985), Kruskal-Wallis one-way ANOVA by Ranks was used to analyze data relating to the origin of the spontaneous causal attributions. A post hoc analysis of these data was subsequently completed on significant findings using the Kruskal-Wallis Multiple Comparisons Test. Finally, ordinal data obtained from the origin of attribution scale items and the attribution reaction item were correlated with grief intensity scores using Spearman's Rank Correlation Coefficient. The minimum accepted significance for this study was set at the .05 level.



## CHAPTER FOUR

### Presentation and Discussion of Results

This chapter has been divided into three sections. The first section presents the characteristics of the sample. The second section outlines the findings for each of the three research questions. Finally, the third section presents a discussion of these findings.

#### Demographics of the Sample

##### Age, Marital, Education and Work Status

The sample consisted of 15 women between the ages of 26 and 38 years of age, with a mean age of 30.4 years. All subjects were involved in permanent relationships. Fourteen were married and one had been in a common-law relationship for five years. Two women in the sample had completed graduate degrees and six others had completed undergraduate studies. Three women had some post-secondary education. A further two women had graduated from high school. The remaining two women had some high school. The majority of the women (86.6%) were working outside the home at the time of the miscarriage.

##### Past Obstetrical History.

The women in the sample had varied obstetrical histories. Primagravidae composed 60% of the sample. Of the remaining multiparous women, three women had two living children, two women had three living children and one woman had previously lost her only child at five months of

age due to a rare genetic disorder. Five women (33.3%) reported a history of conception difficulties. Of those women, four were under investigation or currently under treatment at the time of conception of the miscarried pregnancy.

### Characteristics of the Pregnancy and Miscarriage Experiences

Most of the pregnancies (73.3%) in this sample were planned conceptions, although some of these occurred faster than expected. On the average, the women in the sample knew of their confirmed pregnancies for approximately six weeks. The actual range was from 2 to 12 weeks. The majority of the pregnancies (60%) were uneventful until one week before the actual loss. Episodes of bleeding early in the pregnancy were experienced by five of the women.

None of the women reported experiencing quickening. However, three women reported a single episode of unusual abdominal movements. Two of these women retrospectively felt this movement coincided with the fetal death. Both multiparous women noted that this movement was unlike fetal movement with past pregnancies. One woman, described a movement at 12 weeks like "a big bulge. . . just a movement, as if the whole thing had moved." Her ultrasound at 14 weeks showed fetal development had stopped at 12 weeks (missed abortion). The second woman who experienced an spontaneous, inevitable abortion reported a similar movement four days before the miscarriage. "I felt a big lump and it moved around and went down. . . it felt like a golf ball." The third woman, a primagravida with diagnosed twins, felt her "stomach go up and down" some time between her confirmation of the pregnancy at six weeks and the first ultrasound at seven weeks (which showed no fetal life).

Nine of the women (60%) had had at least one ultrasound scan performed; four of these women had had two tests. Only one woman actually saw a pulsating fetal pole. Three women described seeing a dot (conceptive tissue) and one woman saw two dots (diagnosed twins). Four women reported seeing nothing on the scan. The remaining six women (40%) were not tested.

At the time of the miscarriage, all the pregnancies were judged by the women's physicians to be between six and 16 weeks gestation ( $M = 10.7$ ). One subject thought she was 18 weeks pregnant but she had not felt fetal movement. A closer examination of gestational age revealed that four women (26.6%) lost the pregnancy at or before eight weeks' gestation. Six miscarriages (40%) occurred between nine and 12 weeks and the remaining five (33.3%) occurred between 13 and 16 weeks' gestation.

The sample was almost equally divided between those who had experienced missed abortions (53.3%) and those who had inevitable abortions (46.7%). Only one woman did not have any physical symptoms at the time of hospitalization. Five women experienced only vaginal bleeding and nine of the women reported both bleeding and cramping. The severity of these symptoms were perceived by the women to range from menstrual-like cramping and bleeding to "hemorrhage" and "labor pains". All women underwent dilatation and curettage and were released from the hospital within 8 to 36 hours after admission.

## Findings

### Research Question One: The Intensity of the Maternal Grief Reaction

In order to determine the intensity of the grief reaction following early miscarriage, maternal grief intensities were measured using the Peppers and Knapp Grief Intensity Scale. Descriptive statistics were used to examine the resulting scores at two points in time, shown in Table 1. The first score results were a retrospective measurement of the grief reaction at the time of miscarriage. The second score represents the grief intensity 6 to 10 weeks later at the time of the data collection interview.

Table 1

### Distribution of Grief Intensity Scores at the Time of the Miscarriage and 6 to 10 weeks later

Score Range	Miscarriage		6 - 10 weeks later	
	Frequency	Percent	Frequency	Percent
17 - 35	3	20.0	10	66.7
36 - 54	3	20.0	4	26.7
55 - 73	4	26.7	1	6.7
74 - 92	3	20.0		
93 - 111	1	6.7		
112 - 130	1	6.7		
Total	15	100.1	15	100.1

Maternal grief intensity scores ranged from 28 to 118 points ( $Md = 58$ ,  $M = 62.9$ ,  $SD = 26.7$ ). The maternal grief intensity scores were lower at 6 to 10 weeks post miscarriage. (see Table I). The range was from 19 to 61 points ( $Md = 28$ ,  $M = 32.6$ ,  $SD = 12.4$ ). Using the Median Test, a significant difference was found in the grief intensity scores between the two time intervals (chi square = 8.58;  $p > .01$ ).

### Research Question Two: The Causal Attribution Reaction

Research question two sought to identify the causal attributions that women used to explain their miscarriages. In order to answer this question, data were examined in three different ways. Initially, descriptive statistics were used to examine the intensity of the attribution reaction and the frequency of spontaneously cited causal attributions. Using content analysis to structure the interview data, all causal attributions were classified according to their orientation and relative timing to the miscarriage event. The dominant attributions were subsequently classified according to origin. These findings were then described statistically. Finally, the results of the attribution scale items relating to the origin of causal attribution were also examined using descriptive statistics.

All women in this sample had developed some explanation for their miscarriage. When asked directly in the interview if they had developed a theory about what had caused their miscarriage, seven of the women (46.7%) stated that they had ideas about what caused their miscarriage. Eight woman stated they had no ideas (53.3%). The latter group of women, however, later explained in the interview that their miscarriages were due to chance (one), a genetic event (three) or various other possible causes (four).

All women engaged in behaviors characteristic of the attribution process. In response to the attribution reaction item, wondering what went wrong, 86.7% of the women identified some attribution-seeking at the time of miscarriage ( $Md = 8$ ,  $M = 6.5$ ,  $SD = 3.2$ , ). Ten women (66.7%) responded that they had had many thoughts (rating 7 - 9), one woman (6.7%) identified a moderate number of thoughts (rating 4 - 6) and two (13.3%) described having few thoughts (rating 2 - 3). The other two women reported no attribution-seeking at the time of the miscarriage, although one woman subsequently reported a mild experience at the time of the interview. One of these woman reported attribution-seeking at the time of the interview and had formed several possible attributions. The second woman maintained she had not ever wondered what went wrong. She stated, "I know what went wrong,," and recounted her past experience asking "why me?" at the death of her first child.

Six to 10 weeks later, the wondering what went wrong was reported to be less intense. Yet it continued to be experienced to some degree by 93.3 percent of the women ( $Md = 3$ ,  $M = 3.7$ ,  $SD = 2.4$ , ). The mean score had decreased from 6.5 to 3.7, the median from 8 to 3. The Median Test comparing attribution intensities at these two points in time demonstrated a significant difference (chi square = 9,  $p > .01$ )

### Causal Attributions.

Content analysis of interview data resulted in the identification of 54 causal attributions. Each woman who had developed an idea or theory about the cause of her miscarriage made more than one causal attribution. ( $Md = 3$ ,  $M = 3.1$ ,  $SD = 1.7$ ). These attributions have been categorized according to their origin and are summarized in Table 2. These

categories include organic (physical condition of mother or fetus), environmental (believed teratological exposures), maternal (a behavior, emotional response or belief), and chance.

