

Winter 1997

Coping Processes Used by Mothers of Triplets

Susan Mullen Kaplan
Old Dominion University

Follow this and additional works at: https://digitalcommons.odu.edu/healthservices_etds

 Part of the [Mental and Social Health Commons](#), [Nursing Commons](#), [Personality and Social Contexts Commons](#), and the [Women's Health Commons](#)

Recommended Citation

Kaplan, Susan M.. "Coping Processes Used by Mothers of Triplets" (1997). Doctor of Philosophy (PhD), dissertation, , Old Dominion University, DOI: 10.25777/pwap-1s23
https://digitalcommons.odu.edu/healthservices_etds/55

This Dissertation is brought to you for free and open access by the College of Health Sciences at ODU Digital Commons. It has been accepted for inclusion in Health Services Research Dissertations by an authorized administrator of ODU Digital Commons. For more information, please contact digitalcommons@odu.edu.

COPING PROCESSES USED BY MOTHERS OF TRIPLETS

by

Susan Mullen Kaplan
B.A. May 1976, Simmons College
M.S. December 1980, Texas Woman's University

A Dissertation submitted to the Faculty of
Old Dominion University in Partial Fulfillment of the
Requirement for the Degree of

DOCTOR OF PHILOSOPHY

URBAN SERVICES

OLD DOMINION UNIVERSITY
December 1997

Approved by:

Clare W. Houseman, Ph.D., R.N.
Concentration Area Director

Laurel Garzon, D.N.Sc., R.N.
Dissertation Chair

Lindsay L. Kettle, Ed.D.
Dean, College of Health Science

Brenda S. Nichols, D.N.Sc., R.N.

Clare W. Houseman, Ph.D., R.N.

ABSTRACT

COPING PROCESSES USED BY MOTHERS OF TRIPLETS

Susan Mullen Kaplan

Old Dominion University, 1997

Director: Dr. Laurel Garzon

The purpose of the study was to identify and describe the coping processes used by mothers of triplets. Using a descriptive design, interpersonal comparisons of 92 mothers of triplets attending a national meeting of families of higher order multiples were made. Variables, in addition to sociodemographic characteristics, included coping processes, levels of depression, perceived availability of social support, and current stress levels. Coping processes were measured using the Ways of Coping Questionnaire (Folkman & Lazarus, 1988), derived from their cognitive-phenomenological theory of stress and coping. Level of depression was measured using the Zung Self-rating Depression Scale (Zung, 1965). Perceived availability of social support was measured by the Medical Outcomes Study Social Support Survey (Sherbourne & Stewart, 1991). Current level of stress was measured by the Derogatis Stress Profile (Derogatis, 1980). Results from these self-report instruments were analyzed using descriptive statistics in order to

describe the sample and to determine whether significant correlations between the variables existed.

Results indicated that the subjects were all married, with a mean age of 36.4 years, the majority were college-educated, and had triplets ranging in ages from 8 months to 12 years. Mothers were found to use a variety of coping processes in dealing with the stresses related to the mothering of triplets, supporting the theoretical framework.

Planful problem-solving was used most often with escape-avoidance used least. Current levels of stress were described by the mothers as being derived from a variety of sources in their lives, with time pressure most highly rated. The majority of mothers scored within the normal range for depression. Subjects perceived levels of social support from a variety of sources. Statistically significant correlations were found to exist between level of depression and current level of stress as well as between levels of stress, depression, and perceived levels of social support. Coping processes were also found to be related to the other variables. Recommendations for further study included evaluating the nature of interrelatedness of the variables, and through the use of a comparison group.

DEDICATION

This work is dedicated to my family. My husband, Ivor, without whom none of this would have been possible. Your patience, understanding, and support have kept me focused on my goal, while your sense of humor and your love have kept me sane. I thank you.

And to my triple blessings - my sons Ian Randall, Justin Allan, and Morgan Lyle who are my inspiration and my motivation. Your appearance into my life has added more love, laughter, and noise than I could ever have imagined. Thank you all.

Sometimes finding the rays of the sun amongst the clouds takes a real stretch. The joys of a multiple birth are often like the elusive rays of a radiant sun on an overcast day, and require an effort to focus on. It is with this thought in my heart that I offer this study as a first step to being better able to stay focused on the sun, and to help others to do the same.

ACKNOWLEDGEMENTS

My sincere thanks to all who have helped me with this project, and with the massive undertaking of doing my doctorate degree. Without my teachers, family, friends, and baby-sitters, this would not have been possible.

First, my deepest thanks to my dissertation committee who have helped to make this project a reality by their support, guidance, and patience. To Dr. Laurel Garzon, my committee chair, I send my sincere thanks for all the help that you have given to me since we met in your Women's Health Class when my triplets were only babies. Your sense of humor, your encouragement through my candidacy process, and most of all, your work with me on this study have been priceless. To Dr. Clare Houseman, my connection to this program through all the years that I have been at Old Dominion, I send my thanks. Your guidance has smoothed the way through a complex program and also helped me greatly through the dissertation stage. And, to Dr. Brenda Nichols, whose help through research class, studying for candidacy exams, and writing this dissertation was such a gift, I thank you.

My thanks also to Old Dominion University for its financial support. This project was partially supported by two awards. The first was from the College of Health Sciences for graduate student research which I received in 1997. The second, from the Office of Graduate Studies, was provided to assist doctoral students in dissertation research.

To Kathie Weatherly, I send my heartfelt thanks for all the help and support that you have given me with this project. As a fellow student, I know you know how much I appreciate what you have done, and wish you the best of luck with your own project. Thanks also to Cynthia and Darlene who were incredible at making this all come together into one cohesive and coherent package.

To my friends who were students with me, Maria, Sylvia, Anne, Linda, Karin, and Martha, as well as those who were vicarious students through me, thank you for all your patience listening to my stories and ideas, your graciousness in not acting bored with my endless descriptions of my work, and your boundless encouragement which helped me through.

A special thanks to the Triplet Connection and the Tidewater Mothers of Multiples Club whose members allowed me to pry into their lives and their hearts by asking for their help. Thank you for your interest, your time, and your honesty.

And a very special thanks to MaryAnn and Joan, whose personal and professional coaching have kept me focused on what was really important.

TABLE OF CONTENTS

	Page
Dedication	i
Acknowledgements	ii
List of Tables	viii
List of Figures	x
Chapter	
1. INTRODUCTION	1
PURPOSE	3
PROBLEM TO BE ADDRESSED	3
THEORETICAL FRAMEWORK	9
SCOPE OF THE PROBLEM	12
RESEARCH QUESTIONS	14
SIGNIFICANCE OF THE STUDY	17
ASSUMPTIONS	19
LIMITATIONS	19
DELIMITATION	20
2. REVIEW OF THE LITERATURE	21
STRESS	21
COPING	26

	Page
SOCIAL SUPPORT	33
DEPRESSION	41
INTERACTION BETWEEN THE VARIABLES	46
SUMMARY	57
3. METHODOLOGY	60
PURPOSE	60
RESEARCH QUESTIONS	60
RESEARCH DESIGN	62
VARIABLES	62
Theoretical Definitions ..	62
Operational Definitions	63
STUDY SAMPLE	65
SETTING	65
SAMPLE SELECTION	66
INSTRUMENTATION	66
Ways of Coping Questionnaire	66
Medical Outcomes Study Social Support Survey	68
Zung Self-rating Depression Scale	69
Derogatis Stress Profile	70
DATA COLLECTION	71
DATA ANALYSIS	72
HUMAN SUBJECTS	73

	Page
INSTITUTION AND ORGANIZATION PERMISSION	73
4. ANALYSIS OF THE DATA	74
DESCRIPTION OF THE SAMPLE	74
SOCIODEMOGRAPHIC INFORMATION	74
COPING PROCESSES	77
PERCEIVED AVAILABILITY OF SOCIAL SUPPORT	80
CURRENT STRESS LEVEL	80
LEVEL OF DEPRESSION	82
QUESTION ONE	82
QUESTION TWO	84
QUESTION THREE	88
QUESTION FOUR	89
QUESTION FIVE	89
QUESTION SIX	93
QUESTION SEVEN	94
QUESTION EIGHT	94
QUESTION NINE	100
QUESTION TEN	100
QUESTION ELEVEN	102
QUESTION TWELVE	102
QUESTION THIRTEEN	103
QUESTION FOURTEEN	103

	Page
QUESTION FIFTEEN	107
5. FINDINGS AND INTERPRETATIONS	114
SOCIODEMOGRAPHIC CHARACTERISTICS	114
COPING PROCESSES	117
CURRENT STRESS LEVEL	121
PERCEIVED AVAILABILITY OF SOCIAL SUPPORT	123
LEVEL OF DEPRESSION	126
LIMITATIONS AND GENERALIZATIONS	128
RECOMMENDATIONS FOR FURTHER STUDY	131
CONCLUSIONS	135
REFERENCES	139
APPENDICES	151
A. INFORMATION LETTER	152
B. PARTICIPANT CONSENT FORM	153
C. SOCIODEMOGRAPHIC QUESTIONNAIRE	155
D. THE MOS SOCIAL SUPPORT SURVEY	156
E. THE ZUNG SELF-RATING DEPRESSION SCALE	157
F. WAYS OF COPING QUESTIONNAIRE	158
G. DEROGATIS STRESS PROFILE	160
H. ORGANIZATION LETTER OF CONSENT	161

LIST OF TABLES

Table	Page
1. Respondent Characteristics	75
2. Sample Means and Variance Indicators for WOC Scales and Subscales . . .	79
3. Sample Means and Variance Indicators for MOS Scales and Subscales . . .	81
4. Sample Means and Variance Indicators for DSP Scales, Subscales, and Domains	83
5. Means, SDs, and t-test Results for Coping Process Scores for Mothers Without and With Other Children Prior to Triplets	85
6. Means, SDs, and t-test Results for Stress Scores for Mothers' Without and With Other Children Prior to Triplets	86
7. Means, SDs, and t-test Results for MOS Scales and Subscales for Mothers Without and With Other Children Prior to Triplets	87
8. Means, SDs, and t-test Results for Stress Scores for Mothers With and Without Other Children	90
9. Means, SDs, and t-test Results for Coping, Support, and Depression Scores for Mothers With and Without Other Children	91
10. Statistically Significant ANOVA Results by Education Level Grouping of Mothers of Triplets	92
11. Pearson's Correlation Coefficients for Stress and Coping	95
12. Means, SDs, and t-test Results for Stress Scores According to Subjective Stress Level	97
13. Means, SDs, and t-test Results for Coping, Support, and Depression Scores According to Subjective Stress Levels	98
14. Pearson's Correlation Coefficients for Coping and Social Support	99

Table	Page
15. Pearson's Correlation Coefficients for Stress and Social Support	101
16. Means, SDs, and t-test Results for Stress Scores with Employed and Not Employed Mothers	104
17. Means, SDs, and t-test Results for Coping, Depression and Social Support Scores with Employed and Not Employed Mothers	105
18. Means, SDs, and t-test Results for Coping, Social Support, Depression and Stress Scores with Spontaneous Conception and Assisted Conception	108
19. Spearman's Correlation Coefficients of Independent Variables	111
20. ANOVAs Summary Table for Coping, Social Support, and Stress by Level of Depression	112

LIST OF FIGURES

Figure	Page
1. Coping Processes of Mothers of Triplets	15
2. Coping Processes of Mothers of Triplets (revised)	132

CHAPTER 1

Introduction

The anticipation of the birth of a baby is often a time of great joy, but also one of introspection and self-examination for the mother-to-be. Questions of her own ability to adequately care for the baby, to bond with her child, and about the health and normalcy of the infant abound. Influenced by the new mother's experience with the pregnancy, her ease of conception, and the support she receives from her partner, maternal attachment to the infant begins during the prenatal period (Fowles, 1994).

The transition to motherhood with the birth of the first child, catapults the new mother into having responsibilities for a new life with little preparation for the job other than what she has learned from her own parents, read about in books, or from the observation of others. It has been said that the job of motherhood receives less preparation than almost any other job we could be given, yet the stakes are among the highest (Crawford, 1985).

This combination of inexperience, coupled with huge responsibility, at a time when fatigue is present, finances may be strained, and expectations are high, presents the new mother with many challenges with which to cope. Hormonal changes that follow delivery predispose the mother to mood swings, and in some cases, depression. The months of anticipation of labor, worries about the health

of the infant, and fears of the actual delivery of the child give way to new worries about one's ability to care adequately for this new life. Often, feelings of ambivalence, isolation, and fear are also present (Goshen-Gottstein, 1980).

Caring for a child has been described as a source of chronic stress: the offspring of the human species requires the longest period of dependence on its mother of any species. The continuous needs of the infant upon a mother who is recovering from either a delivery following active, intense labor for an extended period of time or surgical delivery can be particularly stressful when no additional, alternative caregiver is available. The mother who is "on demand" for her infant is often overwhelmed, exhausted, and dealing with her own changing body. As the child grows, the needs change but basic requirements of an environment conducive to steady maturation, a basic foundation for secure attachment, and the development of a sense of trust still fall upon the parents, and often primarily the mother (Goshen-Gottstein, 1980). If she has other children, she is also responsible for their care.

As difficult and stressful as this process is for the mother of a single infant, the mother who has delivered multiple infants, is faced with the stresses and responsibilities in a greatly magnified way. In addition to having experienced a high risk pregnancy, and the stresses which accompany that itself, the mother must now provide for, and nurture more than one infant at a time.

It has been found that the optimal "clutch size" or size of the litter for the human species is one, indicating that the resources available to the human mother are designed ideally to meet the needs of a single offspring at a time (Lack, 1954).

This includes the need for nutrition, nurturance, socialization, and protection.

Throughout nature, the number of offspring born or hatched is proportional to the likelihood of its survival, based on the available resources of the mother.

Dawkins (1989) stated that "Increased bearing is bound to be paid for in less efficient caring" (p. 116).

In the past twenty years, the incidence of multiple births involving triplets or more, referred to as "Supertwins" (Scheinfeld, 1973) has increased more than 221%. In 1994, there were 4,594 triplet or higher multiple births in the United States (Kowalczyk, 1997). This increase can be attributed to a number of factors, but common to all families who experience a multiple birth is a new and demanding life change which necessitates coping.

Purpose

The purpose of this study is to identify and describe the coping processes used by mothers of triplets. The intent is for this information to be used to develop interventions to enable mothers to cope more effectively with a multiple birth.

Problem to Be Addressed

Multiple Birth

Goshen-Gottstein (1980) described repeatedly from her observations of families with multiple births, the difficulties of mothers of these children who are grossly overtaxed by the demands of physical care for her infants during the first few months as well as handling the developmental tasks that follow. The overwhelming nature of the feelings of ambivalence and fear in parents expecting multiples can be staggering especially when also faced with a high risk pregnancy.

fraught with the possibilities of maternal and fetal complications. Once safely delivered, the mother is faced with three infants all equally in need of her for survival. Who should be cared for first, and how do you decide? Clearly she is faced with a situation in which it is difficult not to feel some degree of failure. Again, stress becomes multiplied.

Authors have addressed the role transition to motherhood experienced by women upon the birth of a child (Collins, Dunkel-Schetter, Lobel & Scrimshaw, 1993; Crnic, Greenberg, Ragozin, Robinson & Basham, 1983; Cutrona, 1984; Field, Sandberg, Garcia, Vega-Lahr, Goldstein & Guy, 1985; Fowles, 1994; Frankel & Harmon, 1996; Kemp & Hatmaker, 1989; Lederman, 1995; Lerner & Galambos, 1985; Nuckolls, Cassel & Kaplan, 1972; O'Hara, Rehm & Campbell, 1983; Panzarine, 1995). The normal pregnancy itself constitutes physiological changes resulting from hormones, the growing fetus, and the mother's body adapting to provide an optimal environment for gestation. A pregnancy of a single fetus lasting 40 weeks may be shorter for multiple fetuses and of a high risk.

In a pregnancy involving three or more fetuses, both the mother and infants are at increased risk of complications (Voss, 1996). Maternal complications can include toxemia, pregnancy-induced hypertension, premature rupture of membranes and premature delivery of the fetuses. In the majority of cases, a Caesarean section is required for delivery, and often as an emergency procedure. Fowles (1994) described these factors of premature birth and unexpected delivery as negatively influencing the mother's feeling of competency in dealing with even

a single newborn.

Complications for the fetuses may include extreme prematurity, extended hospitalizations, birth defects, handicaps or stillbirth. Additionally, the more intensive and frequent medical care adds to the financial burden as well as the restrictions on the mother during her complicated pregnancy. If the mother conceived the infants through the use of assisted reproductive technology or ovulation-inducing medications, she may already have experienced infertility and fetal loss, increasing the stressful nature of the pregnancy (Gleicher, Campbell, Chan, Karande, Rao, Balin & Pratt, 1995; Goldfarb, Kinzer, Boyle & Kurit, 1996).

If the pregnancy consists of more than 2 fetuses, the option of selective reduction of the pregnancy is often offered to the parents, which consists of a medical procedure designed to reduce the number of viable fetuses to 3 or fewer. However, the risk of loss of the entire pregnancy is great.

Once the mother has carried the pregnancy to a point where the infants are judged to be capable of life outside of the womb, a different set of concerns develops. The incidence of stillbirths in triplets carried greater than 38 weeks increases dramatically due to the premature aging of the placenta. Again, the mother-to-be is faced with threatened loss of her babies. Optimal delivery is around 36 weeks for triplets, as compared to 40 weeks for singletons (National Center for Health Statistics, 1997).

The risk of a poor birth outcome is much greater for triplet births than single births. The infant death rate is twelve times higher for triplets than for single births although triplets do have a survival advantage over preterm and lower

birthweight single births (National Center for Health Statistics, 1997).

Current Stress Level

Families of multiples face tremendous physical, emotional, and financial stress as a result of the birth of several children simultaneously. Reports of child abuse, marital discord, substance abuse, birth defects, and infant mortality are disproportionately high in this population (Malmstrom & Biale, 1990). Interviews with mothers of triplets revealed almost universal agreement regarding the physical stress of the first few months followed by the emotional stress that the mothers report related to mothering three children simultaneously during the early years (Robin et al., 1991; Garel et al., 1992; Goshen-Gottstein, 1980). All mothers reported the need for additional help, and the lack of preparation they received to adequately prepare them for the experience of mothering triplets.

Depression

Studies have shown that stress and inadequate social support are among the factors associated with the development of depression (Kinard, 1996). Postpartum depression, associated with hormonal changes following delivery, occurs in approximately 10-15% of new mothers and may last for months (Cutrona, 1984). Robin, Bydlowski, Cahen, and Josse (1991) reported that in mothers of triplets, this number is much higher, with 40% of the women that they studied reporting ongoing symptoms of depression. In rare cases, the depression is actually clinical in nature and can continue for years, if untreated. Investigations have shown that mothers suffering from depression are often unable to be as responsive to their infants or as capable of maternal attachment as non-depressed women (Panzarine,

Slater, & Sharps, 1995). Higher levels of depression have been found in mothers who abuse their children than in non-abusing mothers (Kinard, 1996).

Mothers of triplets faced with extreme stress may be at increased risk for the development of depression if unable to cope with the demands of their situations. According to the literature, an increased risk exists for marital discord, child abuse, and negative impacts upon the emotional and intellectual development of the children in families in which the mother is under chronic and extreme stress (Groothuis, Altemeir, Robarge, O'Connor, Sandler, Vietze, & Lustig, 1982).

Panzarine et al. (1995) reported in their study of adolescent mothers that depression was linked with a tendency to view life events negatively, while denying positive experiences. These women reported that their daily tasks were demanding, that they felt overwhelmed with the responsibilities of motherhood, that they tended to view their interactions with their infants in a negative way, and that they tended to overlook rewarding, positive experiences. Mothers of triplets interviewed by Garel and Blondel (1992) reported similar feelings of not being able to fully enjoy their children due to the overwhelming demands of caring for three simultaneously, and were frequently unable to express positive statements about their experience especially in the early months.

Perceived Availability of Social Support

Social support is defined as the involvement with others who directly through tangible assistance or indirectly through emotional support contribute to the well-being of the individual, and is another important variable worthy of consideration. Throughout the literature, mothers of triplets report their

tendencies toward social isolation, based on the magnitude and complexity of managing three children at once (Goshen-Gottstein, 1980; Robin, Bydlowski, Cahen & Josse, 1991). Inadequate social support is one of the strongest predictors of depression (Kinard, 1996).

Mothers described their inability to take their children with them without additional help in all of the families interviewed. Additionally, many mothers reported that they felt that they attracted a great deal of attention and inquisitiveness from those they encountered when they were out with their children. Although some felt that the attention was a positive sign for their efforts, many felt embarrassed, ashamed, and uncomfortable enough to avoid venturing out with their triplets (Goshen-Gottstein, 1980). This social withdrawal accentuated the isolation that mothers of infants reported even following single births, and lasted for a much longer period of time.

Additionally, mothers of triplets stated that they had few places to go to seek information and guidance, as health care providers, child care professionals, and friends lacked experience in caring for the needs of multiples (Garel & Blondel, 1992). Some reported that their pediatricians were very uncomfortable having all three children brought to the office at the same time.

Coping Processes

Two predominant behaviors were reported among mothers of triplets in observations done of their interactions with their children (Goshen-Gottstein, 1980; Garel et al., 1991). One group of mothers tended toward emotional withdrawal from their triplets, opting for efficiency of care, surrogate caregivers,

and extended time away from their children. The other group became completely absorbed in meeting their children's needs to the point of overprotectiveness. Each of these extremes was seen to represent a response to the overwhelming tasks faced by the women. Women who have come from families with multiples and were familiar with the demands tended to have less depression, as did mothers who had adequate help either from spouse, family or hired childcare. Time away from the constant demands of mothering was found to be crucial for the well-being of both mothers and children (Goshen-Gottstein, 1980).

Theoretical Framework

The concept of stress has been described as an inevitable part of life (Lazarus & Folkman, 1984). Selye (1974) described stress as "the nonspecific response of the body to any demand made upon it" (p.14), and developed a model in which stressors caused individuals to make adjustments in their behavior in an attempt to return to a non-stressed state. He felt that the nature of the situation, whether pleasant or unpleasant, was of less importance than the perceived intensity of the stress. This traditional model incorporated response to stressors in a non-cognitive way, as arousal, not appraisal.

Lazarus and Folkman (1984) expanded upon this premise through the development of a cognitive-phenomenological theory of stress, cognitive appraisal, and coping which emphasized the relationship between the person and the environment. Cognitive appraisal described how the individual, when faced with an event, evaluated the significance of what is happening, and how it may affect well-being. Decisions related to the coping process are based on the individual's

assessment of the significance of the event with respect to his own well-being, and his available resources and options for coping.

There are three kinds of cognitive appraisal. Primary appraisal involves judging whether an event is irrelevant, benign-positive, or stressful. An event is considered stressful if an individual's appraisal of the impact of the event identifies that it may exceed his adaptive resources and the possibility of future harm exists (threat). This is different from situations which offer a challenge, in which there is an opportunity for growth and which are viewed as less negative by the individual. Harm-loss refers to damage that an individual has already experienced from the event. Secondary appraisal consists of deciding what can be done based on the available resources, the likelihood that the method selected will accomplish the desired effect, and the consequences of using specific actions.

If new information becomes available either from the person or the environment, a third type, reappraisal, occurs. This may also result from having used an approach which changed the situation. According to Lazarus, these cognitive processes are always changing and developing, resulting in the same event being deemed as threatening on one appraisal and challenging at reappraisal (Cohen & Lazarus, 1983).

Commitment and beliefs are described as important person factors which affect the individual's cognitive appraisal of a situation by determining what is important to him, and influencing how much control over a situation that he feels he has. Situational factors, such as novelty, predictability, immanence, ambiguity, uncertainty, timing, and duration are also significant influences. Through an

interplay between person and situational factors, the individual develops a sense of the meaning of the event (Lazarus & Folkman, 1984).

Once an appraisal has been made, a determination is made of the necessary coping processes. Coping, according to Lazarus and Folkman (1984) consists of "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141). In this way, it is a process rather than a trait, making it dynamic in nature, and one which focuses on efforts rather than outcome success.

Lazarus described two sources of perceived stress, the threat of the situation itself as well as the impact of the individual's emotional response which are both served by coping processes. Problem-focused coping is aimed at altering the environment which is causing the distress. Emotion-focused coping is directed at altering the emotional response to the problem. Both can occur simultaneously but in varying amounts. Again, both person and situational factors can influence the method of coping that is chosen, as can the individual's available resources such as health and energy, positive beliefs, problem-solving skills, social skills, material resources, and social support (Lazarus & Folkman, 1984).

