EARLY POSTPARTUM CONCERNS OF MOTHERS IN DAR-ES-SALAAM, TANZANIA

by



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for the degree of Master of Nursing

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Dedication

This work is dedicated to the memory of my loving and trusting Dad. His death when I was at the beginning of a very tight full-time graduate-school programme was a major shock to me. It is God's will that he died at the particular time. May he rest in peace.

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ABBREVIATIONS

CCM = "Chama cha Mapinduzi" (The Tanzania ruling party)

CI = Confidence interval

M = Mean

MCH = Maternal and child health

SD = Standard deviation

UNICEF = United Nations Children's Fund

WHO = World Health Organization

Abstract

This study was designed to assess Tanzanian women's perceptions of their concerns during the early postpartum period and explore the relationship of these concerns to parity, experience with child care, age, marital status, religion and tribe. The Lazarus and Folkman (1984) stress, appraisal, and coping framework guided the study. A convenience sample of 100 mothers with uncomplicated vaginal deliveries were selected from Dar-Es-Salaam. By means of a card-sort, mothers sorted items as "worries", "interests", "confidences", or "not applicable". Hotelling's multivariate test, followed by univariate F-tests and Bonferroni correction determined that primiparas had significantly more worries and interests than multiparas, and that multiparas had significantly more confidences than primiparas. Two-sample t-tests showed that the two groups of mothers did not differ in their level of worry and interest, but multiparas' level of confidence was significantly higher than that of primiparas. Spearman rank order correlations showed that age categories were negatively correlated with the number of worries and positively correlated with the number of confidences. Pearson correlation coefficients showed that parity was negatively correlated with the number of worries and positively correlated with the number of confidences. However, parity and the age of the mother were not independent of each other because 64% of the primiparas were below 20 years and only one multipara was below 20 years of age. Child-care experience score was negatively correlated with the number of worries and marginally correlated with the number of interests and positively correlated with the number of confidences. Regression of age, parity, and experience with child care score on the number of worries, interests, and confidences showed that experience with child care explained most of the variations in worries and confidences. The findings indicate the need for postpartum follow-up care to assist mothers in reducing the number of worries and in increasing their confidence in dealing with postpartum concerns. Recommendations suggest the development of postpartum intervention programmes such as in-hospital teaching and community-based assessment, guidance, and support.

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CHAPTER I

INTRODUCTION

Background of the Study

Although the postpartum period is considered to be a gratifying one for the mother because of the birth of the baby after the completion of the long-awaited, anticipated, and dreaded labour and delivery (Rubin, 1961a, 1967a, 1967b, 1984), it is also a beginning of challenges and adjustments for her and her family (Gruis, 1977; Harrison & Hicks, 1983; Hiser, 1987; Smith, 1989). During the early postpartum period, family members are expected to assume added roles and adjust their usual routines.

Studies have established that new mothers in Western societies have various concerns related to their infants, themselves, and their families in the early postpartum period (Fillmore & Taylor, 1976; Gruis, 1977; Harrison & Hicks, 1983; Smith, 1989). However, the scope of these studies has not been wide enough to include correlates that would suggest the applicability of those findings to women in non-Western communities. The factor limiting the external validity of those findings is population validity, which involves generalizing to a target population from the population from which the study sample was drawn (Shelly, 1984). External validity or generalizability is threatened when subjects from one environment or setting are used in research that is generalized to populations in other

settings. The social-cultural differences between North America and Africa necessitate studies with African populations if the results are to be clearly applicable to Africa.

Furthermore, previous studies used a broad variable of concern and did not incorporate its relationship to personal or environmental variables that influence women's perceptions of their concerns. Studies that have attempted to subdivide the concern variable into the more specific variables of worry and interest (Hiser, 1987; Moss, 1981; Rovers, 1986) have had results that have limited application. Hiser's and Moss's study subjects were multiparous women only, and although Rovers studied the concerns of both primiparas and multiparas, she did not adequately analyze the interest variable.

Research on postpartum concerns has been done for the purpose of identifying needs for intervention in the postpartum period. Being able to identify these needs is especially important in view of the current trend toward shorter hospital stays in North America (Tribotti, Lyons, Blackburn, Stein, & Withers, 1988). Findings from that research provide nurses with a general perspective from which to understand the expressed needs of mothers. A postpartum program that is based on the clients' expressed needs and concerns enables nurses to assess accurately, make appropriate nursing diagnoses, and develop strategies that

effectively address unique client needs (Tribotti et al. 1988). Accurate assessment and interventions are essential in dealing with the challenges of the postpartum period. In Tanzania, however, women who deliver normally with no complications are discharged home between 24 and 48 hours after delivery and there is no systematic postpartum follow-up care for them.

Realizing the importance of maternal care, especially in developing countries, the World Health Organization has launched the "Safe Motherhood" initiative whose "Call to Action" aims to improve direction for maternal health (WHO, 1987). Its goal is to reduce the health risks to which women are exposed during childbearing and thus reduce maternal morbidity and mortality (WHO, 1987). In Tanzania, the maternal mortality rate is between 200 and 400 per 100,000 births (Government of the Republic of Tanzania/UNICEF, 1990).

In Tanzania, and many other developing countries, the traditional focus in maternal and child health (MCH) services has been product (baby) oriented (Tanzania Ministry of Health, 1990). According to Raikes (1989), MCH services were initiated in all East African countries by Christian missionaries at the beginning of the twentieth century. In these mission-run MCH services, women were considered as producers of babies who might be candidates for baptism.

The MCH services that are currently available in Tanzania still focus on monitoring the health of the baby and provision of postpartum care to women is almost lacking. (Tanzania Ministry of Health, 1990; Government of the Republic of Tanzania/UNICEF, 1990). Despite an increase in health-sector spending for community-based programmes such as the training and use of MCH Aides, village health workers, and traditional birth attendants (Tanzania Ministry of Health, 1990), there has been little change in the structure or philosophy of Tanzania's MCH services because they have remained for the most part centred on women's reproductive role (Raikes, 1989). For example, a recent survey of MCH services in Dar-Es-Salaam, Tanzania's largest city, revealed that only 5% of these services had established postnatal clinics for women. Therefore, while MCH services in Tanzania have succeeded in providing health care for children, they have not succeeded in caring for women (Government of the Republic of Tanzania/UNICEF, 1990). Little attention is paid to what the woman goes through as a result of childbearing (Raikes, 1989).

A woman who has recently given birth deserves to be understood as a person undergoing the impact of a major life change that may create needs not only in relation to her infant but also in relation to her expectations of herself and her family. The purpose of this study was to determine what women in urban Tanzania perceive as concerns during the

postpartum period. The information from this study can be used to guide postpartum follow-up care establishment in Tanzania. The card-sort method was selected because it allows subjects to participate actively in the process. It was also an appropriate method for most women in Tanzania, who are not generally familiar with filling in questionnaires and for whom responding to oral questions about their needs in the postpartum period would have been an unusual experience.

Theoretical Framework

The model of stress, appraisal, and coping developed by Lazarus and his colleagues provides a framework for assessing women's expressed concerns during the postpartum period. This model incorporates the concept of stress, appraisal and coping of which only the first two are applicable in this study.

Stress

Lazarus and Folkman (1984) defined 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). Two critical processes that mediate the person-environment relationship are appraisal and coping with the appraisal process considering both the characteristics of the person and the nature of the environment in a transactional relationship (Lazarus &

Folkman, 1984). Lazarus and Folkman suggest that stress be treated as an "organizing concept for understanding a wide range of phenomena in human adaptation" (p.11). Stress is therefore considered a rubric consisting of many variables and processes.

Cognitive Appraisal

According to Lazarus and Folkman (1984), there are two types of stress appraisal: primary and secondary. Only primary appraisal, which involves a person's evaluation of what is "at stake" in a given transaction was applicable in this study. There are three kinds of primary appraisal: "irrelevant", "benign-positive", and "stressful".

An "irrelevant" appraisal is made when an encounter carries no perceived implication for the person. The person has no investment in the possible outcomes and the encounter impinges on no value, need, or commitment. Nothing is to be gained or lost in the transaction when an encounter is appraised as irrelevant. According to Lazarus and Folkman (1984), it is highly adaptive for humans to be able to distinguish among relevant and irrelevant cues so that they can mobilize for action only when it is desirable or necessary.

A "benign-positive" appraisal is made if an encounter is perceived as having positive outcomes, that is, if it preserves or enhances well-being or promises to do so. This appraisal is characterized by feelings of joy and

peacefulness. Even though totally benign-positive appraisals, those without some degree of apprehension, are rare, this type of appraisal does not require mobilization of coping responses.

A "stressful" appraisal involves a person's perception of harm/loss, threat, and challenge. Harm/loss involves damage or loss that has already occurred, while a threat appraisal concerns anticipated harms and losses and is characterized by negative emotions such as fear, anxiety and anger. When stress appraisal is perceived as a challenge, the focus is on potential gain or growth and is characterized by pleasurable feelings such as eagerness and excitement. Appraisals of stress as a threat or as a challenge necessitate mobilization of coping responses.

In secondary appraisal a person evaluates the coping resources or options available. Secondary appraisal is an important aspect of every stressful encounter because the outcome depends on what can be done, as well as what is at stake. In addition to evaluation of coping options, secondary appraisal involves evaluation of the consequences of using a particular coping strategy.

The way a situation is appraised affects one's ways of coping, which is defined as "constantly changing cognitive and behavioral efforts to manage specific external/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1984,

p.141). There are two types of coping: emotion-focused and problem-focused. Emotion-focused coping is directed inward to change the meaning of the event and regulate distressing emotions; problem-focused coping includes the efforts taken to solve the problem.

Factors Influencing Appraisal

According to Lazarus and Folkman (1984), different situational factors impose different stress-appraisal and coping demands. Situational factors that influence appraisal are novelty, event uncertainty, and timing. Novel situations are those with which the person has not had previous experience. Event uncertainty involves the notion of probability to understand how the perceived likelihood of an event's occurring influences one's appraisal. Timing is a temporal factor that involves how much time there is before an event occurs and how long the stressful event persists.

Lazarus and Folkman (1984) also recognize that stress appraisal and coping are affected by individual differences which arise from people's diverse life histories, experiences, and developmental factors. These also involve personal factors, such as commitment, that express what is important and meaningful to people and that underlie the choices they make (or are prepared to make) to maintain valued ideals and beliefs. These factors may be personally formed or socially shared values and norms. Lazarus and

Folkman (1984), state that beliefs determine what is perceived as fact or how things are interpreted as happening in the environment and shape the person's understanding of the encounter's meaning. They argue that, even though appraisal is often taken to be a conscious, rational, and deliberate process that involves personal agendas that are easily operationalized, less accessible agendas are also important.

Also, according to Lazarus and Folkman (1984), personal and situational factors contribute to a person's evaluation of what is at stake, its significance for well-being, and what, if anything, can be done. In most human encounters, the available information with which to make these evaluations is unclear or insufficient with respect to at least one, and sometimes all of the factors.

Concerns as Stressors

According to the Concise Oxford Dictionary "concern" denotes a relation that can be associated with feelings of anxiety and interest. Postpartum concerns are matters of special worry, interest, or in which the mother may feel confident (Rovers, 1986).

Lazarus and Folkman's (1984) definition of stress involves a relationship of the person with his or her environment. Lazarus and Folkman also identify the stress-appraisal process as being associated with feelings of anxiety, motivation, or joy. According to Benner and Wrubel

(1989), whose theoretical framework is based on Lazarus and Folkman's model, people inhabit their world in an involved manner rather than a subject-object way. Because a concern involves what has meaning to the person, what threatens, challenges, or harms the concern also does so to the person. Also, because the transactional approach views stress as a result of the person's grasp of a situation's meaning, what concerns a person can be a source of stress.

Summary

The focus in Lazarus and Folkman's model is the fact that stress is a relationship between the person and his/her environment that is mediated by the processes of cognitive appraisal and coping. The concept of cognitive appraisal involves one's evaluation of the significance of what is happening to one's well-being. Lazarus and Folkman emphasize the assessment of appraised meaning of a situation and the factors that influence the appraisal.

Literature Review

The period after childbirth has long been considered as one that involves stress to the parents, who undergo the process of adjusting to new roles. Descriptive nursing studies have been conducted to identify the sources of concerns in the postpartum period.

Sources of Concerns in the Postpartum Period

When people experience changes in their life-styles, for example, as a result of the birth of a baby, those

changes can produce varying degrees of stress (Ball, 1987). Several studies have been done to identify primiparous mother's specific concerns in relation to infant care (Bliss-Holtz, 1988; Fillmore & Taylor, 1976) and their general concerns about their infants, themselves, and their families (Bull, 1981; Mercer, 1986; Pellegrom & Swantz, 1980).

Postpartum adjustment is not necessarily easier for multiparous mothers than it is for primiparous mothers. Although a multiparous woman may have confidence in her ability to care for her infant, she has a more complex family system to reconstruct and maintain. Realizing this, several researchers have also sought to assess the concerns specific to multiparas in relation to infant care, self, and family matters (Hiser, 1987; Moss, 1981). Studies which included the concerns of both primiparas and multiparas have explored infant-care concerns only (Rutledge & Pridham, 1987; Summer & Fritch, 1977). Studies that explored infant, mother, and family concerns of both primiparas and multiparas (Flagler, 1989; Gruis, 1977; Harrison & Hicks, 1983) used a broad and non-specific definition of "concerns".

The literature identifies maternal tasks or major adjustment components which are usually sources of potential stress among women in the postpartum period (Affonso, 1987; Gruis, 1977; Hawkin & Gorvine, 1985; Mercer, 1981; Pridham,

Egan, Chang, & Hansen, 1986; Rubin, 1984;). Gruis (1977) categorized the needs of mothers in relation to four tasks they must accomplish: (1) physical restoration, (2) learning to care for a dependent infant, (3) relating with the infant and (4) accommodating the infant in the family. In a review of the literature, Afforso (1987) classified maternal needs and concerns into five general areas of potential sources of stress: (1) daily activities, (2) impact of childbirth (3) mother-infant interactions, (4) social activities and support, and (5) self-assessment.

Using Lazarus and Folkman's (1984) stress-and-coping model, Pridham et al. (1986) examined the concerns of mothers (n=62) and their ways of dealing with those concerns. Content analysis of daily logs kept by mothers revealed similar categories of concerns as those identified by Gruis (1977) and Affonso (1987), namely, (1) mother's physical and psychological status, (2) fulfilling tasks in relation to home, family, and social responsibilities, (3) planning activities for self and socialization, (4) behaviour of self and others, (5) conditions that affect the smooth running of daily activities, and (6) unexpected events.

Rubin (1984) has described the delivery of the baby as a climax to but not the end of the childbirth experience. The woman has to undergo physical involution from the expansive growth of pregnancy and recover from the labour

and delivery experience. She has also to develop maternal behaviour in the interactive system of mother and child. In addition, her family has to adjust its relationships to accommodate the new roles and the new member.

Affonso and Mayberry (1989) conducted a study to identify the common stressors in a group of 221 childbearing women, 60 of whom were in the postpartum period. The postpartum group reported high stress intensity regarding their concerns about their baby's welfare and their experience during pregnancy, labour and delivery. Another high-stress level area was related to the newborn's behaviour, especially crying. However, the study sample was limited to white, educated, middle-class women, with the postpartum group comprising only approximately 25% of the total sample. Further, the interviews were targeted to negatively perceived events, without regard to positive events that may also be stressful.