Table 2

Frequency of Spontaneously Mentioned Causal Attributions

Origin of Attribution	Frequency	Percent	Total %
Chance	7	12.9	12.9
Organic			26.0
abnormal ovum, sperm and/or fetus	9	16.7	
parental chromosomal defect	1	1.9	
maternal medical condition	4	7.4	
Environmental Exposure			13.0
fumes	2	3.7	
medication effects	4	7.4	
medical diagnostics	1	1.9	
Maternal			48.1
Behavior			
method of birth control	4	7.4	
sexual intercourse	2	3.7	
physical exercise (including lifting)	6	11.1	
recreational drug use (illicit, alcohol, & smoking)	3	5.6	
Intrinsic to the Mother			
ambivalence about pregnancy	3	5.6	
personal stress	4	7.4	
philosophy of atonement or moral lesson	4	7.4	
Total	54	100.0	100.0

Further exploration revealed that attributions could also be classified according to the type of attribution-seeking question they answered. Some attributions seem to answer the question: What went wrong? Others, more philosophical attributions, answer the question: Why me? (see Table 3). What went wrong? attributions could be further classified into those that address immediate causalities and those that address prior causalities. Immediate causalities are those the woman believes were the direct cause of her miscarriage. These attributions were primarily organic; however, a few women cited behavioral attributions such as lifting or exercising too much. Prior causalities are those the women believed indirectly caused their miscarriages. These attributions were primarily behaviors, but also included environmental exposures and maternal physical conditions.

Women who responded to the "why me?" question used attributions that referred to a "philosophical causality." This type of attribution refers to the occurrence of an uncontrollable event, or the event of the miscarriage, rather than the mechanical loss of the fetus. Each woman's attributions categorized according to the type of attribution are summarized in Table 3.

#### Dominant Causal Attributions.

The dominant attributions, identified by an asterisk in Table 3, were categorized according to origin of the attribution. These attributions were generally evenly divided between the origin categories of organic, maternal and non-specific. The frequency of these attributions are summarized in the Table 4.

Some dominant attributions seemed to persist in a woman's perceptions even though she had obtain assurances from health



Table 3

Types of Attribution made about Miscarriage

Subject	What went wrong?		Why Me?
	Immediate	Prior	Philosophical
01	*chance fetal abnormality	damage from IUD	
02	*lifting, overactive, illicit drug use, stress		*"bad girl" for chosen lifestyle
03	none		
04	*chance chromosomal abnormality		
05	*error in cell division	Ultrasound/X-ray	
06	*won't lay cause on somewhere possibly, wrongly	sexual intercourse, fennel tea/linseed oil/ birth control pill, fathers genetics	
07	malformed egg due to stress	*personal stress from work environment, aerobics	happens for a reason, test of faith
08	chance genetic event	over-active	*karma, lesson to be learned first
09	*abnormal sperm due to a combination of things, chance	unintentional use of spermaticidal condom, alcohol	
10	something wrong with cycle, weak egg	*failure to see physician earlier, activity, emotional ambivalence	

Table 3 (continued)

Subject	What went wrong?		Why Me?
	Immediate	Prior	Philosophical
11	overactive		*Baby doesn't belong to me. God took it.
12	*genetics due to several things together	spermatocidal jelly, alcohol, insecticide fumes, emotional ambivalence	We decide what happens to us.
13	egg too old, emotional ambivalence due to several factors	*effects of continued breast-feeding on physical health, some environmental exposures, medications, lifting	
14	*premenstrual syndrome		
15	chance, abnormal conceptus	*maternal age	

\* the dominant attribution for that subject.

professionals and other knowledgeable sources that the attribution could be discounted. A number of these persistent attributions were also shared by a significant other.

Table 4

Frequency of Dominant Causal Attributions by Origin of Attribution

(*n* = 14)\*

Theory Type	Frequency	Percent
No specific cause or several things together	4	28.6
Organic: mother's or fetus's physical condition	5	35.7
Maternal: activities, emotions or beliefs	5	35.7
Total	14	100.0

\* one subject made no spontaneous causal attributions.

Origin of Attribution Scale Items.

All women identified with at least one attribution of the six origin of attribution scale items and one woman cited all of the attributions to varying degrees. The most commonly selected attributions were chance (100%), genetic (80%) and maternal action (66.7%) attributions. Attributing responsibility to someone else was chosen least often (13.3%). Maternal emotions and physical problems were both cited by 40% of the women. Chance and genetics were also the attributions given the highest overall degree of responsibility ( $M = 4$ ,  $SD = .9$ ;  $M = 3.3$ ,  $SD = 1.6$ , see Table 5).

Table 5

Frequency of Attributions according to Origin of Attribution Scale

Origin of Attribution	<u>Frequency of Item selection</u>					M	SD	Md
	1	2	3	4	5*			
Chance	0	0	6	3	6	4.0	0.9	4
Genetics	3	2	2	3	5	3.3	1.6	4
Maternal Actions	5	6	1	1	2	2.2	1.4	2
Maternal Emotions	9	3	0	1	2	1.9	1.5	1
Physical Problem	9	2	0	3	1	2.0	1.5	1
Someone else	13	1	0	1	0	1.3	0.8	1

\* 1 meaning no responsibility and 5 meaning a great deal of responsibility.

### Question Three: The Relationship between Grief Intensity and Causal Attributions

The Spearman Rank Correlation Coefficient was calculated to determine if a relationship existed between grief intensity and the degree a women wondered what went wrong. No significant relationship was found at either the time of the miscarriage or 6 to 10 weeks later. Only at the time of the miscarriage did a positive correlation approach statistical significance ( $\rho = .361$ ;  $p = .09$ ).

### Grief Intensity and Types of Causal Attributions.

Women were assigned to two groups based on whether they made a

philosophical attribution or not. The Median Test and Fisher Exact Probability Test were calculated to compare the findings. A significant difference between the two sample groups was found at the time of miscarriage ( $p = .003$ ). The median grief intensity for those making philosophical attributions was 90.5 and 67 for those not making philosophical attributions. Six to 10 weeks later this difference, while not significant, had a probability of .06.

#### Grief Intensity and Origin of Dominant Causal Attributions.

Descriptive statistics were used to describe the dominant causal attributions. At the time of the miscarriage, maternal attributions presented the highest mean grief score ( $M = 88.6$ ) followed by non-specific attributions ( $M = 55.8$ ) and organic attributions ( $M = 41.4$ , see Table 6).

Table 6

#### Grief Intensity Scores by Origin of Dominant Causal Attribution at the Time of the Miscarriage

Source	n	Md	M	SD
Organic	5	41	41.4	11.8
Maternal	5	82	88.6	22.8
Non specific	4	51	55.8	22.1
Total	14			

Six to ten weeks, later while the ordering of the attributions remained constant, the differences between mean grief scores were less apparent (see Table 7).

Table 7

Grief Intensity Scores by Origin of Dominant Causal Attributions 6 - 10 weeks post-Miscarriage

Source	n	Md	M	SD
Organic	5	20	25.6	12.0
Maternal	5	33	38.8	15.3
Non specific	4	33	33.0	8.4
Total	14			

Using the Kruskal-Wallis Test statistic, a significant difference in grief intensity scores was found between the three dominant attribution groups at the time of miscarriage ( $H = 7.6$ ,  $p > .05$ ). This difference was not significant at 6 to 10 weeks later ( $H = 4.5$ ,  $p < .05$ ). To determine the source of the significant difference found at the time of the miscarriage, a post-hoc analysis was performed. The Kruskal-Wallis Multiple Comparisons test was used with paired groups. These comparisons demonstrated that a significant difference existed between grief intensities of women with maternal origin attributions and those with organic origin attributions (test result = 36, critical value = 33,  $p = .05$ ) and maternal origins and non-specific origins (test result = 30, critical value = 22.22,  $p = .05$ ).

### Origin of Attribution Scale Items

Spearman's Rank Correlation Coefficient was used to correlate grief intensity scores with each of the six specified attribution origin items. A positive correlation was found between grief intensity and maternal emotions at both the time of the miscarriage ( $Z = .48$ ,  $p = .02$ ) and 6 to 10 weeks later ( $Z = .45$ ,  $p = .05$ ). No other significant correlations were found. However, a negative correlation between grief intensity and genetic attributions was observed to approach significance ( $Z = .41$ ,  $p = .09$ ).

## Discussion of Results

### Intensity of Grief Reaction

All the women in this study displayed grief reactions although the intensity varied greatly. Oakley and colleagues (1984), Seibel and Graves (1980), and Wall-Haas (1985) all noted similar ranges in the grief experience following miscarriage. These authors found, as did this investigator, that maternal grief reactions can be profound or tempered by feelings of relief. Swanson-Kauffman (1983) observed that, in early miscarriage, the definition of the object of the loss is individually perceived, hence, the degree of loss and subsequent grief would be expected to vary widely.