Thoits (1986) built on the coping model described by Lazarus and Folkman (1984) in her conceptualization of social support as a form of coping assistance. She described social support as "the functions performed for a distressed individual by significant others" (1986, p. 417). Support can be provided through instrumental or tangible aid which provides actions or materials which enable the individual to meet ordinary needs and responsibilities, socioemotional aid which

includes demonstrations of love, caring, sympathy, esteem, and belonging, and, informational aid including advice, personal feedback, and other communications that would make the individual's life less stressed. Type as well as amount of social support are considered significant in the buffering of stress.

The measure of the effectiveness of coping processes can be seen in long- and short-term adaptational outcomes (Lazarus & Folkman, 1984). Three classes of adaptational outcomes are described, including social functioning, morale, and somatic health which are considered by Lazarus and Folkman (1984) to be indicators of adequate coping.

Social functioning, a long-term outcome, is a reflection of how an individual appraises and copes with the events of daily living. Morale, also a long-term outcome, is determined by how one manages a variety of demands coping with both negative and positive events. Somatic health as a long-term outcome, is based on the assumption that stress impacts one's susceptibility to illness, as described by Selye (1974). Coping, according to Lazarus and Folkman (1984), can affect health through influencing the response to the stress.

Short-term outcomes include managing specific encounters, the individual's morale during and after an event, and the physiological responses experienced by the person as a result of the stressful event. Emotional response, a short-term outcome, parallels morale. It is the relationship of these outcomes in combination that allow one's coping processes to be viewed as effective in a specific instance.

Scope of the Problem

Approximately 80,000 multiple birth babies are born each year with triplets

comprising about ninety-two percent of all higher order multiple births (National Center for Health Statistics, 1997). The number continues to rise at a rate of approximately 12% each year as more women are delaying childbearing, and techniques for assisted reproduction are improving (National Center for Health Statistics, 1997). The number of triplets born per year has increased from one in 3323 births in 1973 to one in 1341 births in 1990. Of these infants, 87.8% were preterm and of low birthweight (Luke, 1994). In 1994, 4,233 sets of triplets were born in the United States (Zuckerman & Zuckerman, 1997).

Most of the increase in the rate of triplet births can be traced to white mothers who are married, and more educated than other mothers. According to the National Center for Health Statistics (1997), only one third of the increase can be attributed to advanced maternal age, while the remaining increase resulted from the increased use of assisted reproductive technology including fertility enhancing drugs and medical techniques.

Mothers of these infants are facing not only the stresses that accompany a normal single birth experience, but the additional stresses brought on with the birth of three children simultaneously. Tangible resources such as finances, space, and workload are exhausted as well as the emotional burden of caring for three children of the same age, each with similar needs. Goshen-Gottstein (1980) and Garel and Blondel (1992) described mothers of triplets as being overwhelmed, emotionally distant from their children, at higher risk for depression, and unable to fully enjoy their children due to the burdens of their care. These factors may lead to an increased incidence of child abuse, marital discord, substance abuse,

and other negative consequences for the families unable to meet the demands of the care of their triplets. Additionally, without help from extended family, friends or hired caregivers, the risk of social isolation adds to the mother's burden. The development of depression has been found to lead to impaired maternal attachment and an inability to be responsive to one's infant (Panzarine, Slater, & Sharps, 1995).

The problem addressed by this study included examining the current stress levels, level of depression, coping processes, and availability of social support perceived by mothers of triplets as depicted in Figure 1. These variables will be described through the use of quantitative methodology.

Research Questions

The following research questions were addressed by this investigation:

1. What are the coping processes used by mothers of triplets when asked to recall a particularly stressful recent incident involving having triplet offspring?
2. Is there a significant difference between the coping processes used by mothers of triplets who have other children prior to having triplets and those mothers who have no other children?
3. What sociodemographic variables effect the coping processes used by mothers of triplets?
4. What is the availability of social support perceived by mothers of triplets?
5. What are the current stress levels of mothers of triplets?
6. Is there a relationship between current stress level and coping processes

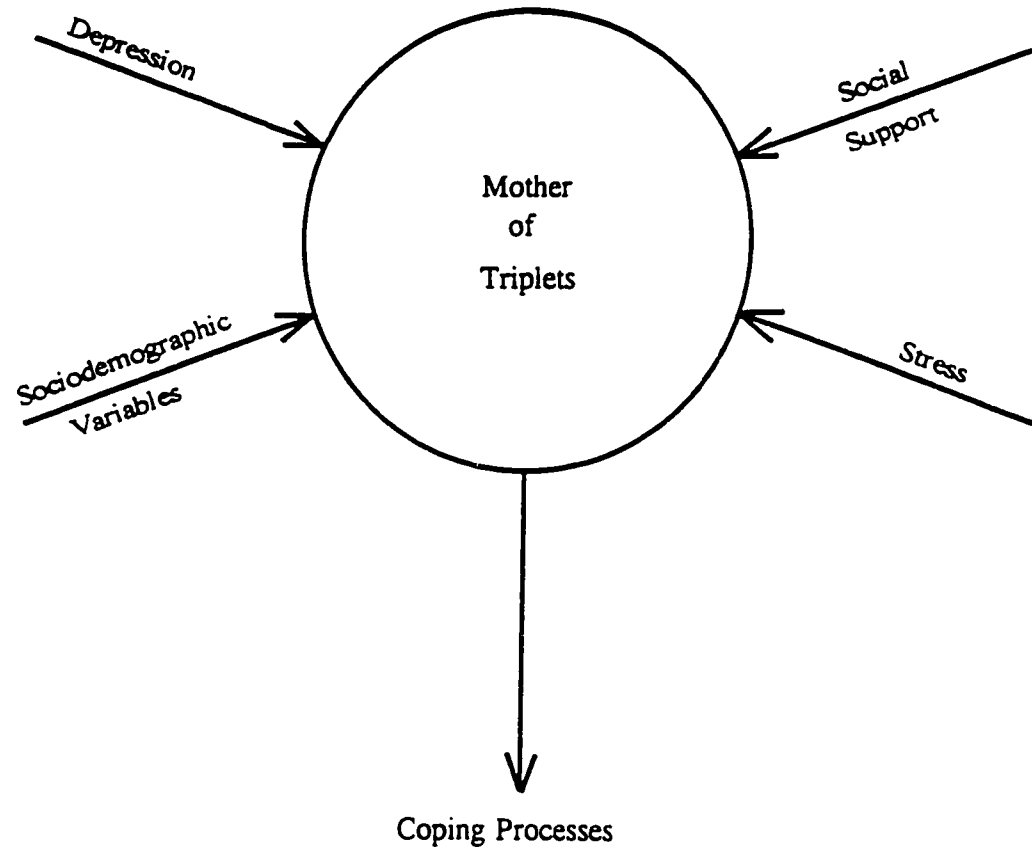


Figure 1. Coping processes of mothers of triplets.

6. Is there a relationship between current stress level and coping processes used by mothers of triplets?
7. Is there a relationship between coping processes and perceived availability of social support?
8. Is there a relationship between current stress level and perceived availability of social support in mothers of triplets?
9. Is there a relationship between level of depression and current stress level of mothers of triplets?
10. Is there a relationship between level of depression and coping processes used by mothers of triplets?
11. Is there a relationship between level of depression and perceived availability of social support in mothers of triplets?
12. Is there a difference in the coping processes, current stress levels, perceived availability of social support, and levels of depression between mothers who work outside of their homes and those mothers of triplets who do not?
13. Is there a difference in the coping processes, current stress levels, perceived availability of social support, and levels of depression between those mothers whose triplets were conceived spontaneously (without medical assistance), and those mothers whose triplets were conceived using assisted reproductive technology?
14. Is there a relationship between any of the sociodemographic variables used to describe the mothers of triplets?

15. Is there a difference in the coping processes, current stress levels, and perceived availability of social support between mothers of triplets when grouped according to their levels of depression?

Significance of the Study

Numerous authors have examined the role of the mother, maternal attachment to the infant, and factors which influence the development of the mother-infant relationship following the birth of a single child. Twin studies have illustrated how the impact of twinning effects the relationship, and the maternal adjustment process. Few studies have focused on the impact on the mother of having triplets, and the resultant effects on the triplets themselves. Several authors have done extensive longitudinal qualitative research with small samples of these families using techniques such as observation, semi-structured, and unstructured interviews to gain an understanding of the experience of the mothers of triplets.

Empirical information, based on research quantifying the level of depression, perceived availability of social support, current stress level, and coping processes of these mothers has been lacking. This investigation was designed to examine in a quantitative and descriptive manner, the experience of the mother of triplets in relation to her stresses and coping skills.

Little information is available for families expecting the birth of higher order multiple infants. Nor is there available literature to address how to best meet the demands of three or more infants and/or children of the same age. Pediatricians and child development specialists are often mothers or fathers of singleton

children and have little experience with the unique needs of the multiple birth family.

It is important to address the urban significance of this problem in relation to the declining number of extended families living in close proximity to the new families with infants and young children. Especially in the case of multiple birth families which require additional assistance, support, and respite for the mother, the lack of family members in close proximity can intensify the isolation as well as the overwhelming nature of the tasks they face.

Osborne and Gaebler (1993) described the importance of communities in helping to care for the needs of those residing within them. Communities have been shown to demonstrate more commitment, flexibility, creativity, understanding, and less bureaucracy than either service and professional agencies resulting in a more caring environment which is cheaper to provide, and focuses on capacities rather than deficiencies. In the case of multiple birth families, community volunteers may provide additional help to an overworked mother through child care, provision of clothing or toys, or parenting advice not available from extended family. Through the development of a better understanding of the importance of coping processes, perceived social support, and the sociodemographic variables that are influential in the lives of mothers of triplets, it is hoped that communities, both urban and rural, can be utilized more effectively to offer support to their multiple birth families.

Thus, by examining the stresses and coping processes of mothers who have triplets, strategies for how to best assist and counsel families to prepare them for

the birth of triplets can be designed. As the incidence of triplet birth continues to climb rapidly, scientifically-based information is mandatory, in order to support these mothers and families who are at risk for significant problems.

Assumptions

1. Description by mothers of current stress level is accurate.
2. Medical histories as described by mothers are accurate.
3. Age of the children will not influence mothers ability to accurately recall and describe stresses and coping processes.
4. All subjects are able to read and understand research instrumentation.

Limitations

1. Mothers who agree to participate in this investigation are not representative of all mothers of triplets.
2. Membership and participation in a support organization for mothers of triplets will not significantly effect results of the study- no generalizations can be made to those mothers who do not belong to and participate in the organization.
3. It is not known whether the sociodemographic characteristics of the respondents are representative of all conference attendees.
4. Self-report will be used for source of all information.
5. Preexisting depression, reactive depression, and hormonally-induced postpartum depression will be unable to be differentiated in this sample.
6. No measure of the quality, type, and source of actual social support will be included.

7. No measure of the quality of the marital relationship will be included.

Delimitation

Instruments selected for data collection have not been validated previously on this population.

CHAPTER 2

Review of the Literature

The purpose of this study was to identify and describe the coping processes used by mothers of triplets. The intent is for this information to be used to develop interventions to enable mothers to cope more effectively with a multiple birth. In order to develop the background of this investigation, it is important to review the available literature in the areas of stress, coping, social support, depression, and the parenting of a multiple birth.

Coyne and DeLongis (1986) stressed the importance of a clear understanding of who is at risk for negative outcomes, under what circumstances, who would benefit from supportive interventions, and what type of supportive interactions might be most helpful. Following a review of the literature of each of these variables, a discussion of how these factors interact will be presented.

Stress

Since the 1920's, researchers have been fascinated with the concept of stress, and its effects on the human mind and body. Cannon (1932) documented the connection between an individual's ill health and critical life events. His research provided evidence that illnesses subsided when stressful situations ended. Wolff (1950) substantiated these findings in his research leading him to hypothesize that illness resulted from an individual's inability to adapt to certain environmental

demands. In addition, he suggested that an individual's perception of an event could influence the intensity of his reaction, as could his psychological, biological, and sociological characteristics (Wolff, 1950).

Selye, like Cannon, considered stress to be a reaction of the body to those environmental demands such as an illness, a natural disaster, or a war which stimulate a response (Selye, 1975). This response, labelled by Selye as the General Adaptation Syndrome, formed the basis for studying the physiological impact of stress on the body and its influence on illness onset. Instrument development based on the weighting of frequently-occurring life events allowed measurement of the lived experiences of individuals and the events taking place in their lives by scaling the relative impact of the event based on amount of readjustment required, desirability, and controllability. Through the rating of the frequency of commonly-occurring life events, both positive and negative, it was speculated that changes in physical and mental health could be predicted (Coddington, 1972; Holmes & Rahe, 1967; Masuda & Holmes, 1967; Rahe, Meyer, Smith, Kjaer & Holmes, 1964). Models based on stimulus-response relied on the need of the individual to regain a state of homeostasis after experiencing the disequilibrium or tension caused by the stress, independent of considering the individual's own response to it.

Although widely used in stress research, criticisms of this method included the basic premise that change, as measured by life events, is stressful. Lazarus and Folkman (1984) argued that it is the personal significance of the change based on an individual's history, stage of life, and present circumstances that cause the

stress. Vinokur and Selzer (1975) identified desirability of the stress and of the outcome of the encounter as being important determinants of the impact of a stress. Their findings indicated that only undesirable events (based on the individual's own perception of desirability) were significantly correlated with stress. Both the event itself and the outcome of the event are important to consider. For example, the death of a spouse who has been terminally ill for a long period of time may have both desirable and undesirable aspects. They also identified the importance of the dimensions of anticipation, expectedness of the stress, and the control that the individual has over the outcome.

Additionally, the magnitude of the event must be individually determined based on the values, beliefs, and commitments of the person involved. The need to include the daily hassles (familiar but constant microevents also referred to as life strains) as well as major changes (births, deaths, loss of job) were addressed, and findings indicated that ongoing "inconveniences" as well as the catastrophic events were disruptive to social relations, habits, and patterns of daily living thereby also contributing to one's perceived level of stress (Lazarus & Folkman, 1984).

It has been speculated that daily hassles may have a greater impact on the individual than major events (Billing & Moos, 1984; Lazarus & Folkman, 1984; Pearlin & Schooler, 1978). Consideration of the timing of the hassle (e.g. rain during a vacation rather than on a workday), individual expectations (e.g. criticism rather than praise), and current life circumstances (e.g. chronic illness or tight deadlines) also alter the individual's appraisal of the situation.

According to Lazarus and Folkman (1984), it is through the process of cognitive appraisal that individuals determine why and to what extent an event is stressful. "A cognitive appraisal reflects the unique and changing relationship taking place between a person with certain distinctive characteristics (values, commitments, styles of perceiving, and thinking) and an environment whose characteristics must be predicted and interpreted" (Lazarus & Folkman, 1984, p.24).

Cognitive appraisal is a two part process. The first part is comprised of primary appraisal, in which the person estimates the impact of the event on his well-being by determining whether it constitutes harm/loss, a threat, or a challenge (Lazarus & Folkman, 1984). An appraisal of harm/loss indicates that some damage to the individual has already occurred, such as an incapacitating illness, damage to self-esteem, or loss of a loved one. A threat is considered to be the anticipation of a harm or loss that has not yet taken place, but is expected, and carries with it the negative emotions of fear, anxiety, and anger. A challenge appraisal is similar to a threat, but is viewed as offering the potential for growth, and is characterized by pleasurable emotions such as eagerness, excitement, and exhilaration. Based on the primary appraisal, a secondary appraisal determines what can be done to overcome, prevent, or alter the impact of the event through the mobilization of available resources and personal characteristics.

Coping processes are then initiated and may encompass altering the situation, accepting it, seeking more information, or avoidance (Folkman, Lazarus, Dunkel-Schetter, DeLongis & Gruen, 1986). However, diminished resources, such

as preexisting or antecedent psychopathology may interfere with the individual's ability to both appraise and cope with a situation effectively (Sharts-Hopko, Regan-Kubinski, Lincoln & Heverly, 1996).

Wolff (1950) described stress as a dynamic state, an ongoing need for adaptation to demands rather than a response to a stimulus. Lazarus and Folkman (1984) considered this distinction to be a crucial link to the concept of coping, the manner in which psychological stress is managed by the individual. Environmental factors such as the type of stress (catastrophic versus daily hassles), frequency, duration (chronic versus acute), and intensity of the stress (magnitude of the adjustment required) all have an impact on the type of adaptation required. It has been suggested that it is the interaction of these environmental factors with personal factors related to individual characteristics which form the basis for cognitive appraisal as a mediator between stress and coping (Lazarus & Folkman, 1984).

As described in the theoretical framework, Lazarus and Folkman (1984) proposed a relational view of stress which considers not only the nature of the demands but also the individual susceptibility of the organism. They described psychological stress as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (p. 19). In their review of the literature, both sociological and psychological research has been traced to develop the background for a cognitive-phenomenological theory of stress and coping, based on the belief that while stress is an unavoidable part of life, it is coping

which differentiates the outcome between and within individuals (Andrews, Tennant, Hewson & Vaillant, 1978; Billings & Moos, 1981, 1984; Coyne, Aldwin & Lazarus, 1981; Lazarus & Folkman, 1984; Pearlin & Schooler, 1978).

Lazarus and Folkman (1984) further describe the need to examine the effects of stress on the sociological, psychological, and physiological processes of the individual. These may be evidenced as social interaction, emotional distress, or somatic disturbance, and may occur independently or interdependently.

For example, empirical data collected from diverse samples supports the efficacy of using an instrument to measure the current stress levels being experienced in individuals with a chronic disease such as diabetes. Stress has been shown to be a contributing factor in unstable diabetes, and documented using the measurement of stress levels according to the Derogatis Stress Profile (DSP) with a sample of patients with unstable diabetes who were fitted with insulin pumps. Characteristics of those in "good" control compared with "moderate to poor" control were able to be distinguished based on their DSP scores which reflected their stress levels, relaxation potential, and role definition (Derogatis & Fleming, 1996).

Coping

Coping may also occur at three levels, the bodily defenses described by Selye's General Adaptation Syndrome, psychological processes used to deal with threat or challenge, and social processes used to deal with social institutions or individuals (Lazarus & Folkman, 1984), and may include both problem-focused and emotion-focused coping. Examples of problem-focused coping include confrontive coping,

making a plan of action and following it, standing one's ground etc. Examples of emotion- focused coping include wishful thinking, distancing, self-control, positive reappraisal, self-blame, tension-reduction, and self-isolation. Seeking social support is considered to be both (Lazarus & Folkman, 1984).

In order to evaluate the foci of coping, research using the Ways of Coping Questionnaire (Folkman & Lazarus, 1980), was conducted on a sample of 1,300 stressful occurrences reported by 100 middle-aged community residents. Results identified higher utilization of problem-focused coping when dealing with work-related problems or those construed as changeable while greater use of emotion-focused coping was found to be related to health issues and those events considered by subjects to be unchangeable.

College students taking mid-term examinations (Folkman & Lazarus, 1985) showed variations in coping process utilization during a study which compared their responses across three distinct periods, prior to taking the exam, while waiting for grades to be posted, and immediately following receiving grades. Emotions (which would help identify appraisal as challenge or threat), type of social support, and coping process used were studied. In addition to providing empirical support for the notion that appraisal and coping are processes rather than stable structures, the evidence also indicated the use of reappraisal and alteration of coping processes as needs changed. Type of social support sought was also found to change at different times in the exam process.

These studies provided empirical evidence that both emotion-focused and problem-focused coping were included in an average of 97% of reported stressful

encounters. It was through the analysis of the findings of these studies, that modifications of the Ways of Coping Checklist were made, and it was finalized into its current form (1988).

Pearlin and Schooler (1978) studied 2,300 people between the ages of 18-65 in an attempt to determine how "coping repertoires" were developed in response to enduring life strains. Pearlin and Schooler speculated that "much of our coping functions only help us to endure that which we cannot avoid" (1978, p. 18). Their interest was not in how exceptional people cope with rare situations, but how persistent hardships encountered in daily life are handled by the majority of individuals.

Their focus was on examining the resources possessed by individuals which included social or interpersonal networks (e.g. family, friends, fellow workers, neighbors and voluntary associations), psychological resources (e.g. self-esteem, self-denigration, mastery, tendencies toward denial, and escapism) and coping responses (e.g. responses that modify the situation aimed at decreasing or eliminating the sources of strain, responses that controlled the meaning of the strain through positive comparison or selective ignoring) and which were directed at dealing with existing strains without being overwhelmed by them. Their findings indicated that the greater the variety of coping responses available to the individual, the more protection from distress such as depression and anxiety was experienced. Background characteristics of their sample including age, sex, education, and income were identified as having significant correlations with parental coping responses and coping resources.

However, not all methods of coping were equally effective in all situations. The need for coping mechanisms that involved commitment and problem-solving were more effective when dealing with marital and parenting problems. Processes involving distancing, and avoidance could be used effectively when dealing with the more impersonal strains of economics and occupation.

Although emotion-focused coping was helpful in providing an outlet, the actions associated with problem-focused coping were more often associated with positive change. Effective copers seemed to be individuals who were able to gather support without having to solicit it. Ineffective coping, which, by definition exacerbated rather than mediated stress, was used more frequently by women, who in turn experienced greater depression and impairment of function (Billings & Moos, 1981; Holahan & Moos, 1987; Pearlin & Schooler, 1978). This was attributed to the common assumption that women were more emotionally responsive and sensitive, while men tend to be more analytic and task oriented.

Coping processes become more stabilized over time, and eventually affect adaptational outcomes as indicated by somatic and psychological health (Folkman, Lazarus, Gruen & DeLongis, 1986). Individuals who used problem-focused responses and affective regulation experienced less dysfunction such as depression than did those who used emotion-focused coping such as selective ignoring in an attempt to avoid or withdraw (Billings & Moos, 1981).

Billings and Moos (1981, 1984) examined coping by studying 194 families comprised of normal individuals and comparison groups of families of alcoholics matched for census tract. Their purpose was to determine whether stressful

events were all handled in the same manner, and what the effect was on the individual. They identified two approaches to the study of coping from earlier research (Lazarus & Folkman, 1984; Pearlin & Schooler, 1978). Methods of coping included active-cognitive (attempts to manage one's appraisal of the stressfulness of the situation), active-behavioral (attempts to deal directly with the problem), and avoidance (attempts to avoid confronting the problem or indirect attempts to reduce emotional tension). Focus of coping included problem-focused and emotion-focused coping as described by Lazarus and Folkman (1984). Measures of depression, anxiety, stress-related physical symptoms, and social resources were also included.

Results confirmed that all categories of coping were used. Age, education level, gender, income, and employment status were all examined with gender showing the only significance. Women reported more children and illness-related events and used more active-behavioral, avoidance, and emotion-focused coping, all considered to be more highly associated with impaired function.

Avoidance coping was found to have the strongest association with psychological distress. Those using avoidance coping tended to have fewer social resources for support which was found to have a predictive value in terms of impaired function. This finding was more common among women, who were less likely to be employed than the men in the study. Recommendations for future research addressed the need to include baseline levels of functioning. Billings and Moos (1981) speculated that unresolved stressors leading to impaired function may be both a cause and an effect resulting in increased emotional sensitivity and

impaired coping.

Holahan and Moos (1987) examined personal and contextual factors which influence coping strategies, dividing them into those which actively involve confronting the problem (problem-focused), and those which were designed to avoid dealing with the problem (emotion-focused) in relation to three sets of variables which included sociodemographic factors, personality dispositions, and contextual factors. Earlier findings had identified those with higher socioeconomic and education levels being less likely to use avoidance and selective ignoring (Billings & Moos, 1981; Pearlin & Schooler, 1978). Personality factors such as easygoing nature and hardiness had been found to result in less need for avoidance coping and more active coping (Holahan & Moos, 1985). Contextual factors included stressful life events and social resources which had been found to influence choice of coping response (Billings & Moos, 1981; Folkman & Lazarus, 1980; Lazarus & Folkman, 1984).

Their findings supported the earlier research done by Billings et al., indicating that avoidance coping was the response used most often in situations in which resources (such as socioeconomic level, preexisting depression, family support, education, self-confidence, and an easy-going personality) are scarce. They concluded that "avoidance coping occurs when primary appraisal leads to the perception of a threat, and secondary appraisal results in a perception of insufficient personal and environmental resources" (Holahan & Moos, 1987, p. 953).

A study done by Folkman and her colleagues (1986) examined, through the

use of intrapersonal comparisons, the relationship between cognitive appraisal, coping processes, and short-term outcomes over a series of five stressful encounters described by the subject. Seventy-five couples were interviewed monthly for six months and completed the Ways of Coping Checklist (Lazarus & Folkman, 1985).