The postpartum-adjustment process has been found to be influenced by variables such as the support network available to the mother (Crnic & Greenberg, 1987; Crockenberg, 1981; Cronenwett, 1985) and the woman's level of confidence in her mothering abilities (Cronenwett, 1985; Mercer, Hackley, & Bostrom, 1983). These variables, then may be said to influence appraisal of concerns.

In summary, the major categories of postpartum maternal tasks or adjustment components that can be sources of

concerns are physical restoration, learning infant needs and mothering skills, relating with the infant and accommodating the infant in the family.

Physical restoration. The puerperium, which involves major physiological changes in the woman, is defined as the period of several weeks between the end of labour and the return of the reproductive tract to its normal, non-pregnant state (Hawkins & Gorvine, 1985). During this period, the uterus undergoes involution, and the organs that the enlarged uterus displaced return to their normal position. These physiological processes aid in the return of the woman's figure to normal (Hawkins & Gorvine, 1985).

The postpartum period can be a time of physical discomforts from an episiotomy wound, breast engorgement, sore nipples, leaking milk, and fatigue. To determine the postpartum concerns of breast-feeding mothers, Graef, Mc Ghee, Rozycki, Fescina-Jones, Clark, Thompson, and Brooten (1988) studied 32 first-time mothers who had had uncomplicated vaginal deliveries. Most physical discomforts, other than nipple problems, occurred during the first and second week postpartum. Of the 21 women reporting physical concerns, 62% reported discomforts with sore and full breasts and 57% were concerned with nipple pain and blisters. Four mothers (19%) reported increased uterine bleeding and cramps during the first week. Twenty-four percent of mothers experienced painful episiotomies during

the first week. Only three mothers (14%) reported haemorrhoidal discomforts during the first week, and another three (14%) expressed muscular pain during the first week. Other studies identified that fatigue was also a concern mothers usually had (Chapman, Macey, Keegan, Borum, & Bennet, 1985; Gruis, 1977).

It has been identified that physical discomforts and fatigue are related with the occurrence of emotional tension during the postpartum period (Affonso, 1984). Further, the frequency and intensity of physical and emotional concerns have been found to change over time (Bull, 1981; Graef et al. 1988).

Learning infant needs and mothering skills. Rubin (1984) has stated that if a mother does not feel competent providing care to her infant, does not produce enough milk, or is not able to soothe her infant when crying, the woman may view herself as a failure. The birth of the child involves a transition in the child's location from the woman's innermost body space to the external, environmental space, a transition from the child in fantasy during pregnancy to being the known, real child. There is also a transition in the woman's identification of herself as mother from the receptive mode of taking-in to the mode of taking-on, of actively doing and being mother of the child (Rubin, 1984).

To examine the changes in the focus of concerns among first-time mothers (n=40), Bull (1981) used a self-administered questionnaire on discharge and after one week at home. The results showed no significant change in the frequency and intensity of concerns related to the infant after one week. Further analysis using the sub-categories of physical care and infant behaviour indicated that physical-care concerns decreased in number and intensity at one week while infant-behaviour concerns continued to be of moderate to much concern. These results suggest that previous experience and in-hospital experience may have contributed to the decreased concerns about physical care. However, the study included only primiparous mothers and the use of a non-random sample limits the generalizability of the findings.

Differences between the concerns and sense of confidence of primiparous and multiparous mothers were identified in the research of Walker, Crain, and Thompson (1986a,1986b). The results showed that maternal attitudes during the postpartum period changed as mothers became more self-confident and positive toward themselves from birth to between four and six weeks after delivery. Multiparas demonstrated more positive attitudes towards themselves and were more confident in caring for their infants than primiparas.

The differences between primiparous and multiparous mothers were also determined in Hiser's (1987) study, where multiparas chose more family items as concerns rather than self or infant items. In Howard and Sater's (1985) study, of all identified needs in the postpartum period, infant care was of primary concern among younger and first-time mothers.

Mercer (1986) used a longitudinal design to study maternal-role attainment as a developmental process and made comparisons between first-time mothers (n=294) aged 15 to 19 years, 20 to 29 years, and 30 to 42 years. In terms of reported frequency, results show that primiparas had more infant concerns (n=438) than concerns of mothering (n=258), career (n=112), husband/mate relationship (n=55), and body image (n=43). Comparison of the three age groups showed no significant differences in the number of concerns listed or in the numbers reporting specific concerns about the infant. The large sample size in Mercer's study increases the generalizability of the findings to primiparas. The study design also allowed age-group comparison of first-time mothers.

Relating with the infant. In addition to meeting her infant's physical needs, the mother has to establish a relationship with her infant. It has been recognized that the adaptation between the infant's personality and that of the mother is important (Brazelton, 1990). A woman needs to

learn about and understand her infant. She also needs information about growth and development and information about her infant's unique patterns of crying, sleeping, feeding, and other behaviours (Brazelton, 1990).

Because the mother-infant interaction is reciprocal (Mercer, 1981), the infant's crying, sleeping, and feeding behaviours may act as stressors, and parenting behaviours may also affect the infant's behaviour (Roberts, 1983). Mercer (1986) found that maternal perceptions about infant behaviour were associated with how mothers felt about their infants. Mothers' perceptions of their neonates during the first days of life and at one month were related to their reported feelings about the mothering role. Women who perceived their infants behaviour as average or below average in during the early postpartum period were less satisfied with the mothering role. A fundamental question to ask however, is whether women's concerns about relating to and knowing their infants would be similar in a wide variety of cultures.

Accommodating a new member. The birth of a new baby requires the mother to organize her life so that the demands of the baby and those of other family members and the rest of society are accommodated (Gruis, 1977; Affonso, 1987). Turner (1978) explained that taking on new roles usually requires adjustment in the behaviours and activities related to most existing roles. People will perceive more concerns

about role taking if they evaluate their abilities and sources of support to be inadequate.

Studies have revealed that the change of life style usually requires the woman to decrease involvement in career pursuits, personal interests, and social roles (Tulman & Fawcett, 1988; Tulman & Fawcett, 1990; Tulman, Fawcett, Groblewski, & Silverman, 1990). The literature also suggests that changing relationships within the family may cause concern (Gruis, 1977; Harrison & Hicks, 1983; Hiser, 1987). The marital relationship may suffer from neglect, since now the couple has little time to develop it (Ellis & Hewat, 1985; Rubin, 1975; Gruis, 1977; Fischman, Rankin, Socken, & Lenz, 1986; Affonso, 1987). Postnatal loss of libido is a very common condition which may threaten the stability of a marriage (Tobert, 1990). Studies have established that sexual behaviour decreases toward the end of pregnancy and that there is only a slow return to pre-pregnant levels in the first postnatal year (Abraham, Child, Ferry, Vizzard, & Mira, 1990; Alder, 1989). Some of the factors that have been associated to change in sexual behaviour are physical discomforts during intercourse as the woman may not have completely recovered from childbirth trauma (Abraham et al., 1990) and hormonal changes (Alder, 1989). Further, other children may be jealous of the attention demanded by the new baby (Chapman et al., 1985; Gruis, 1977; Merilo, 1988).

In summary, the birth of a new baby necessitates the re-organization of old patterns of life among family members. Lazarus and Folkman (1984) also recognize the importance of the properties of events that make them stressful. They also recognize that a person's readjustment, desirability, anticipation, and control of a stressful event will depend not only on the qualities of the situation but also on personal characteristics. The extent to which a situation is stressful is determined by a confluence of personal and situational factors in a specific transaction.

The Variable of Concern in the Postpartum Period

To deal adequately with each component of "concern", Fillmore and Taylor (1976) suggested breaking it down into "worry" and "interest". They stated that doing so would require, at minimum, an "interest" questionnaire, an "anxiety" or "worry" questionnaire, and a set of questions for evaluating ethnicity, class, education, child-care experiences, and family history. They based this suggestion on a critique of previous research and the findings from their own study. In their critique, they found that the studies on infant-care concerns had not raised directly the question of the correlates of concerns but were based on the anxiety model of concerns, which assumes that concerns play a negative role in the mother-infant relationship. In their own study, they interviewed 52 primiparous mothers at one

week postpartum to explore the correlates of infant-care concerns. The hypotheses that postulated negative correlations between years of education, child-care experiences with concern scores were not supported by correlation coefficients. Indeed, instead of finding the hypothesized negative correlation between the amount of assistance at home and sources of advice and information with concern scores, they found positive correlations. They then concluded that the discrepancy in the findings could have resulted from the use of a non-specific concern variable, and thus they proposed the two-component model of worry and interest. The essence of Fillmore and Taylor's suggestion is that there is more than anxiety in the concerns of women. Lazarus and Folkman's model also indicates that stress appraisal can be associated with various forms of feelings, given the fact that some encounters have no implications for the person's well-being and others are associated with negative or positive feelings.

Fillmore and Taylor's two-component model suggests that, if concern involves interest or positive feelings about infant care, it would play a positive, rather than negative role in the mother-infant relationship. The model also sees concerns as a result of the developmental learning process. According to Fillmore and Taylor (1976) concerns are initially based on learning and are changed by (1) later

passive learning, for example, reading courses and materials, (2) later active learning, for example, practical application of information, (3) the infant's behaviour that would indicate successful or unsuccessful practice, (4) perceived contradictions in the information learned, and (5) other influences, for example, nursing interventions and other supportive activities.

Assuming that concerns include both anxiety and interest, Fillmore and Taylor (1976) also suggest (1) that child-care experiences, education, availability of reading materials and support would diminish the anxiety component, (2) that the level of interest would be increased by patient demonstrations, prenatal attendance, and other kinds of reading materials, and (3) that mothers with high interest and low anxiety would have expanded their sources of information while those mothers with high anxiety and low interest may find that many sources of information only increase their anxiety and probably reduce their contact with potential sources of information and help.

To operationalize Fillmore and Taylor's two-component model of concern, Moss (1981) used a card-sort to study the concerns of multiparous mothers (n=56) on the third day after delivery. Results showed these mothers were not as concerned about themselves or their infants as about family relationships. The card-sort method was limited, however, to counting of frequencies and calculating of percentages,

with no assessment of the degree or level of concern for various items. Information about the degree of concern may help in setting priorities during postpartum follow-up care and understanding mothers' levels of anxiety or interest in various postpartum concerns. Another limitation is that Moss collected data on the third day, by which time the full responsibility and dependency of a newborn was not yet been realized.

Rovers' (1986) study measured postpartum concerns in terms of levels of worry and interest and added the component of "confidence." She employed a quasi-experimental design, with 50 mothers in the study group and 50 mothers in control group. The purpose of the study was to determine the principal concerns expressed by rural women during the postpartum period, address those concerns through an individualized teaching programme, and determine the principal variables related to the development of maternal confidence. Results show that, compared to the control group, the study group felt that their questions had been adequately addressed. This indicated that the individualized teaching programme had positive effects on mothers' needs for information. The researcher, however, questioned the reliability of the interest variable because mothers seemed to rate their interest on general desire for information rather than their active willingness to seek information. The findings also suggested that the teaching

programme had increased the subjects' confidence in their mothering behaviour. A mother's appraisal of her competence or level of confidence may be an important factor in how she adapts to accomplish the maternal tasks associated with the birth of a baby (Rutledge & Pridham, 1987).

Far from being an intuitive feminine function, confidence in attaining the maternal role is a complex social and cognitive process that is learned (Rubin, 1967a). While most women achieve confidence successfully, some experience difficulties (Mercer, 1981). Further, the amount of anxiety or interest related to concerns during the postpartum period may hinder or help the woman's successful achievement of confidence.

Rutledge and Pridham (1987) examined the relationship between mothers' (n=140) early postpartum experience and their perceptions of their competence for infant feeding and care. The results of a self-administered questionnaire showed that in-hospital teaching was associated with a sense of competence for bottle-feeding mothers. For breast-feeding mothers, their sense of competence was related to the amount of perceived rest. Parity had a significant effect on perceived competence score, a finding inconsistent with those reported by Pridham and Schultz (1983) but consistent with Curry's (1983) findings. The women's age, race, social status, and education were not significantly related with their sense of confidence. The inconsistency

in the findings can be explained by confounding variables that are associated with parity. Experience in caring for children is not always associated with caring for one's own children.

Influencing Maternal and Social Variables

Educational level, yearly income, and sources of support have been found to be related to women's perception of concerns during the postpartum period (Fillmore & Taylor, 1976; Hiser, 1987). To examine mothers' concerns, Hiser (1987) used an adapted version of the Moss (1981) card-sort with multiparas (n=20) at two weeks postpartum. The findings showed that the maternal variables of age, gravida status, educational level, and yearly household income were not correlated to expressed concerns when Pearson's correlation coefficient was used. However, using Fisher's exact test, a two-by-two cross-tabs design identified significant relationships between card-sort frequencies of concerns and educational level, yearly household income, sex of the baby and parenting preparation. Hiser (1987) noted that parents' readiness to learn child-care and parenting skills develop after birth, when parents start to assume the responsibilities of parenting roles. She also noted that studies done in hospital before the mother and child are discharged home do not capture the concerns that develop later. Even though this study examined the concerns of multiparas at two weeks by using specific correlates of the

concern variable (worry and interest), the sample was too small (n=20) for the study to yield generalizable results. The study sample was also limited to married mothers or those living with a partner at the time of data collection. Further studies that will consider both unmarried primiparas and multiparas are needed. One might expect that the concerns of first-time single mothers would be different from those of a multiparous single mother and that the concerns of single mothers would be different from those of married mothers.

Social support has been found to influence the parent's ability to cope with parenting and to affect the level of parent satisfaction with parenting and infant care (Cronenwett, 1985). In addition, new mothers have been found to tend to identify their main sources of help as their partners, their mothers, their mothers-in-law (Mercer, 1986; Pridham & Zavoral, 1988). The stress, appraisal, and coping framework also recognizes the effect of social support on how a person appraises and copes with a situation. Lazarus and Folkman also specifically distinguish between social networks or the types of relationships a person has, which is a relatively distal variable, and social support or the perception of the value of social interactions, which is a more proximal variable. The essence in making the above distinction is that having a social network does not necessarily entail getting support

from it. Thus, even though new mothers may have large social networks, their sources of support are normally those people close to them and those who care.

Social-Cultural Variations

Birns and Hay (1988) argue that the experience of being a mother is affected by a woman's personal history, her social position, and by socio-economic forces operating in her culture and her health. Issues that may be important or relevant to women in one culture may not carry the same significance to women in other cultures with different environmental conditions.

Women in Tanzania, like women in other African countries, continue to suffer from the poverty that afflicts the continent (Tanzania Ministry of Community Development, Youth, & Culture, 1988). Issues relating to the family's economic situation and the availability of adequate food for the family are important areas of assessment during the early postpartum period. It has also been noted that the general health of people in Tanzania, like that of other people in Third World countries, is generally poor because of the prevailing communicable diseases and malnutrition (Tanzania Ministry of Community Development, Youth, and Culture, 1988). These environmental constraints are some of the factors that make research target populations in Western communities different from those in non-Western communities. Prevention of communicable diseases through sanitation and

immunizations are important priorities to be assessed during the early postpartum period.

Other social-cultural variations are mother-infant interactions and infant-care patterns. For example, in Western research, rooming-in has been identified as influencing mothers' confidence level (Greenberg, Rosenberg, & Lind, 1973; Jordan, 1973). Rooming-in, the plan of having the newborn share its mother's unit in order to provide an environment that enhances a wholesome mother-child relationship and an opportunity for parents to learn about their infants and the care involved from the very beginning (Reeder & Martin, 1987), demonstrates a cultural difference between developed countries and developing countries like Tanzania. Rooming-in is not a significant issue in the latter instance simply because almost all women who deliver normally would have their babies with them for the duration of their hospital stay.