In comparing the mean grief intensity scores from this study with those of the Peppers and Knapp (1980a) study, the scores do not appear substantially different or unexpected. Peppers and Knapp reported a mean grief intensity score of 75.6 at the time of the miscarriage, while this study reported a mean score of 62.9. The differences between these results might result from differences in the sample characteristics or from the

social context of the grieving. The authors allude to including women with first-time losses, habitual aborters and women with subsequent live births. Anecdotal literature suggests that these experiences influence grief and grief resolution differently (Leppert & Pahlka, 1984; Oakley et al., 1984). Peppers and Knapp (1980a) commented that less intense reactions were noted in women with subsequent successful pregnancies and more intense reactions were noted with repeated failures. They described these relationships as "approaching statistical significance." If the Peppers and Knapp study included many women with repeated miscarriages, the initial reported grief intensity would be expected to be higher.

Over the 6 to 10 week time frame used in this study, grief intensities were found to decrease significantly (chi square = 8.58,  $p = .01$ ). This decline in grief intensity is consistent with Swanson-Kauffman's (1983) finding that the acute phase of grief was resolved by about the fourth week after early miscarriage for most women. Other authors have also suggested grief resolution occurs rapidly following miscarriage (Hardin & Urbanis, 1986; Leppert & Pahlka, 1984; Peppers & Knapp, 1980b).

Mean grief intensity scores at the time of the interviews are also comparable. Peppers and Knapp (1980a) reported a mean of 27.7 compared to the 32.6 found in this study. These results do not appear significantly different or unexpected. The results of the Peppers and Knapp study would be expected to show a greater degree of grief resolution simply due to the differences in the passage of time since the loss. The average time since the miscarriage in the Peppers and Knapp study was 8.1 years compared to 6.9 weeks in this study.



### The Attribution Process Reaction

All women in this study used the process of attribution-seeking. This finding is consistent with those of Weiner (1985) and Wong and Weiner (1981) who concluded that attributional searches are spontaneously performed in situations which are uncertain, or have negative or unpredicted outcomes. However, many authors on miscarriage have described the use of the attributional process as only a common behavior and not universal (Borg & Lasker, 1981; Bryant, 1985; Friedman & Gradstein, 1982; Herz, 1984; Leppart & Pahlka, 1984; Moore, 1984; Oakley et al., 1984; Pizer & Palinski, 1980; Seibel & Graves, 1980; Wall-Haas, 1985). Since all miscarriages are unpredicted and have uncertain causes, one possible reason for this apparent difference in incidence could be in the degree of negativity associated with the loss by the woman. Hence, the attribution-seeking reaction would be expected to be less intense in women experiencing less intense grief reactions. Yet the current study found no significant correlation between attributional search intensity and grief intensity ( $\rho = .361$ ,  $p = .09$ ) at either the time of the miscarriage or 6 to 10 weeks later ( $\rho = .152$ ,  $p = .28$ ), suggesting that other factors are also involved in the performance of an attributional search.

Another possible explanation for this difference may be procedural. While all the subjects in this study used the attribution process, one of the women did not formulate a specific theory about the cause of her miscarriage and eight women did not acknowledge that they had formulated a theory. In fact, this latter group of women had all made medically accepted attributions. However, these attributions were not perceived by the women to be the same as having a theory or idea about the causes of miscarriage. Consequently, if other authors, not intent on examining the

attribution reaction following miscarriage, examined only the causal attributions, the actual incidence of reactions using the attribution process would remain unknown.

Wong and Weiner stated that attributional searches have been shown to be "neither random nor exhaustive but guided by a set of heuristics" (1981, p. 654.). These heuristics appear to be developed from a combination of the individual's social context and belief structure (Rudy, 1980; Wong & Weiner, 1981). Janis and Rodin noted that the "high level of emotionality surrounding most health related problems [results in] misattributions" (1979, p. 489). Several women in this study held a causal attribution and also reported discrediting information about that attribution. This information was often obtained from the medical profession or various other authority sources. All women appeared aware of this discrepancy, but only one woman seemed concerned with it. This woman referred to her attribution as "this irrational thing." Several authors have commented on observing attributions which appear less-than-rational. (Ewy & Ewy, 1984; Oakley et al., 1984; Pizer & Palinski, 1980). In addition, Oakley and colleagues (1984) commented that, while women who experience first-time losses were more likely to attribute their miscarriage to a physician-approved attribution, the incidence of attributions based on less-than-rational appearing heuristics increased with subsequent miscarriages. In this study, it was observed that these attributions were often shared by significant others and that they often revolved around guilt feelings over some previous activity. Ewy and Ewy (1984) and Oakley and associates (1984) also observed an apparent association with guilt feelings. These observations suggest that a woman's affect and social context also influence the formation of maternal attributions. Since affect and social

and societal contexts (which will be discussed later) all appear to influence the attribution process, it is also reasonable to suggest that an intervention strategy which provides only information is not likely to result in the discounting of a causal attribution once it has formed (Wortman & Dintzer, 1978).

Overall, the intensity of the attributional search reaction was found to decrease significantly over the 6 to 10 week time frame used in this study ( $\chi^2 = 9, > p = .01$ ). This finding is congruent with the grief theories of Parkes (1981) Engel (1964), and Kavanaugh (1974) who identified attribution-seeking behaviors as part of the grieving process. Leppert and Pahlka (1984) reported finding that the grief phase involving attribution-seeking is the one of the slowest stages to resolve in miscarriage grief. However, as all grieving behaviors have been found to decrease over time as part of the natural course of the grieving process (Lindemann, 1944), it is reasonable to expect that, as women approached resolution of their grief, their need for attribution-seeking would also decrease.

### Causal Attributions

In all, 54 causal attributions were mentioned spontaneously by women in this study. It is difficult to compare results from this study with those of other authors, since terminology varies. Yet some similarities in frequency were found with comparable causal attributions. Oakley and associates' (1984) found slightly more women attributed their miscarriages to an abnormal fetus (19%) than they did in this study (16.6%). The findings for the attribution of overdoing physical activities were almost identical between these two studies (11% and 11.1%), while Seibel and Graves (1980)

reported a slightly higher incidence (19.4%). Oakley and colleagues reported 11% of their sample identified illnesses, accidents and medication effects, while this study noted 15%. As well, sexual intercourse was cited by 7.5%, 3.5% and 1% of the women in the studies of Seibel and Graves (1980), this investigator, and Oakley and colleagues (1984) respectively. Finally a comparison of frequency was made for attributions identified as non-specific in origin. In this study women often began by saying "I don't know but..." Seibel and Graves (1980) and Oakley and colleagues (1984) studies used an attribution category entitled "I don't know." The frequency percentages were again similar (35.7%, 28.6%, 23%, respectively). These comparisons suggest that women who miscarry do make frequent and similar attributions.

Itemized lists of causal attributions, such as previously discussed, were found not to adequately reflect the ideas and theories women used to explain the causes of their miscarriages. The degree of complexity of these attributions was an unexpected finding. Four different characteristics of attributions were identified. The first difference was in the type of attribution question (Why me?/What went wrong?) the causal attribution addressed. This distinction determines whether the attribution pertains to the physical event of miscarriage or miscarriage as an adverse life event. The second difference which affects all attributions was the degree of importance a woman assigned to an attribution. It appeared that not all causal attributions had the same degree of importance or dominance. A third difference was noted in the origins of the causal attributions or the locus of control offered by the causal attribution. Attributions with organic origins represented an external locus of control; non-specific origins represented some unknown degree of control; and maternal origins

represented an internal locus of control. Attributions of maternal origins represent what has been referred to in the literature as self-blaming attributions. The final characteristic was noted only in those attributions which answered the question: What went wrong? Differences were observed in the relative timing of the attributions. Some attributions appeared to be formed to explain other attributions. These differences in the relative timing lead to the classifying of attributions into either an immediate or prior category. Brickman, Ryan and Wortman (1975) and Bulman and Wortman (1977) described similar time-differentiated attributions with victims of other uncontrollable events.

Causal attributions were found to differ in the type of attributional question they answered. Some attributions reported in this study were observed to respond to the more physically-oriented question (What went wrong?), while others referred to the more philosophical question (Why me?). Most of the literature reviewed on miscarriage identified only the immediate and prior type of attributions answering the first question, (Borg & Lasker, 1981; Bryant, 1985; Leppert & Pahlka, 1984; Seibel & Graves 1980, Oakley et al., 1984; Wilkinson, 1987) while only a few authors cited the more philosophical attributions which answered the second question (Friedman & Gradstein, 1982; Herz, 1984; Stack, 1984). The significance of this distinction appears to be in the extent of the perceived loss of control. Attributions responding to the first question identify a localized loss of control, while philosophical attributions are indicative of a more global loss of control and changes to the meaning of one's life. Both of these types of attributions have been shown to influence subsequent reactions to uncontrollable events (Wortman & Dintzer, 1978).