Despite the different populations used in consecutive studies, research done by Folkman et al. (1980, 1985, 1986) indicated that similar coping scales emerged from each data set validating the consistency of coping processes used despite the variety of stressful occurrences. Encounters appraised as changeable were addressed by problem- focused processes that kept subjects focused on the situation while more distancing and avoidance was used in unchangeable situations. (Folkman et al., 1986). In situations in which the subjects felt that they needed more information, self-control and seeking social support were used in addition to planful problem-solving.

Short-term outcomes were evaluated in terms of whether the subject considered them to be satisfactory or not, and were found to be directly related to the appraised changeability of the encounter. Events considered unchangeable were found to have fewer reported satisfactory short-term outcomes. Because the assessment of short-term outcomes in this study was based on the retrospective recall of the appraisal and coping by the subjects, further research evaluating outcomes was recommended to clarify any confounding between the two (Folkman et al., 1986).

Four issues were raised by the results of these studies. Determining the

causality of the influence of appraisal on coping is not possible, as it is most likely to be bidirectional due to the dynamic nature of reappraisal and the coping processes themselves. Secondly, the wide variety of the events reported required general rather than situation-specific coping options allowing for more generalizability, but less specificity. Third, the limitations involved with the use of self-report appear as a source of debate throughout the literature (Coyne, Aldwin & Lazarus, 1981; Goshen-Gottstein, 1980; Kobasa, 1979; Lazarus & Folkman, 1984), and the recommendation of verification of findings through direct observation and physiological assessment is made. The recommendation is also made for examination of interindividual approaches through the comparison of diverse individuals and their coping processes (Folkman et al., 1986).

Social Support

As reported throughout the coping literature, the concept of social support has been identified as having an impact on stress, appraisal, and coping processes (Andrews et al., 1978; Aneshensel & Stone, 1982; Bandura, 1977; Cobb, 1976; Cohen & Wills, 1985; Collins, Dunkel-Schetter, Lobel & Scrimshaw, 1993; Crawford, 1985; Crnic, Greenberg, Ragozin, Robinson & Basham, 1983; Coyne & DeLongis, 1986; Cutrona, 1984; Dunkel-Schetter, Folkman & Lazarus, 1987; Folkman et al., 1980, 1985, 1986; Hirsch, 1980; Holahan & Moos, 1985, 1987, 1991; Lazarus & Folkman, 1984; Lederman, 1995; Monroe, Bromet, Connell & Steiner, 1986; Panzarine, Slater & Sharps, 1995; Pearlin & Schooler, 1978; Robin, Bydlowski, Cahen & Josse; Sharts-Hopko et al., 1996; Sherbourne & Stewart, 1991; Simons & Johnson, 1996; Tietjen & Bradley, 1985; Thoits, 1986; Wilson,

Reis, Midmer, Biringer, Carroll & Stewart, 1996).

In his classic work, Cobb (1976) traced earlier research examining social support in relation to such situations as hospitalization, recovery from illness, and stress. He felt that knowing that one was held in esteem by others gave people self-confidence to take actions toward eliminating stressful circumstances and to adjust to circumstances which could not be changed. In his article, he distinguished between coping as manipulating the environment and adaptation as changing the self in an attempt to improve the fit (Cobb, 1976).

Because of the difficulties in determining the specific manner by which social support enhances coping or vice versa, two models have been proposed. One model, as supported by Cobb (1976), describes social support as having a stress-buffering effect, mediating the impact of stressful occurrences. The other model describes social support as being a main effect, having direct, positive effects on well-being such as providing evidence of love, care, affiliation, belonging, respect, social recognition, affection, and nurturance which enhances self-esteem, self-efficacy, and coping ability (Andrews et al., 1978; Anshel & Stone, 1982; Bandura, 1977). In their review of the literature, Cohen and Wills (1985) reported that evidence exists for both models.

Social support has been described by Hirsch (1980) as having five possible categories which include cognitive guidance, social reinforcement, tangible assistance, socializing, and emotional support. He identified the characteristics of density (number of relationships) and multidimensionality (number of different activities or types of support) as having significance. He concluded that helpful

support could assist the individual to delineate necessary from unnecessary tasks, to identify alternative coping behaviors, to identify environmental resources, and to help the individual with the development of realistic criteria by which to judge the effectiveness of one's coping efforts.

Billings and Moos (1981) found that people who used avoidant coping reported fewer social resources. Dunkel-Schetter, Folkman, and Lazarus (1987) followed 75 middle-aged couples over a 6 month period as part of a large field study of stress and coping in which possible correlates of social support were examined. Structured interviews elicited descriptions of recent stressful experiences and their relative stressfulness, and sought answers to questions related to social support received in response to these situations. Coping was measured using the Ways of Coping Questionnaire (Lazarus & Folkman, 1984), and social support variables were measured using an instrument developed for this investigation (Lazarus, Folkman, Gruen & DeLongis, 1986).

Results of this investigation showed that encounters considered by the subjects to be highly stressful, were found to have a greater amount of emotional and informational support provided, as well as more people involved in giving support than encounters considered as being less stressful. More sources of support were used if one's health or the health of a loved one were involved. The use of problem-focused coping was significantly associated with more informational support, assistance, emotional support, and more sources of support. Those using emotion-focused coping were found to have significantly less informational support, marginally less tangible aid, and marginally less emotional support. More

sources of support were reported among those who coped by seeking support and using positive reappraisal than those who did not.

From earlier work, Folkman, Lazarus, Gruen, and DeLongis (1986) had determined that self-esteem was significantly and positively related to coping through seeking support. In this study, high self-esteem was found to be associated with more emotional support received. More aid and assistance was found to be given when the stressful situation was found to be associated with a threat to one's health or the health of a loved one than if the threat was to one's self-esteem (Dunkel-Schetter, et al., 1987). The authors speculated that this may be due to the inability of support providers to readily recognize the need for support, or the reluctance of those in need of assistance to ask for or accept offers of it for fear of appearing as a failure. Regardless, often, those most in need of assistance are least able to avail themselves.

However, the study does not allow for any determination of whether coping elicits support or support enhances coping. The coping process used by an individual in response to a specific stressful situation may provide an indication to others of what support and assistance is needed and/or desired. Processes such as distancing and avoidance may signal that the person does not want information while problem-solving actions may provide different cues. From these cues, those who could provide support make determinations of the type, amount, timing, and the desirability of the support they offer, and act accordingly. As it is easier and more rewarding to offer support to someone who willingly accepts it and values its contribution, offering support to an individual who is withdrawn, hostile, or

defensive is more threatening (Dunkel-Schetter et al., 1978).

Additionally, support offers may also be an attempt of the individual involved to alter the coping of the individual seeking support as a means of alleviating hostility, guilt, or for other nonaltruistic reasons. Determining the motivations of those offering support, the actual behaviors as opposed to self-reports of distressed subjects, and the descriptions of actual support received are difficult and subject to distortion, adding to the limitations found in studies using this methodology, but do provide a basis for further research in this area.

Aneshensel and Stone (1982) studied 1000 normal people regarding their self-reported life stress, depression, and perceived social support. From their findings, they associated the lack of social support to the development of depressive symptoms in those studied. Their findings indicated that although the effects of stress are greater on those without social support, the lack of social support was a significant contributor to adverse psychological outcomes. They concluded that there was support for the buffering model, although there was indication that the functions of social support did vary in form based on the content or intensity of the stressor. High stress situations evoked more specific, threat-oriented support whereby low stress situations were associated with more diffuse support. Benefits of social support were positive for both (Aneshensel & Stone, 1978).

Monroe and colleagues (1986) recognized the importance of prospective studies of social support based on the obvious difficulties in verifying the accuracies of symptom onset, support changes, and life event occurrences used in

earlier cross-sectional research. Additionally, the question of whether individuals who were symptomatic for depression rather than asymptomatic responded differently to situations was examined. In order to limit their sample to having a heterogeneous source of support, they selected nondepressed married women in a nonconflicted marital relationship who were white, high school-educated, and had two or three children. Data were collected related to life events, social support, marital conflict, and depressive symptoms using a variety of valid and reliable instruments.

Findings indicated that in nondepressed women, marital support was significantly inversely associated with depressive symptoms, although, an increased incidence of life events was related to an increased likelihood of subsequent distress. This did not support the hypothesized role of support as a buffer of life event stress, but is congruent with the *main effects model* (Anhensel & Stone, 1982). The authors also addressed the methodological problems associated with research in which it is difficult to control for homogeneity of the sample, the variety of life events encountered, the effect of life frames involved in both event-reporting and symptom onset, which they felt, could all contribute to an overattribution of effects to stress (Monroe et al., 1986).

However, the question of marriage as a primary source of social support raises the issue of the "costs" of supportive relationships, which have been identified as among the primary sources of stress in daily life (Lazarus & Folkman, 1984). Relationships perceived as being unsatisfactory or too costly in terms of return obligations may often be avoided or rejected. Troubled marriages may add to

conflict and overload, serving to intensify stress (Coyne & DeLongis, 1986) while a satisfactory marriage may encourage adaptive coping based on spousal approval. A positive marital relationship was found to be a major support to adequate parenting (Simons & Johnson, 1996).

Coyne, Aldwin, and Lazarus (1981), in a study of coping processes of women, found that depressed women were more likely to be involved in close relationships characterized by poor communication, hostility, and friction than their non-depressed counterparts. They were also more likely to be unemployed, lacking in others to confide in, and having three or more children at home. Their findings indicated that depressed individuals tended to seek more information, express more ambivalence, use more wishful thinking, and avoidance. Their increased use of escape and avoidance-style coping was found to interfere with their ability to deal with problems effectively.

The lack of apparent supportive relationships may also be related to deliberate efforts at avoidance of involvement by the individual who is overwhelmed, particularly among women for whom potential sources of support may prove to be demanding beyond their ability to reciprocate (Coyne & DeLongis, 1986). Family members' concerns, overprotectiveness and overinvolvement may provide the opposite effect intended. The authors highlight the need for an understanding of the interrelatedness of the individual with the environment in which he lives for fully evaluating the value of the support available in different situations. It is the balance of the social support offered against the social demands associated with it that determines its value to the

individual, and the degree of stress by which it is accompanied or is alleviated (Lazarus & Folkman, 1984).

This conflict has also been identified in studies of new mothers and the perceived support that they receive coping with motherhood (Crawford, 1984). Both age and socioeconomic status have been inversely related to social support conflict among mothers.

The measure of perceived functional support defined as the degree to which interpersonal relationships serve particular functions, formed the basis for the development of the Medical Outcomes Study Support Survey (MOS). This instrument, designed for use with chronically ill adults, addressed components of social support which include emotional support, informational support, tangible support, and positive social interaction (Sherbourne & Stewart, 1991). Although independent, the interrelatedness of the components was evident in the results of early studies using the tool.

Thoits (1986) suggested reconceptualizing social support as coping assistance. By defining social support as "functions performed for a distressed individual by significant others such as family members, friends, co-workers, relatives, and neighbors" (Thoits, 1986, p. 417), these functions can then be matched with coping processes.

She suggested that problem-focused coping and instrumental support are directed at changing or managing stressful situations, while emotion-focused coping and emotional support attempt to alleviate negative feelings. Perception-focused coping (Pearlin & Schooler, 1978) and informational support

are directed at establishing the meaning of an event. This conceptual redefinition fits between the two models described earlier, and was based on work done by Lazarus and Folkman (1984) and Pearlin and Schooler (1978). Advantages of this third alternative included speculation that if certain coping processes are more effective in certain situations, than the coinciding type of coping assistance should also be more effective. By integrating the coping and the support processes together, it was suggested that previously unexamined forms of effective support may be recognized. Third, prediction of conditions signalling the need for specific strategies may become possible by signalling situations indicating risk (Thoits, 1986).

Depression

Although the influence of hormonal factors has been linked with the development of postpartum depression, O'Hara, Rehm, and Campbell (1983) based their research on the hypothesis that the additional demands placed on new mothers may have a significant influence on the onset and intensity of depression. Social support variables, and additional situational stressors which had been identified in earlier research as having an influence on the development of depression were evaluated in a sample of thirty women recruited during their second trimester of pregnancy and followed through the postpartum period. The sample was divided into two groups based on their depression screening scores. The first group (depressed) had scores that were elevated during pregnancy as well as their postpartum depression scores being high. The second group (nondepressed) showed no depression at either point. Variables examined

included history of past depression, recent stressful life events, history of pregnancy and social network information which was gathered using standardized instruments and interviews at two points during the study.

Although the size of the sample was small in this longitudinal study, several findings supported their predictions. Women in the depressed group showed a significant past history for depression in comparison with the nondepressed group, as well as significantly more stressful life events since the beginning of their pregnancies. The size of the social support networks increased in both groups over the course of the study, but did not differ in terms of constellation (family to nonfamily). Emphasis was placed on evaluating the impact of the marital relationship, and depressed women reported that they received less emotional support from their spouses, had more marital conflict, and were less likely to talk things over with their spouses than the nondepressed group. The depressed group also reported being less able to give emotional support to their spouses and other confidants. No relationship was found between delivery stress and postpartum depression.

These findings support the linking of stressful life events and depression which becomes intensified when social support is decreased although causality cannot be determined in this research. However, recommendations for early interventions during pregnancy for women with histories of depression are indicated (O'Hara et al., 1985).

O'Hara (1986) completed a larger study of 99 women followed during pregnancy through nine weeks postpartum which expanded on his earlier work by

looking at demographic variables, past family history of depression, and childcare-related stressors in a sample divided into those who were prepartally depressed (n=9), prepartally nondepressed (n=90), postpartally depressed (n=12), and non-postpartally depressed (n=87). Although the group sizes were small, the women in this sample who were depressed during pregnancy were not the same group as those with postpartum depression, leading to the speculation that prepartum and postpartum depression may have different causes.

Differences between the groups included more children among the prepartum depressed women and lower educational levels among the postpartum depressed group. Those experiencing postpartum depression experienced more general and childcare-related stress events. As in the earlier study, O'Hara reported that postpartally depressed women reported less spousal support than the nondepressed group as well as less satisfaction with overall support from all sources. Evidence that marital satisfaction was less during pregnancy in the group with postpartum depression may have significance as a factor in its development or vice versa (O'Hara, 1986).

Stressful life events were reportedly higher among the postpartally depressed women although not among those who were depressed during pregnancy, raising the question of a bias among those depressed women in reporting events postpartally. The researchers speculated that depression during pregnancy may also be related to somatic discomfort, such as fatigue, nausea, and weight gain, and recommended future research in this area.

Sugawara and colleagues (1997) studied 1,329 Japanese women in a

longitudinal investigation of the mood changes which take place throughout pregnancy and into the perinatal period. They administered the Zung Self-rating Depression Scale at six points through the study period and determined that women who experienced premenstrual mood changes also experienced higher Zung scores across the pregnancy and during the postpartum period, indicative of more mental instability as described by the authors.

Throughout the literature, an association between maternal depression and the development of their children has been reported, indicating the need for attention to this adverse outcome (Coghill, Caplan, Alexandra, Robson & Kumar, 1986; Crawford, 1985; Field et al., 1985; Gross et al., 1994; Lerner & Galambos, 1985; O'Hara, Rehm & Campbell, 1983; Radke-Yarrow, Cummings, Kuczynski & Chapman, 1995; Panzarine et al., 1995; Panzarine, 1996; Teti, Gelfand, Messinger & Isabella, 1995). Associations between cognitive development, attachment behaviors, maternal satisfaction, punitive behaviors, maternal confidence, maternal gratification and interactions such as feeding behaviors were identified as having been effected.

Adolescent mothers, at higher risk for impaired relationships with their infants, were studied by Panzarine (Panzarine et al., 1995; Panzarine, 1996) in relation to coping with motherhood, depressive symptoms, social support, maternal confidence, and maternal gratification.

Her findings indicated that adolescents with more depression had more negative interactions with their infants, were less satisfied with the social support that they received, although more likely to seek support than the non-depressed

group. The use of more emotion-focused coping was found which is consistent with adult findings (Coyne et al., 1981). Behaviors observed included ignoring the baby, and avoiding unpleasant situations. Overall, the depressed group viewed events more negatively than nondepressed subjects. Limitations to the study included the use of a new instrument with no psychometric information. However, the question of whether depression initiates the cycle of avoidance, or if it is due to a lack of energy and patience related to poor coping were raised.

Frankel and Harmon (1996) studied 62 pairs of mothers and their toddler children. Half ($n=32$) of the mothers were considered to be depressed based on a psychiatric interview while the remainder ($n=30$) of the women were considered to be non-depressed. The groups were compared through observation and the use of standardized questionnaires to determine whether significant differences existed in their maternal-child interactions, self-reports of their parenting, and the attachment behavior of their children. No significant differences were seen during the behavioral observations, but the depressed women did rate themselves as having more negative feelings about mothering, described themselves as less capable, and enjoyed their children less than the non-depressed group. No differences in the children's behavior was seen regardless of the group to which the mother belonged.

Kinard (1996) compared mothers of abused elementary school-aged children with a matched group of mothers of nonabused children (although not all mothers were the perpetrators of abuse). The frequency and intensity levels of depressive symptoms were found to be significantly higher in mothers of the abused group.

Levels of competence and perceived social support, especially from family, were also found to be lower in the mothers of the abused group. Multiple regressions including sociodemographic factors supported a significant relationship between low socioeconomic level and depression. Social support was found to be the strongest predictor of depression. Other factors such as maternal education level, employment status, and involvement in organizations were also shown to be of significance. Identification of maternal depression, especially in cases of mothers who perceive themselves to have low social support was found to be critical to providing their children with protection, as well as teaching them skills to develop social networks.

Interaction Between the Variables

In order to develop an approach through which to investigate the coping processes used by mothers of triplets, it was important to identify work that has been done examining the interrelatedness of the variables of stress, coping, social support, and depression as it relates to mothering. By addressing single birth, high-risk births, and twin births, a background for the experience of the mother of triplets has been developed.

Throughout the coping literature, the association between stress, ineffective coping, impairment of functioning, and depression raised the question of the effect of depression on coping processes. Hanninen and Aro (1996) studied a sample of young adults in Finland comprised of 890 women and 766 men to evaluate depression levels and coping style differences. Variables included gender, depression, coping processes, life stress events, and resilience. Resilience

was defined by Hanninen and Aro as "the individual's personal style that is supposed to encourage effective coping with difficulties" (p. 1455).

Unlike earlier studies which demonstrated significant differences in the functionality of how men and women coped, there were no significant qualitative differences reported, although women used different functional ways of coping such as seeking social support while men used more problem-solving. Actual methods of dysfunctional coping differed, with women tending to blame themselves, vent anger on others, and overeat while men drank more alcohol. The authors noted that more men dropped from the study than women raising the possibility that those who were more dysfunctional were unable to continue.

Both functional and dysfunctional coping were associated with depression, as was low resilience. Men were found to be more resilient than women, raising the question of the role of resilience as a mediator between coping and depression. No differences between life stress and gender were found.

Sherbourne, Hays, and Wells (1995) studied risk factors identified to be associated with the onset or persistence of depression in a sample of chronically ill medical patients. Among the risk factors were included the presence of social supports, occurrence of stressful life events, and coping style over a two year period. Their findings indicated that the more patients who were classified as non-depressed at the start of the study used avoidance coping, the higher the likelihood of an increase in depressive symptoms. Depressed patients who used active coping strategies showed greater improvements in their depression. Social support, especially among those patients who were already depressed, had a

protective effect from increasing depressive symptoms. Stressful life events did not impact depressive symptoms in this sample.

Numerous studies have been done to evaluate the impact of social support on pregnancy outcome and its role in relation to the development of depression, poor maternal-infant interactions, and maternal adjustment (Collins et al., 1993; Dunkel-Schetter, Sagrestano, Feldman & Killingworth, 1996; Field et al., 1985; Kemp & Hatmaker, 1989; Lederman, 1995; Nuckolls et al., 1972; Panzarine et al., 1995; Panzarine, 1996; Tietjen & Bradley, 1985).

Lederman (1995) predicted from empirical evidence that prenatal stress and lack of support, which are identifiable during pregnancy, can have deleterious and long-lasting effects on both mother and child. Tietjen and Bradley (1985) found no association between prebirth social support and its ability to predict postpartum adjustment. However, as in most social support literature, it was difficult to generalize results due to the variety of concepts and measures used (Dunkel-Schetter et al., 1996).

Nuckolls and her colleagues (1972) identified that pregnant women with a combination of high life stress scores and low psychosocial assets (which included social resources) suffered more pregnancy complications than did those without. Collins and her associates (1993) found that low-income women with more support experienced less depression and better birth outcomes. Support was examined in relation to quality of support, type of support, and provider of support. Parity was inversely associated with stress level for the first delivery. Results of this study supported the model that receipt of social support served as

a buffer to the development of depression.

In a study designed to examine the relationship between stress and social support, Crnic and his associates matched 52 mother-premature infant pairs with 53 mother-full-term infant pairs (Crnic, Greenberg, Ragozin, Robinson & Basham, 1983). As well as being one of the first studies looking at the interaction between the variables, it was also first to look at an at-risk population. Although all births were of single infants, the premature delivery was hypothesized to increase the level of stress experienced by the mothers, and makes it worthy of note, as prematurity is a characteristic common in multiple births. A home interview was conducted at one month with data collection related to life stress, social support, general life satisfaction, and satisfaction with parenting. At four months, a behavioral observation of the mother-infant pairs was conducted.

No significant differences between pairs with premature infants and those with full-term infants were found leading to pooling of all data. This encouraging finding was attributed to the healthy status of all the infants, the adjustment that had occurred in the time since birth, and the support that families of the premature infants had received from health care providers immediately following birth.

Stress was found to have a major impact on the mothers' intrapersonal feelings and satisfaction, attitudes toward parenting, and ability to be responsive to the baby because of her less positive feelings. Infants of these mothers were also less responsive, adding to maternal stress levels. Mothers with more support were found to be more positive. Social support as a buffer against stress was not

clearly indicated in this investigation, but appeared to have a more selective effect, especially in relation to intimate relationships and in terms of the stress intensity. This may be due to the limited familial, social, and community contacts among mothers of infants. Main effects reported greater maternal support being related to more secure infant attachment, mutual gratification in the relationship, and enhancement of reciprocity between mothers and infants (Crnic et al., 1983).

Ventura (1982) identified a relationship between the coping behaviors of mothers and their perceptions of their infants' temperament. Gross, Conrad, Fogg, and Wothke (1994), described a cyclical pattern in which mothers who were depressed tended to describe their children as more difficult. In turn, they reported their maternal self-efficacy as low, adding to their depression.

In an extensive review of the literature completed by Wilson, Reid, Midmer, Biringer, Carroll, and Stewart (1996), antenatal psychosocial risk factors in single births were identified which were found to be associated with adverse postpartum outcomes for the family. Family factors included poor marital adjustment, lack of social support, traditional rigid sex-role expectations, and recent stressful life events. Among maternal factors, low self-esteem and antepartum depression were also associated with adverse outcomes.

Multiple Births

In an early study of the impact of twins on parent-child interaction, Lytton, Conway, and Sauve' (1977) reported that parents of twins had less interaction with their children than singleton parents, including verbal exchanges involving direction, praise, and follow through with rules. This was attributed to greater

demands of twins on parents' time. The impact of lessened involvement with twin offspring was associated with more demanding behaviors, delayed independence, and decreased quality and quantity of speech.

Robin, Corroyer, and Casati (1996) identified two dimensions of care observed during the first year of mothering twins, a continuum of collective versus individual care, and organization of daily routines. Through the use of questionnaires, clinical interviews, and home observations, variables included mother's state of fatigue, the nature of the father's involvement, the presence of other caregivers, and mother's emotional investment. Nonfatigued and nondepressed mothers gave more individualized care while mothers who are overwhelmed tended to practice collective mothering. Neither the involvement of the father nor the presence of other caregivers appeared to account for the tendency for some mothers to be exceedingly organized.

Although the incidence of higher order multiple births has continued to rise (Luke, 1994), the impact of the birth of three infants on the mother has received little attention in the literature. Few studies have been available to empirically describe the experience of the mother especially after the first year. Studies that have been done have used small samples with mainly qualitative methodologies.

Goshen-Gottstein (1980), in a small, longitudinal study of mothers in Israel who had been observed interacting with their infants, described the impact of multiple births on the mother. The methodology of this study was based on her belief that in order to adequately describe the nature of maternal-child interactions, observations must be carried out in the natural setting of the family

environment.

Four families of twins, six families with triplets, and four families of quadruplets were included in the sample. All the triplets were born in Jerusalem within the same year, and came from middle to lower socioeconomic groups. Observations and interviews were carried out monthly over a period of two years then bimonthly for approximately three more years. The researchers were observers in the household, but did interact when approached by the subjects. Specific attention was paid to how mothers interacted with their children, whether they described their interactions as they had actually occurred, and whether differences existed in how mothers related to their individual children.