Infant crying as a concern in the postpartum period can be viewed differently as a result of varying environmental methods of handling a crying and fussing infant (Landau, 1982). Because the mother-infant interaction is reciprocal, an infant will react differently when left unattended most of the time than when in the constant company of a caretaker, as is the normative practice in Tanzania, where the baby would be carried in a sling while the mother goes about her usual activities.

Another cultural difference is breast-feeding. While some women in North America attempt to breast-feed and others choose to formula-feed (Graef et al., 1988), most women in Tanzania breast-feed during the early postpartum period. The specific concerns related to breast-feeding are therefore important issues of assessment. However, for those who attempt to formula-feed, keeping infant-feeding utensils clean is important because of the high risks of contamination that prevail in developing countries. On the whole, because of the contamination problems and the inadequacies in preparation, formula-feeding is not encouraged in Tanzania, especially in the early postpartum period. However, although breast-feeding is encouraged, it has negative consequences to the health of women, especially when combined with the effects of poverty, poor nutrition, heavy workloads, and repeated pregnancies (Government of the Republic of Tanzania/UNICEF, 1990). The imbalance between energy demands and food intake leads to maternal depletion, which renders women more susceptible to diseases.

Family planning is an area of concern that is also culturally significant. The contraceptive-acceptance rate stands at about 5-7% (Tanzania Ministry of Health, 1990). The low contraceptive-acceptance rate is one factor contributing to the fact that a typical Tanzanian woman will have between 6 and 7 babies (Tanzania Ministry of Health, 1990). Together with social constraints like poverty, the

birth of a child may be very stressful to a family with an already large number of children.

Summary

Even though numerous studies have been done to explore the concerns of mothers during the postpartum period, there are still gaps to be explained. These studies are North America based, so their applicability to other communities would be questionable in cultural and economic terms. Further, the "concern" variable used in these studies was unclear. In the three studies that did specify that variable, there was limited statistical analysis because of the methodologies used (Moss, 1981; Hiser, 1987); there was limited generalizability because of the sample size (Hiser, 1987); and the validity of the "interest" variable was questionable (Rovers, 1986). In addition, such studies have focused only on the concerns of married women or those living with partners, ignoring the single population.

Postpartum-concern research is needed in non-Western communities such as Tanzania, where the findings can be used to guide the establishment of postpartum follow-up care that is culturally specific. As identified in Lazarus and Folkman's model, there are factors that influence stress appraisal that would count for differences in the appraisal process of Western and non-Western women in the early postpartum period. The physical and social environments in major life events affect people's reactions vividly and

powerfully. According to Lazarus and Folkman (1984), given a similar and unambiguous environmental display, people see what is there, and there is little opportunity for individual differences. However, peoples' social existences are diverse, with varied ambiguities that play a large role in their perception and appraisal.

Figure 1 summarizes the approach taken in this study. The sources of concerns during the postpartum period were identified from the literature.

Purpose of the Study

The purpose of this study was to identify and describe what women in urban Tanzania identify as major concerns during the early postpartum period and to explore the relationship between those concerns and the variables of age, tribe, religion, parity, marital status, and education level. The specific research questions and hypotheses were:

1. What do urban Tanzanian women identify as worries, interests, and areas of confidence or irrelevance in the early postpartum period?
2. Is there a difference between what primiparous and multiparous mothers perceive as worries, interests, and confidences in the early postpartum period?

Hypothesis 2a: Primiparas will express a greater number of worries than multiparas.

Hypothesis 2b: Multiparas will express a greater number of interests than primiparas.

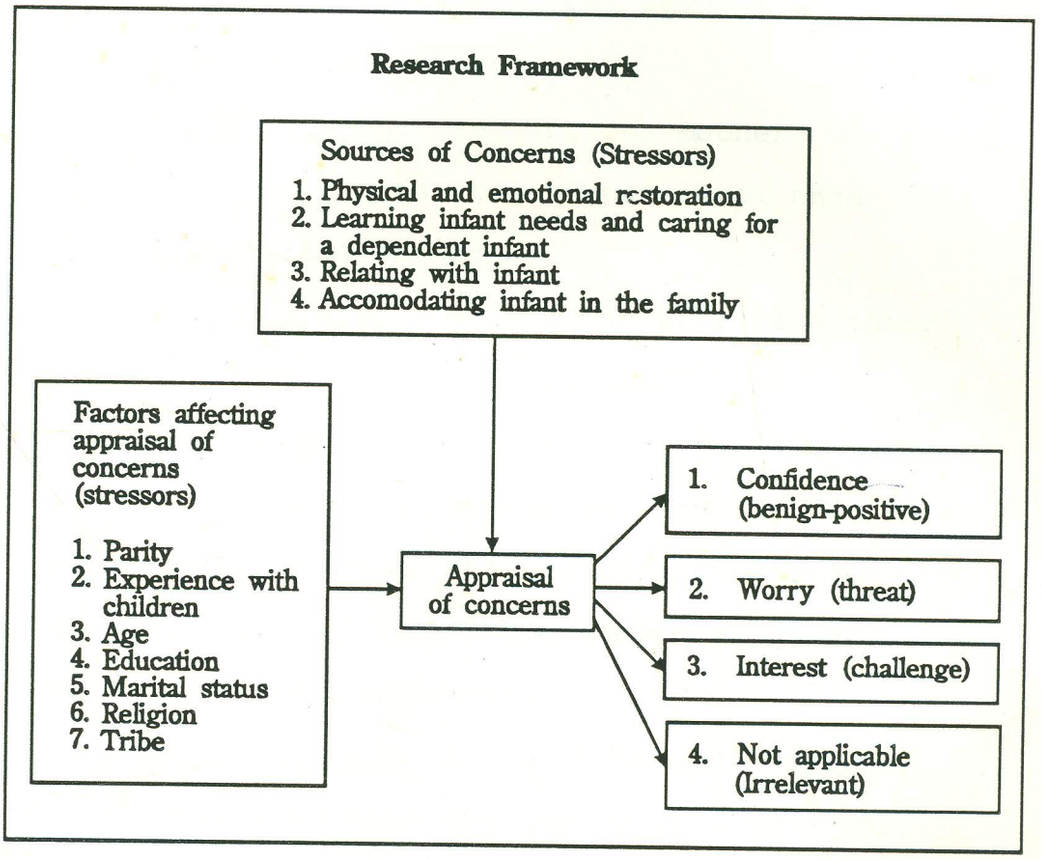


Figure 1: Research framework that reflects Lazarus and Folkman's (1984) stress-appraisal concepts and the findings from the postpartum-concerns literature.

Hypothesis 2c: Multiparas will have more items sorted in the confidence category than primiparas.

3. Is there a difference in the rating of the level of worry, interest, and confidence between

primiparous and multiparous mothers?

Hypothesis 3a: Primiparous mothers will rate their worries at a higher level than multiparous mothers.

Hypothesis 3b: Multiparous mothers will rate their interests at a higher level than primiparous mothers.

Hypothesis 3c: Multiparas will rate their confidences at a higher level than primiparas.

4. What is the relationship between the variables of age, parity, marital status, education level, religion, and tribe and the number of worries, interests, and confidence?

Hypothesis 4a: Age will be positively correlated with the number of interests.

Hypothesis 4b: Age will be negatively correlated with the number of worries.

Hypothesis 4c: Experience with children score will be positively correlated with the number of confidences.

Hypothesis 4d: Years of education will be positively correlated with the number of interests.

Hypothesis 4e: Married women and those living with a partner will express fewer

worries than will single women.

Hypothesis 4f: There will be no difference in the number of worries, interests, and confidences for all the tribal groups.

Hypothesis 4g: There will be no difference in the number of worries, interests, and confidences for all the religious groups.

Definition of Terms

Postpartum period: the time between delivery and when the mother's reproductive organs return to their normal, pre-pregnant state (Reeder & Martin, 1987).

Early postpartum period: in this study, reference to "early" meant the period after delivery to two weeks after discharge from the hospital.

Parity: in this study, parity was defined as the number of living children a mother had.

Concerns: matters related to the baby, herself, and her family and of which the mother has special worry, interest, or about which she feels confident (Rovers, 1986)

Worry: an uneasiness of mind, or something about which a mother is anxious because she does not know what to do about it (Moss, 1981; Rovers, 1986).

Interest: something about which a mother is curious or that draws her attention because she wants to learn more about it (Moss, 1981; Rovers, 1986).

Confidence: something about which a mother feels certain of having the information and skills needed to deal with the situation (Rovers, 1986).

Not Applicable: matters that are not important or do not pertain to the mother's situation during the early postpartum period.

Stress: 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 their well-being (Lazarus & Folkman, 1984).

CHAPTER II

METHODS

Study Design

A comparative correlational design, which aims at describing relationships among variables rather than at inferring cause-effect relationships (Polit & Hungler, 1987), was used. Hypotheses that have been tested in North America were tested in a different cultural setting.

In this study, Lazarus and Folkman's (1984) two concepts of stress appraisal as threat or challenge were operationalized by the two component variables of "concern"--"worry" and "interest"-- in relation to various items of concern. The benign-positive stress appraisal was operationalized or represented by the women's expressed "confidence" in the various concern items. The concept of irrelevant stress appraisal was represented by the study's "not applicable" category. The above variables--worry, interest, confidence, and not applicable--were the dependent variables or the outcomes of the study.

The independent variables of parity, experience with children, age, marital status, education level, religion and tribe can be described as personal and situational factors that influence stress appraisal.

Setting

Subjects for this study were identified through three maternity units in the city of Dar-Es-Salaam, the population

of which includes people from all of the various tribes of Tanzania. There are also various religious groups, but the major religious affiliations are Christianity and Islam.

Subjects were selected from the postnatal wards of three government hospitals of Temeke, Ilala, and Mwananyamala. These hospitals conduct normal and uncomplicated labour and deliveries. According to the Ministry of Health 1989 statistics, there was an average of 25-28 births per day in each hospital.

Population and Sample

The target population for this study consisted of women in the early (two weeks) postpartum period who had delivered vaginally, were either married or single, and ranged in age from 16 to 40. A convenience sample of 100 women who could read Swahili was selected during the period between October 1991 and January 1992. Half of the subjects were primiparas and half were multiparas. On each recruitment day, two lists of mothers (primiparas and multiparas) who met the inclusion criteria were made from delivery records. To incorporate randomization, every other mother on the list was picked. To control for confounding variables, the subjects met the following criteria:

1. no diagnosis of pre-existing medical problems;
2. no complications in the prenatal, intrapartum, or postpartum period;
3. the infant's gestational age at birth was 37-42

weeks;

4. no evidence of maternal or fetal distress;
5. no resuscitation of the newborn at birth and an Apgar score of greater than 7 at five minutes;
6. the newborn had no congenital abnormalities and the birth weight was between 2.5 kg and 4.0 kg;

Description of the Sample

Of the 159 subjects selected for the study, 100 were able to be followed up in their homes at 10 to 14 days postpartum. There were 100 infants born to the study subjects, that is, there were no multiple births. The infants birth weights ranged from 2.5 to 3.8 kg (mean = 3.01 kg), and their Apgar score at five minutes ranged from 7 to 10 (mean= 9.9).

Fifty women (50%) were first-time mothers. Among the fifty mothers, fifteen (30%), twenty (40%), and fifteen (30%) were selected from the district hospitals of Temeke, Ilala, and Mwananyamala respectively. The remaining fifty were multiparous mothers in the above similar proportions from the three hospitals. Most of the multiparous mothers had two or more children and only a few had four or more children (Table 1).

The two groups of mothers were statistically different in terms of the experience with children score (χ^2=67.00, df=6, p=.000). The score was calculated in the method described by Rovers (1986). For primiparous mothers, the

Table 1

Parity of Mothers (N=100)

Parity	N (%) of Mothers
1	50 (50%)
2	16 (16%)
3	20 (20%)
4	4 (4%)
5	10 (10%)

score was based on self-evaluation, and for multiparous mothers the score was based on the number of their own children and the age of the last child. The score ranged from 0 to 10 (mean=4.36, SD=3.06). Most primiparas' scores were 1 and 2, and most multiparas' scores were 6 and 7 (Table 2).

Table 2

Experience with Children Score by Parity

	N (%) of Groups	
Score	Primiparas	Multiparas
0	6 (6%)	-
1	18 (18%)	-
2	17 (17%)	-
3	9 (9%)	-
4	-	1 (1%)
5	-	1 (1%)
6	-	15 (15%)
7	-	20 (20%)
8	-	4 (4%)
9	-	2 (2%)
10	-	7 (7%)

The two groups of mothers clearly differed in terms of age (χ^2=55.08), df=3, p=.000). The mothers ages ranged from 16 to 40. Of the primiparous mothers, 64% were less than 20 years old and none was 30 or older, whereas only one multiparous mother was less than 20 years old and 28% were at least thirty years old (Table 3).

The two groups of mothers also clearly differed in terms of marital status (χ^2=14.51, df=2, p=.000) but they were similar in terms of education and religion. Most of the mothers had achieved primary education and there were four religious affiliations for the two groups of mothers (Table 3). There were a total number of 36 tribal groups represented in the study, and the Zaramo, which is the indigenous tribe of the Dar-Es-Salaam area, comprised 22 (22%) of the total sample (Table 4).

Methods of Data Collection

The card-sort was chosen as the method of data collection. The items of the card-sort instrument were translated from English to Swahili, as it was anticipated that many subjects would not speak or understand English. Translation was validated by expert translators.

Women who met the inclusion criteria were approached for information and consent (see Appendix B) before they were discharged from the hospital. At that time they were also asked questions that were used to complete the demographic-information form (see Appendix E). After two

weeks (within 10-14 days) postpartum, the subjects were visited in their homes at which time the card-sort was carried out. They were also asked information that was used

Table 3

Age, Marital Status, Education Level, Religion Reported by Mothers

Variable	N (%) of Primiparas	N (%) of Multiparas
Age*		
Below 20	32 (64%)	1 (2%)
20-24	16 (32%)	18 (36%)
25-29	2 (4%)	17 (34%)
30 and above	-	14 (28%)
Marital Status**		
Married	21 (42%)	43 (68%)
Living with Partner	9 (18%)	10 (20%)
Single	20 (40%)	6 (12%)
Education Level		
1-4 years primary	2 (4%)	1 (2%)
5-7 years primary	46 (92%)	46 (92%)
4-6 years secondary	2 (4%)	3 (6%)
Religion		
Catholic	11 (22%)	14 (28%)
Moslem	29 (58%)	30 (60%)
Lutheran	8 (16%)	3 (6%)
Anglican	1 (2%)	2 (4%)
Seventh Day Adventist	1 (2%)	1 (2%)

* χ^2=55.08, df=3, p=.000

** χ^2=14.51, df=2, p=.000

to calculate a score for their previous experience with infants (see Appendix F).

Table 4

Tribal Groups Reported by Mothers (N=100)

Tribe	N	(%) of Mothers
Zaramo	22	(22%)
Ndengereko	7	(7%)
Hehe	5	(5%)
Makonde	5	(5%)
Ngoni	5	(5%)
Chagga	4	(4%)
Rangi	4	(4%)
Pogoro	4	(4%)
Luguru	4	(4%)
Yao	3	(3%)
Nyiramba	3	(3%)
Nyamwezi	3	(3%)
Waha	2	(2%)
Ngindo	2	(2%)
Digo	2	(2%)
Bondei	2	(2%)
Kaguru	2	(2%)
Zigua	2	(2%)
Nyakyusa	2	(2%)
Nyaturu	2	(2%)
Matumbi	1	(1%)
Kutu	1	(1%)
Nyagatwa	1	(1%)
Doe	1	(1%)
Mwisenye	1	(1%)
Makua	1	(1%)
Jita	1	(1%)
Manyema	1	(1%)
Vigunda	1	(1%)
Nyiha	1	(1%)
Haya	1	(1%)
Mwera	1	(1%)
Arab	1	(1%)
Meru	1	(1%)
Pemba	1	(1%)
Pare	1	(1%)

The Card-Sort

A two-step card-sort tool was used. The first step was based on the method described by Moss (1981). Moss constructed a 61-item card-sort instrument to collect data about concerns of multiparous mothers on the third postpartum day. The instrument consisted of 61 index cards containing a word or a phrase of commonly expressed postpartum concerns. From her review of the literature and her personal experience, Moss identified three general topics of concerns relating to infant, mother and family matters.