Differences in the degree of importance assigned to an attribution was an unanticipated finding in this study. None of the literature on miscarriage suggested this characteristic. However, the idea of differences in importance has been noted by investigators of other subjects (Bulman & Wortman, 1977). The finding in this study resulted in the identification of dominant attributions. Wortman and Dintzer (1978) found that a prior attribution is often more important to future behaviors than is an immediate attribution.

Women's explanations for their miscarriages were found to be a conglomerate of attributions with these characteristics. In this study, women were not predominantly influenced by prior attributions. However, among the four women who were strongly influenced by a prior attribution three gave immediate attributions which were organic in origin while their prior attributions were primarily maternal in origin. In addition, these three cases demonstrated prior attributions based on less-than-rational appearing heuristics. On the basis of assigned importance, therefore, both women with this type of two-staged attribution, and women who identify the direct cause of their miscarriage as maternal in origin, are probably representative of the women who have been described in the literature as self-blaming.

### The Relationships between Grief Intensity and Causal Attributions

The dominant attributions of women in this study were fairly evenly distributed between the three different origin categories: maternal/self-blaming (5), organic (5) and non-specific (4). Women who made maternal/self-blaming attributions (attributions to her behavior, emotions or beliefs) had significantly higher grief intensities at the time of the

miscarriage ( $H = 7.6 > p = .05$ ) than women whose dominant attributions were of the other types. This correlation, however, was not found to be significant 6 to 10 weeks later ( $H = 4.5 < p = .05$ ).

One possible explanation for this positive correlation at the time of the miscarriage is that an intense grief reaction involves a simultaneous and significant loss of control or a significant perception of threat to a woman's understanding of reality. Attribution theory provides two hypotheses which explain how self-blame facilitates adaptation in situations that are perceived as unmodifiable. These hypotheses suggest two possible motivations: maintaining one's belief in a "just world" (Lerner, 1971) or maintaining the belief in one's ability to exercise personal control over the environment (Kelley, 1971). Hence, self-blaming attributions which provide a high degree of control would be expected to be used by women to assist in the positive adaptation to the unpredicted event of miscarriage. Since self-blame, in this situation, is an effective and adaptive coping behavior, the correlation between grief intensity and self-blame later in the grieving process would be expected to be less significant. This expectation was borne out in this study.

One problem with this hypothesis is that not all possible maternal attributions provide an individual with a perception of control (Janoff-Bulman, 1979). Only those self-blaming attributions which are behavioral can provide a sense of controllability. Attributions which are characterological or based on self-esteem derogate the individual and are, therefore, maladaptive (Janoff-Bulman, 1979). These distinctions are based on state/trait theory (Spielberger, 1972). The extent to which the women in this sample used maladaptive self-blaming attributions could not be

determined. However, there was some suggestion of this type of attribution in one woman whose grief score remained relatively high over time.

An equally plausible explanation for the correlation between high grief intensity and maternal origin attributions at the time of miscarriage is that the woman's perception of the lost fetus determines the intensity of grief and also determines the origin of the attribution which is most consistent with this perception. In this study, it was observed that women who referred to their loss as a blighted ovum or fetus tended to make organic attributions; these women tended to have lower grief scores. Women who referred to their loss as a child, tended to make attributions related to mothering behaviors and had higher grief scores. Since the relationship is based on the definition of the loss, the natural reduction in grief intensity over time should not be influenced by the attribution itself. Therefore, a positive correlation between grief intensity and attribution at the time of interview would not be expected. Further investigation would be needed to determine if a relationship does exist between a woman's definition of her loss, her causal attributions and her grief intensity.

A significant difference in grief intensity was found between women who made philosophical attributions at the time of the miscarriage and those who did not ( $p = .003$ ). Six to ten weeks later, this difference was not found to be significant.

Grief reactions following unpredicted deaths have been found to be the most intense and are thought to result in the greatest degree of emotional distress (Bowlby, 1981). A similar situation may exist with women who miscarry. If the miscarriage resulted in the sudden breaking of a maternal/child attachment bond, the woman's appraisal of the loss situation may include an awareness of losses beyond the obvious physical



loss, including those of personal meaning and control. Bulman and Wortman suggested that philosophical attributions provide the victim with "a view that there is an underlying order and meaning to our existence" (1977, p.362). Therefore, if by altering the meaning that the unpredicted and adverse event has in an individual's life, self-concept can be preserved and the individual is provided with a mechanism to maintain control (Silver & Wortman, 1980). For example, if a woman comes to believe the miscarriage was a punishment for past sins, she has an explanation for an event she thought would not or should not happen to her. Perceiving that she can atone for her past transgressions, the woman is also able to reestablish control over the outcome of future pregnancies. Through these two mechanisms, one of which is self-blaming, philosophical attributions become adaptive coping behaviors. Therefore, one would not expect to find a correlation with grief intensity later in the process of grief resolution. No such correlation was found in this study.

One problem with this possible explanation is that not all philosophical attributions appear to be behaviorally self-blaming. It seems possible, although it wasn't clearly demonstrated in this study, nor was any discussion of this found, that a philosophical attribution may also be non-blaming.

The attribution scale items in this study also revealed that maternal emotions were significantly and positively correlated with grief intensity. This correlation was found to be significant both at the time of the miscarriage ( $Z = .48, p = .02$ ) and 6 to 10 weeks later ( $Z = .45, p = .05$ ).

The distinctions between characterological and behavioral self-blame provide one possible explanation for this finding. Emotions can be either intrinsic to the self-concept (trait) or a response to a situation (state) such

as the emotional grief responses following a miscarriage. By asking women how much their emotions were responsible for their miscarriage, this investigator did not distinguish between these two types of emotions. Hence, this finding may represent characterological or behavioral types of self-blame or, indeed, both. However, since the correlation persisted over time, and this was the only attribution correlation which did, it can be suggested that, at least some of these women, were identifying characterological self-blame. As a result, this maladaptive coping behavior impeded normal grief resolution and the correlation persisted over time.

Another possible reason relates to the social context of women who attribute their miscarriages to their emotions. Borg and Lasker commented that there is a "general tendency to view women's health problems as having psychological origins" (1981, p. 28). Friedman and Gradstein (1982) commented that the psychosomatic theory of miscarriage supported by researchers like Simon and colleagues (1969) was "seriously flawed". They added "It is unfortunate that until the past few years, these flaws were totally overlooked and thus a theory that was decidedly hostile to women was accepted by both the medical establishment and society" (1982, p. 46). The earlier discussion of the heuristics of the attributional process indicated that causal attributions are influenced both by a woman's belief and by her societal and social context. Similarly, according to grief theory, grief resolution has been shown to be influenced by social context and the freedom to express that grief (Schneider, 1984). Therefore, women who attributed their miscarriages to their emotions may have perceived their social and societal context as antagonistic and did not express their grief. Conversely, those women who attempt to express their grief may receive public censure and not be allowed to do so. In this type of situation, not