Ambivalence about having triplets was reported to have begun by mothers at the time of learning of their multiple gestation, despite the mother's desire for having an infant. Only two of the six reporting feeling happy about the news. The ambivalent feelings continued after the birth. The negative side of the ambivalence was visible through the behaviors of the mothers toward their infants through avoidance, withdrawal from them, and allowing others to care for them. While some of the mothers would not take their infants out in public due to the reaction that it evoked from outsiders, several of the mothers reported that they enjoyed the added attention they received. This was also reported by Robin et al., in a later study (1996) in which mothers "exploited" their unique situation in requests for free services and goods.

Labeling of the children was observed when mothers attempted to find ways to individually relate to the children. Often labels were based on behaviors, or

positive and negative qualities observed in the children. Unfortunately, the labels often lasted long after the child's behaviors had changed.

Much of the mothers' efforts were spent finding ways to organize the delivery of care to several babies needing to be fed, changed, held, bathed, rocked, soothed, and calmed at the same time. Mothers often related to their children as a unit rather than as three individuals in an attempt to equalize care for all although this resulted in less sensitivity to the needs of each child. This behavior was also observed in how they addressed the children, spoke about them, and behaved towards them, often singling out one to give special attention. The author stressed that all mothers appeared to be unaware of their preferential treatment describing how they treated all their children equally.

Goshen-Gottstein (1980) stated "the raising of multiple infants can be seen as an instance of human beings attempting to cope with a situation with which they are not equipped to cope" (p. 200). Mothers who reportedly coped better had been teachers or child care workers prior to having their own children, and had previously received some training in handling several children at once. The other mothers had been raised as single children, and previously had little contact with triplets. Similarities in behavior and attitudes between mothers of higher order multiples, and single mothers were identified based on the tendency toward task overload in both groups.

Using both home-based interviews and observations, Robin, Bydlowski, Cahen and Josse (1991) studied fourteen women who had given birth to triplets, at four months and one year after birth. They reported that forty percent of the mothers

were depressed, tired, and bitter. "These depressed women were unable to project into the future. They live totally from day to day, overwhelmed by insurmountable material difficulties" (p. 44).

Although a small sample, several characteristics of the mother-infant interaction were identified which indicated poor adjustment to the birth of the triplets. These included the inability to make long-range plans, rejection of help from others, ongoing depression in the mother evidenced by little pleasure in performing childcare tasks, and few spontaneous positive comments about the children. Seventy percent of the women blamed the doctor or the medical system for their situation, and many reported that they felt like they were being punished. Women who had previously been infertile and successfully treated with drug therapies or assisted reproductive techniques felt particularly conflicted due to their strong desire for a child and ambivalence related to a multiple birth.

Individual variations in reactions to the birth of three infants were attributed to the individual makeup of the women and the amount of support available to them from family and friends (Robin et al., 1991). Fathers and grandparents were the principal sources of assistance with care demands. Although not studied directly, the role of fathers ranged from changing work schedules to be available to actively assist, to the occurrence of marital crises in two families in which the fathers were unable to adjust to the demands of the multiple birth. Support was also sought and found by sharing the experience with other mothers of triplets.

Observations of mother-infant interactions during feeding at four months demonstrated the efficiency of the routines developed by mothers to manage the

childcare tasks. Sixty percent of the mothers showed no signs of enjoying interactions with their infants. By comparison, at the one year observations, 60% of mothers were able to derive pleasure from their tasks, individualize their interactions with their babies, and speak of them in a positive manner although still remaining both organized and efficient in their routines.

At one year, families displayed a range of adaptation, with 20% demonstrating rapid adjustment through the ability to project into the future as evidenced by making long and short-term plans, having substantial help, an absence of feelings of abnormality, and a sense of satisfaction and pleasure from childcare. Fifty percent of the remaining mothers showed progress toward coping although still displaying some depression.

In some families, hyperactivity and regimentation of daily life replaced depression as a means of coping with the demands (Robin et al., 1991). Mothers became rigid, punitive, and overprotective in dealing with the demands they faced.

Mothers at risk for continued poor adjustment were found to be those with inadequate assistance with care, an inability to derive pleasure from interacting with the infants as evidenced by few playful interchanges, isolation, and a pervasive feeling of the abnormality of the situation. In families in which children were still suffering from the effects of prematurity and handicaps, additional feelings of ambivalence indicated the need for psychological assistance for the mothers. Earlier research done by Robin et al. (1991) compared pregnancy data about these mothers with their adjustment at four and twelve months. Indicators of risk of poor adjustment were able to be identified prenatally, allowing for early

intervention planning.

Garel and Blondel (1992) studied twelve mothers of one year old triplets using semistructured interviews. Their findings reinforced those of earlier studies (Goshen-Gottstein, 1980; Robin et al., 1991) in which mothers displayed considerable fatigue and stress. Many of the mothers had received help from social services for the first year, and were now faced with managing alone, as support from friends and family had also decreased. Limitations to mobility were among the reasons stated for why mothers described social isolation as a problem. Changes in the marital relationship added to stresses caused by the increased burdens.

Clearly, all of the studies reported difficulties in the maternal-child relationship (Garel et al., 1992; Goshen-Gottstein, 1980; Robin et al., 1991). These ranged from delayed bonding after birth, preferential bonding, overprotectiveness, and withdrawal from emotional attachment to avoid jealousy among the children.

Children became the target of frustration and anger potentially leading to physical abuse, as described by one of the mothers: "Sometimes I lose my self control. I shout at them or spank them more than is necessary. It makes me feel guilty but I can't help it. At the end of the day I feel like a tiger. I can imagine that in some situations there could be a risk of child abuse" (Garel et al., 1992, p. 730).

Nearly seventy percent of the mothers experienced depression, frustration, asthenia, helplessness, anxiety, tension, guilt, and irritability one year after

delivery. Of these, three were treated with anti-depressants. Unlike the results of Robin et al. (1991) in which mothers began to show more enjoyment of their infants, the majority of these mothers continued to feel detached from their children and ambivalent towards them.

Although many of the difficulties expressed by the triplet mothers at one year could also be found in mothers of singletons, their intensity was exaggerated by the presence of three at once (Garel et al., 1994). Studies of families with twins also reported financial and marital concerns, the need for home help, and the risk of child abuse (Groothuis, Altemeier, Robarge, O'Connor, Sandler, Vietze, & Lustig, 1982; Tanimura, Matsui, & Kobayashi, 1990).

Groothuis et al. (1982) reported that larger families with inadequate spacing between the children were at the highest risk for child abuse as parents were more stressed, more punitive, and less supportive. In their comparison between families with twins and similar families with singleton children, twins were found to be at higher risk of abuse. It has been reported that the rate of child abuse in families with multiple births is 2.5 times that of the general population (Malmstrom & Biale, 1990).

Summary

By tracing the relevant literature through stress, coping, social support, depression, and the experience of mothering a multiple birth, it became clear that the population comprised of mothers of triplets is faced with significant obstacles on a daily basis. The task of mothering three children of the same age may be appraised as either a threat or a challenge to these women, who may view their

situation as a unique opportunity or a punishment, offering them public attention or a reason to hide.

Throughout the literature, the need for additional help and support for mothers of triplets has been clearly documented (Bendefy, Elliman, Prio, & Bryan, 1994; Dilley & Dilley, 1995; Gardephe, 1997; Garel et al., 1992; Gibb & Greenough, 1991; Goshen-Gottstein, 1980; Malmstrom & Biale, 1990; Malmstrom, Flaherty & Wagner, 1988; Robin et al., 1991, 1996). Suggested interventions included education for parents and expectant parents, counselling and psychological support, medical education for health providers about the special needs of multiple birth families, marital counselling, peer support, tangible and financial assistance through community services programs and home health agencies, and specialized health care programs to provide comprehensive services to meet the complex needs of these families. For some mothers, treatment for depression may also be indicated.

As of 1990, there were 660,000 multiple birth children under 10 in the United States with an additional 4,000 sets of triplets or higher born each year (Malmstrom & Biale, 1990). It was for these reasons that this investigation was designed. Evidence has demonstrated that ambivalence, avoidance coping, depression, task overload, preexisting stress, a lack of control over stressful situations, stress of long-term duration, unpredictability, social isolation, and limited social support contributed to diminished resources for coping. To date, research has been very limited with this population whose numbers are growing. In order to effectively develop proactive interventions for mothers at risk of being

unable to cope adequately with the demands of mothering triplets. more empirical evidence is needed.

What has been lacking in the literature is a study designed to examine this specific population of individuals, all experiencing the same ongoing life stress. Additionally, interpersonal comparisons were made to identify whether specific sociodemographic covariables could be identified. This descriptive study was designed to examine the experience of 92 mothers of triplets to identify whether existing research looking at diverse populations experiencing a variety of stressful situations can be generalized to this specific group of women experiencing life as mothers of triplets.

CHAPTER 3

Methodology

Purpose

The purpose of this study was to describe the coping processes used by mothers of triplets. By identifying these processes, the mothers' current stress levels, levels of depression, and the social supports they perceive to have available to them, it was hoped that a clearer understanding of their experience would be developed. From this understanding, it would then be possible to design interventions to be used to prepare women expecting triplets, or higher order multiples to better cope with the demands of motherhood.

Research Questions

1. What are the coping processes used by mothers of triplets when asked to recall a particularly stressful recent incident involving having triplet offspring?
2. Is there a significant difference between the coping processes used by mothers of triplets who have other children prior to having triplets and those mothers who have no other children?
3. What sociodemographic variables effect the coping processes used by mothers of triplets?
4. What is the availability of social support perceived by mothers of triplets?
5. What are the current stress levels of mothers of triplets?

6. Is there a relationship between current stress level and coping processes used by mothers of triplets?
7. Is there a relationship between coping processes and perceived availability of social support?
8. Is there a relationship between current stress level and perceived availability of social support in mothers of triplets?
9. Is there a relationship between level of depression and current stress level of mothers of triplets?
10. Is there a relationship between level of depression and coping processes used by mothers of triplets?
11. Is there a relationship between level of depression and perceived availability of social support in mothers of triplets?
12. Is there a difference in the coping processes, current stress levels, perceived availability of social support, and levels of depression between mothers who work outside of their homes and those mothers of triplets who do not?
13. Is there a difference in the coping processes, current stress levels, perceived availability of social support, and levels of depression between those mothers whose triplets were conceived spontaneously (without medical assistance), and those mothers whose triplets were conceived with using assisted reproductive technology?
14. Is there a relationship between any of the sociodemographic variables used to describe the mothers of triplets in the sample?
15. Is there a difference in coping processes, current stress levels, and perceived

availability of social support between mothers of triplets when grouped according to their levels of depression?

Research Design

This study was done using a descriptive research design, a quantitative methodology, the purpose of which was to "describe systematically the facts and characteristics of a given population" (Isaac & Michael, 1995, p. 50). There was very limited existing research describing the experience of mothers of triplets. It was this lack which necessitated the collection of an empirical database to describe how these women coped with events in their daily lives. This type of research did not provide the opportunity for testing hypotheses or for making predictions, but did identify relationships which had not previously been identified and provided implications for future study.

Variables

Four major variables have been examined in this study: coping processes, perceived availability of social support, level of depression, and current level of stress. Each of these will be described individually.

Theoretical Definitions

1. Coping Processes- "Constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984, p.141).
2. Perceived Availability of Social Support - Functions performed for a distressed individual by significant others (Thoits, 1986).

3. **Level of Depression** - "An emotional state following loss and characterized by a sense of hopelessness, or as anger toward another turned inward to ward off its painful intrapsychic or social consequences" (Lazarus & Folkman, 1984, p. 266).
4. **Current Stress Level** - Negative life events and chronic life strains which require behavioral readjustment due to their interference with ordinary daily activities (Thoits, 1986).

Operational Definitions

Coping processes were measured by the Ways of Coping Questionnaire (Folkman & Lazarus, 1988). This instrument was derived from a cognitive-phenomenological theory of stress and coping developed by Lazarus and Folkman (1984). Coping processes were measured using self-report of thoughts and actions occurring in response to a specific stressful encounter. Eight coping subscales were used to interpret responses based on the raw and relative scores which included confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem-solving, and positive reappraisal. Relative scores allowed for the comparisons of the relative frequencies that each of the processes was used.

Perceived availability of social support was measured by the use of the Medical Outcomes Study Social Support Survey (Sherbourne & Stewart, 1991), which asked the subject to rate the amount of support that they perceive that they have received from their friends, family, or significant others with a variety of daily tasks. Four subscales representing the different types of social support were

determined for the individual as well as a total score. The subscales included tangible support, affectionate support, positive social interaction, and emotional or informational support. In addition, a question asking for an estimate of the number of close friends and close relatives on whom the subject can rely was included.

Level of depression was measured using the Self-rating Depression Scale developed by W. W. K. Zung in 1965. Subjects were asked to complete a 20-item inventory of statements which described how they felt. Ten items were worded positively and ten negatively with corresponding frequencies of occurrence for each. These values were then calculated to yield an index which indicated the estimated level of depression of the subject as either no depression, minimal or mild depression, moderate to marked depression, or severe depression. Although not diagnostic, this instrument was used to divide subjects into relative levels of depression for comparison.

Current level of stress were measured using the Derogatis Stress Profile (Derogatis, 1980), a self-report stress inventory developed based on interactional stress theory. The instrument measured three constructs of stress which were then divided into eleven dimensions yielding both individual scores and global stress indices. The first construct, personality mediators was measured by the subscales of time pressure, driven behavior, attitude posture, relaxation potential, and role definition. Environmental stressors were measured by the subscales of vocational satisfaction, domestic satisfaction, and health posture. Emotional response was measured by the subscales of hostility, depression, and anxiety. Additionally, a

subjective assessment of the current level of stress was measured on an analog scale completed by each subject.

Because of the descriptive nature of this investigation, and the limited amount of prior research on this population, sociodemographic variables were measured and used for secondary analyses. These included age of mother, age of triplets, number of children and ages, religion, marital status, employment status, health or disability of children, health of mother, method of conception (spontaneous or assisted reproductive technology), type and amount of household help, and socioeconomic status.

Study Sample

The study sample consisted of a convenience sample comprised of mothers of triplets attending a national convention of families of triplets and higher order multiples. All mothers attending the convention were asked to voluntarily complete the survey instruments. Volunteers were solicited through the use of a brief, written description of the study enclosed in the convention packet which was distributed at the time of registration at the conference. Information including how to contact the investigator, who was available throughout the convention, was included on the information sheet. The target number of cases was 100, in order to collect sufficient data for analysis of the numerous variables identified. Criteria for inclusion was currently mothering three children born simultaneously.

Setting

The setting used was a national convention for families with higher order multiples (triplets or above) held in Chicago, Illinois, in July 1997. The

convention was sponsored by The Triplet Connection, a nonprofit "network of caring and sharing for multiple birth families" (Triplet Connection Quarterly, 1996).

Sample Selection

As previously stated, the sample was a convenience sample comprised of mothers of triplets attending a national meeting of families with higher order multiples in order to access a large number of eligible subjects. A random sample would not be possible under these circumstances due to the potentially limited response rates of those completing questionnaires.

Instrumentation

Subjects in the study were asked to complete five instruments. The first was a sociodemographic information sheet developed based on information identified in the literature as having possible significance. This 23 question tool included questions relating to age, marital status, socioeconomic status, religion, parity, number and ages of children, health of mother, health of triplets, method of conception, employment status, educational level, and household help.

Ways of Coping Questionnaire

The Ways of Coping Questionnaire (WOC), developed by Susan Folkman and Richard Lazarus in 1985 was designed to assess the thoughts and actions used by an individual to cope with the stressful encounters of daily life. The instrument consisted of a 66-item, self-report using a four point Likert scale which measured the coping processes used when a stressful event is encountered. According to Folkman, Lazarus, Dunkel-Schetter, DeLongis, and Gruen (1986), the process of

coping is a dynamic one, which changes based on continuous appraisals and reappraisals. These appraisals result in coping efforts either directed at changing the environment ("problem-focused"), or changing the meaning of the event ("emotion-focused") (Folkman & Lazarus, 1980). Eight subscales, each describing a method of coping were developed based on factor analysis of the results of interviews with 75 white, middle and upper-middle-class married couples with at least one child living at home. The resulting subscales include: Confrontive Coping (COPE1SC), Distancing (COPE2SC), Self-Controlling (COPE3SC), Seeking Social Support (COPE4SC), Accepting Responsibility (COPE5SC), Escape- Avoidance (COPE6SC), Planful Problem Solving (COPE7SC), and Positive Reappraisal (COPE8SC).

Subjects were asked to recall a specific, recent stressful event that involved being the mother of triplets. With this incident in mind, they were then asked to complete the instrument. Scoring was computed as both raw scores, which described the coping effort for each of the eight types of coping, and as relative scores which described the proportion of effort represented by each type of coping.

Because the instrument was designed to measure coping as a process, and not as a trait, the authors described traditional test-retest as a less valid measure of the tool's internal consistency than Cronbach's alpha, reported to range from .61 to .79 for all scales (Kramer & Conoley, 1992). Face validity was reported by the authors without specific empirical data other than numerous other sources which have used the instrument in research. No cross-cultural or other ethnic groups

were reported. nor was the population of this study included in prior research with the instrument.

Medical Outcomes Study Social Support Survey

The Medical Outcomes Study Social Support Survey (MOS), developed by Sherbourne and Stewart (1991), is a brief, 20-item self-administered survey designed to measure the perceived availability of social support using a five point Likert scale. The four subscales address tangible support, affectionate support, positive social interaction, and emotional or informational support.

This instrument was developed by the Rand and Medical Outcomes Study (MOS) teams as one of several instruments designed to measure social health (McDowell & Newell, 1996). This instrument focuses on the functional or perception of support aspects which entail: (1) provision of emotional support, love and empathy; (2) provision of instrumental or tangible support; (3) provision of information, guidance or feedback; (4) provision of appraisal support which enables the individual to evaluate herself; and (5) provision of companionship in leisure and recreational activities as measured by the subscales. A single question addressing structural support as measured by the number of close friends and relatives are available to the subjects was also included, although this item was not included in the subscale scores.

Past reliability data on the instrument was high with overall $\alpha = 0.97$ and subscales ranging from 0.91 to 0.96. Correlations of item-scale exceeded 0.72. Test-retest reliability at one year was 0.78 with a range of 0.72 to 0.76 for each subscale (McDowell & Newell, 1996).

Sherbourne and Stewart (1991) reported psychometric data based on the use of the instrument on 2,987 participants in the MOS who were comprised of ambulatory, chronically ill patients. Validity in a general population sample or specifically in the sample of this study have not been established although the instrument has been theoretically based and the items are universally applicable. This instrument was selected (despite its lack of validation in this population) due to its subscales which coincide with the coping subscales, and also because of its ease of completion for the respondents.

Zung Self-rating Depression Scale

The Zung Self-rating Depression Scale (Zung) is a 20-item self-report tool originally developed to quantify the extent of diagnosed, existing depression. Through its widespread use, it has been found to be a reliable screening instrument for depression in medical practices, and as a method of monitoring changes following treatment (McDowell & Newell, 1996).

The design of this self-report instrument was based on the classification of depression into affective, somatic, psychomotor, and psychological symptoms which comprise the 20-item scale. Subjects chose from among four options to describe the frequency with which they experience specific feelings or sensations whose presence has been determined to be related to depression (Zung, 1964). Raw scores are summed and converted to an index.

The original tool was developed in 1964, and was revised to its current version in 1974. Reliability of the instrument was established using samples ranging from 100-225 with alphas ranging from .75 to .95. Cross-cultural samples and studies

done using drug addicts revealed alphas ranging from .75 to .79. The instrument has also been used frequently with elderly populations (McDowell & Newell, 1996). The split-half reliability of the tool is .73 (Hersen & Bellack, 1988).

Derogatis Stress Profile

The Derogatis Stress Profile (DSP) is a 78-item self-administered test which measured the current stress level of an individual. Using a five point Likert scale, the subject rated how frequently specific stressful events occurred as an indication of his daily life experiences.

This inventory was developed by Leonard R. Derogatis in 1980 based on interactional stress theory which describes stress as being comprised of three interactional domains consisting of environmental stressors (ENV), personality mediators (PMD), and emotional responses (EMO). The paradigm upon which this interactive model is based identifies eleven dimensions under which these domains are arranged in a hierarchical model (Derogatis, 1980).

Environmental events include vocational satisfaction (VSS), domestic satisfaction (DSS), and health environment (HPS). Personality mediators include time pressure (TPS), driven behavior (DBS), attitude posture (ATP), relaxation potential (RPS), and role definition (RDS). Emotional responses include hostility (HOS), anxiety (ANX), and depression (DEP). Because of its hierarchical structure, this instrument was able to measure stress at dimensional, domain, and global levels providing a comprehensive view of the subject's stress level. All calculations were based on raw scores. Additionally, a subjective stress score (DSP78) is calculated from an analog scale which asks the subject to rate his

current stress level.

Reliability of the DSP was determined through two indicators, test-retest coefficients were based on a small sample (N=34), and ranged from 0.92 to 0.72 for subscales, and 0.90 for the total stress score. Item homogeneity based on a large sample (N=867), ranged from 0.93 to 0.79.

The internal validity for the dimension scores ranged from 0.40 to 0.76 on the total scores. Domain scores ranged from 0.78 to 0.88. The DSP has been used to measure the effectiveness of stress-reduction education for teachers, stress among dental students, and in family systems looking at relationships between stress, psychological distress, coping strategies, and marital adjustment (Derogatis & Fleming, 1996). Through these studies, it has been shown that the instrument is able to quantify stress as experienced by people in a manner consistent with the interactional theoretical model being proposed.

None of the instrumentation for this study has been previously used with this population. A pilot study using the local Mothers of Multiples Club (N=25) was conducted prior to the actual study in order to validate their use in this population.

Data Collection

Each family registered to attend the Triplet Convention in Chicago Illinois in July 1997 was given a packet containing information about the conference and a research packet which contained a brief letter describing this study, and requesting participation by mothers of triplets (Appendix A). Each packet also included a Participant Consent Form (Appendix B), and each of the five instruments. The

instruments were coded by number to maintain anonymity of the subjects and completed instruments were stored separately from the consent forms. Completion of the instruments was also construed as consent to participate. Subjects were told that the questionnaires could be done at their convenience during the conference and returned to the investigator stationed in a convenient and visible location throughout the meeting. At the conclusion of the conference, those who had not yet completed the forms were reminded to do so, and provided with a prepaid, addressed mailing envelope.

Data Analysis

Data were analyzed using descriptive univariate using the software package SPSSX. For the purposes of this descriptive study, all subscales were analyzed leaving scales intact as this instrumentation had not been used previously with this population. All scales and subscales were correlated as were total to subscale scores.

Data were analyzed using both parametric and nonparametric statistical tests based on the level of data. Sociodemographic data were correlated using Spearman's rank order correlation in order to test for a relationship between the nominal and ordinal level data. The Likert-type instruments yielded data which were handled as interval level and tested using parametric statistics. Differences between group means were tested using t-tests for independent groups, and analysis of variance. Equality of variance between groups of unequal size was tested using Levene's test for homogeneity of variance. Correlations were tested using Pearson product moment correlation (Polit, 1996).

Human Subjects

Subjects were provided with a written letter of explanation about the study, and asked to sign a consent form. All data was treated as confidential. Each subject was assigned a number, and all their questionnaires were numerically coded with no identifying information appearing on the answer sheets. Consent forms were stored separately from answer sheets.

Subjects were also provided with phone numbers to reach the investigator and faculty advisor should they have questions, wish to discuss the study, or desire a copy of results. The investigator was available throughout the meeting where data was collected if needed by the subjects.

Institution and Organization Permission

Approval to conduct research was requested from The Triplet Connection, and was granted based upon receipt and review of a written description of the study. Permission to conduct the study was also granted by the Human Subject's Committee of the College of Health Sciences at Old Dominion University.

CHAPTER 4

Analysis of the Data

Description of the Sample

Results of the study are presented in this chapter, beginning with a description of the sociodemographic characteristics of the sample, data analysis results, and the specific research questions. Data were collected at the Triplet Connection's annual family conference held in Chicago, Illinois, on July 18-20, 1997. One hundred ninety families of triplets were in attendance. All were given research packets upon registration and requested to return the completed packet by the end of the conference. Ninety-two completed packets were returned (48%). Responses from the questionnaires were analyzed using the SPSSX statistical package.