To operationalize the two-component model--worry and interest--of the concern variable, as proposed by Fillmore and Taylor (1976), Moss's instrument required the subjects to sort the concerns into "worry", "interest", and "no concern" groups. To assess the reliability of mothers' sorting, Moss placed similar items on three pairs of cards. If the mother's sorting was reliable, the similar items would have been placed under the same heading. According to the Spearman-Brown Prophecy Formula, the split-half reliability for these three pairs was .84, .86, and .89.

In this study, the Moss tool was modified (with permission) to be specifically culturally congruent and also to incorporate Rovers' (1986) variable of confidence. To allow subjects to express what is important as well as what is not important or not relevant to their situation, there

was a "not applicable" category. Two items ("blood tests taken on baby" and "care of infant's circumcision") were removed because they are not routinely done in the early postpartum period in Tanzania. Several items relevant to Tanzania were added. The new tool had 75 items, of which 17 pertained to the family, 24 pertained to the mother, and 35 pertained to the infant. According to Polit and Hungler (1987), for adequate reliability and manageability, the card-sort tool should have between 60 and 100 items.

The second step of the card-sort required the subjects to sort the three groups of cards according to the degree of their worry, interest, and confidence, using a four-point rating scale as follows:

1 = very little worry / interest / confidence

2 = little worry / interest / confidence

3 = moderate worry / interest / confidence

4 = great worry / interest / confidence

The "not applicable" category did not require any sorting into levels.

Validity of the instrument. Content and face validity of the card-sort were assessed by three experts who were Tanzanians, nurses, and mothers. Content validity is concerned with the sampling adequacy of the content areas to be measured and is based on expert judgement (Polit & Hungler, 1987)

Reliability of the instrument. To assess the workability of the instrument, the English version was tried on three mothers in Halifax, Canada. The mothers were able to understand the instructions and managed to do the card-sort within 20 to 30 minutes. To establish if mothers in Dar-Es-Salaam would be able to understand the instructions, the items, and do the sorting of the Swahili instrument, the first 10 subjects were used as a pilot sample. There were no major difficulties in doing the card-sort, especially because the researcher explained all the steps and the translation had been done in a descriptive manner.

The same test used by Moss, the split-half reliability test on three pairs of similar items of "baby's weight" and "baby's weight loss"; "return of my figure to normal" and "change of figure"; "feeling on edge" and "feeling nervous and tense" was done to retest the reliability of the postpartum card-sort. The results of the reliability test were .69, .92, .93 respectively. A similar split-half reliability test was used for the second part of the card-sort. The mothers' sorting were considered reliable if the degree of worry, interest, and confidence for similar items was the same. The results of the reliability test were .61, .90, .91 respectively. Mothers' interpretations of the meanings of baby's weight and baby's weight loss may have affected the way they sorted those items. Whereas baby's weight could have been perceived as a current concern,

baby's weight loss could have been perceived as a not applicable item at that particular time.

Demographic Data Sheet

Information about age, parity, marital status, education, tribe, and religion was collected on a demographic data sheet (Appendix E).

Previous Experience with Infants Index

Rovers' (1986) Previous Experience with Infants Index, which is calculated from the number of previous children, and/or previous experience with care of infants, was used with permission (Appendix F).

Ethical Considerations

The research proposal was reviewed at Dalhousie University by the Thesis Advisory Committee of the School of Nursing and the Human Review Committee of the Faculty of Graduate Studies. In Dar-Es-Salaam, permission to conduct the research was received from the Dar-Es-Salaam City Council and also from the hospitals that were used for subject identification.

Consent and Confidentiality

A letter with information about the study was written to inform directors of the institutions that were used for subject identification (see Appendix A).

In the process of the study, only the researcher knew the names of the subjects. Information concerning the identity of the subjects was destroyed after completion of

the study. To participate in the study, subjects had to sign a consent form (see Appendix B). Subjects were also informed that there were no anticipated risks or benefits involved in the study. However, they were told that the results of this study might provide a basis for the establishment of a postpartum follow-up program to assist women in meeting the demands of the postpartum period. The study also provided a chance for women to voice their concerns related to their infants, themselves, and their families.

Methods of Data Analysis

Data from the card-sort were analyzed, by means of the Statistical Package for Social Sciences to answer the research questions and according to the stated hypotheses. Descriptive analysis of research question 1 involved frequencies and percentages and their graphic representations. Analysis of research question number 2 (hypotheses 2a through 2c) involved statistical tests for significance to determine the differences in means for "worry", "interest", and "confidence" between primiparas and multiparas. Apart from the total scale, worries, interests, confidences, and "not applicable" items were counted, and multivariate tests (Hotelling's *t*-test) for the difference of means were done, according to the three major subscales of "baby", "mother", and "family"; one minor scale of the baby subscale ("appearance and general condition of the

baby") and one minor scale of the mother subscale ("appearance and general condition of the mother"). Because of the small number of items on the "baby behaviour (5 items)", "care of the baby (10 items)", and , and "feelings of the mother (7 items"), no statistical tests were done on these minor scales. Univariate *f*-tests (done within the multivariate tests) and the Bonferroni correction determined specific areas of difference.

Research question number 3 (hypotheses 3a through 3c) sought to determine the difference between primiparous and multiparous mothers' sorting of items as related to the degree of worry, interest, and confidence they had. Descriptive analysis in terms of frequencies and percentages for the four levels was done. To determine the difference in the levels chosen, two-sample *t*-tests of the differences between mean scores (result of 1-4 rating on the items) were done.

Pearson correlation coefficients, Spearman rank order correlations, and chi-square tests were done to answer research question 4. Analysis according to educational level was not done because most of the mothers had obtained only primary education. Analysis according to tribe was also not done because there were too many (36) groups. Multiple-regression analysis was done to evaluate the relationship of the independent variables (age, parity, and experience with children) on the number of worries,

interests, and confidences. Descriptive analyses were done to determine within-groups patterns of sorting of items into worries, interests, and confidences. The test experimentwise significance level was set at α=.05. All values reported (except in specified areas) were rounded to the second decimal place.

CHAPTER III

FINDINGS

Items Identified as Worries, Interests, Confidences, and Not Applicable

Analysis of items sorted as worries (Table 5), interests (Table 6), confidences (Table 7), and not applicable (Table 8) show differences between primiparous and multiparous mothers. Items that were sorted as a particular category by less than 40% of either group of mothers were not included in the table for that category. Refer to Appendix D for a complete list of the items and the frequencies. While 20 items were sorted as a worry by at least 40% of primiparous mothers, only 7 items were sorted as worries by at least 40% of multiparous mothers. Just over twice as many (32) items were sorted as interests by at least 40% of primiparas as compared to at least 40% of multiparas (15), but almost three times as many items (35) were sorted as confidences by at least 40% multiparas as compared to at least 40% primiparas (12).

Table 5

Items Identified as Worries by Mothers, by Parity

Items	N (%) of Mothers	
	Primiparas (N=50)	Multiparas (N=50)
Baby's jerking or trembling	34 (68%)	-
Family finances	34 (68%)	30 (60%)
My sweating	32 (64%)	-
Discharge from baby's eyes	30 (60%)	-

Table 5 continued

How relatives act toward the baby	30 (60%)	-
How husband acts act toward me	28 (56%)	21 (42%)
Baby's weight loss	28 (56%)	-
If baby will love me	27 (54%)	-
How husband acts toward the baby	27 (54%)	22 (44%)
Baby's skin	25 (50%)	-
Baby's bowel movements	25 (50%)	-
Baby's hiccough	25 (50%)	-
How I did in labour / delivery	25 (50%)	-
How relatives act toward me	25 (50%)	-
Sore stitches	24 (48%)	-
Feeling on edge	24 (48%)	-
Feeling nervous or tense	24 (48%)	-
Meeting needs of everyone	-	27 (54%)
Resuming sexual relations	22 (44)	24 (48%)
Finding time for self	-	22 (44%)
Pains or cramps in my abdomen	21 (42%)	-
Feeling tired	20 (40%)	24 (48%)

Table 6

Items Identified as Interests by Mothers, by Parity

	N (%) of Mothers	
Items	Primiparas (N=50)	Multiparas (N=50)
Knowing how babies grow / develop	45 (90%)	40 (80%)
Knowing how babies act	44 (88%)	35 (70%)
Knowing about baby immunizations	44 (88%)	32 (64%)
Family planning	37 (74%)	36 (72%)
Bathing the baby	35 (70%)	-
Prevention of infant infections	35 (70%)	33 (66%)

Table 6 continued

Baby's temperature	33 (66%)	25 (50%)
Baby's sleeping	33 (66%)	26 (52%)
Prevention of infections to myself	33 (66%)	32 (64%)
Providing nutritious food to family	32 (64%)	27 (54%)
Making decisions	31 (62%)	-
Frequency of breast-feeding baby	29 (58%)	-
Baby's burping	23 (56%)	-
Baby's soft spot	27 (54%)	-
Baby's sneezing or coughing	27 (54%)	-
Baby's safety	27 (54%)	30 (60%)
Holding the baby	27 (54%)	-
My nutrition	27 (54%)	-
Being a good mother	27 (54%)	29 (58%)
Baby's general health	26 (52%)	30 (60%)
Baby's eyes	25 (50%)	-
Care of baby's cord	25 (50%)	-
Amount of breast milk	25 (50%)	-
Baby's weight	-	26 (52%)
Baby's crying	-	26 (52%)
Baby's breathing	24 (48%)	31 (62%)
Baby's spitting up	24 (48%)	-
Baby's sex	24 (48%)	-
Baby's hiccough	22 (44%)	-
Baby's crying	22 (44%)	-
My breasts and nipples	22 (44%)	-
How to soothe the baby	21 (42%)	-
Keeping the baby dry and clean	20 (40%)	-
My vaginal flow	20 (40%)	

Table 7

Items Identified as Confidences by Mothers, by Parity

Items	N (%) of Mothers	
	Primiparas (N=50)	Multiparas (N=50)
Baby's hair	36 (72%)	47 (94%)
Holding the baby	-	46 (92%)
My urinating	47 (88%)	46 (92%)
Naming the baby	35 (70%)	43 (86%)
Baby's urinating	40 (80%)	45 (90%)
Bathing the baby	-	45 (90%)
Baby's eyes	20 (40%)	42 (84%)
Baby's spitting up	-	42 (84%)
Baby's burping	-	38 (76%)
Keeping the baby clean and dry	-	38 (76%)
Baby's sucking	21 (42%)	37 (74%)
Baby's sex	28 (56%)	37 (74%)
Visits by relatives and friends	28 (56%)	37 (74%)
My weight	-	35 (70%)
Frequency of breast feeding the baby	-	34 (68%)
How my relatives will act toward me	-	33 (66%)
Cleanliness of my perineal area	31 (62%)	32 (64%)
Feeling close to the baby	35 (70%)	32 (64%)
My stretch marks	-	31 (62%)
My breasts and nipples	-	31 (62%)
Baby's soft spot	-	31 (62%)
How to soothe the baby	-	28 (56%)
My bowel movements	-	28 (56%)
Baby's skin	-	27 (54%)
Baby's hiccough	-	26 (52%)
Baby's sneezing	-	26 (52%)
Care of baby's cord	-	26 (52%)
How relatives act toward the baby	-	26 (52%)

Table 7 continued

Amount of breast milk	-	25 (50%)
My sweating	-	25 (50%)
Making decisions	-	25 (50%)
Baby's bowel movements	-	24 (48%)
My hunger	22 (44%)	-
Meeting needs of everyone at home	21 (42%)	-
If baby will love me	-	21 (42%)
Baby's temperature	-	20 (40%)
Baby's sleeping	-	20 (40%)

Table 8

Not Applicable Items Identified by Mothers by Parity

	N (%) of Mothers	
Items	Primiparas (N=50)	Multiparas (N=50)
My haemorrhoids	46 (92%)	36 (72%)
Feeling like crying	32 (64%)	32 (64%)
My flabby figure	27 (54%)	29 (58%)
How children will act toward baby	25 (50%)	-
How children will act toward me	25 (50%)	-
My stretch marks	21 (42%)	21 (42%)
My sore stitches	_	33 (66%)
Baby's vaginal discharge	_	23 (46%)

Number of Worries, Interests, and Confidences

The differences between primiparous and multiparous number of worries, interests, and confidences were

determined by means-difference analysis. Figure 2 shows a distinct difference in the number of worries and confidences between primiparas and multiparas. Using Hotelling's t-test, analyses on the total scale of 75 items showed that there was a significant difference between the mean number of primiparas' and multiparas' worries, interests, and confidences (F=57.70; df=3, 96; p=.000). Univariate f-tests (done after the multivariate test) to determine the specific areas of difference and the Bonferroni simultaneous confidence interval at 95% to determine the magnitude of the differences are reported under each hypothesis.

Hypothesis 2a

Primiparous mothers sorted approximately 1.8 times as many items as worries than multiparous mothers did (Table 9). Primiparas sorted from 10 to 35 items as worries and multiparas sorted from 3 to 30 items as worries; and whereas 32 primiparas sorted at least 20 items as worries, only 5 multiparous mothers did so (Figures 3 and 4).

The univariate f-test for the difference in means showed that the primiparas' mean for worry on the total scale was significantly higher than the multiparas' mean for worry (F=87.42; df=1,98; p=.000), thus hypothesis 2a was

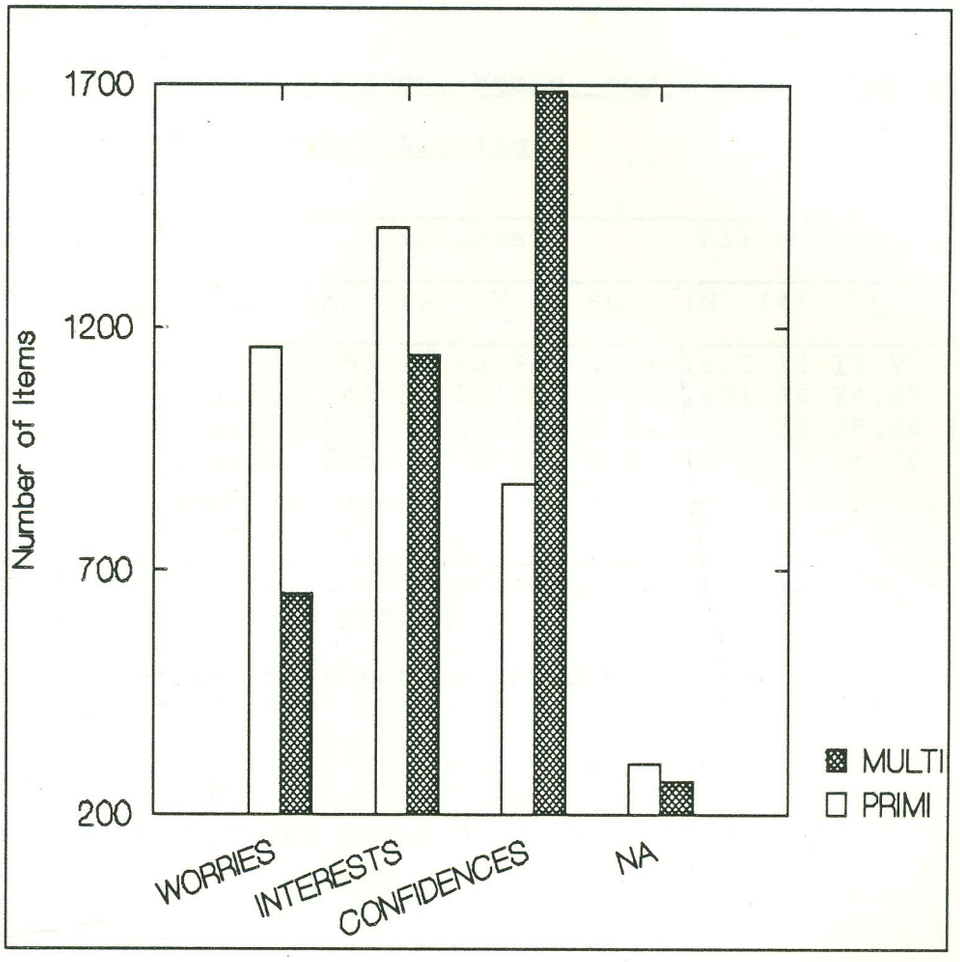


Figure 2: Barchart of frequency counts for worries, interests, confidences, and not applicable on total scale.

supported. The 95% simultaneous confidence interval for the means difference in the number of worries between primiparous and multiparous mothers was (7.46, 12.74), that is, on average, primiparas had between 7.46 and 12.74 more worries than multiparas.