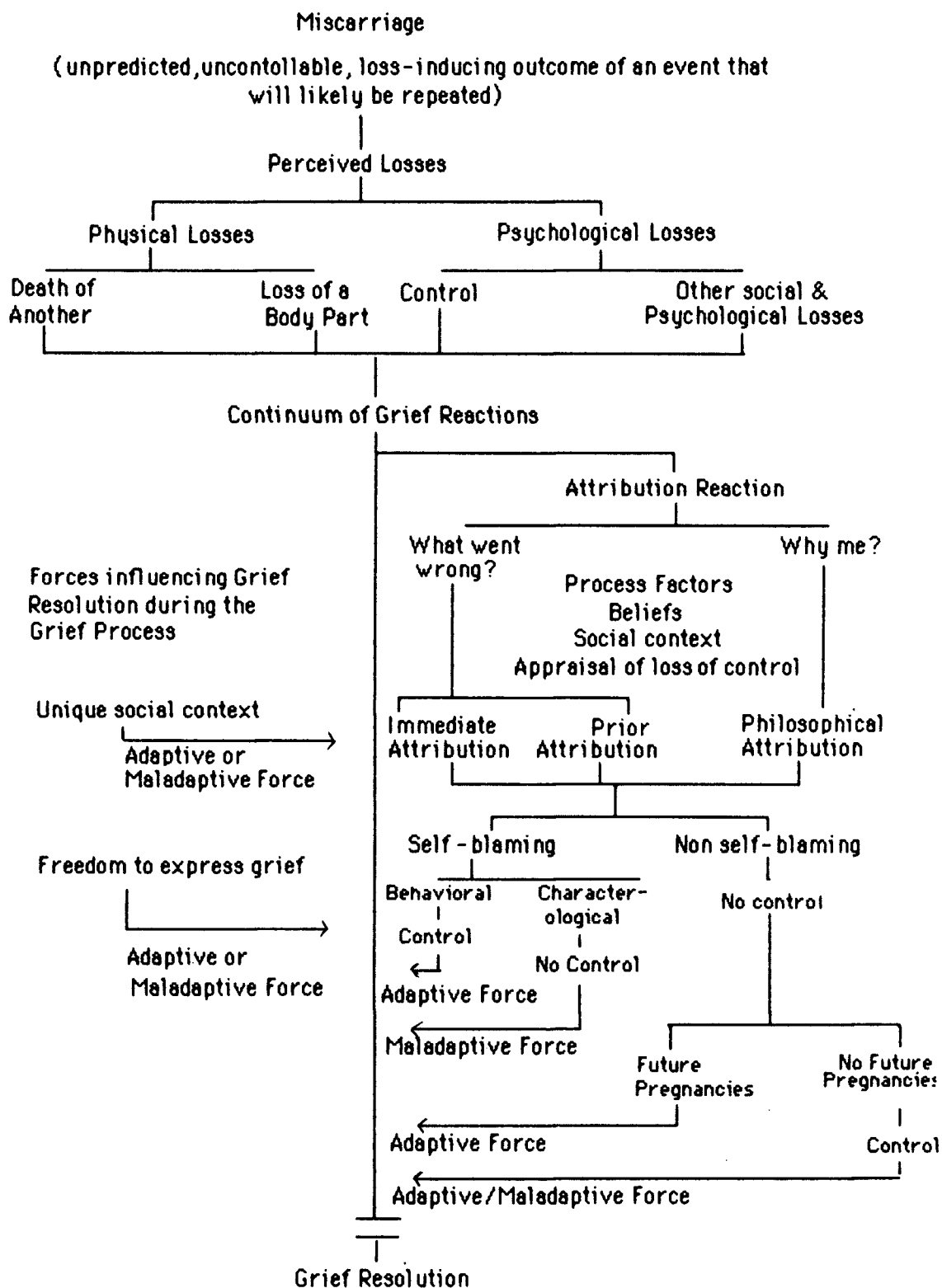
only is self-blame (possibly characterological self-blame) used, but also the victim is also likely to be victimized. Either situation would impede grief resolution, as suggested by the positive correlation at the time of the interview.

The conceptual framework used in this study was composed of four main concepts: miscarriage, loss, grief reaction and causal attribution reaction. While this framework included the necessary concepts, it did not account for the time dimension involved. Lacking this time dimension, the conceptual framework provided limited guidance in interpreting study results as both grief and causal attribution are processes. Therefore, in order to interpret the findings of this study a more extensive framework had to be developed. Loss, grief and attribution theories were combined with a time dimension to create a new framework for understanding responses to miscarriage. The revised conceptual framework is diagrammatically presented in Figure 2.

### Summary

This chapter began with a review of the characteristics of the sample. In addition to demographic data related to age and marital, educational, and work status, characteristics of the women's obstetrical histories and their pregnancy and miscarriage experiences were discussed. Grief Intensity Scale scores indicated that the women in this sample experienced widely differing degrees of grief intensity following their miscarriages. The grief intensities were also noted to have significantly decreased by the time of the interview 6 to 10 weeks following the miscarriage.

Figure 2: Restructured Theoretical Framework



While no significant relationship was found between grief intensity and the intensity of the attributional search reaction, all women in the study were found to use the attribution-seeking process, although not all women formulated causal attributions. The attribution process for some women was observed to be composed of a non-sequitous heuristic. The causal attributions formed by the women in this study were found to be fairly consistent with those of women in other studies with similar societal contexts. The ideas or theories the women formed to explain their miscarriages were found to be composed of more than one causal attribution. Four characteristics of miscarriage causal attributions were identified in order to understand these women's theories. These characteristics included the type of attributional question asked and whether a physical or philosophical attribution was formed, the dominance of the causal attribution, the origin of the causal attribution and the relative timing of the causal attributions related to the physical event of miscarriage.

Correlations between grief intensity and a variety of causal attribution variables were studied both at the time of the miscarriage and 6 to 10 weeks later. Significant positive correlations were found between grief intensity and both philosophical attributions and maternal/self-blaming attributions only at the time of miscarriage. A significant positive correlation for maternal emotions as a causal attribution was found both at the time of the miscarriage and 6 to 10 weeks later. No other significant correlations between grief intensity and causal attributions were found. Drawing on the theories of loss, grief, and attribution, possible explanations for the significant findings were hypothesized.

Finally, a revised conceptual framework was presented which more accurately reflects the grief and attribution process of the miscarriage experience of the study subjects.

## CHAPTER FIVE

### Summary, Conclusions, Implications and Recommendations

Until recently, early miscarriage was considered by many health professionals and members of the public to be a nonevent. Only the women who experienced it knew of its often traumatic emotional aftermath. In the last 20 years, an increasing volume of exploratory research and anecdotal literature in both the public and professional press has begun to document the emotional reactions to miscarriage. Two of the most commonly documented reactions in this literature are grief and causal attribution. Exploratory research suggests that maternal grief has some unique characteristics but very little is known about causal attributions or their characteristics. No research was found which attempted to determine whether a relationship exists between these two reactions. This study was designed to further explore maternal grief intensity, causal attributions and determine if a relationship exists between these two common reactions to early miscarriage.

Using an exploratory and descriptive correlational design, this study examined the intensity of the maternal grief experience, the formation and types of causal attributions and the relationships between selected types of causal attributions and grief intensity at two points in time. Fifteen women who met the sampling criteria comprised the convenience sample. These women were interviewed by the investigator between 6 and 10 weeks after their miscarriages. They completed a three-part questionnaire, including the Peppers and Knapp Grief Intensity Scale, and a semi-

structured interview was conducted. The data were analyzed using a variety of descriptive and non-parametric statistical tests and content analysis.

Demographic analysis of the sample revealed that the mean age was 30.4 years. The women were predominantly married, employed in the work force, and educated beyond high school. For the majority of women (60%), this was their first pregnancy. Of the remaining women, two women had three children, three women had two children and one woman had previously lost a child. A minority of the women reported conception difficulties at the time of this pregnancy. Most of the miscarried pregnancies were planned (73%) and more than half (60%) were uneventful until one week before the miscarriage. All but one woman experienced some physical symptoms associated with their miscarriages at the time of admission to the hospital for dilatation and curettage. The sample was almost equally divided between women who experienced missed and inevitable spontaneous abortions. The mean gestational age at the time of the miscarriage was 10.7 weeks.

The women reported retrospectively a wide range of grief intensity at the time of the miscarriage ( $M_d = 58$ ,  $M = 62.9$ ). At the time of the interview, 6 to 10 weeks later, a significant decrease in grief intensity was found ( $M_d = 28$ ,  $M = 32.6$ , chi square. = 8.58,  $p = .01$ ).

All women used the attribution process, although not all women made causal attributions. This process was observed to be influenced by the personal beliefs and the social contexts of each woman. Those women who made causal attributions, all spontaneously mentioned more than one causal attribution. A total of 54 causal attributions were given. The complexity of the ideas and theories women formed to explain their miscarriages resulted in the identification of four characteristics of causal attributions that



follow miscarriages. Causal attributions were found to be either philosophical or physically oriented; to be organic, non-specific or maternal/self-blaming in origin; to be either dominant or non-dominant; and /or to refer to causalities immediate or prior to the physical event.

Positive correlational relationships were found between maternal grief intensity and three groups of causal attributions. Significantly higher grief intensities were found to be associated with women who identified philosophical causal attributions for their miscarriages, but only at the time of their miscarriage ( $p = .003$ ). Significantly higher grief intensities at the time of the miscarriage were also found in women whose dominant causal attributions could be identified as a maternal/self-blaming attribution (test result = 36, critical value = 33,  $p = .05$ ; test result = 30, critical value = 22.2,  $p = .05$ ). Finally, in response to the forced-choice questioning of the Origin of Attribution Scale items, a significant positive correlation was found between grief intensity and attributions to maternal emotions both at the time of the miscarriage ( $Z = .48$ ,  $p = .02$ ) and at the time of the later interview ( $Z = .45$ ,  $p = .05$ ).

The theories of loss, grief, and attribution were found to be appropriate for studying women who miscarry. However, the original conceptual framework employing these concepts lacked the necessary time dimension to account for the processes of grief and attribution and had to be restructured.

### Conclusions

Due to the small sample size, use of a convenience sampling technique, and the retrospective methodology for determining grief and

attribution at the time of the miscarriage, the findings of this study should not be generalized. However, some trends can be identified and some interpretations of the data are suggested.