Sociodemographic Information

The study sample consisted of 92 mothers of triplets whose sociodemographic characteristics are summarized in Table 1. All of the women were married. Ninety-eight percent of the women (n=90) were Caucasian, with the remaining 2% Asian. The mean age of the sample was 36.4 years old, with a range of 26 to 50 years. Household income ranged from under \$20,000 annually to over \$100,000, with 56% (n=52) earning greater than \$70,000 annually. Triplets ranged in age from 8 months to 12 years of age, with a mean age of 4.3 years.

Table 1

Respondent Characteristics (N=92)

Characteristics	n	Total %	Cum %
Marital status			
Married	92	100.0	100.0
Race			
Caucasian	90	97.8	97.8
Asian	2	2.2	100.0
Religious preference			
Catholic	38	41.3	41.3
Jewish	5	5.4	46.7
Protestant	33	35.9	82.6
Other	9	9.8	92.4
None	7	7.6	100.0
Household income			
0 - 19,999	1	1.1	1.1
20,000 - 49,000	19	20.7	21.8
50,000 - 69,000	20	21.7	43.5
70,000 - 99,000	35	38.0	81.5
100,000 plus	17	18.5	100.0
Education completed			
Twelfth grade	7	7.6	7.6
1st yr. college	6	6.5	14.1
2nd yr. college	9	9.8	23.9
3rd yr. college	3	3.3	27.2
4th yr. college	33	35.9	63.1
5th yr. college	7	7.6	70.7

Table 1 continues

Table 1: cont

Characteristics	n	Total %	Cum %
Education completed			
6th yr. college	14	15.2	85.9
7th yr. college	3	3.3	89.2
8th yr. college	8	8.7	97.9
Employed outside the home			
Full time	17	18.5	18.5
Part time	38	41.3	59.8
Not at all	37	40.2	100.0
Has other children			
Yes	29	31.5	31.5
No	63	68.5	100.0
Conception method			
Fertility medications	39	42.4	42.4
Technology assisted	4	4.3	46.7
Both	36	39.1	85.8
Neither (Spontaneous)	12	13.0	98.8
Type of delivery			
Vaginal	3	3.3	3.3
C-section	86	94.5	97.8
Both	2	2.2	100.0
Urgency of delivery			
Spontaneous	25	27.8	27.8
Emergency	37	41.1	68.9
Scheduled	28	31.1	100.0

Table 1 continues

Table 1: cont

Characteristics	n	Total %	Cum %
Health of the mother			
Never ill	9	9.8	9.8
Rarely ill	77	83.7	93.5
Often ill	6	6.5	100.0
Medication taken for			
Depression	4	4.3	4.3
Anxiety	3	3.3	7.6
Household help			
Yes	45	49.0	49.0
No	47	51.0	100.0
Family members with multiple births			
Yes	43	46.7	46.7
No	49	53.3	100.0

Sixty-nine percent of the women (n=63) had no children other than their triplets. Gestational ages of the triplets at birth ranged from 26.5 weeks to 38 weeks with a mean age of 33 weeks. Less than 20% of the mothers (n=16) took their infants home with them at time of their discharge following delivery.

Coping Processes

Coping processes used by the mothers of triplets were measured using the Ways of Coping Questionnaire (WOC) (Folkman & Lazarus, 1986). A summary of the means, standard deviations, ranges, and reliability coefficients is provided in

Table 2. Relative coping scores were calculated to allow for a comparison of the percentage of time each process was utilized in relation to total coping.

Each subject was asked to briefly describe a stressful incident which had occurred in the prior week and was specifically related to having triplets. From these descriptions, four common categories of responses emerged.

Conference-related stress was described by 26.1% of the mothers (n=24). Recent illnesses of their children were described as being stressful by 9.8% (n=9) of the mothers. Twenty-seven or 29.3% of the mothers described an incident involving the behavior of their triplets as being a recent stressful event. Eleven percent of the mothers (n=10) described having too much to do as being most stressful to them. An additional 7.6% of the mothers (n=7) described other events or incidents not related to any of the previous categories. The remaining 14.1% of the mothers (n=13) did not write a description of a specific event.

Based on these descriptions, mothers were instructed to answer all other questions with the statement that best described how they coped with the stressful event. Scores were then calculated for both the total score and subscale scores, and converted to relative values. According to Folkman and Lazarus (1988), relative scores described "the proportion of effort represented by each type of coping" (p. 15).

Planful problem-solving, a problem-focused effort which is deliberately aimed at changing both the situation and solving the problem in an analytic manner, was reportedly used most frequently, 18% of the time. Positive reappraisal, a positive attempt to create meaning through a focus on the opportunity for personal

growth, was reportedly used 15% of the time. Self-controlling coping, which describes an individual's efforts to regulate their own feelings and actions, was used 14% of the time. Seeking social support, in which an effort is made to seek information, tangible and emotional

Table 2

Sample Means and Variance Indicators for WOC Scales and Subscales (N=92)

Variable	Mean	SD	Range	Reliability Coefficient
^a Coping processes				
Total coping (RTCOPE)	1.00	.00	1.0 - 1.0	.90
Confrontive Coping (RCOPE 1SC)	.11	.04	.00 - .20	.52
Distancing (RCOPE 2SC)	.11	.05	.00 - .27	.66
Self-controlling (RCOPE 3SC)	.14	.04	.02 - .39	.54
Seeking social support (RCOPE 4SC)	.12	.05	.00 - .26	.76
Accepting responsibility (RCOPE 5SC)	.11	.06	.00 - .35	.45
Escape-avoidance (RCOPE 6SC)	.08	.04	.00 - .20	.70
Planful problem-solving (RCOPE 7SC)	.18	.05	.04 - .33	.71
Positive reappraisal (RCOPE 8SC)	.15	.05	.00 - .28	.82

Note: All reliability coefficients are standardized item alphas ^an = relative values

support, was used 12% of the time. Confrontive coping, an aggressive and often hostile approach to changing the situation was used 11% of the time. Distancing, in which a cognitive effort is made to both detach oneself and minimize the risk of a situation, was used 11% of the time. Accepting responsibility, an approach in which one acknowledges one's own role in a situation as well as attempting to 'fix it', was also used 11% of the time. The remaining 8% of the time involved the use of escape-avoidance coping, in which wishful thinking and attempts to avoid the problem were made.

Perceived Availability of Social Support

The availability of social support as perceived by the 92 mothers in the sample was measured using the MOS Social Support Survey (Sherbourne & Stewart, 1991). Means, standard deviations, ranges, and reliability coefficients for the total score (MOS TS) and the subscales which include tangible support (MOS 1SC), affectionate support (MOS 2SC), positive social interaction (MOS 3SC), and emotional or informational support (MOS 4SC) are summarized in Table 3.

Respondents were asked to write in the number of close friends and close relatives with whom they felt at ease and able to talk. Sixty-nine percent of the sample reported 4 or fewer close friends ($n=76$). Seventy-eight percent of the sample reported 4 or fewer close relatives ($n=72$).

Current Stress Level

Current level of stress experienced by the 92 mothers of triplets in the sample was measured by the DSP (Derogatis, 1980). Sample means, standard deviations, ranges and reliability coefficients for the total scores, subscale scores and domain

Table 3

Sample Means and Variance Indicators for MOS Scales and Subscales (N=92)

Variable	Mean	SD	Range	Reliability Coefficient
Social support				
Total support (MOS TS)	53.39	16.76	9.0 - 76.0	.97
Tangible support (MOS 1SC)	10.02	4.20	1.0 - 16.0	.90
Affectionate support (MOS 2SC)	9.66	2.96	2.0 - 12.0	.92
Positive social interaction (MOS 3SC)	11.29	3.90	0.0 - 16.0	.93
Emotional or informational support (MOS 4SC)	22.43	7.78	3.0 - 32.0	.95

Note: All reliability coefficients are standardized item alphas

scores are summarized in Table 4. Subjects were asked to respond to a series of statements which were based on how each respondent felt about herself. These were then scored by the examiner according to instructions provided by Derogatis.

Additionally, an analog scale was included as the last question in which the subjects were asked to mark the point along a continuum which described the amount of stress they were experiencing in their lives. The mean was 5.8 with a standard deviation of 2.03. Actual range was .6 to 10 with a possible range of 0-10. These levels were collapsed to "none to minimal" stress which was described by 34% of the sample (n=31) and "moderate to extreme stress" described by 66% of the sample (n=61).

Level of Depression

The level of depression experienced by the 92 mothers of triplets who comprised the sample was measured by the Zung Self-rating Scale (Zung, 1965). The mean Zung Total score for the sample was 36.70 with a standard deviation of 7.20 and range of 21.0 to 56.0. The reliability coefficient or standardized item alpha for the scale was .81.

The total score (ZungTS) was then converted to the Zung Index Score (ZUNGIND). The mean Zung Index Score was 45.87 with a standard deviation of 8.99 and a range of 26.25 to 70.0. These scores were collapsed into three groups which described severity of depression according to "within normal limits," "minimal to mild," and "moderate to severe." Seventy-one percent of the mothers (n=65) completing the study scored within the normal range. Twenty-one percent of the sample (n=19) were within the minimal to mild range. Eight, or 8.0% of the sample was within the "moderate to severe" range.

Question One

Question one addressed the coping mechanisms used by mothers of triplets as measured by the Ways of Coping Checklist (Folkman & Lazarus, 1986). As described above, scoring was converted to relative scores from raw scores in order to compare relative frequencies of each type of coping reportedly used and these are summarized in Table 2. Mean scores are equivalent to percentages of time in which each coping process was utilized.

All forms of coping were utilized by the sample when coping with a recent stressful event and included confrontive coping, distancing, self-controlling,

Table 4
Sample Means and Variance Indicators for DSP Scales, Subscales, and Domains (N=92)

Variable	Mean	SD	Range	Reliability Coefficient
Current stress level				
Total stress (TSS)	126.44	28.38	44.0 - 183.0	.90
Time pressure (TPS)	16.53	3.79	5.0 - 24.0	.41
Driven behavior (DBS)	10.71	3.88	3.0 - 19.0	.36
Attitude posture (ATP)	12.59	2.78	7.0 - 20.0	-.04
Relaxation potential (RPS)	13.63	4.07	4.0 - 24.0	.40
Role definition (RDS)	10.35	3.64	0.0 - 19.0	.40
Vocational satisfaction (VSS)	11.74	5.56	0.0 - 24.0	.73
Domestic satisfaction (DSS)	8.95	4.38	0.0 - 21.0	.70
Health posture (HPS)	9.30	4.19	0.0 - 19.0	.46
Hostility (HOS)	10.71	4.40	0.0 - 24.0	.63
Depression (DEP)	8.34	4.13	0.0 - 19.0	.69
Anxiety (ANX)	13.60	5.25	0.0 - 26.0	.76
Personality mediators domain (PMD)	63.80	11.50	35.0 - 87.0	.67
Environmental stress domain (ENV)	29.99	10.60	4.0 - 57.0	.76
Emotional response domain (EMO)	32.61	11.11	4.0 - 61.0	.83
Subjective stress score (DSP78)	5.84	2.02	.60 - 10.0	N/A

Note: All reliability coefficients are standardized item alphas

seeking social support, accepting responsibility, escape-avoidance, planful problem-solving, and positive reappraisal. This is consistent with the findings of Folkman and Lazarus (1984).

Question Two

Question two addressed whether significant differences existed in the relative amounts of coping processes used by mothers of triplets who had other children prior to having triplets, when compared to those mothers who had triplets as their first children.

Independent t-tests were performed to determine whether significant differences existed between the means of the groups. Levene's Test for Equality of Variances showed homogeneity between the groups, and t-values for equal variances were reported. No significant differences between the mean scores on any of the subscales were found as summarized in Table 5. Independent t-tests were also performed to determine whether any statistically significant differences existed between the mean scores of the two groups on the DSP, MOS, and Zung scales.

Equality of variances between the groups was determined by Levene's Test for Equality of Variances, and was seen in all the scales with the exception of the vocational satisfaction and environmental stressors domain subscales, and the total stress scores. The value of t for unequal variances was reported.

Results of independent t-tests of group means on the DSP are summarized in Table 6. Relaxation potential was the only DSP subscale in which a significant statistical difference ($p=.01$) was found.

Table 5

Means, SDs, and t-test Results for Coping Process Scores for Mothers Without and with Other Children Prior to Triplets (N=92)

Variable	df	No children prior to triplets (N=66)		Other children prior to triplets (N=26)		t	p
		mean	SD	mean	SD		
Confrontive coping (RCOPE1SC)	90	.11	.04	.10	.04	.88	.38
Distancing (RCOPE2SC)	90	.11	.05	.10	.05	.59	.56
Self-controlling (RCOPE3SC)	90	.14	.03	.14	.06	.16	.88
Seeking social support (RCOPE4SC)	90	.12	.05	.13	.05	-.34	.74
Accepting responsibility (RCOPE5SC)	90	.11	.05	.11	.07	.17	.86
Escape-avoidance (RCOPE6SC)	90	.08	.04	.08	.05	.31	.75
Planful problem-solving (RCOPE7SC)	90	.18	.05	.19	.05	-.56	.58
Positive reappraisal (RCOPE8SC)	90	.15	.05	.16	.06	-.87	.38

Note. Two-tailed p values

Table 6
Means, SDs, and t-test Results for Stress Scores for Mothers Without and with Other Children Prior to Triplets (N=92)

Variable	df	No children prior to triplets (N=66)		Other children prior to triplets (N=26)		t	p
		mean	SD	mean	SD		
* Total stress score (TSS)	34.95	127.39	25.03	124.00	35.99	.44	.66
Subjective stress score (DSP78)	90	5.99	2.94	5.45	1.96	1.16	.25
Time pressure (TPS)	90	16.70	3.31	16.12	4.84	.66	.51
Driven behavior (DBS)	90	10.59	3.83	11.00	4.07	-.45	.65
Attitude posture (ATP)	90	12.36	2.96	13.15	2.20	-1.23	.22
Relaxation potential (RPS)	90	14.30	3.86	11.92	4.19	2.60	.01**
Role definition (RDS)	90	10.74	3.53	9.35	3.78	1.67	.10
* Vocational satisfaction (VSS)	36.90	12.08	5.07	10.88	6.68	.82	.42
Domestic satisfaction (DSS)	90	9.03	4.13	8.73	5.04	.29	.79
Health posture (HPS)	90	9.12	3.98	9.77	4.75	-.67	.51
Hostility (HOS)	90	10.39	4.25	11.50	4.74	-1.09	.28
Depression (DEP)	90	8.45	3.65	8.04	5.21	.43	.67
Anxiety (ANX)	90	13.62	5.04	13.54	5.84	.07	.95
Personality mediators domain (PMD)	90	64.70	10.24	61.54	14.20	1.19	.24
Emotional response domain (EMO)	90	43.57	20.39	33.08	13.19	-.23	.82
* Environmental stress domain (ENV)	35.77	30.23	9.51	29.38	13.16	.30	.77

Note. Two-tailed p values * n = unequal variances * p ≤ .05 ** p ≤ .01

Table 7

Means, SDs, and t-test Results for MOS Scales and Subscales for Mothers Without and with Other Children

Prior to Triplets (N=92)

Variable	df	No children prior to triplets (N=66)		Other children prior to triplets (N=26)		t	p
		mean	SD	mean	SD		
Total support (MOS TS)	90	53.29	16.64	53.66	17.40	-.10	.92
Tangible support (MOS 1SC)	90	9.95	4.26	10.18	4.15	-.23	.82
Affectionate support (MOS 2SC)	90	9.76	2.97	9.40	2.98	.52	.60
Positive social interaction (MOS 3SC)	90	11.23	3.98	11.46	3.73	-.26	.80
Emotional and informational support (MOS 4SC)	90	22.35	7.58	22.62	8.43	-.153	.88

Note. Two-tailed p values

No statistically significant differences were seen in the MOS scores. Variances between the groups were equal based on Levene's Test for Equality of Variances. The results of the t-tests are summarized in Table 7.

No statistically significant differences were seen between the groups' mean scores on the Zung Self-rating Depression Scale with $t(90) = .55$, $p = .59$.

The sample was also divided into two groups according to those who had children other than their triplets and those who had only triplets. Independent t-tests of the two groups and Levene's Test for Equality of Variances were performed. Levene's test indicated that the variances were equal between the groups for all subscales except for time pressure and attitude posture on the DSP. Relaxation potential mean scores were different at a statistically significant level ($p < .05$) while all other means on all scales and subscales for all variables are summarized in Tables 8 and 9.

Question Three

Question three addressed whether there were significant differences in coping processes used by mothers of triplets based on sociodemographic factors such as age of mother, educational level, and household income level as determined by the sociodemographic questionnaire. One-way analyses of variance (ANOVAS) were calculated and statistically significant results ($p < .05$) are summarized in Table 10.

When collapsed into three groups, education had no effect on coping scores with the exception of the Escape-avoidance subscale in which there was a statistically significant difference $F(89)=6.09$, $p < .01$. Only seven of the subjects

had "high school only" education compared with 51 who had college education and 32 with additional graduate level education, providing three distinct groups. No significant differences in coping process scores were found when age or household income were tested using ANOVAs.

Question Four

Question four addressed the availability of social support perceived by mothers of triplets. Mothers of triplets perceived receiving all four types of social support including tangible, affectionate, positive social interaction, and emotional and informational support as summarized in Table 3.

Question Five

Question five addresses the stress levels currently reported by mothers of triplets as measured using the Derogatis Stress Profile (DSP). In addition to the total stress scores, each subscale mean and domain mean is reported in Table 4. The stress scores addressed by the subscales include time pressure, driven behavior, attitude posture, relaxation potential, role definition, vocational satisfaction, domestic satisfaction, health posture, hostility, depression, and anxiety. The domain scores address the personality mediators domain, the emotional response domain, and the environmental stress scores.

Reliability coefficients in this study on all subscales were low in comparison with the literature (Derogatis, 1980). Scores were recoded according to instructions. However, total stress score and domain scores had acceptable reliability coefficients. Low reliability coefficients (less than .75) were attributed to the small sample size.

Table 8
Means, SDs, and t-test Results for Stress Scores for Mothers Without and with Other Children

Variable	df	No children (N=63)		Other children (N=29)		t	p
		mean	SD	mean	SD		
* Time pressure (TPS)	39.53	16.49	3.21	16.62	4.89	-.13	.90
Driven behavior (DBS)	90	10.60	3.83	10.93	4.04	-.37	.71
* Attitude posture (ATP)	73.56	12.40	3.01	13.00	2.17	-1.09	.28
Relaxation potential (RPS)	90	14.27	3.93	12.24	4.10	2.27	.03*
Role definition (RDS)	90	10.68	3.54	9.625	3.82	1.30	.20
Vocational satisfaction (VSS)	90	12.14	5.17	10.86	6.32	1.03	.31
Domestic satisfaction (DSS)	90	9.21	4.11	8.38	4.95	.84	.40
Health posture (HPS)	90	9.03	3.96	9.90	4.67	-.92	.36
Hostility (HOS)	90	10.37	4.35	11.45	4.49	-1.10	.28
Anxiety (ANX)	90	13.52	5.10	13.76	5.04	-.20	.84
Depression (DEP)	90	8.41	3.72	8.17	4.96	.26	.80
Personality mediators domain (PMD)	90	64.44	10.38	62.41	13.74	.79	.43
Environmental stressors domain (ENV)	90	30.38	9.60	29.14	12.63	.52	.60
Emotional response domain (EMO)	90	32.30	10.47	33.38	12.55	-.43	.67
Total stress (TSS)	90	127.13	25.59	124.93	34.13	.34	.73

Note: Two-tailed p values

* η^2 = unequal variances

* $p \leq .05$ ** $p \leq .01$

Table 9
Means, SDs, and t-test Results for Coping, Support and Depression Scores for Mothers Without and with Other Children

Variable	df	o children (N=63)		Other children (N=29)		t	p
		mean	SD	mean	SD		
<u>WOC</u>							
Confrontive coping (RCOPE 1SC)	90	.11	.04	.10	.04	.78	.44
Distancing (RCOPE 2SC)	90	.11	.04	.10	.06	.09	.93
Self-controlling (RCOPE 3SC)	90	.14	.03	.14	.06	.41	.68
Seeking social support (RCOPE 4SC)	90	.12	.05	.13	.05	-.14	.82
Accepting responsibility (RCOPE 5SC)	90	.11	.06	.11	.07	.42	.67
Escape-avoidance (RCOPE 6SC)	90	.08	.04	.07	.05	1.09	.28
Planful problem-solving (RCOPE 7SC)	90	.18	.05	.19	.05	-.92	.36
Positive reappraisal (RCOPE 8SC)	90	.14	.05	.16	.06	-1.29	.20
<u>MOS</u>							
Tangible support (MOS 1SC)	90	9.92	4.35	10.23	3.94	-.33	.75
Affectionate support (MOS 2SC)	90	9.68	3.01	9.60	2.90	.13	.90
Positive social interaction (MOS 3SC)	90	11.16	4.06	11.58	3.57	-.48	.63
Emotional-informational support (MOS 4SC)	90	22.10	7.67	23.14	8.12	-.60	.55
Total support (MOS TS)	90	52.86	16.91	54.56	16.66	-.45	.65
<u>Zung</u>							
Zung total	90	36.98	7.40	36.07	6.81	.56	.57

Note. Two-tailed p values

Table 10
Statistically Significant ANOVA Results by Education Level Grouping of Mothers of Triplets

Variable	df	High School only (N=7)		college (4 years) (N=51)		college (>4 yrs) (N=32)		F	p
		mean	SD	mean	SD	mean	SD		
Vocational satisfaction (VSS)	89	13.43	5.44	12.69	5.66	9.75	4.99	3.28	.04 *
Environmental stressors domain (ENV)	89	33.57	7.72	31.65	10.40	25.84	10.46	3.68	.03*
Escape-avoidance coping (RCOPE 6SC)	89	.11	.02	.09	.04	.06	.04	6.09	.00**

Note. Two-tailed p values ^aη = unequal variances * p ≤ .05 ** p ≤ .01

Question Six

Question six addressed whether a statistically significant relationship existed between the current stress levels (as measured by the DSP) and the coping processes used by mothers of triplets (as measured by the WOC using relative scores). Table 11 summarizes Pearson's Correlation Coefficients for stress levels and coping processes.

As noted in Table 13, many weak but statistically significant correlations exist between the scales. Escape-avoidance correlates with the DSP scores on five subscales, all domains and both total stress and subjective stress. There are 17 inverse correlations that exist between stress levels, planful problem-solving, and positive reappraisal.

Statistically significant relationships existed between the relative coping subscales confrontive coping, distancing, escape-avoidance, planful problem-solving, positive reappraisal and current total stress score (TSS). Statistically significant relationships also existed between the relative coping subscale scores on escape-avoidance, planful problem-solving, positive reappraisal and the subjective stress scores reported by the subjects (Table 11).

Subjective stress scores (DSP78) were collapsed into two groups consisting of "none to minimal stress" (n=31) and "moderate to extreme stress" (n=61). Independent t-tests were performed to determine whether there were statistically significant differences between the mean scores of the groups on all instruments.

Results of the independent t-tests on the DSP scores are summarized in Table 12. With the exception of time pressure and health posture, statistically

significant results were found on all subscales, domains, and the total stress score.

Results of the Independent t-tests done using the two groups divided according to stress level on the mean scores of the WOC are summarized in Table 13. Escape-avoidance and positive reappraisal were the only subscales with statistically significant ($p=.01$) differences between the groups. A statistically significant difference ($p<.01$) was also found between the groups' mean Zung scores ($t(90)=-3.57$).

Question Seven

Question seven addresses whether a statistically significant relationship exists between the coping processes used by the mothers of triplets and the social support they perceive. Table 14 summarizes the Pearson's Correlation Coefficients for coping processes and perceived availability of social support. Both accepting responsibility and escape- avoidance coping demonstrate a statistically significant though weak, inverse correlation with all types of support including total support. All types of support except tangible support are correlated with seeking social support as a coping process.

Question Eight

Question eight addressed whether a statistically significant relationship exists between current stress level (DSP) and availability of social support perceived by mothers of triplets (MOS). Correlation coefficients using Pearson's r were calculated between total scores as well as subscales on the instruments and are reported in Table 15.