Table 9

Number of Items, Percentages, Means, and Standard Deviations of Total Scale (75 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	(N)	(%)	M	SD	(N)	(%)	M	SD	(N)	(%)	M	SD
W	1159	31	23.04	5.96	653	17	12.94	4.78	1812	24	17.99	7.39
I	1406	38	27.46	4.96	1145	31	22.26	6.75	2551	34	24.87	6.44
C	881	23	17.42	5.41	1686	45	33.46	6.96	2567	34	25.44	10.17
NA	304	8	6.08	2.21	266	7	5.32	2.43	570	8	5.70	2.30
	3750				3750				7500			

W=*Worry I=**Interest C=***Confidence NA=Not Applicable
M=Mean number of items sorted

Significant differences between primiparas and multiparas
* (F= 87.42, p=.000)
** (F= 19.16, p=.000)
*** (F=165.77, p=.000)

Note: percentages were rounded to whole numbers.

Hypothesis 2b

Primiparous mothers sorted approximately 1.2 times as many items as interests than multiparous mothers did (Table 9). Whereas the number of primiparas' interests ranged from 16 to 40, multiparas' number of interests ranged from 0 to 35; and while 48 primiparas sorted at least 20 items as interests, 35 multiparas did so (Figures 5 and 6).

The univariate f-test showed that primiparas' mean for interest was significantly higher than the multiparas' mean for interest (F=19.16; df=1,98); p=.000), and thus hypothesis 2b was not supported. The 95% simultaneous

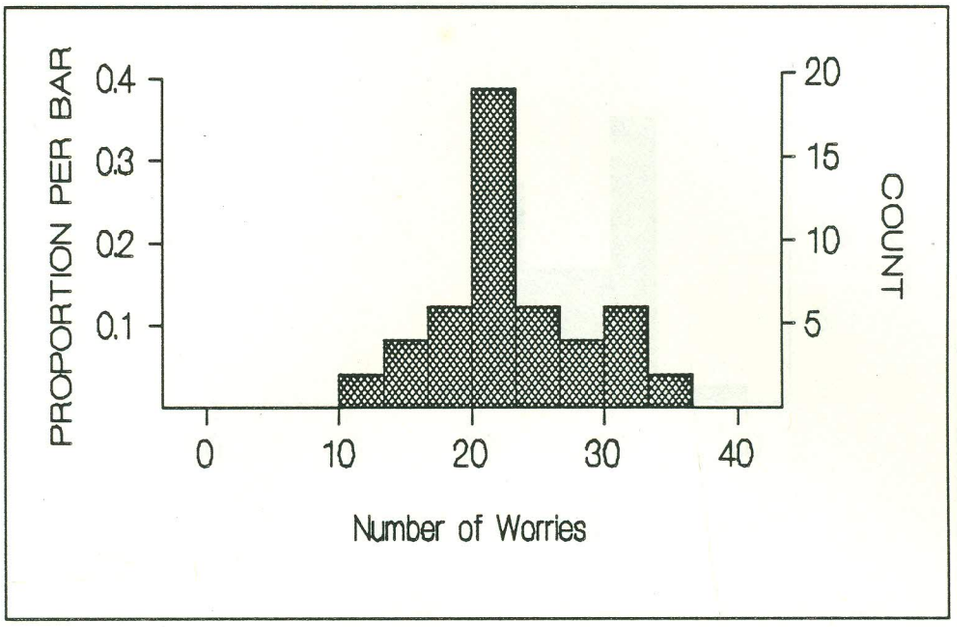


Figure 3: Histogram of primiparas' frequency distribution for worries (0.1 proportion = 5 mothers).

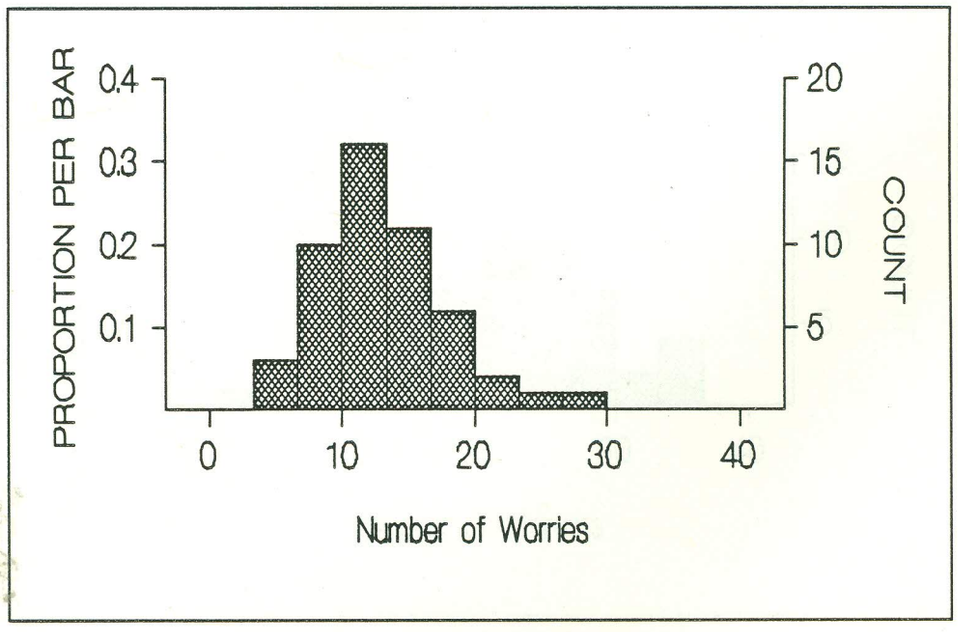


Figure 4: Histogram of multiparas' frequency distribution for worries (0.1 proportion = 5 mothers)

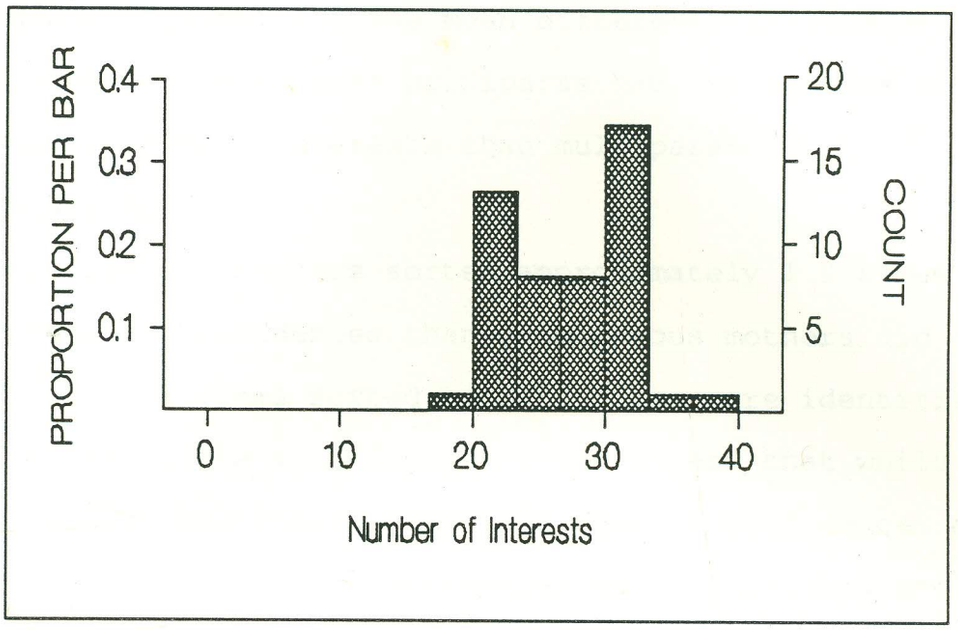


Figure 5: Histogram of primiparas' frequency distribution for interests (0.1 proportion = 5 mothers).

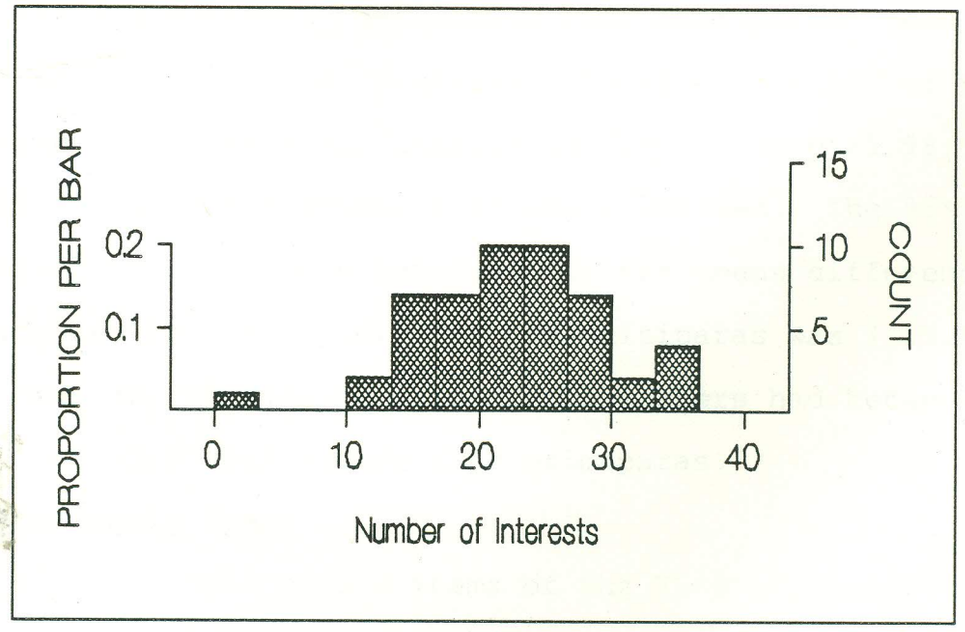


Figure 6: Histogram of multiparas' frequency distribution for interests (0.1 proportion = 5 mothers)

confidence interval for the mean difference in interests was (2.31,8.09), showing that primiparas had, on average between 2.31 and 8.09 more interests than multiparas.

Hypothesis 2c

Multiparous mothers sorted approximately 1.9 times as many items as confidences than primiparous mothers did, and 45% of all the items sorted by multiparas were identified as confidences (Table 9). Figures 7 and 8 show that while there were no multiparas with less than 15 confidences and their highest number of confidences was 50, primiparas' number of confidences ranged from 5 to 30. Forty five multiparas had at least 25 confidences whereas only 5 primiparas had at least 25 confidences.

The univariate f-test showed that multiparas' mean for confidence on the total scale was significantly higher than the primiparas' mean for confidence (F=165.77; df=1,98; p=.000), and thus hypothesis 2c was supported. The 95% simultaneous confidence interval for the means difference in confidences between primiparas and multiparas was (-19.08, -13), that is, on average multiparous mothers had between 13 and 19.08 more confidences than primiparas.

Not Applicable Items

Eight percent or 570 items of the 7500 items sorted by 100 mothers were identified as not applicable. Three hundred and four or 8% of the 3750 items sorted by

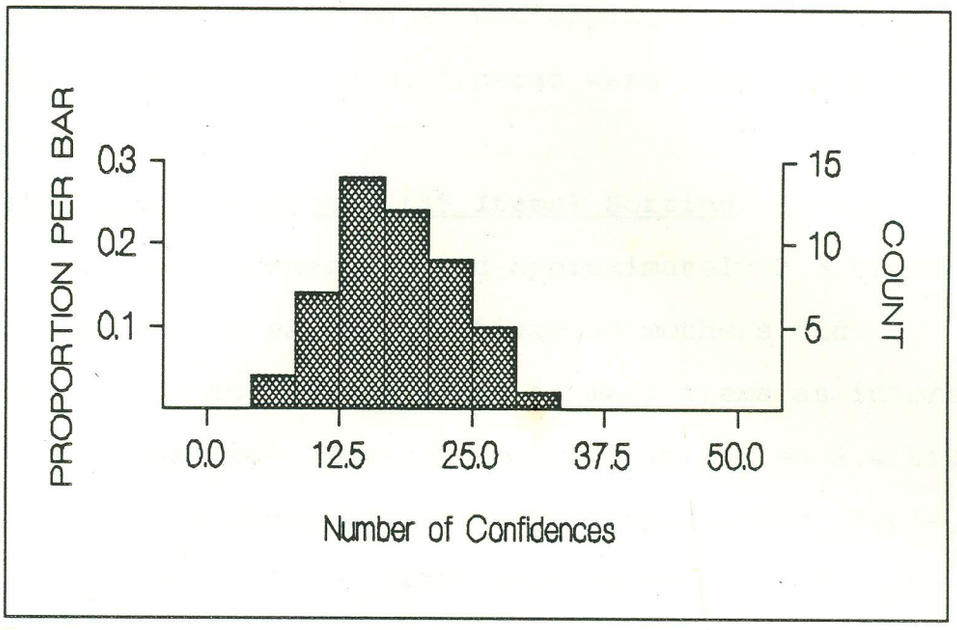


Figure 7: Histogram of primiparas' frequency distribution for confidences (0.1 proportion = 5 mothers).