Women who miscarry react to their loss by grieving. The intensity of this grief experience appears to vary substantially. Despite this variation, all acute grief reactions appear to decrease significantly over a relatively short period of time. This decrease appears to be more rapid than would be expected in other bereavement situations.

It is possible that all women who miscarry use the attribution process even though not all women form causal attributions. The attribution process appears to be influenced by individually defined heuristics which may or may not appear logical to others. As a result of this process, women may develop ideas or theories to explain the causes of their miscarriages. Most often these ideas or theories appear to involve more than one causal attribution. These theories appear to be composed of a complex arrangement of causal attributions which account for differences in relative timing, importance, orientation to the event, and origin of the attribution.

It is possible that causal attributions are used by some women to assist in the resolution of maternal grief following a miscarriage. Women who experience high grief intensities at the time of their miscarriages may make causal attributions that provide them with a perception of control in order to cope more effectively with the unpredicted and uncontrollable outcome of their pregnancy. Maternal grief intensity may be decreased with the reestablishment of control which occurs when women select some types of philosophical or maternal/self-blaming attributions. It is important to note that while most self-blaming causal attributions in this

study appeared to be adaptive responses at the time of the miscarriage and early in grief resolution, this may not be true later on. Self-blaming attributions involving a woman's emotions appeared, in this study, to be maladaptive responses to miscarriage that in some manner impede normal grief resolution.

### Implications for Nursing Practice and Education

The data from this study suggest a number of implications for practice and education. This study demonstrated that there are two reactions nurses working with women who miscarry should learn to anticipate. The first reaction is a grieving response. Nurses must recognize that women will experience a wide variety of grief reactions following miscarriage. Nursing interventions should be individualized for each woman's grief responses. Nurses also need to recognize that, regardless of the intensity of the initial grief reaction, the experience of acute grief should decrease fairly rapidly in the first few weeks after the loss. Therefore, a more thorough assessment of the woman's behavior and social context would be required only if prolonged grieving is observed.

Nurses should also anticipate an attribution-seeking response. The attribution process revolves around a need for information which explains what happened, why it happened, or why it happened to that woman. While nurses must be able to provide women and their significant others with factual information about possible causes of miscarriage, this information must be tailored to each woman's perception of her loss if it is not to be discounted as irrelevant or insensitive. Therefore, a simple handout or brief

listing of the more likely causes of miscarriage should not be considered an adequate intervention during this vulnerable period

While the discussion of cause appears to require an individualized approach, nurses need also recognize that patients confronted by an uncontrollable situation benefit from a unified approach to other areas of patient information. A deliberate attempt to standardize some of this information, such as frequency statistics and after-care instructions, would likely assist women to deal with the other uncertainties surrounding miscarriage. All women in this study commented on a lack of consistency in the information they were given by various health care professionals.

Finally, nurses might consider the possibility of giving anticipatory information. Patient education in early prenatal care has helped to decrease infant morbidity, however, these programs have also often portrayed pregnancy as something that is within a woman's ability to control. With the incidence of miscarriage remaining at a constant 10 to 15%, it appears this approach in patient education may be compounding some women's perceptions of miscarriage as a negative uncontrollable event and personal failure. Prenatal education might be more responsive to the needs of all would-be parents if all types of pregnancy outcomes were discussed.

A large number of maternal child textbooks used in nursing today do not discuss miscarriage. Consequently, it is difficult for beginning practitioners to view miscarriage as something more than a gynecological pathology. The awareness of miscarriage as a sudden death phenomenon needs to be incorporated into all basic nursing curricula if attitudes toward miscarriage are to change.

### Recommendations for Further Research

Although the sample was small and results cannot be generalized, the findings from this study suggest trends and warrant further investigation. This study should, therefore, be replicated with a larger sample. Several areas for further investigation were revealed which may be helpful in understanding the role causal attributions play in coping with a miscarriage.

The relationship between the loss object definition and grief intensity needs further investigation. With a better understanding of this phenomenon, it may be possible to determine whether a relationship exists between the woman's perception of the loss object and her causal attributions. This may actually be a more significant relationship than that occurring between grief intensity and maternal causal attributions.

Longitudinal studies examining the impact of specific types of causal attributions are needed to determine if their use is adaptive or maladaptive in the unique situation of miscarriage and in their attitudes towards pregnancy in the future. In miscarriage, unlike other adverse events which individuals often try to avoid entirely, it is only the outcome of the pregnancy women who miscarry wish to control. Most women actively seek future pregnancies following their first miscarriage.

Similarities and differences between the grief responses of women who experience first-time pregnancy losses and those that have second and repeated losses needs to be determined. Experiences of intense guilt associated with self-blame documented in the literature may be more a phenomenon of repeated pregnancy loss than of a specific self-blaming attribution.

The impact of significant others on attribution formulation also needs investigation. One observation made during this study was that irrational appearing dominant attributions were often also believed by a significant other. A qualitative study design could examine the interpersonal and situational factors which lead to these influential shared attributions..

## REFERENCES

- Berezin, N. (1982). After a pregnancy loss. New York: Simon & Schuster.
- Borg, S., & Lasker, J. (1981). When pregnancy fails. Boston: Beacon Press.
- Bowlby, J. (1981). Loss: Sadness and depression. (vol. 3) Markham, Ont.: Penguin Books.
- Brickman, P., Ryan, K., & Wortman, C.B. Causal chains: Attribution of responsibility as a function of immediate and prior causes. Journal of Personality and Social Psychology, 32, 1060-1067.
- Bryant, H. E. (1985). Miscarriage: How to help in the crisis. Canadian Family Physician, 31, 1109-1116.
- Bulman, R.J., & Wortman, C.B. (1977). Attributions of blame and coping in the 'real world': Severe accident victims react to their lot. Journal of Personality and Social Psychology, 35, (5), 351-363.
- Busch, D., McBride, A. B., & Benaventura, L. M. (1986). Chemical dependency in women: The link to OB/GYN problems. Journal of Psychosocial Nursing, 24, (4), 26-30.
- Carlson, C. E. (1978). Behavioral concepts and nursing interventions. (2nd ed.) Toronto: Lippincott Company.
- Corney, R., & Horton, F. (1974). Pathological grief following spontaneous abortion. American Journal of Psychiatry, 131, (7), 825-827.
- Ewy, D., & Ewy R. (1984). Miscarriage, stillbirth and newborn loss. New York: Dutton, Inc.
- Engel, G. L. (1964). Grief and grieving. American Journal of Nursing, 64, (9), 93-99.
- Feldman, D., & Gagnon, J. (1985). Statview [Computer program] Calabasas, CA: Brain Power Inc.
- Friedman, R., & Gradstein, B. (1982). Surviving pregnancy loss. Toronto: Little, Brown & Company.

- Hardin, S. B., & Urbanus, P. (1986). Reflections on a miscarriage. Maternal-Child Nursing Journal, 15, (1), 23-30.
- Harris, C. C. (1984). Dysfunctional grieving related to childbearing loss: A descriptive study. Health Care for Women International, 5, 401-425.
- Herz, E. (1984). Psychological repercussions of pregnancy loss. Psychiatric Annals, 14, (6), 454-457.
- Hickman, M. A. (1985). Midwifery. (2nd ed.) Boston: Blackwell Scientific Publications.
- Hutti, M. H. (1984). An examination of perinatal death literature: Implications for nursing practice and research. Health Care for Women International, 5, 387-400.
- Hutti, M. H. (1986). An exploratory study of the miscarriage experience. Health Care for Women International, 7, 371-389.
- Janis, I. L., & Rodin, J. (1979). Attribution, control and decision making: Social psychology and health care. In Stone, G., Cohen, F., Alder, N., & Associates (Eds.). Health psychology: A handbook (pp. 487-521). Sanfrancisco: Jossey-Bass Publishers.
- Janoff-Bulman, R. (1979). Characterological versus behavioral self-blame: Inquires into depression and rape. Journal of Personality and Social Psychology, 37, (10), 1798-1809.
- Kavanaugh, R. (1974). Facing death. Baltimore: Peguin Books.
- Kelley, H. H. (1971). Attribution in social interaction. Morristown, N.J.: General Learning corporation.
- Kelley, H. H. (1973). The process of causal attribution. American Psychologist, 28, (2), 107-128.
- Kennel, J., Slyter, H., & Klaus, M. (1970). The mourning response of parents to the death of a newborn infant. New England Journal of Medicine, 283, (7), 344-349.