Table 11
Pearson's Correlation Coefficients for Stress and Coping

	Ways of Coping								
	RCOPE 1SC	RCOPE 2SC	RCOPE 3SC	RCOPE 4SC	RCOPE 5SC	RCOPE 6SC	RCOPE 7SC	RCOPE 8SC	RTCOPE
<u>DSP</u> Time Pressure Score (TPS)	.15	-.04	-.02	-.05	-.02	.09	.06	-.12	-.04
Driven Behavior Score (DBS)	.20	-.21*	.02	.08	.14	.15	-.28**	-.04	-.14
Attitude Posture Score (ATP)	.08	-.24*	.01	.16	.11	.24*	-.19	-.14	.14
Relaxation Potential Score (RPS)	.13	-.10	.10	-.21	.21*	.01	-.02	-.10	-.18
Role Definition Score (RDS)	.09	-.05	.14	.02	.05	.19	-.11	-.26	-.14
Vocational Satisfaction (VSS)	.18	-.14	.06	-.06	.17	.35**	-.15	-.33**	-.07
Domestic Environment Stressors (DSS)	.14	-.04	.14	-.06	.23*	.36**	-.23*	-.43**	-.15
Health Posture Score (HPS)	.04	.13	-.11	-.16	.17	.14	-.05	-.15	-.01
Hostility Score (HOS)	.29**	-.25*	-.25**	.02	.34**	.14	-.23*	-.06	.06
Anxiety (ANX)	.13	-.26**	.03	.06	.32**	.28**	-.28**	-.24*	-.06
Depression Score (DEP)	.21*	-.17	-.05	-.06	.38**	.29**	-.20*	-.36**	-.17
Personality Mediators Domain (PMD)	.21*	-.19	.08	-.02	.16	.20*	-.16	-.21*	-.13
Environmental Stress Domain (ENV)	.17	-.04	.05	-.12	.25*	.39**	-.19	-.41**	-.10
Emotional Response Domain (EMO)	.25*	-.29**	-.11	.01	.42**	.29**	-.30**	-.27**	-.07
Total Stress Score (TSS)	.24*	-.21*	.01	-.05	.32	.34**	-.25*	-.34**	-.12
Subjective Stress Score (DSP)	.16	-.11	.00	.06	.17	.30**	-.25*	-.27**	.01

* p ≤ .05

** p ≤ .01

Key for Table 11 appears on page 90

Key for Table 11

RCOPE 1SC	Confrontive Coping
RCOPE 2SC	Distancing
RCOPE 3SC	Self-Controlling
RCOPE 4SC	Seeking Social Support
RCOPE 5SC	Accepting Responsibility
RCOPE 6SC	Escape-Avoidance
RCOPE 7SC	Planful Problem-solving
RCOPE 8SC	Positive Reappraisal

Table 12

Means, SDs, and t-test Results for Stress Scores According to Subjective Stress Level

Variable	df	None to minimal stress (N=31)		Moderate to extreme stress (N=61)		t	p
		mean	SD	mean	SD		
Time pressure (TPS)	90	16.00	4.03	16.80	3.66	-.96	.34
Driven behavior (DBS)	90	9.23	3.33	11.46	3.94	-2.70	.01**
Attitude posture (ATP)	90	11.48	2.52	13.15	2.76	-2.82	.01**
Relaxation potential (RPS)	90	11.87	3.34	14.52	4.13	-3.09	.00**
Role definition (RDS)	90	9.19	2.90	10.93	3.86	-2.21	.03*
Vocational satisfaction (VSS)	90	9.45	5.16	12.90	5.43	-2.93	.00**
Domestic satisfaction (DSS)	90	7.06	3.62	9.90	4.45	-3.07	.00**
Health posture (HPS)	90	8.48	4.26	9.72	4.12	-1.34	.18
Hostility (HOS)	90	9.16	3.74	11.49	4.52	-2.47	.02*
Anxiety (ANX)	90	10.29	4.50	15.28	4.80	-4.81	.00**
Depression (DEP)	90	6.19	3.61	9.43	3.96	-3.81	.00**
Personality mediators (PMD)	90	57.77	9.61	66.87	11.24	-3.85	.00**
Environmental stress domain (ENV)	90	25.00	10.22	32.52	9.93	-3.40	.00**
Emotional response domain (EMO)	90	25.65	10.08	36.20	9.91	-4.80	.00**
Total stress (TSS)	90	108.42	26.23	135.59	25.00	-4.85	.00**

Note. Two-tailed p values

* $p \leq .05$

** $p \leq .01$

Table 13

Means, SDs, and t-test Results for Coping Scales and Subscales Scores According to Subjective Stress Level

		None to minimal stress (N=31)		Moderate to extreme stress (N=61)			
Variable	df	mean	SD	mean	SD	t	p
<u>WOC</u>							
^a Confrontive coping (RCOPE 1SC)	48.07	.10	.05	.11	.04	-1.40	.17
Distancing (RCOPE 2SC)	90	.12	.05	.11	.05	1.31	.20
Self-controlling (RCOPE 3SC)	90	.14	.04	.14	.05	.28	.78
Seeking social support (RCOPE 4SC)	90	.12	.05	.13	.05	-1.07	.29
Accepting responsibility (RCOPE 5SC)	90	.10	.06	.12	.06	-1.19	.24
Escape-avoidance (RCOPE 6SC)	90	.06	.04	.09	.04	-3.08	.00**
Planful problem-solving (RCOPE 7SC)	90	.20	.05	.18	.05	1.92	.06
Positive reappraisal (RCOPE 8SC)	90	.17	.05	.14	.05	2.66	.01**
<u>MOS</u>							
Tangible support (MOS 1SC)	90	11.45	3.43	9.29	4.39	2.39	.02*
Affectionate support (MOS 2SC)	90	9.90	2.47	9.53	3.19	.57	.57
Positive social interaction (MOS 3SC)	90	12.84	3.13	10.51	4.03	2.81	.01**
Emotional-informational support (MOS 4SC)	90	24.90	6.41	21.17	8.16	2.22	.03*
Total support (MOS TS)	90	59.10	13.69	50.49	17.52	2.39	.02*
<u>Zung</u>							
Zung total	90	33.16	6.56	38.49	6.88	-3.57	.00**

Note. Two-tailed p values ^an = unequal variances * p ≤ .05 ** p ≤ .01

Table 14
Pearson's Correlation Coefficients for Coping and Social Support

	<u>Ways of Coping</u>								
	RCOPE 1SC	RCOPE 2SC	RCOPE 3SC	RCOPE 4SC	RCOPE 5SC	RCOPE 6SC	RCOPE 7SC	RCOPE 8SC	RTCOP E
<u>MOS</u>									
Tangible (MOS 1SC)	-.05	.12	.00	.11	-.25*	-.27**	.17	.15	-.05
Affectionate (MOS 2SC)	.14	.01	-.25*	.32**	-.30**	-.26**	.20	.13	.14
Positive Social Interaction (MOS 3SC)	.11	.02	-.16	.23*	-.20*	-.24*	.13	.10	.04
Emotional-Information (MOS 4SC)	-.03	-.03	-.19	.40**	-.27**	-.33**	.21	.17	.09
Total (MOS TS)	-.03	-.24	-.17	.32**	-.29**	-.32**	.20*	.17	.06

* $p \leq .05$ ** $p \leq .01$

Key

RCOPE 1SC	Confrontive
RCOPE 2SC	Distancing
RCOPE 3SC	Self-Controlling
RCOPE 4SC	Seeking Social Support
RCOPE 5SC	Accepting Responsibility
RCOPE 6SC	Escape-Avoidance
RCOPE 7SC	Planful Problem-solving
RCOPE 8SC	Positive Reappraisal
RTCOP E	Total

Domestic satisfaction subscale scores demonstrated a moderately strong inverse correlation ($p < .01$) with all social support subscales including total support. Although somewhat weaker, the environmental stressors domain, emotional response domain, and total stress scores were inversely correlated with all social support scales.

Question Nine

Question nine addressed whether the level of depression among mothers of triplets is significantly related to their levels of stress. Level of depression was measured by the Zung Self-rating Scale and stress was measured by the DSP. All subscales on the DSP are correlated at a significant level with the Total Zung Score. Time pressure and attitude posture scores are significant at the $p \leq .05$ level while all other subscales and domains are significant at the $p \leq .01$ level. Strong correlations are noted between depression level and all domain scores as well as the total score.

Question Ten

Question ten addressed whether a statistically significant relationship existed between the level of depression reported by mothers of triplets (ZUNG), and the coping processes (WOC) that they used. Statistical significance at the $p < .05$ level is found between level of depression and accepting responsibility, planful problem-solving and total coping. Statistical significance is found at the $p \leq .01$ level between level of depression and escape-avoidance and positive reappraisal.

Table 15
Pearson's Correlation Coefficients for Stress and Social Support

	<u>MOS</u>				
	MOS 1SC	MOS 2SC	MOS 3SC	MOS 4SC	MOS T
<u>DSP</u>					
Time Pressure (TPS)	-.08	-.22*	-.22*	-.20*	-.20*
Driven Behavior (DBS)	-.02	.01	-.16	-.09	-.05
Attitude Posture (ATP)	-.12	.04	-.05	-.06	-.06
Relaxation Potential (RPS)	.08	-.07	-.12	-.21*	-.12
Role Definition (RDS)	-.11	-.15	-.28**	-.27**	-.25
Vocational Satisfaction (VSS)	-.17	-.23*	-.25*	-.27**	-.27**
Domestic Satisfaction (DSS)	-.41**	-.53**	-.59**	-.54**	-.59**
Health Posture (HPS)	-.16	-.15	-.24*	-.18**	-.21*
Hostility (HOS)	-.17	-.22*	-.25*	-.22*	-.24*
Anxiety (ANX)	-.15	-.17	-.31**	-.21*	-.24*
Depression (DEP)	-.28**	-.24	-.37**	-.34**	-.36**
Personality Mediators Domain (PMD)	-.07	-.13	-.22*	-.27**	-.22*
Environmental Mediators Domain (ENV)	-.32**	-.40**	-.47**	-.44**	-.47**
Emotional Response Domain (EMO)	-.24*	-.26*	-.38**	-.31**	-.34**
Total Stress (TSS)	-.24*	-.31*	-.42**	-.40**	-.40**
Subjective Stress (DSP 78)	-.19	-.09	-.31**	-.25*	-.25*

* $p \leq .05$ ** $p \leq .01$

Key for Table 15 appears on page 96

Key for Table 15

MOS 1SC	Tangible
MOS 2SC	Affectionate
MOS 3SC	Positive Social Interaction
MOS 4SC	Emotional/Informational
MOS T	Total

Question Eleven

Question eleven addressed whether a statistically significant relationship exists between the reported level of depression (ZUNG), and the perceived availability of social support as reported by mothers of triplets (MOS). A significant inverse relationship exists between the level of depression as measured by the Index score on the Zung Self-rating scale for depression and the perceived availability of social support as measured by the Medical Outcomes Study Social Support Instrument (MOS) on all subscales. Tangible support was statistically significant at the $p \leq .05$ level while all other sub-scales were significant at the $p \leq .01$ level.

Question Twelve

Question twelve addresses whether there is a difference in coping processes, current stress levels, perceived availability of social support and levels of depression between mothers of triplets who work outside of the home and those mothers who do not according to their DSP, MOS, Zung, and WOC mean scores. Independent t-tests and Levene's Test for Equality of Variances were performed on both groups mean scores on all scales and subscales.

Variances between groups were equal for all scales and subscales. Results are

summarized in Table 16 and remaining variables appear on Table 17. Statistically significant ($p < .05$) results were found between group means on the relaxation potential, and vocational satisfaction sub-scales of the DSP.

Escape-avoidance coping was the only coping subscale with a statistically significant ($p = .01$) difference between the means. Mean scores also differed between the groups on the Zung Self-rating scale indicating a difference in the depression level between the two groups.

Question Thirteen

Question thirteen addresses whether there is a difference in coping processes, current stress levels, perceived availability of social support, and levels of depression between mothers whose triplets were conceived without assistance (spontaneously) and those who triplets were conceived using assisted reproductive technology based on their DSP, MOS, Zung, and WOC mean scores. Independent t-tests and Levene's Tests were performed and the Vocational Satisfaction was the only scale in which the variances were unequal. As shown in Table 18, no statistically significant differences were found between the groups' mean scores.

Question Fourteen

Question fourteen addresses whether a relationship exists between any of the sociodemographic variables which describe the sample of 92 triplet mothers. A correlation matrix (Table 19) summarizes the Spearman Correlation Coefficients of the independent variables of household income, education, mother's age, health, other children, birth order of the triplets, type of delivery, method of

Table 16

Means, SDs, and t-test Results for Coping, Depression and Social Support Scores with Employed and Not-Employed Mothers

Variable	df	Not employed outside home (N=37)		Employed outside home (N=55)		t	p
		mean	SD	mean	SD		
Time pressure (TPS)	90	16.62	3.77	16.47	3.83	.18	.84
Driven behavior (DBS)	90	11.30	3.24	10.31	3.89	1.20	.23
Attitude posture (ATP)	90	12.57	2.57	12.60	2.94	-.05	.96
Relaxation potential (RPS)	90	14.81	4.35	12.24	3.71	2.34	.02*
Vocational satisfaction (VSS)	90	13.11	5.42	10.82	5.46	1.97	.05*
Domestic satisfaction (DSS)	90	9.46	4.40	8.60	4.37	.92	.36
Health posture (HPS)	90	9.41	4.29	9.24	4.17	.19	.85
Hostility (HOS)	90	11.08	4.90	10.45	4.05	.67	.51
Anxiety (ANX)	90	14.65	5.74	12.89	4.81	1.59	.12
Depression (DEP)	90	9.02	3.94	7.87	4.22	1.32	.19
Personality mediators domain (PMD)	90	65.24	11.70	62.84	11.37	.98	.33
Environmental stressors domain (ENV)	90	31.97	10.62	28.65	10.47	1.48	.14
Emotional response domain (EMO)	90	34.76	11.93	31.22	10.40	1.51	.14
Total Stress (TSS)	90	131.97	28.55	122.71	27.91	1.55	.13

Note. Two-tailed p values * $p \leq .05$ ** $p \leq .01$

Table 17

Means, SDs, and t-test Results for Coping, Depression and Social Support Scores with Employed and Not-Employed Mothers

Variable	df	Not employed outside home (N=37)		Employed outside home (N=55)		t	p
		mean	SD	mean	SD		
<u>Coping Processes</u>							
Confrontive coping (RCOPE 1SC)	90	.11	.04	.10	.04	.70	.49
Distancing (RCOPE 2SC)	90	.10	.04	.12	.05	-1.36	.18
Self-controlling (RCOPE 3SC)	90	.13	.04	.14	.05	-1.82	.07
Seeking social support (RCOPE 4SC)	90	.13	.06	.12	.05	1.14	.26
Accepting responsibility (RCOPE 5SC)	90	.12	.07	.11	.05	1.18	.24
Escape-avoidance (RCOPE 6SC)	90	.09	.05	.07	.04	2.53	.01**
Planful problem-solving (RCOPE 7SC)	90	.18	.05	.19	.05	-1.08	.28
Positive reappraisal (RCOPE 8SC)	90	.14	.06	.15	.05	-1.15	.25
<u>Perceived Availability of Social Support</u>							
Tangible support (MOS 1SC)	90	10.04	4.10	10.00	4.30	.05	.96
Affectionate support (MOS 2SC)	90	9.87	2.67	9.51	3.16	.58	.56
Positive social support(MOS 3SC)	90	11.27	3.55	11.31	4.15	-.05	.96

Table 17 continues

Table 17: cont.

Variable	Not employed out-side home (N=37)			Employed outside home (N=55)		
	df	mean	SD	mean	SD	t
Emotional-Informational support(MOS 4SC)	90	22.73	7.26	22.22	8.18	.31
Total support(MOS TS)	90	53.92	14.83	53.04	18.07	.25
<u>Depression Level</u> Zung total	90	38.68	7.74	35.36	6.55	2.21

* $p \leq .05$ ** $p \leq .01$

delivery, method of conception, and whether extended family lives nearby.

Statistically significant relationships ($p < .01$) exist between education and household income, and birth order and other children in the family. Statistically significant results at $p < .05$ are seen between mother's age and education, mother's age and other children, and birth order of the triplets and education of the mothers.

Question Fifteen

Question fifteen addresses whether there are statistically significant differences between the mean scores on all scales and subscales when subjects are grouped according to their level of depression. Subjects were divided into three groups according to whether their Zung Index Score was "within normal range" ($n=65$), "minimal to mild depression" ($n=19$), and "moderate to severe depression" ($n=8$). Results of ANOVAS done on all mean scores which revealed significant differences are summarized in Table 20.

The mean scores and standard deviations for WOC subscales for seeking social support, escape-avoidance, and positive reappraisal were significantly different based on level of depression. Stress scores for total stress, subscales (role definition, domestic satisfaction, health posture, anxiety, and depression) were all significantly different between groups as were domain scores (environmental stressors, and emotional response). All means scores tended to increase as the level of depression rose. Tangible support was the only subscale on the MOS which demonstrated significant differences between groups.

Table 18

Means, SDs, and t-test Results for Coping, Social Support, Depression Scores and Stress with Spontaneous Conception and Assisted Conception

Variable	df	Spontaneous Conception (N=12)		Assisted Conception (N=74)		t	p
		mean	SD	mean	SD		
<u>Coping Processes</u>							
Confrontive coping (RCOPE 1SC)	89	.11	.04	.11	.04	.10	.92
Distancing (RCOPE 2SC)	89	.09	.04	.11	.05	-1.53	.13
Self-controlling (RCOPE 3SC)	89	.13	.05	.14	.04	-.48	.64
Seeking social support (RCOPE 4SC)	89	.12	.06	.12	.05	-.20	.84
Accepting responsibility (RCOPE 5SC)	89	.11	.06	.11	.06	.20	.85
Escape-avoidance (RCOPE 6SC)	89	.08	.05	.08	.04	-.12	.91
Planful problem-solving (RCOPE 7SC)	89	.20	.06	.18	.05	1.26	.21
Positive reappraisal (RCOPE 8SC)	89	.16	.07	.15	.05	.48	.63
<u>Perceived Availability of Social Support</u>							
Tangible support (MOS 1SC)	89	10.50	5.05	9.87	4.06	.49	.63
Affectionate support (MOS 2SC)	89	9.58	3.66	9.65	2.89	-.07	.93
Positive social support (MOS 3SC)	89	12.42	5.35	11.06	3.63	1.13	.26

Table 18 continues

Table 18: cont.

Variable	df	Spontaneous Conception (N=12)		Assisted Conception (N=74)		t	p
		mean	SD	mean	SD		
Emotional-Informational support (MOS 4SC)	89	23.58	10.17	22.23	7.48	.56	.58
Total support (MOS TS)	89	56.08	23.30	52.81	15.73	.63	.53
<u>Depression Level</u>							
Zung total	89	37.33	6.95	36.75	7.20	.26	.79
<u>Stress</u>							
Time pressure (TPS)	89	17.67	3.70	16.38	3.81	1.09	.28
Driven behavior (DBD)	89	11.42	3.66	10.65	3.93	.64	.52
Attitude posture (ATP)	89	12.58	1.31	12.61	2.95	-.03	.98
Relaxation potential (RPS)	89	12.33	3.75	13.89	4.10	-1.24	.22
Vocational satisfaction (VSS)	12.56	13.42	7.63	11.59	5.14	.80	.44
Domestic satisfaction (DSS)	89	7.83	4.57	9.11	4.39	-.94	.35
Health posture (HPS)	89	8.83	4.47	9.42	4.18	-.45	.66
Hostility (HOS)	89	11.58	3.40	10.66	4.50	.68	.50
Anxiety (ANX)	89	13.50	4.23	13.78	5.21	-.18	.86

Table 18 continues

Table 18: cont.

Variable	df	Spontaneous Conception (N=12)		Assisted Conception (N=74)		t	p
		mean	SD	mean	SD		
Depression (DEP)	89	8.58	4.64	8.41	3.99	.14	.89
Personality mediators domain (PMD)	89	64.08	9.69	63.91	11.80	.05	.96
Environmental stressors domain (ENV)	89	30.08	13.41	30.13	10.19	-.01	.99
Emotional response domain (EMO)	89	33.67	7.19	32.85	11.23	.24	.81
Total Stress (TSS)	89	127.83	27.05	126.89	28.30	.11	.91

Note. Two-tailed p values

Table 19
Spearman Correlation Coefficients of Independent Variables

	(H)	(E)	(A)	(H)	(OC)	(BO)	(DT)	(DM)	(CM)	(EF)
Education (E)	.30**									
Age (A)	.10	.21*								
Health (H)	-.05	-.03	.18							
Other child (OC)	-.08	-.17	.23*	.05						
Birth Order (BO)	-.10	-.21*	.20	.03	.91**					
Delivery Type (DT)	-.06	.08	-.00	-.00	-.17	-.18				
Delivery Urgency (DU)	.07	-.06	-.03	-.07	-.06	.01	.00			
Conception Method (CM)	-.11	-.01	-.05	-.11	-.12	-.01	.00	.15		
Extended Family (EF)	.03	-.01	-.04	-.12	-.04	-.06	.07	-.06	.14	
Coping 67	-.08	-.09	-.02	-.05	-.08	-.15	-.03	-.00	-.04	.11

* $p \leq .05$ ** $p \leq .01$

Household Income (H.I.)

Table 20

		Within normal range (N=65)		Minimal to mild (N=19)		Moderate to severe (N=8)			
variable	df	m	SD	m	SD	m	SD	F	p
Coping									
Self-controlling	91	.13	.04	.16	.07	.15	.03	3.15	.05*
Escape-Avoidance	91	.07	.04	.10	.04	.11	.04	6.83	.00**
Positive Reappraisal	91	.16	.05	.12	.05	.12	.06	6.48	.00**
Social Support									
* Affectionate	89	10.40	2.38	8.05	3.47	7.42	3.60	8.27	.00**
Positive social interaction	91	12.11	3.38	9.68	4.19	8.49	5.07	5.63	.00**
Educational & informational	91	23.89	6.84	19.68	8.91	17.02	9.10	4.60	.01**
*Total support	89	56.77	14.61	46.89	18.01	41.39	21.90	5.25	.01**
Stress									
Relaxation potential	91	13.08	4.23	13.89	2.96	17.50	3.02	4.59	.01**
Role definition	91	9.71	3.36	10.42	3.27	15.38	2.97	10.41	.00**
Domestic satisfaction	91	7.72	3.87	11.32	4.16	13.25	4.20	11.24	.00**
Health posture	91	8.42	3.90	10.68	3.89	13.25	4.53	6.80	.00**
Anxiety	91	12.17	5.01	15.84	3.73	19.88	3.87	12.34	.00**
Depression	91	7.17	3.88	9.95	2.80	14.00	2.73	15.21	.00**
Table 20 continues	* n = unequal variances			*p ≤ .05 ** p ≤ .01					

Table 20 cont.

Variable	df	Within normal range (N=65)		Minimal to mild depression (N=19)		Moderate to marked depression (N=8)		F	p
		m	SD	m	SD	m	SD		
*Personality mediators	89	61.77	12.00	66.68	8.81	73.50	5.88	4.83	.01**
Environmental stressors	91	26.88	9.84	35.74	7.47	41.63	9.84	13.22	.00**
Emotional response domain	91	29.55	10.77	37.42	6.74	46.38	7.78	13.15	.00**
*Total stress	89	118.20	27.78	139.84	16.25	161.50	14.64	14.12	.00**
Subjective stress	89	5.50	1.90	6.32	2.41	7.43	.82	4.16	.02

* n = unequal variances * p≤.05 ** p≤.01

CHAPTER 5

Findings and Interpretations

The purpose of this study was to describe the coping processes used by mothers of triplets who were attending a national conference for multiple birth families with triplets or more. Each of the mothers who comprised the sample completed a series of questionnaires which addressed the variables of coping processes, perceived availability of social support, current stress level, level of depression, and sociodemographic characteristics.

Although the sample size was limited ($n=92$), some weak but statistically significant relationships became apparent. Findings related to the major variables will be reviewed individually, then general interpretations will be made.

Sociodemographic Characteristics

Examination of the sociodemographic characteristics of the sample of ninety-two mothers of triplets revealed a homogeneous group. All subjects were married, the majority were Caucasian, with at least some college education, and an income above \$50,000.

As reported in Chapter 4, weak but statistically significant correlations were found to exist between some of the sociodemographic variables. Household income was correlated with education level, as was the age of the mother. The age of the mother was also found to be related to whether she had other children

in addition to the triplets. Older mothers tended to have only triplets as did those mothers who had more education. There was a high correlation ($r=.91$) between first born triplets and having no other children.

No significant differences in coping processes or perceived availability of social support were found between those mothers who had triplets as their firstborn children when compared to mothers who had children prior to having triplets. No statistically significant differences were found on any of the social support variables between the group of mothers who had other children in addition to their triplets and those who did not.

Education was related to coping processes used by mothers only in the use of escape-avoidance coping which was used less frequently as education level increased. This supports earlier findings that had identified those with higher socioeconomic and education levels as being less likely to use avoidance-type coping (Billings & Moos, 1981; Pearlin & Schooler, 1978), a process considered to be a less effective means of coping than problem-focused processes.