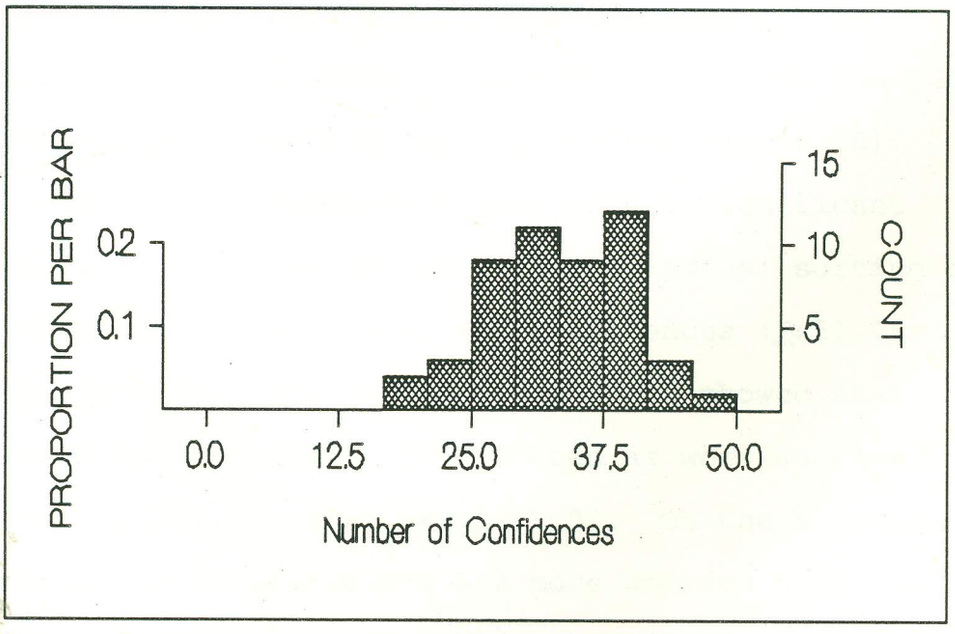


Figure 8: Histogram of multiparas' frequency distribution for confidences (0.1 proportion = 5 mothers).

primiparas were identified as not applicable and 266 (7%) of the 3750 items sorted by multiparas were identified as not applicable.

Analysis of Baby Subscale (35 Items) Sorting

Primiparous mothers sorted approximately 2.5 times as many items as worries than multiparous mothers did. Primiparas also sorted 1.4 times as many items as interests than multiparas did. However, multiparas sorted 2.4 times as many items as confidences than primiparas did (Table 10).

There was a marked difference between primiparous mothers' and multiparous mothers' number of worries and confidences, whereas there was a slight difference between the two groups interests (Figure 9). The means and standard deviations of the sorting into each category of the dependent variables--worry, interest, confidence, and not applicable--also show similar differences (Table 10). Hotellings t-test showed that there was a significant difference between primiparas' and multiparas' sorting of items as worries, interests, and confidences (F=51.16; df=3,96, p=.000). The univariate f-tests showed that primiparas had more baby items sorted as worries than multiparas (F=67.87; df=1,98; p=.000). On the average, primiparas had between 4 and 8.2 more worries than multiparas (95% simultaneous CI.= 4, 8.2). Primiparas also expressed more interests than multiparas (F=32.80; df=1,98; p=.000) and they had between 2.28 and 6.76 more interests

than multiparas (95% simultaneous CI.=2.28, 6.76). Multiparas had significantly more confidences than primiparas on the baby items sub-scale (F=149.91; df=1,98; p=.000) and they had between 8.44 and 13.2 more confidences than primiparas (95% simultaneous CI.=-13.2, 8.44). The findings of the above analysis are similar to the findings of the analysis on the total scale. Baby-related items comprised 13% of all the items sorted as not applicable.

Appearance and general condition of the baby (20 Items). Whereas primiparous mothers sorted 2.9 times as many items as worries than multiparous mothers did, multiparous mothers sorted 2.1 times as many items as confidences than primiparous did. Also, primiparas had 1.3 times as many interests than multiparas (Table 11). Hotelling's multivariate test showed that there was a significant difference between primiparas' and multiparas' sorting of items as worries, interests, and confidences on appearance and general condition of the baby items (F=43.67; df=3,96; p=.000). The univariate f-tests determined that primiparas had more worries than multiparas (F=85.52; df=1,98; p=.000). Primiparas also had significantly more interests than multiparas (F=11.26; df=1,98; p=.001). Multiparas had significantly more confidences than primiparas on the above-mentioned minor scale (F=109.97; df=1,98; p=.000). The findings on this minor-scale are similar to the findings on the total scale.

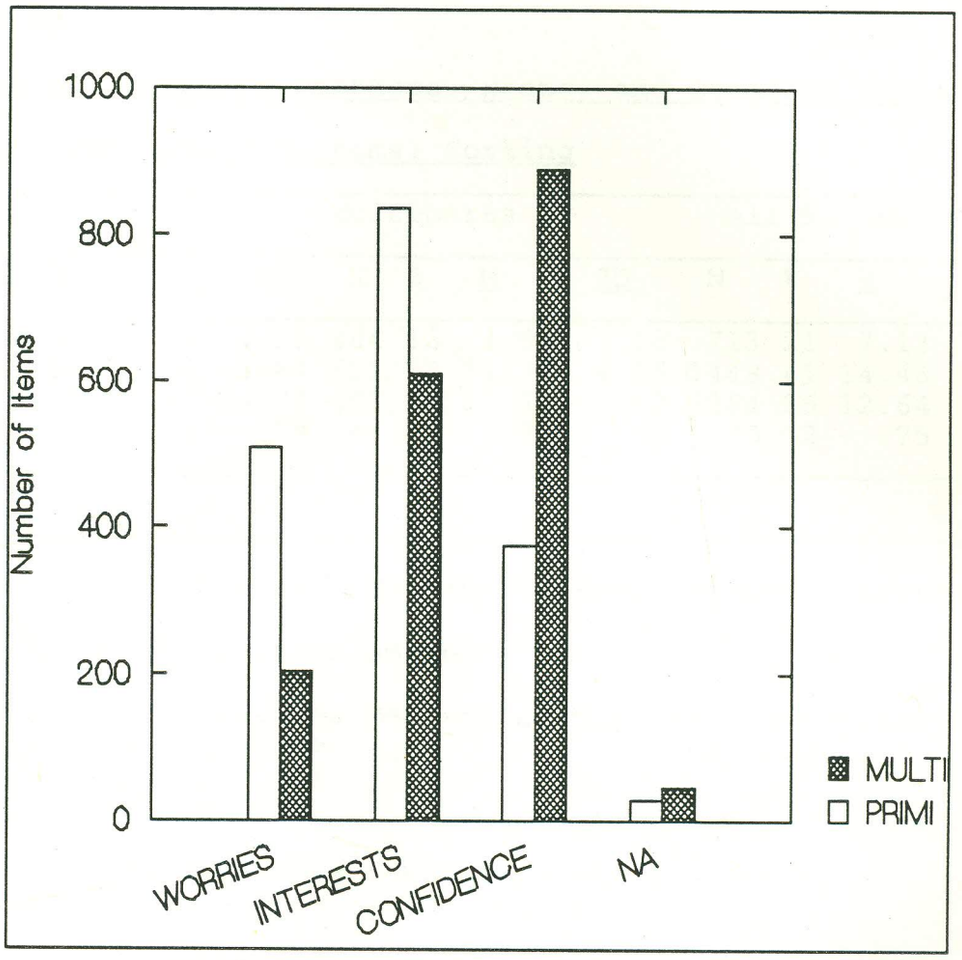


Figure 9: Bar chart of frequency counts for worries, interests, confidences, and not-applicable (NA) on the baby sub-scale of the postpartum card-sort.

Items sorted as not applicable by primiparous mothers comprised 1.4%, and those sorted by multiparas in that category comprised 3.75% of all the minor scale items.

Table 10

Number of Items, Percentages, Means, and Standard Deviations of Baby Subscale (35 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	509	29	10.18	4.20	204	12	4.08	3.13	713	21	7.13	4.79
I	837	48	16.74	3.84	611	35	12.22	4.05	1448	41	14.48	4.54
C	375	21	7.50	3.73	889	51	17.78	9.62	1264	36	12.64	6.64
NA	29	2	.58	.70	46	2	.92	.94	75	2	.75	.85
	1750				1750				3500			

W=*Worry I=**Interest C=***Confidence NA=Not Applicable

M= Mean number of items sorted

Significant differences between primiparas and multiparas
* (F= 67.87, p=.000)
** (F= 32.80, p=.000)
*** (F=149.91, p=.000)

Note: Percentages were rounded to whole numbers.

Baby behaviour (5 Items). Primiparous mothers had 1.5 times as many items sorted as worries than multiparas and both groups had approximately the same number of items sorted as interests. Multiparous mothers had 2.02 times as many items sorted as confidences than primiparous mothers (Table 12). There were no items sorted as not applicable in this category. No statistical tests were done because of the small (5) number of items.

Care of the baby (10 Items). Also, because of the small number of items, there were no statistical tests done for the care of the baby minor scale. However, primiparas had

2.3 and 1.7 times as many items sorted as worries and interests respectively than multiparas. Multiparas sorted 3.3 times as many items as confidences than primiparas did (Table 13). Neither group of mothers sorted items as not applicable.

Table 11

Number of Items, Percentages, Means, and Standard Deviations of Appearance and General Condition of the Baby Minor Scale (20 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	321	32	6.42	2.36	110	11	2.20	2.20	431	22	4.31	3.11
I	396	40	7.92	2.63	306	31	6.12	2.74	702	35	7.02	2.82
C	254	25	5.08	2.43	538	54	10.76	2.96	792	40	7.92	3.93
NA	29	3	.58	.70	46	5	.92	.94	75	4	.75	.85
	1000				1000				2000			

W=*Worry I=**Interest C=***Confidence NA=Not Applicable
M=Mean number of items sorted

Significant differences between primiparas and multiparas
* (F= 85.52, p=.000)
** (F= 11.26, p=.000)
*** (F=109.97, p=.000)

Note: Percentages were rounded to whole numbers.

Table 12

Number of Items, Percentages, Means, and Standard Deviations of Baby Behaviour Minor Scale (5 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	60	24	1.20	0.97	38	15	.76	.74	98	20	.98	.89
I	153	61	3.06	1.15	137	55	2.74	1.34	290	58	2.90	1.25
C	37	15	.74	.88	75	30	1.50	1.31	112	22	1.12	1.17
NA	-	-	-	-	-	-	-	-	-	-	-	-
	250				250				500			

W=Worry I=Interest C=Confidence NA=Not Applicable
M=Mean number of items sorted

Note: Percentages were rounded to whole numbers.

Table 13

Number of Items, Percentages, Means and Standard Deviations of Care of the Baby Minor Scale (10 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	128	26	2.56	2.13	56	11	1.12	1.15	184	18	1.84	1.85
I	288	58	5.76	1.80	168	34	3.36	1.72	456	46	4.56	2.13
C	84	17	1.68	1.68	276	55	5.52	1.79	360	36	3.60	2.59
NA	-	-	-	-	-	-	-	-	-	-	-	-
	500				500				1000			

W=Worry I=Interest C=Confidence NA=Not Applicable
M=Mean number of items sorted

Note: Percentages were rounded to whole numbers.

Analysis of Mother Subscale (24 Items) Sorting

Whereas primiparous mothers sorted approximately 1.8 and 1.2 times as many worries and interests respectively than multiparous mothers did, multiparous mothers sorted 1.7 times as many confidences than primiparas did (Table 14). Also, mother-related items comprised of 75% of all the items sorted as not applicable. Whereas multiparas had very few mother-related worries, they had many mother-related confidences; and whereas primiparas had many mother-related worries, they had few mother-related confidences (Figure 10). Hotelling's multivariate test showed that there was a significant difference between primiparas' and multiparas' sorting of items as worries, interests, and confidences (F=19.79; df=3,96; p=.000). The univariate f-tests determined that primiparas sorted significantly more items than multiparas as worries (F=33.00; df=1,98; p=.000), and the 95% simultaneous confidence interval showing that primiparas had between 1.56 and 4.72 more worries than multiparas. There was no significant difference between primiparas and multiparas in the sorting of items as interests on this subscale (F=3.39; df=1,98; p=.069) but multiparas had significantly more confidences than primiparas (F=56.15; df=1,98, p=.000) and the 95% confidence interval showed that multiparas had on the average between 2.42 and 5.9 more confidences than primiparas. The findings

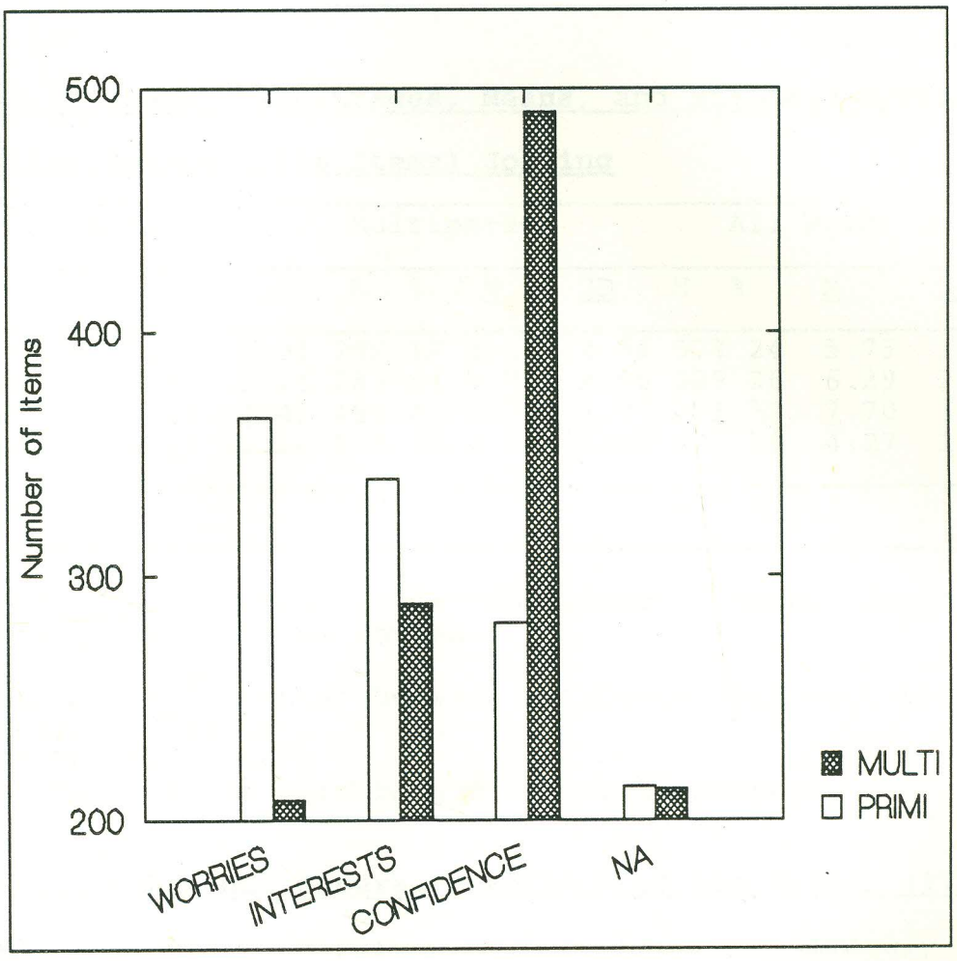


Figure 10: Bar chart of frequency counts for worries, interests, confidence, and not-applicable on the mother subscale.

about primiparas' and multiparas' worries and confidences were similar to the findings on the total scale; the findings about primiparas' and multiparas' interests were not.

Table 14

Number of Items, Percentages, Means, and Standard Deviations of Mother Subscale (24 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	365	30	7.30	3.01	208	17	4.16	2.54	573	24	5.73	3.19
I	340	28	6.80	2.71	289	24	5.78	2.96	629	26	6.29	2.87
C	281	23	5.62	2.42	490	41	9.78	3.07	771	32	7.70	3.45
NA	214	18	4.28	1.84	213	18	4.26	2.02	427	18	4.27	1.92
	1200				1200				2400			

W=*Worry I=Interest C=**Confidence NA=Not Applicable
M=Mean number of items sorted

Significant differences between primiparas and multiparas
* (F=33.00, p=.000)
** (F=56.15, p=.000)
Note: Percentages were rounded to whole numbers.