- Klaus, M. H. & Kennel, J. H. (1982). Parent-infant bonding (2nd ed.). Toronto: The C.V. Mosby Company.
- Kubler-Ross, E. (1969). On death and dying. New York: MacMillan Publishing Company.
- Lachelin, G. C. (1986). Miscarriage: The facts. London: Oxford University Press.
- Leppert, P. C., & Pahlka, B. S. (1984). Grieving characteristics after spontaneous abortion: A management approach. Obstetrics and Gynecology, 64, (1), 119-122.
- Lerner, M. J. (1971). Observers evaluation of a victim: Justice, guilt and veridical perception. Journal of Personality and Social Psychology, 20, 127-135.
- Lifton, R. J., Olsen, E. (1976). Death imprint in Buffalo Creek. In H. Parad, H. Resnik, & L. Parad (Eds.). Emergency and disaster managment (pp. 295-308). Bowie. Md.: The Charles Press Publishers.
- Lindemann, E. (1944). Symptomatology and management of acute grief. American Journal of Psychiatry, 101, 141-148.
- Marris, P. (1974). Loss and change. New York: Pantheon Books.
- Moore, J. (1984). Miscarriage: A common tragedy. Nursing Times Community Outlook, June, 210.
- Oakley, A., McPherson, A., & Roberts, H. (1984). Miscarriage. Fontana Paperbacks.
- Parkes, C. M. (1965). Bereavement and mental illness: Part 1 British journal of medical psychology. A clinical study of the grief of bereaved psychiatric patients, 38, 1-12.
- Parkes, C. M. (1981). Sudden death and its impact of the family. In P. F. Pegg, & E. Metze, (Eds.) Death and dying: A quality of life (pp. 19-34). London: Pitman Books Limited.

- Peppers, L. & Knapp, R. (1980a). Maternal reactions to involuntary fetal/infant death. Psychiatry, 43, (2), 155-159.
- Peppers, L. & Knapp, R. (1980b). Motherhood & mourning: Perinatal death. New York: Praeger Publishers.
- Peretz, D. (1970). Reaction to loss. In: B. Schoenberg, A. C. Carr, D. Peretz, & A. H. Kutscher (Eds.), Loss & grief: Psychological management in medical practice, (pp. 20-35). New York: Columbia University Press.
- Pizer, H., & Palinski, C. (1980). Coping with a miscarriage. St Louis: The C.V. Mosby Company.
- Reed, K. S. (1984). Involuntary pregnancy loss research and the implications for nursing. Issues in Mental Health Nursing, 6, (3/4), 209-217.
- Rothbaum, F., Weisz, J. R., & Snyder, S. S. (1982). Changing the world and changing the self: A two-process model of perceived control. Journal of Personality and Social Psychology, 42, (1), 5-37.
- Rudy, E. B. (1980). Patients' and spouses' causal explanations of a myocardial infarction. Nursing Research, 29, (6), 352-356.
- Schneider, J. (1984). Stress, loss, and grief: Understanding their origins and growth potential. Rockville, Md.: Aspen Publication.
- Seibel, M., & Graves, W. L. (1980). The psychological implications of spontaneous abortions. The Journal of Reproductive Medicine, 25, (4), 161-165.
- Seigel, S. (1956). Nonparametric statistics for the behavioral sciences. New York: McGraw Hill.
- Silver, R. L. & Wortman, C. B. (1980). Coping with undesirable life events In: J. Gerber & M. Seligman (Eds.), Human helplessness theory and applications, (pp. 279 - 344). New York: Academic Press.
- Simon, N., Rothman, D., Goff, J., Senturia, A. (1969). Psychological factors related to spontaneous and therapeutic abortion. American Journal of Obstetrics and Gynecology, 104, (6), 799-808.

- Spielberger, C. D. (1972). Anxiety: Current trends in theory and research. (Vol. 1). New York: Academic Press.
- Stack, J. M. (1980). Spontaneous abortion and grieving. American Family Physician, 21 (5), 99-102.
- Stack, J. M. (1984). The psychodynamics of spontaneous abortion. American Journal of Orthopsychiatry, 54, (1), 162-167.
- Stephany, T. M. (1982). Early miscarriage: Are we too quick to dismiss the pain? RN, 45, (11), 89.
- Swanson-Kauffman, K. (1983). The unborn one: A profile of the human experience of miscarriage. Unpublished doctoral dissertation, University of Colorado, Denver, CO.
- Taber, B. Z. (1984). Manual of gynecologic and obstetric emergencies. (2nd ed.). Toronto: W.B. Saunders Company.
- Wallach, E. E., & Kempers, R. D. (Eds.) (1985). Modern trends in infertility and conception control, Vol. 3. Chicago: Year Book Medical Publishers, Inc.
- Wall-Haas, C. L. (1985). Women's perceptions of first trimester spontaneous abortion. Journal of Gynecology and Neonatal Nursing, 14, (1), 50-53.
- Watson, J. (1979). Nursing: The philosophy and science of caring. Boston: Little, Brown and Company.
- Weiner, B. (1985). 'Spontaneous' causal thinking. Psychological Bulletin, 97, (1), 74-84.
- Wetzel, S. (1982). Are we ignoring the needs of the women with a spontaneous abortion. Maternal-Child Nursing, 7, (5), 258-259.
- Wilkinson, S. (1987). Hidden loss, Nursing Times Nursing Mirror, 83, (12), 30-31.

Wong, P. T. P., & Weiner, B. (1981). When people ask 'why' questions, and the heuristics of attributional search. Journal of Personality and Social Psychology, 40, (4), 650-663.

Wortman, C.B., & Dintzer, L. (1978). Is an attributional analysis of the learned helplessness phenomenon viable?: A critique of the Abramson-Seligman-Teasdale reformulation. Journal of Abnormal Psychology, 87, (1), 75-90.

## Appendix A: Grief Intensity Scale

## QUESTIONNAIRE

CODE: \_\_\_\_\_

The following are some words and phrases that describe various kinds of reactions that a person may experience after suffering a miscarriage.

Please consider each of these by thinking back to the time of your loss and try to tell us whether or not you experienced any of these reactions. Please also consider each reaction in terms of the present.

Try to rate yourself on these reactions by circling the number along the sliding scale that most nearly corresponds to the intensity of your feelings as you remember then at the time of your miscarriage and as you feel now.

1. Sadness

At the Time:

Now:

1 2 3 4 5 6 7 8 9  
 No Sadness Moderate Very Sad

1 2 3 4 5 6 7 8 9  
 No Sadness Moderate Very Sad

2. Loss of Appetite

At the Time:

Now:

1 2 3 4 5 6 7 8 9  
 No Loss Moderate Severe Loss

1 2 3 4 5 6 7 8 9  
 No Loss Moderate Severe Loss

3. Irritability

At the Time:

Now:

1 2 3 4 5 6 7 8 9  
 None Moderate Much

1 2 3 4 5 6 7 8 9  
 None Moderate Much

4. Sleeping Problems

At the Time:

1	2	3	4	5	6	7	8	9
No problem			Moderate			Severe Problems		

Now:

1	2	3	4	5	6	7	8	9
No Problems			Moderate			Severe Problems		

5. Difficulty Concentrating

At the Time:

1	2	3	4	5	6	7	8	9
No Difficulty Thoughts			Moderate			Great Difficulty		

Now:

1	2	3	4	5	6	7	8	9
No Difficulty			Moderate			Great Difficulty		

6. Preoccupation with thoughts and memories of your child

At the Time:

1	2	3	4	5	6	7	8	9
No thoughts			Moderate			Many Thoughts		

Now:

1	2	3	4	5	6	7	8	9
No thoughts			Moderate			Many Thoughts		

7. Depression

At the Time:

1	2	3	4	5	6	7	8	9
None			Moderate			Severe		

Now:

1	2	3	4	5	6	7	8	9
None			Moderate			Severe		

8. Fear of being alone in the house

At the Time:

1	2	3	4	5	6	7	8	9
No fear			Moderate			Great Fear		

Now:

1	2	3	4	5	6	7	8	9
No Fear			Moderate			Great Fear		

9. Anger

At the Time:

1	2	3	4	5	6	7	8	9
No anger			Moderate			Severe Anger		

Now:

1	2	3	4	5	6	7	8	9
No anger			Moderate			Severe Anger		

10. Guilt

At the Time:

1	2	3	4	5	6	7	8	9
No guilt			Moderate			Severe Guilt		

Now:

1	2	3	4	5	6	7	8	9
No guilt			Moderate			Severe Guilt		

11. Problems returning to usual activity

At the Time:

1	2	3	4	5	6	7	8	9
No Problem			Moderate			Severe Problem		

Now:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe Problem		

12. Afraid of responsibility of caring for children

At the Time:

1	2	3	4	5	6	7	8	9
No fear			Moderate			Great Fear		

Now:

1	2	3	4	5	6	7	8	9
No fear			Moderate			Great Fear		

13. Failure to accept reality

At the Time:

1	2	3	4	5	6	7	8	9
Accepted Well			Moderate Failure			Severe Failure		

Now:

1	2	3	4	5	6	7	8	9
Accepted Well			Moderate Failure			Severe Failure		



14. Time confusion

At the Time:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe		
Confusion						Confusion		

Now:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe		
Confusion						Confusion		

15. Repetitive dreams about baby

At the Time:

1	2	3	4	5	6	7	8	9
No dreams			Some			Many		
						Dreams		

Now:

1	2	3	4	5	6	7	8	9
No dreams			Some			Many		
						Dreams		

16. Exhaustion

At the Time:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe		
Exhaustion						Exhaustion		

Now:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe		
Exhaustion						Exhaustion		

17. Lack of strength

At the Time:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe		
Problem						Problem		

Now:

1	2	3	4	5	6	7	8	9
No			Moderate			Severe		
Problem						Problem		

## Appendix B: Attribution Reaction Item

## Appendix B

Attribution Reaction Item

(This item immediately followed the Grief Intensity Scale)

18 Wondering about what went wrong

At the Time									Now								
1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
No thoughts			Moderate			Many Thoughts			No thoughts			Moderate			Many Thoughts		

## Appendix C: Origin of Attribution Scale Items

## Appendix C

Origin of Attribution Scale Items

How much do you think each of the following factors was responsible for your miscarriage?

Indicate using the five point scale: with 5 meaning a great deal of responsibility and 1 meaning no responsibility.

a.) Someone else

(could include husbands, family members, coworkers, doctors or hospital staff.)

5	4	3	2	1
A great deal of responsibility				No responsibility

b.) Genetics

(could include parental genetics, fertilization accidents or mutations)

5	4	3	2	1
A great deal of responsibility				No responsibility

c.) Your emotions

(could include ambivalence towards the pregnancy, or experiences of stress, grief or nervousness')

5	4	3	2	1
A great deal of responsibility				No responsibility

d.) A Physical Problem

(could include maternal age, hormonal fluctuations, uterine fibroids, incompetent cervix, diseases [such as diabetes, rubella, hypothyroidism] and accidental trauma to the abdomen [falls]).

5	4	3	2	1
A great deal of responsibility				No responsibility

e.) Chance

(a random event )

5	4	3	2	1
A great deal of responsibility				No responsibility

f.) Your actions

(could include behaviors as: smoking, drinking alcohol or caffeine, exertions,[ like exercise, lifting heavy objects, raising hands over head] sexual intercourse, injury)

5	4	3	2	1
A great deal of responsibility				No responsibility

g.) God

(some greater being or force that ordains life events)

5	4	3	2	1
A great deal of responsibility				No responsibility

**Appendix D: Demographic and Obstetrical History  
Interview Guide**

## Appendix D

Interview GuideDemographic and obstetric history:

1. Age: \_\_\_\_\_

2. Education:

- \_\_\_\_\_ 1. grade school completed
- \_\_\_\_\_ 2. high school completed
- \_\_\_\_\_ 3. post secondary education
- \_\_\_\_\_ 4. university completed.

3. Obstetric history:

- a. para: \_\_\_\_\_ gravidum \_\_\_\_\_
- b. history of difficulty conceiving \_\_\_\_\_ Yes \_\_\_\_\_ No

4. Most recent Pregnancy:

- a. \_\_\_\_\_ planned \_\_\_\_\_ unplanned
- b. date of pregnancy confirmation
- c. Did you feel movement? \_\_\_\_\_ Yes \_\_\_\_\_ No
- d. Did you have an ultrasound? \_\_\_\_\_ Yes \_\_\_\_\_ No
- If yes, at what week \_\_\_\_\_
- Can you describe what you saw?

f. What was the date of your miscarriage

g. How many weeks pregnant were you at time of miscarriage?

\_\_\_\_\_

h. What symptoms did you have at the time of your miscarriage?

i. What was the diagnosis the Doctor gave to your miscarriage?  
 (Interviewer may classify into information from questions  
 h & i into one of the following types)

- \_\_\_\_\_ complete spontaneous
- \_\_\_\_\_ incomplete spontaneous
- \_\_\_\_\_ missed



- k. What health care did you receive at the time of your miscarriage? (Interviewer may classify information into the following categories)
- \_\_\_\_\_ No Involvement
  - \_\_\_\_\_ Treated in Doctors office/ clinic only
  - \_\_\_\_\_ Admitted to hospital, no surgical intervention
  - \_\_\_\_\_ Admitted to hospital, with surgical intervention

### Attributions

5. Would you share with me what you understood from the doctors or nurses in the office/hospital caused your miscarriage?

6. Did any one else suggest something else caused your miscarriage?

- a.) IF yes, who?
- b.) What did they suggest?

7. Many women have ideas about what may have caused them to miscarry. In other words, even though they may or may not have known the medical cause of the miscarriage, they had some thoughts or ideas about what might have caused it.

a.) Have you any ideas or thoughts about what may have caused your miscarriage?

(probe: was any thing going on in your life prior to the loss, that you thought might have affected your pregnancy?)

b.) IF more than one cause, what did you think was the main cause?

8. Before your miscarriage, what did you believe caused miscarriages?

9. Have your beliefs about the cause of or reason for miscarriage changed?

10. Did knowing or not knowing the reason or cause of your miscarriage ever concern you?

a.) If yes, could you share with me what was the concern?

## Appendix E: Introductory Letter for Physicians

Appendix E  
Introductory Letter for Physicians

School of Nursing  
University of British Columbia

Dear Dr.

My name is Marsha McCall. I am a master's in Nursing candidate at the University of British Columbia. I understand from Dr. \_\_\_\_\_ that my thesis research proposal, "Perceived Causal Attributions and their Relationship to Grief Intensity in Miscarriage", was presented to you at the Gynecology staff meeting in April. As a result of discussions at that meeting, I am writing to obtain permission from you and your colleagues to approach patients who are suitable for inclusion in my study. I am interested in approaching patients who have been admitted to nursing unit \_\_\_\_ for missed or spontaneous abortions of less than 16 weeks gestation (naturally conceived).

To summarize my study, I wish to conduct a brief interview with fifteen suitable participants at approximately six weeks post miscarriage. My intent is to determine what thoughts the women have had about the cause or causes (both medical and folk beliefs) of their miscarriage and to measure the intensity of their grief using a questionnaire. The sampling criteria I am using in my study includes: 1.) maternal age 20 -38 years, 2.) no history of previous miscarriage or perinatal death, 3.) no previous decision to terminate the pregnancy, 4.) women in a permanent

## Appendix F: Physician Consent Form

Appendix F  
Physician Consent Form

I, \_\_\_\_\_, give my consent for Marsha McCall R.N. to discuss her study "Perceived Causal Attributions and their Relationship to Grief Intensity in Miscarriage" with patients under my care if the hospital nursing staff have previously identified these patients as potential participants according to the sampling criteria. I give this consent with the proviso that I am notified of those patients who consent to participate in this study.

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

## Appendix G: Introductory Letter for Women

Appendix G  
Introductory Letter for Women

School of Nursing  
University of British Columbia

Dear \_\_\_\_\_,

My name is Marsha McCall, and I am a Registered Nurse currently completing my Master's of Science in Nursing at the University of British Columbia. I am doing a study to find out more about the experience of coping with a miscarriage and whether women have ideas about what might have caused their miscarriage. Participating in this study includes completing a short questionnaire and answering a few questions. Although you may not benefit directly, the information gained from this study, will assist health care professionals help women adjust to miscarriages in the future.

Although you are being asked to participate now, the interview and questionnaire completion will not take place for about 6 weeks. At that time, I will phone you to arrange a visit to conduct the interview. This visit will be arranged at a time and place convenient to you. The entire visit should take no longer than 30 - 40 minutes.

In order that the interview is not interrupted by note taking, I would like to use a tape recorder during the interview. All information obtained will be coded to maintain your confidentiality. In addition, the tapes will be erased at end of the study.



## Appendix H: Women's Consent Form

## Appendix H

Women's Consent Form

I have read and understood the letter from Marsha McCall describing a study examining a woman's experience after a miscarriage. I understand that this study will involve completing a short questionnaire and an interview.

I understand that my name and any identifying information will not be used in the study or revealed in any publications. Further, I understand that the interview will be taped, and that the tape recordings of the interview will be destroyed at the end of the study.

I understand that I am under no obligation to participate in this study and that refusal to participate will not affect future medical or nursing care.

---

I understand the nature of the study named Perceived Maternal Attributions and their Relationship to Grief Intensity in Miscarriage and give my consent to participate. I acknowledge receipt of a copy of this consent form.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_