Mothers who had no children other than their triplets were found to differ from those who had other children in only one statistically significant way. Relaxation potential scores were lower for mothers who had children in addition to triplets. This was also true for mothers of triplets who were firstborn when compared with triplets born after another child was already present in the family.

Employment outside of the home was found to be associated with decreased relaxation potential and decreased vocational satisfaction stress scores. An increased use of escape-avoidance coping was associated with the mothers who did

not work outside of their home. Depression levels were found to be higher in the mothers who did not work outside of their homes. As found in earlier research (Coyne, et al., 1981), women who were depressed were more likely to be unemployed, and to use more avoidance-type coping than women who were not depressed. In earlier studies, employment tended to increase sources of social support for women compared with those who remained at home although this was not demonstrated by this sample.

As the education level of the mothers increased, those with more education were found to have lower environmental stress domain scores reflecting increased satisfaction with domestic, health, and vocational environments in their lives. This could influence ability to view events as challenges rather than threats through increased problem-solving coping processes or more positive reappraisal of events as described by Lazarus and Folkman (1984) Escape-avoidance coping was the only coping process found to be statistically significantly related to level of education of the mother.

Thirteen percent of the triplets in the sample were conceived spontaneously (conceived with no fertility medications, or assisted reproductive technology) while the remainder of the families had used some form of medical intervention. The method of conception did not have a statistically significant relationship with any of the variables, as no differences were shown between the mothers who conceived spontaneously and those for whom medical intervention was necessary. The use of assisted reproductive technology has been found to be significantly associated with the dramatic rise in the number of triplet births among older.

more educated, white, higher income women according to the National Center for Health Statistics (1997). Caucasian mothers accounted for 87 percent of all triplet births between 1980-1997.

In summary, few of the sociodemographic characteristics had any relationship with the variables. Differences in age, education, income, and type of conception were associated with few if any differences in the responses of the mothers.

Coping Processes

As discussed in Chapter 4, all types of coping processes were used by the subjects when describing how they dealt with the stressful situation described by each individual and her experience with her triplets. For many, the event they described was related to going to the national triplet convention (26%), which would be considered a desirable event, but with accompanying stress related to the preparation, the travelling, the unfamiliar living arrangements, and the numbers of people in attendance. Others described stressful events related to illnesses of the children (10%), or their children's behavior (29%), which may both be considered as undesirable. For some (11%), the sheer number of things they had to do on a regular basis was stressful. Regardless of the desirability of the events described, all were daily hassles-type events as opposed to catastrophic events as described by Lazarus and Folkman (1984). Pearlin and Schooler (1978) speculated that these more minor but constant stresses were potentially more difficult to handle than the more catastrophic ones which tended to mobilize support, force action, and adaptation.

According to Pearlin and Schooler (1978), it is the variety of coping responses

that may help protect individuals from increased anxiety and depression. As evidenced by the inclusion of all processes of coping by all mothers without one clearly dominant type, the sample in the study was consistent with the Pearlin and Schooler sample. As was found in their research, which examined the types of coping that were most frequently used in various situations, mothers of triplets used relatively greater amounts of planful problem-solving (18%) and positive reappraisal (15%) than the more emotionally-focused avoidance coping (8%). This supports the findings of the Pearlin and Schooler (1978) study when parenting situations were involved.

Folkman and Lazarus (1988) found that people were more apt to use more self-control, accept more responsibility, use more escape-avoidance, and seek less social support in situations that were considered threatening to their self-esteem. In cases where the well-being of a loved one was threatened, more distancing, confrontive coping, escape-avoidance, and planful problem-solving were used. In this study, all situations were related to the well-being of one's children by nature of the situation under consideration by the mother. Since the focus of the situations described by the mothers was on having triplets, all responses could be considered as related to the well-being of a loved one, but did not seem to support Lazarus and Folkman's speculation (1988).

The use of confrontive coping was found to be increased when the personality mediators domain scores (time pressure, driven behavior, attitude posture, relaxation potential, and role definition), the emotional response domain scores (hostility, anxiety, and depression) and the total stress scores were higher. As a

problem-focused coping process, confrontive coping is associated by Folkman and Lazarus (1988) with risk-taking and hostility. In other words, as the stress levels of the mothers increased, the use of confrontive coping also increased.

Mothers of triplets also indicated the use of the coping process of distancing. Distancing was found to be related to decreased scores for driven behavior, attitude posture (achievement orientation), hostility, anxiety, emotional response domain, and total stress level scores. Although preliminary, the results tend to support Lazarus and Folkman's (1984) description of distancing and intellectualization as means of psychologically dissociating oneself from social demands which have become stressful, demanding, and overwhelming. However, their frequent and long-term use as coping processes may result in low morale, and a sense of unmet social obligations. These results have been considered as negative outcomes which may eventually contribute to impaired health.

Self-controlling coping, which is characterized by an effort to regulate one's feelings and actions, was higher when hostility scores were lower. No other stress-related scores showed a statistically significant relationship to this process of coping.

As an emotion-focused coping process, self-controlling coping would be expected to increase as stress level increased (Folkman & Lazarus, 1980), although not evident with this sample. This may be related to the unchangeable nature of having triplets, a stress considered to be unalterable, of long duration, and unambiguous. Lazarus and Folkman (1984) later described how these factors could influence appraisal, and thus impact which coping processes are used.

Seeking social support, a coping process considered to be both emotion and problem-focused, did not have a statistically significant relationship with any of the stress subscales, domains, total stress, or subjective stress scores. This will be discussed further in the social support findings.

Accepting responsibility, a form of coping in which the individual attempts to rectify the situation by taking responsibility for it, was found to be associated with higher scores for relaxation potential, the environmental stress domain (vocational satisfaction, domestic satisfaction, and health environment), and the emotional stress domain. It also had a statistically significant relationship with level of depression. Apparently, as mothers accepted more responsibility for the situations they encountered related to their triplets, they described themselves as having more stress from a variety of sources and became more depressed, anxious and/or hostile as evidenced by the significant increase in emotional response scores.

The increased use of escape-avoidance coping was associated with higher scores in all stress domains, as well as the total and the subjective stress scores. As stress levels among the mothers increased, positive reappraisal coping decreased and escape-avoidance increased. This concurs with Billings and Moos (1981) who described that unresolved stressors led toward the use of increased emotional sensitivity, less effective coping, and impaired function. Mothers in the sample who were more depressed also tended to use more escape-avoidance coping, and less positive reappraisal. The use of escape-avoidance coping was also found to be higher in women who did not work outside of their homes, consistent with the findings of Coyne, Aldrin, and Lazarus (1981).

Planful problem-solving, a problem-focused coping method in which the individual attempts to correct the situation as well as to analyze it, was found to be associated with decreased driven behavior, domestic environment stress, and lower emotional response domain, total stress, and subjective stress scores. In other words, as stress levels decreased, the use of planful problem-solving coping increased. Considered to be one of the most adaptive coping processes by Billings and Moos (1981), planful problem-solving was associated with fewer dysfunctional outcomes than avoidance-type coping.

Positive reappraisal, in which the effort is made to create a positive interpretation of a situation by looking at it as an opportunity for personal growth, was found to be higher when all stress domain scores were lower, especially in the areas of vocational and domestic environments, and the total and subjective stress scores were lower. Although an emotion-focused process, positive reappraisal contributes to affective regulation rather than avoidance, thus decreasing ineffective coping and increasing stress (Billings & Moos, 1981). As levels of stress increased and/or perceived levels of social support decreased, there was an increase in accepting responsibility (self-blame), an increase in escape-avoidance, and a decrease in planful problem-solving.

Current Stress Level

As described previously, the Derogatis Stress Profile measured three levels of stress. The primary stress vectors (time pressure, driven behavior, attitude posture, relaxation potential, role definition, vocational satisfaction, domestic satisfaction, health environment, hostility, anxiety, and depression) represent

stress-inducing areas. The secondary stress domains represented the interaction of these elements comprising environmental events, personality mediators, and emotional responses. These were totaled to provide a global stress score.

The relationship between stress level as measured by the Derogatis Stress Profile and the coping processes used by the mothers, was statistically significant in a number of areas indicating that as the current levels of stress changed, coping processes also changed. When subjective stress scores on the DSP were dichotomized into "none to minimal stress" and "moderate to extreme stress", there was a significant increase in the escape-avoidance score, and a decrease in the planful problem-solving score as would be expected from the literature (Folkman & Lazarus, 1984).

Mothers who described themselves as having more stress scored significantly higher on the Zung Self-rating Depression instrument. In other words, mothers who described themselves as having a greater amount of stress, tended to be more depressed and used coping processes which have been found to be less effective as well as more conducive to negative outcomes such as depression according to Lazarus and Folkman (1984), and are consistent with earlier studies done by others such as Anhensel and Stone (1978). In Frankel and Harmon's study (1996), the women who were found to be depressed scored higher on a life stressor inventory scale as well as on a parenting stress scale. Critics of the self-report methodology argue that depression may influence one's ability to accurately describe one's own situation, thereby raising the question of how reliable the findings are as the level of depression increases (Frankel & Harmon,

1996).

Those women in the "moderate to extreme" stress group had significantly lower mean scores on the tangible support, positive social interaction, and the emotional and informational support subscales as well as lower total support scores on the MOS. Only tangible support levels were not found to be statistically significant although mean scores were lower in the group with greater stress.

These findings were consistent with earlier studies which identified social support as being either a potential buffer for stress or a main effect by enhancing self-esteem and one's ability to deal with stress (Thoits, 1986). Thoits (1986) described the use of social support as a means of enhancing coping, and it appeared that according to this sample, there was less perceived available social support among the more stressed mothers indicating a need for either an increase in the amount available to them, or some means of assisting them to recognize its availability.

Perceived Availability of Social Support

The MOS Social Support Survey measured both perceived levels of social support and also the number (or structure) of social support available to each subject. Types of support included tangible (materials, aid), emotional and informational support (guidance, attachment, appraisal support), affectionate support (love, nurturance), and positive social interaction (belonging or social companionship).

All subscales on the MOS Social Support Survey were found to be inversely related to stress levels on the DSP and depression levels on the Zung. Both stress

and depression scores were higher in women who perceived that they had less social support of all types, consistent with the findings in other studies (Sharts-Hopko, et al., 1996; Sherbourne and Stewart, 1991).

An inverse correlation was found to exist between perceived availability of tangible support and many of the stress-related subscales and domain scores. Mothers who perceived that they had low levels of tangible support tended to have higher scores on domestic environment stress, depression, the environmental stressors domain, the emotional response domain, and total stress scores. Without elaboration by the subjects, it was difficult to identify what "tangible" support was missing, but the costs in time and finances of a multiple pregnancy and birth were high.

Those mothers whose scores were also low on the affectionate support subscale indicated higher stress scores related to time pressure, vocational environment stress, domestic environment stress, hostility, the environmental stress domain, the emotional response domain, and total stress scores. Again, limited available time and marital relationships may be factors in low affectionate support scores, but require future research to investigate the relationship.

Low perceived availability of positive social interaction was found to be related inversely in a statistically significant way to all stress subscales except relaxation potential, attitude posture, and driven behavior scores. All stress domain scores, total, and subjective stress scores were also inversely related. Goshen-Gottstein (1980) described social isolation among mothers of triplets in earlier studies.

Emotional and informational support were inversely related to all stress subscales with the exception of driven behavior and attitude posture scores. This may indicate that as women in the study experienced more stress, they perceived that they were receiving less emotional and informational support, especially important during times such as a high risk pregnancy, making a decision related to selective reduction, or for parenting issues.

These findings support the earlier research which identified social support to be a factor in coping processes, as well as a mediator of stress. Although unable to identify the role of social support for the mothers of this study, there appears to be a clear connection between higher levels of stress and lower perceived availability of social support. Aneshensel and Stone (1982) concluded from their study of 1000 normal people that lack of social support was a contributor to the development of adverse psychological outcomes.

Dunkel-Schetter, Folkman, and Lazarus (1987) found that problem-solving, seeking support, and positive reappraisal were most consistently associated with the receipt of support. This was also found among mothers of triplets whose total scores on the MOS were related in a statistically significant way to the subscales which measured seeking social support and planful problem-solving.

The clear interrelatedness of stress, coping processes, and perceived availability of social support indicated the value of further investigation in this area. Additionally, the concept of self-esteem, not addressed in the MOS, but indicated as a possible mediator of social support, should be further investigated (Sherbourne & Stewart, 1991).

Level of Depression

It is not surprising to find that the mothers in this study who reported lower perceived available social support had higher scores on the Zung indicating higher levels of depression. With the exception of tangible support, all levels of perceived social support decreased significantly as levels of depression increased when mothers were grouped according to their level of depression. This was supported by the work of Dunkel-Schetter and associates (1987) who described how depressed persons report perceiving less support, and that those who are most in need of assistance were often least able to avail themselves of it. Affectionate support had a significant decrease as reported by the subjects with higher levels of depression..

The majority of the mothers (71%) were within normal limits on the Zung Self-rating Depression Scale indicating that in general, this group of mothers was not clinically depressed at the time of completing the survey. Four of the mothers reported being treated with antidepressant medication and three of the mothers were being treated with anti-anxiety medications.

When subjects were divided into their level of depression based on their Zung Index scores, significant differences between the groups in several areas were evident. Self-controlling coping, escape-avoidance and positive reappraisal were all significantly related to level of depression in mothers by group.

Panzarine et al. (1995) found that 56% of her sample of adolescent mothers showed no depressive symptoms. In her sample, as with mothers of triplets, coping by seeking social support was found to be lowest in the most depressed

mothers. Frequency of social support also decreased as the level of depression in the mothers increased.

The use of escape-avoidance coping increased as the level of depression increased and the use of positive reappraisal decreased. Coyne, Aldwin, and Lazarus (1981) found that depressed individuals tended to use more escape-avoidance coping which interfered with their ability to effectively problem-solve.

Both total and subjective stress scores for the mothers in each of the three groups increased as the level of depression increased. Statistically significant differences were noted with relaxation potential, role definition, domestic environment stressors, health posture, anxiety, depression, personality mediators, the environmental stressors domain, and the emotional response domain scores. This is consistent with the literature which associated increased depression with the perception of increased stress (Monroe et al., 1986) as well as the belief that increased stress contributes to the development of depression (Aneshensel & Stone, 1982). The sample used in Monroe et al.'s study (1986) was similar to the sample of mothers used in this study: they were Caucasian, high-school educated, married, and had two to three (not multiple birth) children.

Panzarine et al. (1985) concluded in their study of adolescent mothers, that "depression is associated with an inclination to view life events negatively while simultaneously denying positive experiences" (p. 117). This concurs with the findings of Frankel and Harmon (1996) who found that mothers who were depressed found less pleasure in mothering, and described themselves as less

effective in their maternal interactions than did their non-depressed peers.

However, observation of both groups revealed no significant differences between their mothering abilities or the attachment of their children.

Limitations and Generalizations

The sample used in this study was a convenience sample comprised of mothers who were all members of a national support organization for triplet families, the Triplet Connection. Although the group is open to all mothers of higher order multiples, and has a large membership, it still requires that families know of its existence, make an effort to join, pay dues, and read the materials. Several thousand families do so, but many others do not. It is these families for whom the answers to the question of level of depression, availability of social support, the use of coping processes, and current stress level remain unknown.

Limiting the sample to mothers attending the conference may jeopardize the generalizability of the results, as these may be the mothers who are highest functioning, have the most resources available to assist them, and who are well-organized enough to travel with their children to a distant location. On the contrary, one mother at the conference suggested that perhaps the mothers who attended the meeting were the ones most in need of support rather than the least. Perhaps the 92 mothers who chose to complete the study differed from those who were in attendance but did not take the time or have the desire to share their thoughts and experiences related to triplet mothering.

Mothers who attended the triplet convention and completed the questionnaires were all married, were able to travel with their children, and could

afford to attend the meeting. What about the mothers whose triplets are handicapped to the extent that they are unable to travel, those who are unmarried or have poor marital relationships, and those who cannot afford to attend a meeting such as this? It is these questions which limit the generalizability of these results as the sample is clearly not representative of the universe of triplet mothers living in the United States today.

Self-report was used for the collection of data, and has been shown to be a limitation in the reliability of the results (Frankel & Harmon, 1996; Goshen-Gottstein, 1980). Memories fail, and certainly information gathered in the midst of a busy weekend with children present may be distorted and biased. Parker and Brown (1982) reported that a subject's depressed mood influences reports of his coping behavior, and its perceived effectiveness. This was also found by Frankel and Harmon (1996) in their study of depressed and nondepressed mothers and their children. Differences were noted between how mothers described their depression, and how their depression and interaction with their children was rated by a trainer observer. Goshen-Gottstein (1980) also reported the discrepancies that existed between the mothers' descriptions of their behavior, and that described by observers, raising the question of distortion by the mother in her own self-reports.

Although this was not a study which involved a description of maternal behaviors, perhaps coping processes used by the mother could have been subjected to some degree of distortion in a self-report only study, and would have benefited from a qualitative component. Earlier studies of triplets done by

Goshen-Gottstein (1980) and others recommended the use of observation as the technique of choice for understanding the interaction between triplets and mothers, and to accurately assess the stresses in the daily lives of these families. Perhaps future studies should include both methods of gathering data, adding a qualitative component to add validity and detail to the quantitative pieces.

As discussed in the section on depression, it was beyond the limits of this study to evaluate the actual causes, types, and time of onset of the depression identified in some of the mothers. For the purposes of this study, the presence of depression, as identified and quantified by a screening instrument, the Zung Self-rating Depression Scale, was an attempt to determine whether or not depression may be related in a statistically significant way to any differences between those women who were found to be depressed and those who were within the normal range. No observation of interactions or diagnostic interviews were performed to confirm depressed status of the mothers.

No determination had been made in this study of the quality or actual frequency of social support available to the mothers in the sample. Due to this limitation, it was not possible to make predictions about how much, and what type of social support is best.

No attempt was made in this study to evaluate maternal self-efficacy, a variable found by Panzarine (unpublished manuscript, 1996) to be related to the other key variables in this study. The personality mediators domain in the DSP does address some personality attributes, but as a conglomeration not as individual factors. This would be important to study in future research if

designing interventions to enhance maternal coping.

Recommendations for Further Study

Findings from this preliminary study supported the theoretical framework of this research, and indicated that there is an interrelatedness of the concepts with this sample. The benefit of further clarifying their relative contributions was indicated. The instrumentation, although long and time-consuming to complete, did address many significant aspects of the variables and helped identify important areas for further study. Figure 2 represents a possible alternative representation of how the variables may be interconnected as research in this area continues.

Figure 2 represents a revised view of the variables based on the analysis of the data collected. All broken lines indicate that a relationship exists between the variables at the end of the arrowheads. No prediction can be made related to the order in which the variables appear or how they interact with each other.

All variables in this preliminary, descriptive study appear to be related as indicated by the broken line which connects them. Neither direction nor relative magnitude of the relationship was able to be determined from the statistical analysis used in this study. However, further statistical analysis using multivariate statistics such as regression analysis would allow for a clearer description of the intensity, direction, and relative magnitude of each variable, and for testing of directional hypotheses.

Few of the sociodemographic variables appear to have significant relationships with the other variables. However, this may be related to the size of the sample and its non-random, convenience nature.

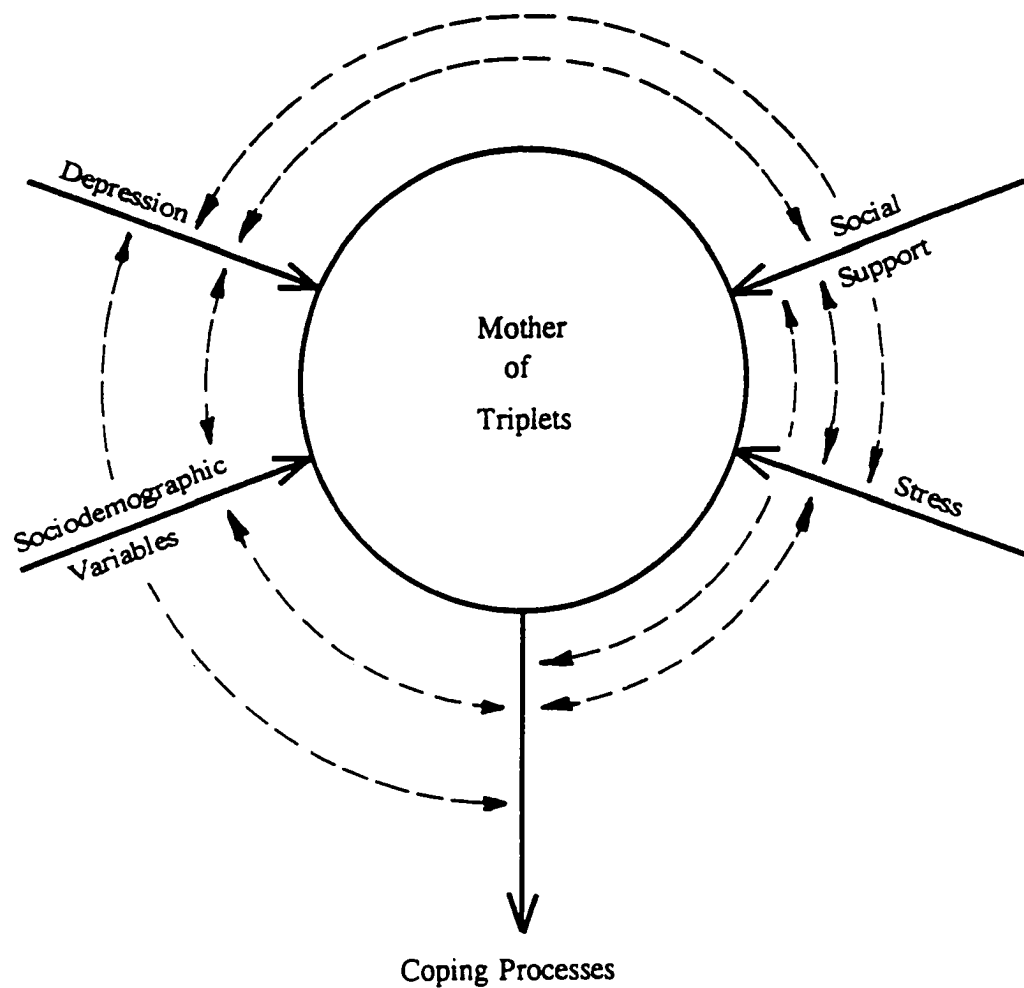


Figure 2. Coping processes of mothers of triplets (revised).

Coping processes appear to be related to both the level of stress and the perceived availability of social support as well as the level of depression when the mothers were grouped according to their levels of depression. Because of the small sample size, further evaluation is needed.

Perceived availability of social support was related to both levels of depression and stress. Data from this study indicated that as either level of depression or level of stress increased, the perceived level of social support decreased.

This model is a preliminary design based on the first-level descriptive data found in the investigation. Future research and statistical analysis must be done to develop a clearer representation of the interrelationship of the variables, and to allow for prediction of their effects to be made.

Although the convenience sample used in this study was selected to represent the current demographics of the population of triplets, a larger group of mothers of triplets needs to be identified through a variety of sources including high-risk obstetricians, infertility programs, pediatricians, and others who would come in contact with the families who already have triplets or who are expecting them. Mothers of triplets often know others with triplets in their areas, and could provide a referral to the researcher as well. If possible, families with diverse marital, racial, economic, and educational backgrounds are needed to provide a broader picture of the coping processes which they use.

Several of the fathers at the triplet convention considered themselves to be the primary caregivers to their children and were interested in completing the questionnaires. As gender has been associated with differences in coping

processes (Billings & Moos, 1981; Holahan & Moos, 1987; Lazarus & Folkman, 1984; Pearlin & Schooler, 1978), a comparison between mothers' and fathers' responses to the sample questionnaires would be an important addition to the body of knowledge. The need for continued research in the area of higher order multiple births, especially focusing on the impact of the sudden increase of size on the family, is clear.

The addition of a "control" group made up of mothers who have three children who are all singletons would also allow for a comparison between the impact of mothering three children of different ages and the mothering of three children of the same age. This would help differentiate between the stresses of parenting multiples and those of parenting several singletons.

A longitudinal study could also be conducted in which the same group of mothers comprising the sample could be reevaluated over time using the same instrumentation to see if the coping processes, perceived availability of social support, level of depression and stress level change as time passes. Lazarus and Folkman (1984) described coping as a dynamic process which would vary by situation, and would lead to the hypothesis that results would be different. This may also be related to the age of the triplets, a variable not examined in this study, which may have an impact on how mothers dealt with stressful situations that they faced. Additional research in this area comparing mothers grouped according to the ages of their children would be a valuable addition to this preliminary descriptive data.