Appearance and General Condition of the Mother (17 Items). Whereas primiparous mothers had approximately 1.8 times as many items sorted as worries than multiparas, multiparas had that ratio for their confidences compared to those of primiparas (Table 15). Both groups of mothers sorted as many items as not applicable and those items comprised approximately 64% of all the items sorted as that category on this minor scale.

Hotelling's multivariate test showed that there was a significant difference between primiparas' and multiparas' sorting of these items as worries, interests, and confidences (F=23.59; df=3,96; p=.000). Univariate f-tests determined that primiparas had significantly more worries

than multiparas (F=28.71; df=1,98; p=.000), but there was no significant difference in primiparas' and multiparas' interests (F=.75; df=1,98; p=.39) and multiparas had significantly more confidences than primiparas (F=60.83; df=1,98; p=.000). The findings about primiparas' and multiparas' worries and confidences on this minor scale are similar to the findings on the total scale; the findings about primiparas' and multiparas' interests are not similar to the total-scale findings.

Table 15

Number of Items, Percentages, Means, and Standard Deviations of Appearance and General Condition of the Mother Minor Scale (17 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	248	29	4.96	1.29	135	16	2.70	1.27	383	25	7.66	3.66
I	250	29	5.00	1.45	190	22	3.80	1.52	440	26	8.80	4.94
C	213	25	4.26	1.15	391	46	7.80	1.01	604	36	12.06	6.54
NA	139	16	2.92	.54	134	16	2.68	.76	273	16	5.60	3.00
	850				850				1700			

W=*Worry I=Interest C=**Confidence NA=Not Applicable
M=Mean number of items sorted

Significant differences between primiparas and multiparas
* (F=28.71, p=.000)
** (F=60.83, p=.000)
Note: Percentages were rounded to whole numbers.

Mother's feelings (7 Items). No statistical tests were done on this minor scale because it had few (7) items. However, whereas primiparous mothers approximately sorted

1.6 times as many items as worries than multiparous mothers did, multiparous mothers sorted approximately as many items as interests as primiparas did, and multiparas sorted approximately 1.5 times as many confidences than primiparas did (Table 16).

Table 16

Number of Items, Percentages, Means, and Standard Deviations of Mother's Feelings Minor Scale (7 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	117	33	2.34	1.72	73	21	1.46	1.27	190	27	1.90	1.57
I	90	26	1.80	1.26	99	28	1.98	1.44	189	27	1.89	1.35
C	68	19	1.36	1.17	99	28	1.98	1.06	167	24	1.67	1.16
NA	75	21	1.50	1.30	79	23	1.58	1.26	154	22	1.54	1.27
	350				350				700			

W=Worry I=Interest C=Confidence NA=Not Applicable
M=Mean number of items sorted

Note: Percentages were rounded to whole numbers.

Analysis of Family Subscale (16 Items) Sorting

Primiparas sorted approximately 1.2 times as many items as worries than multiparas did. Whereas both groups of mothers sorted approximately as many items as interests, multiparous mothers sorted approximately 1.4 times as many items as confidences than primiparas did (Table 17). Family items accounted for 11% of all the items sorted as not applicable.

Hotelling's multivariate test showed that there was a significant difference in the means for worries, interests,

and confidence on family items (F=22.45; df=3,96, p=.000). Univariate f-tests then determined that there was only one area of difference. There were no significant differences between primiparas and multiparas sorting of items as worries (F=2.24; df=1,98; p=.137;) and interests (F=.54; df=1,98; p=.464) but multiparas had significantly more confidences than primiparas (F=8.87; df=1,98; p=.004). However, the 95% simultaneous confidence interval did not show much difference between multiparas' and primiparas' confidences (CI=-3.2, -0.08). Thus, although statistically significant, there was no practical significance. Figure 11 also shows that there were no distinct differences between the two groups.

Table 17

Number of Items, Percentages, Means, and Standard Deviations of Family Subscale (16 Items) Sorting

	Primiparas				Multiparas				All Mothers			
	N	%	M	SD	N	%	M	SD	N	%	M	SD
W	285	37	5.70	3.24	241	30	4.82	2.60	526	33	5.26	2.99
I	229	27	4.58	2.25	245	31	4.90	2.10	474	30	4.74	2.17
C	225	28	4.50	2.87	307	38	6.14	2.63	532	33	5.32	2.86
NA	61	8	1.22	1.07	7	1	.14	.40	68	4	.68	.97
	800	100	-	-	800	100	-	-	1600	100	-	-

W=Worry I=Interest C=*Confidence NA=Not Applicable
M=Mean number of items sorted

Significant difference between primiparas and multiparas
* (F=8.87, p=.004)
Note: Percentages were rounded to whole numbers.

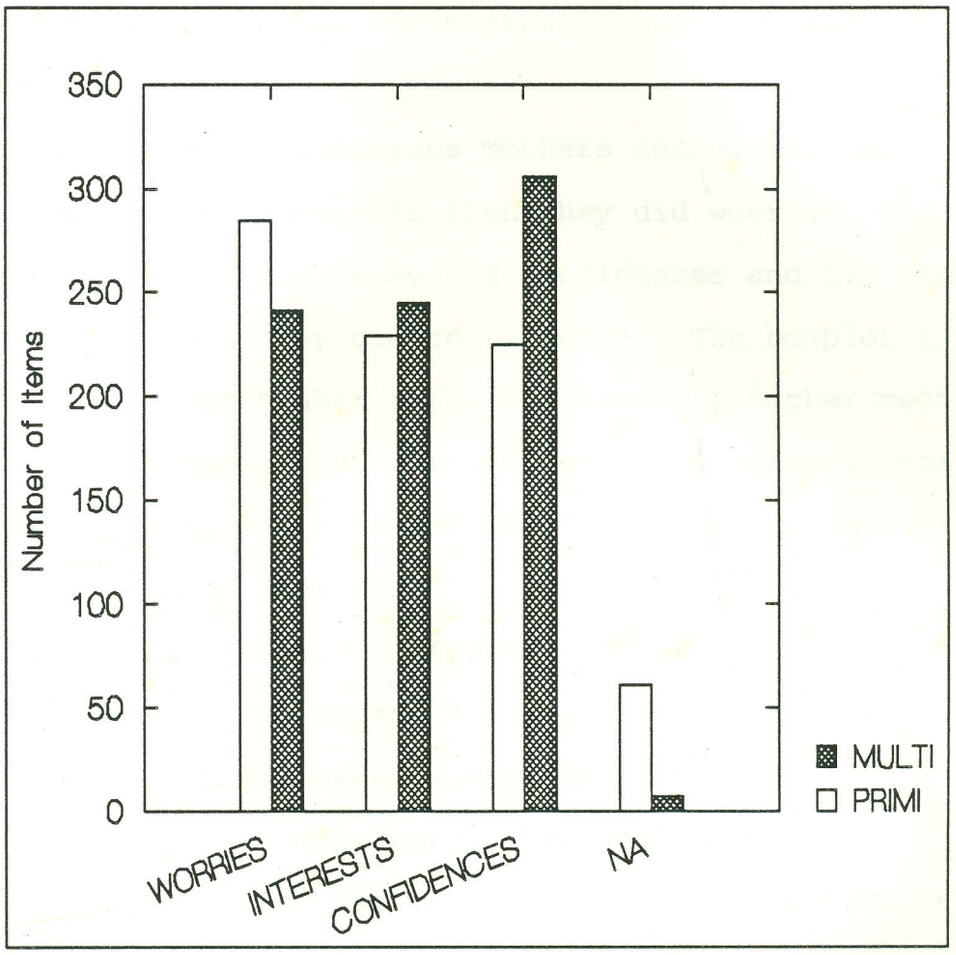


Figure 11: Bar chart of frequency counts for worries, interests, confidence, and not-applicable (NA) on the family sub-scale.

Within Groups Analysis

Descriptive analysis by boxplots and frequency counts for each group were done to examine primiparas' and multiparas' sorting patterns. Kendalls' test of concordance was also done to examine if there was relative agreement among primiparous mothers and multiparous mothers with

respect to their number of worries, interests, and confidences.

Primiparas. Primiparous mothers sorted approximately 1.2 times as many interests than they did worries, 1.6 times as many interests than they did confidences and 1.3 times as many worries than they did confidences. The boxplot in Figure 12 depicts higher range points and a higher median point for interests than for worries. The range points and the median point for confidences are lower than those for both worries and interests.

There was a marked difference (12.5%) between the subscale composition on the total scale and its contribution to the number of interests sorted by primiparas (Table 18). This indicated that many baby items were sorted as interests. Kendalls' test of concordance showed that there was agreement among primiparous mothers relative to their number of worries, interests, and confidences (χ^2= 31.63, df=2, p=.001). Whereas there were only six primiparous mothers who had more confidences than worries or interests, 31 of primiparas had fewer confidences than worries or interests.

Multiparas. Multiparous mothers sorted approximately 1.8 times as many interests than they did worries; 1.5 times as many confidences than they did interests and 2.5 times as many confidences than they did worries. The boxplot in Figure 13 (with two extreme outliers) demonstrates an

Table 18

Primiparas' Percentages of Worries, Interests, and Confidences Accounted for by the Subscales

Subscale	%Total Scale (N=7500)	% Worries (N=1159)	% Interests (N=1406)	% Confidences (N=881)
Baby	47	43.90	59.53	43.00
Mother	32	31.50	24.18	31.89
Family	21	24.60	16.29	25.50
Total	100	100	100	100

Table 19

Multiparas' Percentages of Worries, Interests, and Confidences Accounted for by the Subscales

Subscale	%Total Scale (N=7500)	% Worries (N=653)	% Interests (N=1145)	% Confidences (N=1686)
Baby	47	31.25	53.36	52.78
Mother	32	31.85	25.24	29.06
Family	21	36.90	21.49	18.20
Total	100	100	100	100

increasing pattern in the range points and the median points from worries to confidences.

Whereas family items comprised only 21% of the total, they accounted for 36.90% of the worries (difference of 16%). Also, while baby items comprised of 47% of the total scale, they accounted for only 31.25% of the worries sorted by multiparas (difference of 16%). This indicated

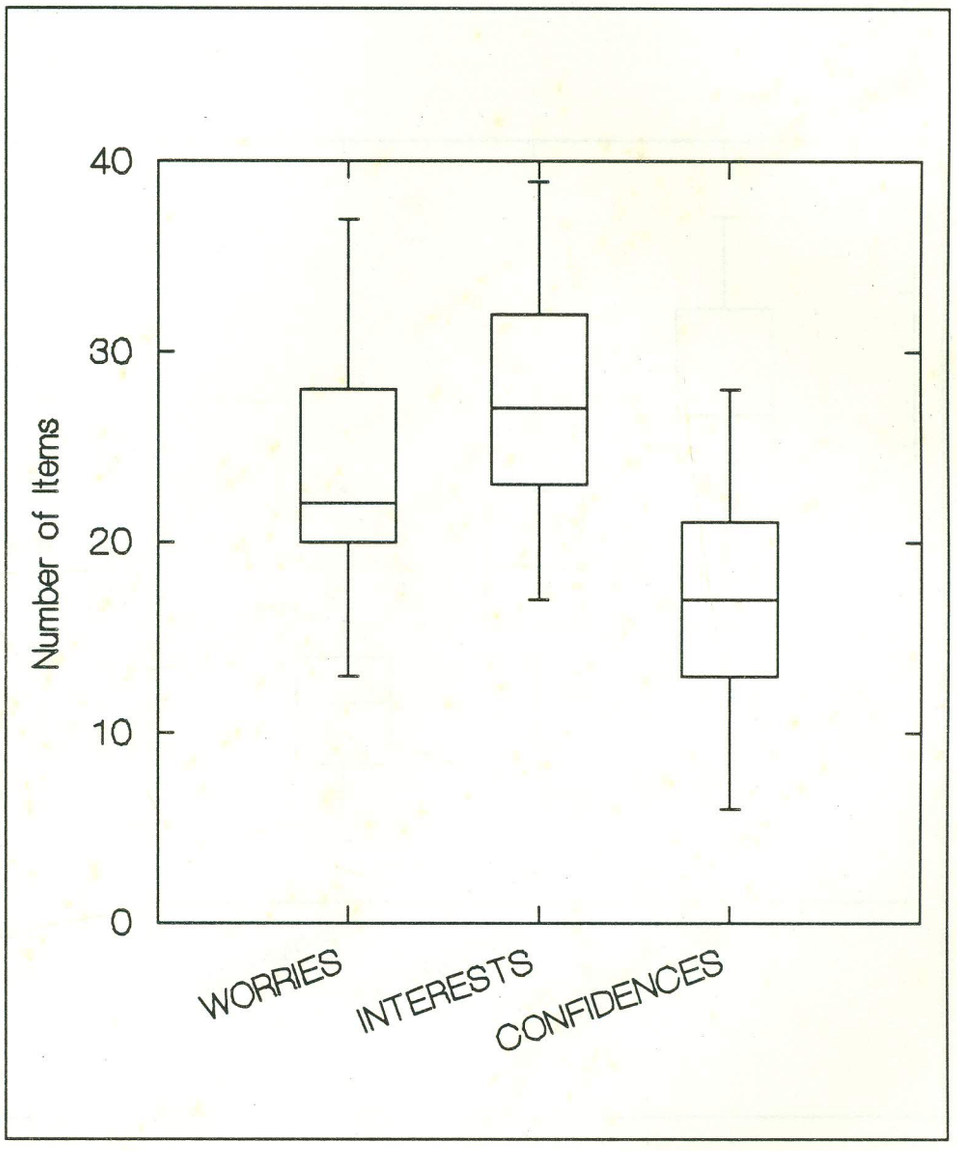


Figure 12: Boxplot showing primiparas' sorting pattern for worries, interests, and confidences.

that fewer baby-related items were sorted as worries and more family-related items were sorted as worries (Table 19). Kendalls' test of concordance showed that there was

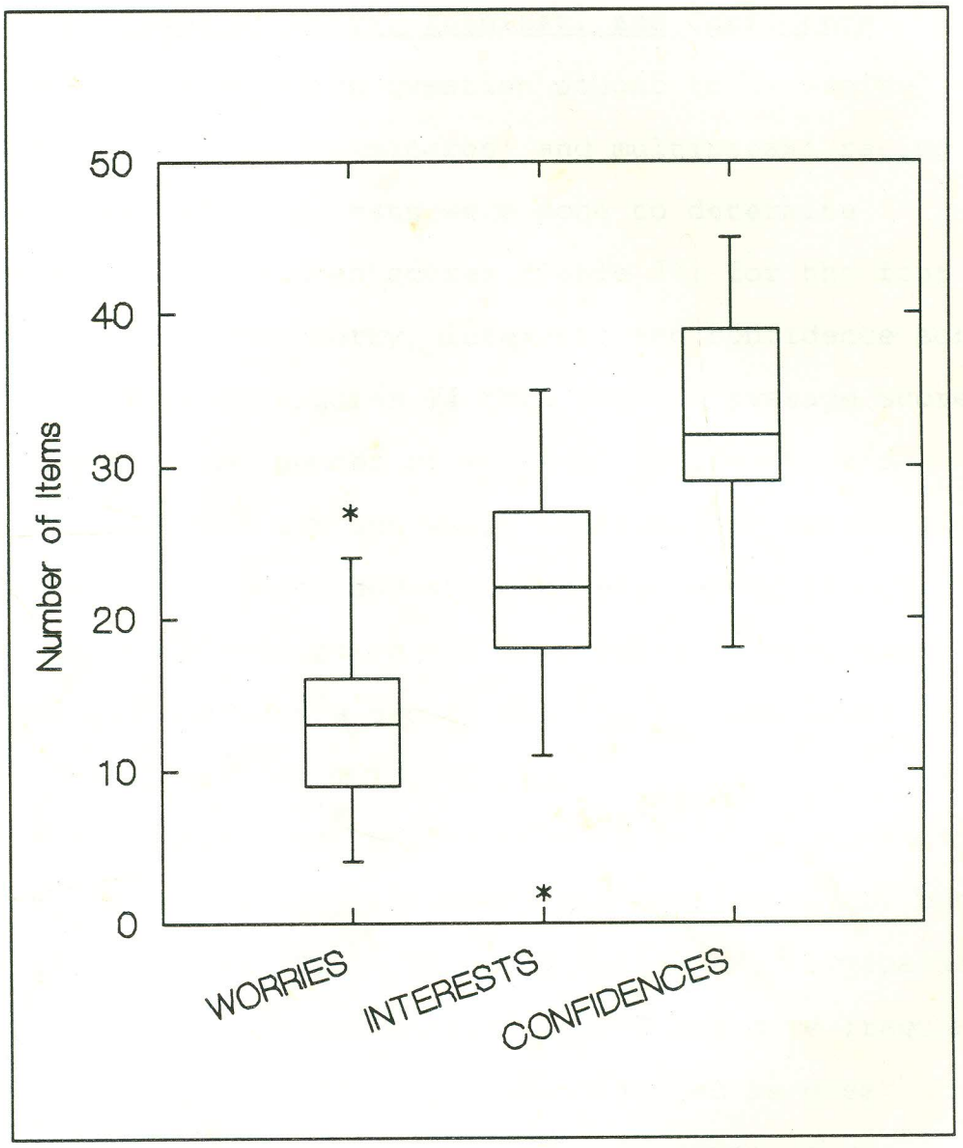


Figure 13: Boxplot showing multiparas' sorting pattern for worries, interests, and confidences.

agreement among multiparous mothers to their relative number of worries, interests, and confidences (χ^2=59.68, df=2, p<.001). All the 50 multiparous mothers had more confidences than worries or interests.