Conclusions

Mothers of triplets who comprised the sample for this study used a variety of coping processes in dealing with the current stresses in their lives, as evidenced by the scores on the Ways Of Coping Questionnaire. Stress levels were inversely related to the perceived availability of both social support and the use of effective coping processes. Mothers who were found to be depressed also experienced greater stress levels from a variety of sources, perceived themselves as having less social support, and used less problem-solving coping than their less-depressed counterparts.

Based on earlier findings cited from the literature related to stress among mothers of children, the impact of depression on mother-child relationships, and the effectiveness of coping processes indicated a need for further research about higher order multiple births in order to identify where interventions can be targeted to be most effective. The exact impact of maternal depression on the child is still not clear, as reported by Frankel and Harmon (1996), but regardless, the importance of this early relationship has been well-documented throughout the literature.

Despite the use of a convenience sample, findings in this study were consistent with earlier coping research done with a variety of samples, supporting the theoretical framework. Additionally, this study supported the validity of the instrumentation of this study especially if used with a larger sample. It must be kept in mind that although the study sample was homogeneous in its makeup, it was representative of the fastest growing group of triplet mothers, those who are

white, well-educated, married, and over thirty years old according to the National Center for Health Statistics (1997).

Although this study lacked a comparison group of mothers who did not have triplets with whom to compare the variables, certain important information was obtained. Mothers of triplets coped by using a variety of processes, and tended to exhibit the same response to stress, depression, and social support as described in earlier studies in the literature using different populations. These instruments were valid tools to use to do a preliminary description of these mothers of triplets, and provided some clear indicators for the need for further research using instruments which could address such details as sources of social support, type and duration of depression, and more detailed information about the pregnancy and delivery.

The results of this study are limited in terms of ability to generalize these results to all triplet mothers, or to make causal connections between being the mother of triplets and any of the variables examined. It is, however, clear from this study that more work in this area needs to be done.

The enthusiastic and cooperative response of the mothers when asked to complete a time-consuming series of questionnaires and, their interest in the findings make a clear statement about their need for more information. Many expressed appreciation at being given the opportunity to express their feelings and to describe their own circumstances. Some said that they were angry that they had never been prepared for the challenges that they faced as the mother of triplets. Others were anxious to help expectant mothers who were attempting to

prepare for the arrival of their triplets.

Another important group whose needs were mentioned by many of the mothers were those couples seeking treatment for infertility and were faced with the increased risk of multiple births. As evidenced by the large number of women in this sample whose triplets were conceived through assisted reproductive technology (n=74 or 86%), the need for better understanding of the experience of mothering triplets, and more information about how to best prepare is vital.

According to the research done by Gleicher et al. (1995), the length of infertility as well as the advancing age of the mother appeared to be associated with the desire for multiple births, including a desire for triplets or greater. Respondents appeared to be knowledgeable about the medical risks involved, and willing to consider selective reduction in cases of very high order multiples. Goldfarb and associates (1996) also studied the attitudes of those undergoing fertility treatment, and determined that women needed to be made aware of the risks involved in a multiple birth pregnancy prior to the intervention such as intrauterine insemination or in vitro fertilization rather than after the pregnancy had been established.

It appeared from both the response of the women who comprised the sample who responded to the current study, and the studies done by other researchers, that women often do not know, and are not told of what to expect or how to prepare for a multiple birth because the information has not been available except from a purely obstetrical risk perspective. It is hoped that the preliminary information gathered in this study will contribute to the development of an

empirically-based approach to assessing the current stress levels, social supports, depression levels, and coping processes available to mothers-to-be as well as those seeking infertility treatment.

The willingness of the triplet mothers who comprised the study sample to tell their stories and share their struggles was impressive. Many emphasized that the best, and only source of information currently available about how to cope with the mothering of triplets was another mother of triplets. Formal and informal networks, when available, provided encouragement, an opportunity to discuss fears, a place to ventilate, and a realistic view of what life with triplets can entail.

As the number of higher order multiple birth families continues to increase, health care professionals involved in both infertility treatment and prepartum care need to be aware of how to help expectant mothers of triplets to prepare. Those caring for the triplets themselves must understand the needs of the parents and the children in order to provide the best care for their patients. And those mothers expecting triplets need to understand how to best prepare themselves for a situation which both blesses and stresses.

REFERENCES

- Andrews, G., Tennant, C., Hewson, D. & Vaillant, G. E. (1978). Life event stress, social support, coping style, and risk of psychological impairment. *The Journal of Nervous and Mental Disease*, 166, 307-316.
- Aneshensel, C. S. & Stone, J. D. (1982). Stress and depression: A test of the buffering model of social support. *Archives of General Psychiatry*, 39, 1392-1396.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84, 191-215.
- Bendefy, I. M., Elliman, A., Prior, S. & Bryan, E. M. (1994). Is there a role for a twins clinic? An evaluation of parents' responses. *Acta Paediatr*, 83, 40-45.
- Bleyl, J. (Ed.). (1996). *Triplet Connection Quarterly*, 13.
- Billings, A. G. & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine*, 4, 139-157.
- Billings, A. G. & Moos, R. H. (1984). Coping, stress, and social resources among adults with unipolar depression. *Journal of Personality and Social Psychology*, 46, 877-891.
- Cannon, W. (1932). *The wisdom of the body*. New York: W. W. Norton Co.
- Clinical Psychometric Research, Inc. (1995). *The Derogatis Stress Profile (DSP) A Summary Report*. Towson, Maryland.

Cobb, S. (1976). Social support as a moderator of life stress. *Psychosomatic Medicine*, 38, 300-314.

Coddington, R. (1972). The significance of life events as etiologic factors in the diseases of children: I. A survey of professional workers. *Journal of Psychosomatic Research*, 16, 7-18.

Coddington, R. (1972). The significance of life events as etiologic factors in the diseases of children: II. A study of a normal population. *Journal of Psychosomatic Research*, 16, 205-213.

Coghill, S. R., Caplan, H. L., Alexandra, H., Robson, K. M. & Kumar, R. (1986). Impact of maternal postnatal depression on cognitive development of young children. *British Medical Journal*, 292, 1165-1167.

Cohen, F. & Lazarus, R. S. (1983). Coping and adaptation in health and illness. In D. Mechanic (Ed.), *Handbook of health, health care, and the health professions* (pp. 608-635). New York: The Free Press.

Cohen, S. & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310-357.

Collins, N. L., Dunkel-Schetter, C., Lobel, M. & Scrimshaw, S. C. M. (1993). Social support in pregnancy: Psychosocial correlates of birth outcomes and postpartum depression. *Journal of Personality and Social Psychology*, 65, 1243-1258.

Coyne, J. C., Aldwin, C. & Lazarus, R. S. (1981). Depression and coping in stressful episodes. *Journal of Abnormal Psychology*, 90, 439-447.

Coyne, J. C. & DeLongis, A. (1986). Going beyond social support: The role of social relationships in adaptation. *Journal of Consulting and Clinical Psychology*, 54, 454-460.

Crawford, G. (1985). A theoretical model of support network conflict experienced by new mothers. *Nursing Research*, 34, 100-102.

Crnic, K. A., Greenberg, M. T., Ragozin, A. S., Robinson, N. M. & Basham, R. B. (1983). Effects of stress and social support on mothers and premature and full-term infants. *Child Development*, 54, 209-217.

Cutrona, C. E. (1984). Social support and stress in the transition to parenthood. *Journal of Abnormal Psychology*, 93, 378-390.

Dawkins, R. (1989). *The selfish gene*. Oxford: Oxford University Press.

Derogatis, L. R. & Fleming, M. (in press). In C. P. Zalaquett & R. J. Woods (Eds.) *Evaluating stress: A book of resources*. Towson, MD: University Press in America.

Dilley, B. & Dilley, K. (1995). *Special delivery: How we are raising America's only sextuplets... and loving it*. New York: Random House.

Dunkel-Schetter, C., Folkman, S., & Lazarus, R. S. (1987). Correlates of social support receipt. *Journal of Personality and Social Psychology*, 53, 71-80.

Dunkel-Schetter, C., Sagrestano, L. M., Feldman, P. & Killingsworth, C. (1996). Social support in pregnancy. In G. R. Pierce, B. R. Sarason, & I. G. Sarason (Eds.) *Handbook of social support and the family*. New York: Plenum Press. 375-412.

Eberlein, T. (1996). Too many babies? The dangerous rise in multiple births. *Redbook*, 187, 88-91, 118-120.

Field, T., Sandberg, D., Garcia, R., Vega-Lahr, N., Goidstein, S. & Guy, L. (1985). Pregnancy problems, postpartum depression, and early mother-infant interactions. *Developmental Psychology*, 21, 1152-1156.

Folkman, S. & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21, 219-239.

Folkman, S. & Lazarus, R. S. (1985). If it changes, it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychology*, 48, 150-170.

Folkman, S. & Lazarus, R. S. (1988). *Ways of Coping Questionnaire sampler, sampler set manual, test booklet, scoring key*. Palo Alto: Consulting Psychologists Press, Inc.

Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A. & Gruen, R. J. (1986). Dynamics of a stressful encounter: Cognitive appraisal, coping, and encounter outcomes. *Journal of Personality and Social Psychology*, 50, 992-1003.

Folkman, S., Lazarus, R. S., Gruen, R. J. & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of Personality and Social Psychology*, 50, 571-579.

Fowles, E. R. (1994). The relationship between prenatal maternal attachment, postpartum depressive symptoms and maternal role attainment (Doctoral dissertation, Loyola University, 1994). *Dissertation Abstracts International*, 55/01, 76.

Frankel, K. A. & Harmon, R. J. (1996). Depressed mothers: They don't always look as bad as they feel. *American Academy of Child and Adolescent Psychiatry*, 35, 289-298.

Gardephe, C. D. (1997). Raising triplets: An adventure in pregnancy and parenting. *Healthy Kids*, III, 37-40, 60.

Garel, M. & Blondel, B. (1992). Assessment at 1 year of the psychological consequences of having triplets. *Human Reproduction*, 7, 729-731.

Gibb, D. & Greenough, A. (1991). Problems of multiple pregnancy. *British Journal of Hospital Medicine*, 46, 366-370.

Gleicher, N., Campbell, D. P., Chan, C. L., Karande, V., Rao, R., Balin, M. & Pratt, D. (1995). The desire for multiple births in couples with infertility problems contradicts present practice patterns. *Human Reproduction*, 10, 1079-1084.

Goldfarb, J., Kinzer, D. J., Boyle, M. & Kurit, D. (1996). Attitudes of in vitro fertilization and intrauterine insemination couples toward multiple gestation pregnancy and multifetal pregnancy reduction. *Fertility and Sterility*, 65, 815-820.

Goshen-Gottstein, E. R. (1980). The mothering of twins, triplets and quadruplets. *Psychiatry*, 43, 189-204.

Groothuis, J. R., Altemeier, W. A., Robarge, J. P., O'Connor, S., Sandler, H., Vietze, P. & Lustig, J. V. (1982). Increased child abuse in families with twins. *Pediatrics*, 70, 769-773.

Gross, D., Conrad, B., Fogg, L. & Wothke, W. (1994). A longitudinal model of maternal self-efficacy, depression, and difficult temperament during toddlerhood. *Research in Nursing and Health*, 17, 207-215.

Hanninen, V. & Aro, H. (1996). Sex differences in coping and depression among young adults. *Social Science Medicine*, 43, 1453-1460.

Hersen, M. & Bellack, A. S. (Eds.) (1988). *Dictionary of behavioral assessment techniques*. New York: Pergamon Press.

Hinkle, L. (1977). *Psychosomatic medicine: Current trends and clinical applications*. New York: Oxford University Press.

Hirsch, B. J. (1980). Natural support systems and coping with major life changes. *American Journal of Community Psychology*, 8, 159-172.

Holahan, C. J. & Moos, R. H. (1985). Life stress and health: Personality, coping, and family support in stress resistance. *Journal of Personality and Social Psychology*, 49, 739-747.

Holahan, C. J. & Moos, R. H. (1987). Personal and contextual determinants of coping strategies. *Journal of Personality and Social Psychology*, 52, 946-955.

Holahan, C. J. & Moos, R. H. (1991). Life stressors, personal and social resources, and depression: A 4-year structural model. *Journal of Abnormal Psychology*, 100, 31-38.

Holmes, T. & Rahe, R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213-218.

Isaac, S. & Michael, W. B. (1995). *Handbook in research and evaluation* (3rd ed.). San Diego: EDITS.

Kemp, V. H. & Hatmaker, D. D. (1989). Stress and social support in high-risk pregnancy. *Research in Nursing & Health*, 12, 331-336.

Kessler, R. C., Price, R. H. & Wortman, C. B. (1985). Social factors in Psychopathology: Stress, social support, and coping processes. *Annual Review of Psychology*, 36, 531-572.

Kinard, E. M. (1996). Social support, competence, and depression in mothers of abused children. *American Journal of Orthopsychiatry*, 66, 449-462.

Kobasa, S. C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. *Journal of Personality and Social Psychology*, 37, 1-11.

Kowalczyk, L. (1997, March 3). Moms back aggressive prenatal care. *The Patriot Ledger*, pp. 1,7.

Kramer, J. J. & Conoley, J. C. (Ed.). (1992). *The eleventh mental measurements yearbook* (pp. 1012-1015). Lincoln, NE: The University of Nebraska Press.

Lack, D. (1954). *The natural regulation of animal numbers*. Oxford: Oxford University Press.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing Company.

Lederman, R. P. (1995). Relationship of anxiety, stress, and psychosocial development to reproductive health. *Behavioral Medicine*, 21, 101-112.

Lerner, J. V. & Galambos, N. L. (1985). Maternal role satisfaction, mother-child interaction, and child temperament: A process model. *Developmental Psychology*, 21, 1157-1164.

Lin, N., Dean, A. & Ensel, W. (Eds.) (1986). *Social support, life events and depression*. Orlando: Academic Press.

Luke, B. (1994). The changing pattern of multiple births in the United States: Maternal and infant characteristics, 1973 and 1990. *Obstetrics & Gynecology*, 84, 101-106.

Lytton, H., Conway, D. & Sauve' R. (1977). The impact of twinship on parent-child interaction. *Journal of Personality and Social Psychology*, 35, 97-107.

Malmstrom, P. M. & Biale, R. (1990). An agenda for meeting the special needs of multiple birth families. *Acta Genet Med Gemellol*, 39, 507-514.

Malmstrom, P.M., Flaherty, T. & Wagner, P. (1988). Essential nonmedical perinatal services for multiple birth families. *Acta Genet Med Gemellol*, 37, 193-198.

Masuda, M. & Holmes, T. (1967). Magnitude estimations of social readjustments. *Journal of Psychosomatic Research*, 11, 219-225.

McDowell, I. & Newell, C. (1996). *Measuring health A guide to rating scales and questionnaires* (2nd ed.). New York: Oxford University Press.

Monroe, S. M., Bromet, E. J., Connell, M. M. & Steiner, S. C. (1986). Social support, life events, and depressive symptoms: A 1-year prospective study. *Journal of Consulting and Clinical Psychology*, 54, 424-431.

Nash, J. M. (1997). Fertile minds. *Time Magazine*, 149, 48-56.

National Center for Health Statistics. (1997). *Triplet births: Trends and outcomes, 1971-94*. Vital and Health Statistics (DHHS Publication No. 1997-417-563). Washington D. C: U.S. Government Printing Office.

Nuckolls, K. B., Cassel, J. & Kaplan, B. (1972). Psychological assets, life crisis, and the prognosis of pregnancy. *American Journal of Epidemiology*, 95, 431-441.

O'Hara, M. W. (1986). Social support, life events, and depression during pregnancy and the puerperium. *Archives of General Psychiatry*, 43, 569-573.

O'Hara, M. W., Rehm, L. P. & Campbell, S. B. (1983). Postpartum depression: A role for social network and life stress variables. *The Journal of Nervous and Mental Disease*, 171, 336-341.

Osborne, D. & Gaebler, T. (1993). *Reinventing government*. New York: Penguin Books.

Panzarine, S., Slater, E., & Sharps, P. (1995). Coping, social support, and depressive symptoms in adolescent mothers. *Journal of Adolescent Medicine*, 17, 113-119.

Panzarine, S. (1996). *Coping, self-efficacy and depressive symptoms in adolescent mothers*. Manuscript submitted for publication.

Parker, G. & Brown, L. (1982). Coping behaviors that mediate between life events and depression. *Archives of General Psychiatry*, 39, 1386-1391.

Parker, G., Brown, L. & Blignault, I. (1986). Coping behaviors as predictors of the course of clinical depression. *Archives of General Psychiatry*, 43, 562-565.

Pearlin, L. I. & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 19, 2-21.

Polit, D. F. (1996). *Data analysis & statistics for nursing research*. Stamford, Ct.: Appleton & Lange.

Radke-Yarrow, M., Cummings, E. M., Kuczynski, L. & Chapman, M. (1985). Patterns of attachment in two- and three-year-olds in normal families and families with parental depression. *Child Development*, 56, 884-893.

Robin, M., Bydlowski, M., Cahen, F. & Josse, D. (1991). Maternal reactions to the birth of triplets. *Acta Genet Med Gemellol*, 40, 41-51.

Robin, R., Corroyer, D., & Casati, I. (1996). Childcare patterns of mothers of twins during the first year. *Journal of Child Psychology and Psychiatry*, 37, 453-460.

Scheinfeld, A. (1973). *Twins and supertwins*. Baltimore: Pelican Books.

Selye, H. (1975). *Stress without distress*. New York: Signet.

Sharts-Hopko, N. C., Regan-Kubinski, M. J., Lincoln, P.S. & Heverly, M.A. (1996). Problem-focused coping in HIV-infected mothers in relation to self-efficacy, uncertainty, social support, and psychological distress. *Image: Journal of Nursing Scholarship*, 28, 107-111.

Sherbourne, C. D., Hays, R. D. & Wells, K. B. (1995). Personal and psychosocial risk factors for physical and mental health outcomes and course of depression among depressed patients. *Journal of Clinical and Consulting Psychology*, 63, 345-355.

Sherbourne, C. D. & Stewart, A. L. (1991). The MOS social support survey. *Social Science Medicine*, 32, 705-714.

Simons, R. L. & Johnson, C. (1996). The impact of marital and social network support on quality of parenting. In G. R. Pierce, B. R. Sarason & I. G. Sarason (Eds.) *Handbook of social support and the family*. New York: Plenum Press. 269-287.

Sugawara, M., Toda, M. A., Shima, S., Mukai, T., Sakakura, K. & Kitamura, T. (1997). Premenstrual mood changes and maternal mental health in pregnancy and the postpartum period. *Journal of Clinical Psychology*, 53, 225-232.

Tanimura, M., Matsui, I., & Kobayashi, N. (1990). Child abuse of one of a pair of twins in Japan. *The Lancet*, 336, 1298-1299.

Teti, D. M., Gelfand, D. M., Messinger, D. S. & Isabella, R. (1995). Maternal depression and the quality of early attachment: An examination of infants, preschoolers, and their mothers. *Developmental Psychology*, 31, 364-376.

Tietjen, A. M. & Bradley, C. F. (1985). Social support and maternal psychosocial adjustment during the transition to parenthood. *Canadian Journal of Behavioral Science*, 17, 109-121.

Thoits, P. A. (1986). Social support as coping assistance. *Journal of Clinical and Consulting Psychology*, 54, 416-423.

Ventura, J. N. (1982). Parent coping behaviors, parent functioning, and infant temperament characteristics. *Nursing Research*, 31, 269-273.

Vinokur, A. & Selzer, M. L. (1975). Desirable versus undesirable life events: Their relationship to stress and mental distress. *Journal of Personality and Social Psychology*, 32, 329-337.

Voss, D. H. (1996). Outcome. In S. A. Gall, (Eds.) *Multiple pregnancy and delivery*. St. Louis: Mosby. 305-320.

Williams, A. W., Ware, J. E. & Donald, C. A. (1981). A model of mental health, life events, and social supports applicable to general populations. *Journal of Health and Social Behavior*, 22, 324-336.

Wilson, L. M., Reis, A. J., Midmer, D. K., Biringer, A., Carroll, J. C. & Stewart, D. E. (1996). Antenatal psychosocial risk factors associated with adverse postpartum family outcomes. *Canadian Medical Association Journal*, 154, 785-799.

Zuckerman, B. & Zuckerman, P.M. (1997, May). Pediatric news. *Child*, 12, 70.

Zung, W. W. K. (1965). A self-rating depression scale. *Archives of General Psychiatry*, 12, 63-70.

Appendices

APPENDIX A

Information Letter

Dear Mother of Triplets.

As the mother of four year old triplets myself, I know how limited your free time is. I will ask only for a few minutes of your attention to read this letter.

I have become very concerned about the lack of available information about the process involved with mothering three children simultaneously. I am a registered nurse with a Master's Degree in Maternal-Child Health and a Doctoral candidate at Old Dominion University in Norfolk, Virginia, currently conducting research for my dissertation concerning the coping methods used by mothers of triplets. My specific interest is in how mothers of triplets cope, what they consider their stresses to be, and what types social supports are important in their coping.

My study requires approximately 45 minutes to complete. The simple questionnaires ask you to rate various aspects of coping, stress, depression, and social support, as well as providing some basic information about your and your family. All information will be coded, so confidentiality will be maintained. Please answer every question.

Although this study may not benefit you directly, it is hoped that the results of the study will provide the basis for the development of ways to help mothers expecting triplets to prepare better for the experience of day-to-day life with three children of the same age. If you are interested in the results of the study, a summary will be sent to you by contacting me, Susan M. Kaplan R.N., M.S. at 757-624-9072.

Thank you in advance for your help.

APPENDIX B

Participant Consent Form

Coping Processes Used By Mothers of Triplets

I understand that I am being asked to voluntarily participate in a research study which has been designed to improve the understanding of how mothers of triplets cope. I understand that all of my answers to the questions on the questionnaires that I will complete will be coded by number so that my responses will remain confidential, and my name will not be associated with my responses.

I understand that my decision to participate or not participate in this study will in no way influence my association with the Triplet Connection or its activities, nor will it jeopardize any current or future medical care that I may receive. The study design, procedures, and materials have all been reviewed and approved by the Human Subjects Committee, College of Health Science at Old Dominion University, Norfolk Virginia.

Participation in this study will involve completion of a packet of questionnaires which will take approximately 45 minutes. All materials will be coded in order to maintain confidentiality and privacy. I understand that my completion of these forms will imply my consent.

I understand that my participation in this study is voluntary, and that I will not receive any compensation for participating, nor will there be any direct benefit to me from the results. It is hoped that future mothers of triplets will benefit from the better understanding of their needs gained through this investigation. I understand that I may withdraw from this study at any time without penalty.

Although there are no known health risks involved in participating in this study, there may be unidentified risks. If any discomfort should arise as a result of completing the materials, I understand that I may contact the investigator. Susan M. Kaplan, R.N., M.S. at 757-624-9072 and/ or Laurel Garzon, Ph.D., Dissertation Chair at 757-683-5250 to ask questions or discuss my concerns.

A summary of the results will be available upon request by contacting Susan M. Kaplan at the above number. My signature below indicates my consent to participate in this study.

Subject's Signature
Date

Witness' Signature
Date

I have explained the above to the subject on the date stated on this consent form.

Investigator's Signature

Date

Please Note

Copyrighted materials in this document have not been filmed at the request of the author. They are available for consultation, however, in the author's university library.

Pages 155-161

UMI



"A Network of Caring & Sharing For Multiple Birth Families"

Autobiographical Sketch

Susan Mullen Kaplan was born in Boston, Massachusetts, on February 12, 1954. She attended Simmons College in Boston where she earned a Bachelor of Arts degree in Nursing in 1976. In 1980, she was awarded a Master of Science degree in Maternal-Child Nursing by Texas Woman's University. Concurrently, as a nurse-fellow in the Adolescent Health Training Project at the University of Texas Health Sciences Center - Southwestern Medical School in Dallas, she completed a fellowship in adolescent health care in 1980. She has been a member of Sigma Theta Tau, the National Honor Society for nurses since 1985.

Positions held include staff nurse positions within hospital and community health settings, clinical nurse specialist positions in hospital, clinical research, and ambulatory diabetes care centers. Assistant Director positions include Children's Medical Center of Dallas Education Department, and with Program Development and Evaluation at the Diabetes Institutes, Eastern Virginia Medical School in Norfolk, Virginia. Most recently, Ms. Kaplan has worked as an independent nursing consultant for Norfolk Senior Center, and for several area hospitals, working on projects related to program development.

Publications include:

Kaplan, S. (1990). The nurse as change agent. *Pediatric Nursing*, 16.

Kaplan, S. (1991). The absolutely basic concepts of being a nurse entrepreneur. *Pediatric Nursing*, 17.