Level of Worry, Interest, and Confidence

The third research question sought to determine differences between primiparas' and multiparas' rating of items. Two-sample t-tests were done to determine differences in the mean scores (Table 20) for the four levels (1-4) on the worry, interest, and confidence sorting. As can be seen in Figures 14 thru 19, the average scores did not depend on the number of worries, interests, and confidences. The average worry and interest scores lie within similar ranges and are clustered along the third level for both primiparas and multiparas. Primiparas' range for average confidence scores and the cluster lines are lower than those for multiparas.

Most of the items were sorted as level 3 and 4 for all the categories--worry, interest, and confidence--by both groups of mothers (Table 21 and Figure 20). Primiparas had 9 items sorted as great worries at 20% and more frequency, whereas multiparas had only 5 items sorted as great worries at that percentage (Table 22). The reaction of their husbands or partners toward them and resumption of sexual relations was of great worry to both groups.

Whereas primiparous mothers sorted 24 items as great interests at the 20% and more frequency, multiparas sorted 19 items as great interests at that frequency (Table 23). Both groups of mothers had great interest at 20% or more frequency about the following items: "baby's crying",

Table 20

Means and Standard Deviations of Average (Level) Scores

	Primiparas (N=50)		Multiparas (N=50)	
	M	SD	M	SD
Worry	2.91	0.37	2.89	0.49
Interest	3.19	0.38	3.18	0.50
Confidence	2.91	0.38	3.38	0.43

M=Mean for mothers' average scores

"baby's breathing", "baby's weight", "how well I did in labour and delivery", "baby's temperature", "being a good mother", "baby's general health", "baby's safety", "resuming sexual relations", "providing nutritious food to the family", "preventing infections to myself", "preventing infant infections", "family planning", and "knowing about baby's immunizations".

Primiparas had 7 items sorted as great confidence at the 20% and more frequency, whereas multiparas had 41 items sorted as great confidences at that frequency (Table 24). Both groups of mothers were confident at 20% frequency or more frequency about the following items: "baby's sucking", "baby's hair", "feeling close to the baby", "cleanliness of my perineal area", and "naming the baby".

Table 21

Number of Worries, Interests, and Confidences Sorted in Each Level

Variable	Primiparas	Multiparas	Total
Worry			
1	105	82	187
2	186	124	310
3	439	232	671
4	429	215	644
Sub-Total	1159	653	1812
Interest			
1	105	101	206
2	209	106	315
3	403	326	729
4	689	612	1301
Sub-Total	1406	1145	2551
Confidence			
1	82	109	191
2	166	126	292
3	328	405	733
4	305	1046	1351
Sub-Total	881	1686	2567
Total			6930

Hypothesis 3a

The hypothesis examining if primiparas would rate their worries at a higher level than multiparas was not supported. Even though primiparas had more worries in general and more worries sorted into the 'great worry level' their mean worry score (calculated as an average of 1-4) rating by a two-sample t-test was not significantly different from multiparas' mean worry score (t=0.19, df=57, p=0.85).

Table 22

Items Sorted Great Worry by Mothers, by Parity

	N (%) of Mothers	
Items	Primiparas	Multiparas
Baby's burping	10 (20%)	
Sore stitches	10 (20%)	
Pains or cramps in my abdomen	11 (22%)	
How husband/partner acts toward baby	12 (24%)	
How relatives act toward baby	12 (24%)	
Resuming sexual relations	12 (24%)	13 (26%)
Baby's bowel movements	14 (28%)	
How husband/partner acts toward me	14 (28%)	10 (20%)
Baby's jerking/trembling	17 (34%)	
Family finances		12 (24%)
Finding time for self		12 (24%)
Meeting needs of everyone at home		13 (26%)

Table 23

Items Sorted as Great Interests by Mothers, by Parity

	N (%) of Mothers	
Items	Primiparas	Multiparas
Baby's eyes	10 (20%)	
Baby's crying	10 (20%)	16 (32%)
Baby's sleeping	10 (20%)	17 (34%)
How to soothe the baby	11 (22%)	
Baby's breathing	12 (24%)	17 (34%)
Baby's weight	12 (24%)	11 (22%)
Baby's sneezing or coughing	13 (26%)	
My nutrition	13 (26%)	
Frequency of breast-feeding	15 (30%)	

Table 23 continued

How well I did in labour/deliver	15 (30%)	13 (26%)
Baby's temperature	16 (32%)	13 (26%)
Being a good mother	16 (32%)	16 (32%)
Baby's general health	17 (34%)	17 (34%)
Baby's safety	17 (34%)	15 (30%)
Baby's soft spot	19 (38%)	
Resuming sexual relations	20 (40%)	11 (22%)
Providing nutritious food to family	21 (42%)	17 (34%)
Preventing infections to myself	24 (48%)	24 (48%)
How babies act	25 (50%)	
Preventing infant infections	25 (50%)	22 (44%)
Family planning	30 (60%)	24 (48%)
Knowing how babies grow and develop	33 (66%)	
Knowing about baby immunizations	37 (74%)	24 (48%)
Feeling nervous or tense		10 (20%)
Baby's weight loss		17 (34%)

Table 24

Items Sorted as Great Confidence by Mothers, by Parity

	N (%) of Mothers	
Items	Primiparas	Multiparas
Dealing with relatives and friends		10 (20%)
How my relatives will act toward baby		10 (20%)
Baby's breathing		11 (22%)
Baby's temperature		11 (22%)
Being a good mother		11 (22%)
How husband/partner acts toward me		12 (24%)
Baby's sneezing or coughing		13 (26%)
My sweating		13 (26%)
How well I did in labour/delivery		13 (26%)

Table 24 continued

My nutrition		13 (26%)
Baby's hiccough		14 (28%)
Baby's sleeping		14 (28%)
My vaginal flow		14 (28%)
How my relatives will act toward me		15 (30%)
My stretch marks		16 (32%)
Making decisions		16 (32%)
Frequency of breast-feeding the baby		17 (34%)
My weight		17 (34%)
Baby's bowel movements		18 (36%)
Baby's soft spot		18 (36%)
Care of baby's cord		18 (36%)
Baby's bowel movements		18 (36%)
Baby's skin		19 (38%)
How to soothe the baby		19 (38%)
My breasts and nipples		20 (40%)
Baby's spitting		21 (42%)
Amount of breast milk		21 (42%)
Visits by relatives and friends		21 (42%)
Feeling close to the baby	18 (36%)	21 (42%)
Cleanliness of my perineal area	16 (32%)	22 (44%)
Baby's burping		23 (46%)
My bowel movements		23 (46%)
Baby's sex		24 (48%)
Baby's sucking	11 (22%)	28 (56%)
Bathing the baby		28 (56%)
Naming the baby	17 (34%)	30 (60%)
Keeping the baby clean and dry		32 (64%)
Holding the baby		33 (66%)
Baby's hair	18 (36%)	38 (76%)
My urinating	21 (42%)	
Baby's urinating	24 (48%)	

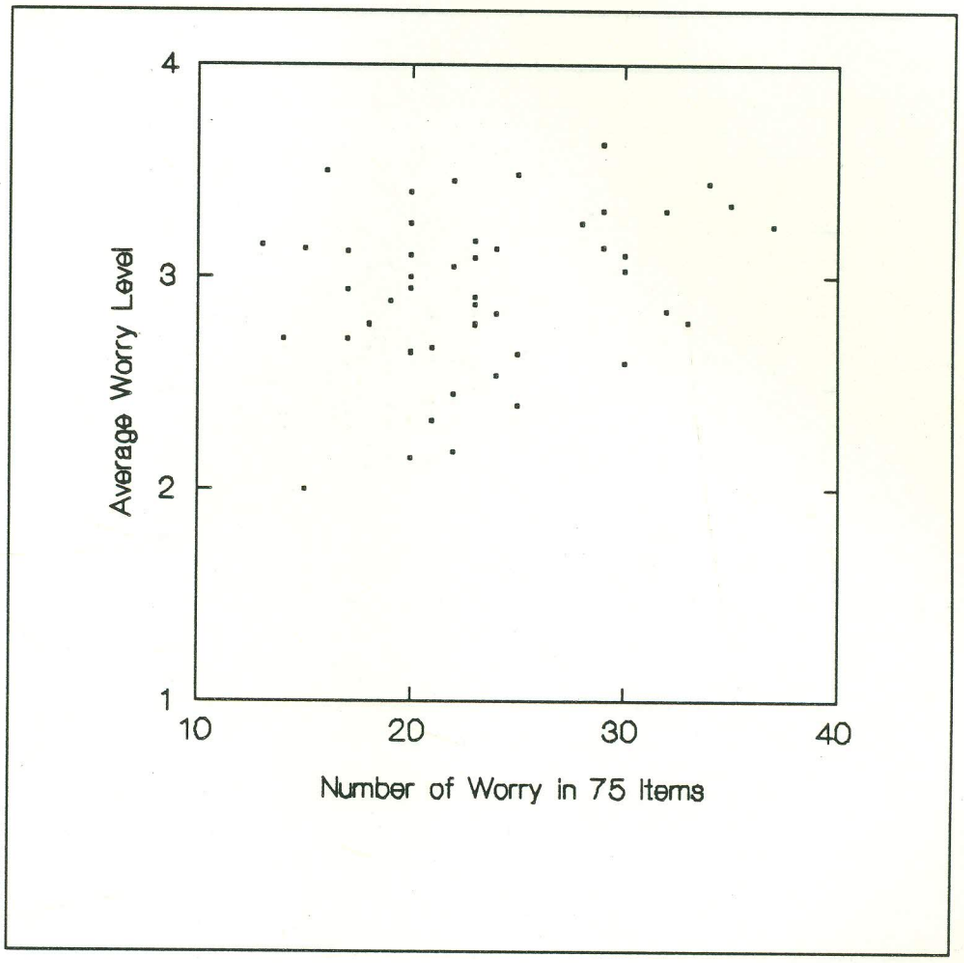


Figure 14: Scatter plot of primiparas' number of worries with the average worry scores.

Note: No significant correlation between number of worries and average worry scores (r=.25).

Hypothesis 3b

The hypothesis examining if multiparas would rate their interests at a higher level than primiparas was not supported. The two-sample t-test did not show significant difference between primiparas' and multiparas' mean interest score (t=0.06, df=59, p=0.95).

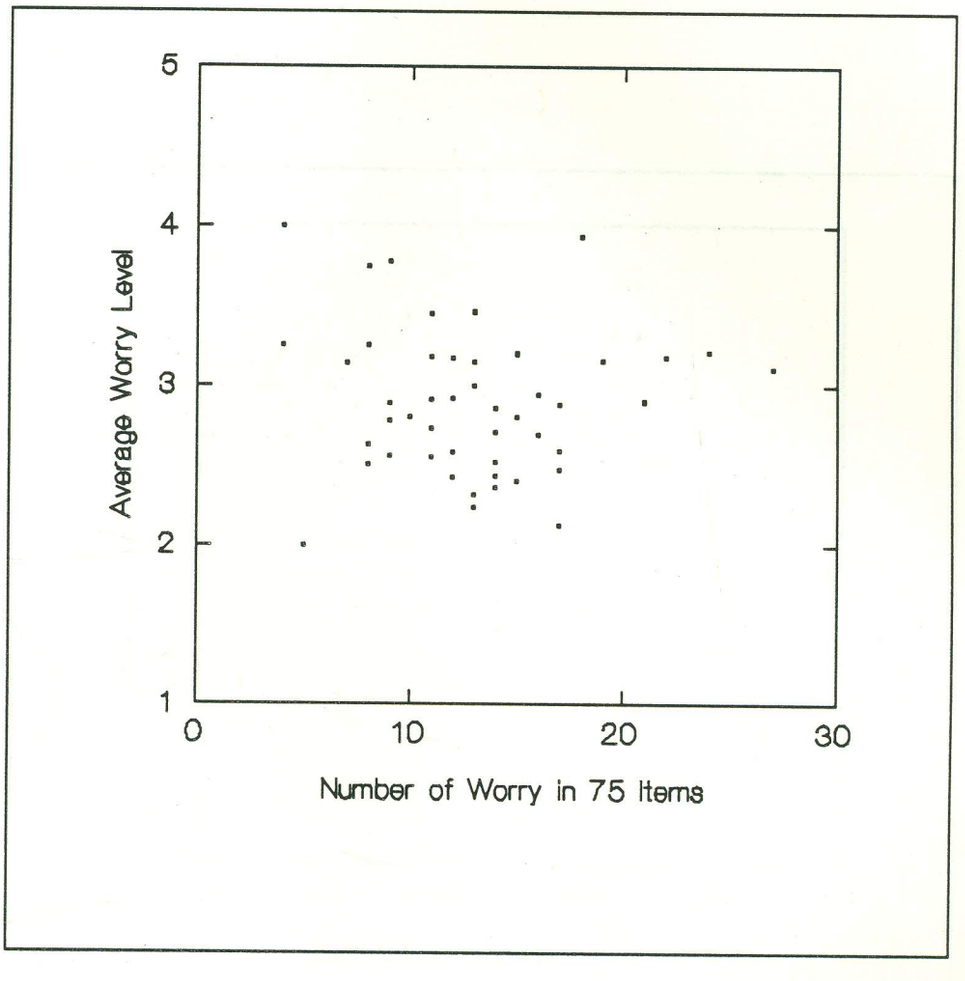


Figure 15: Scatter plot of multiparas' number of worries with the average worry score.

Note: No significant correlation between number of worries and average worry scores (r=-.08).

Hypothesis 3c

The hypothesis examining if multiparas would rate their confidences at a higher level was supported. The mean confidence score for multiparas was significantly higher than that of primiparas (t=-4.66, df=60, p=.000).

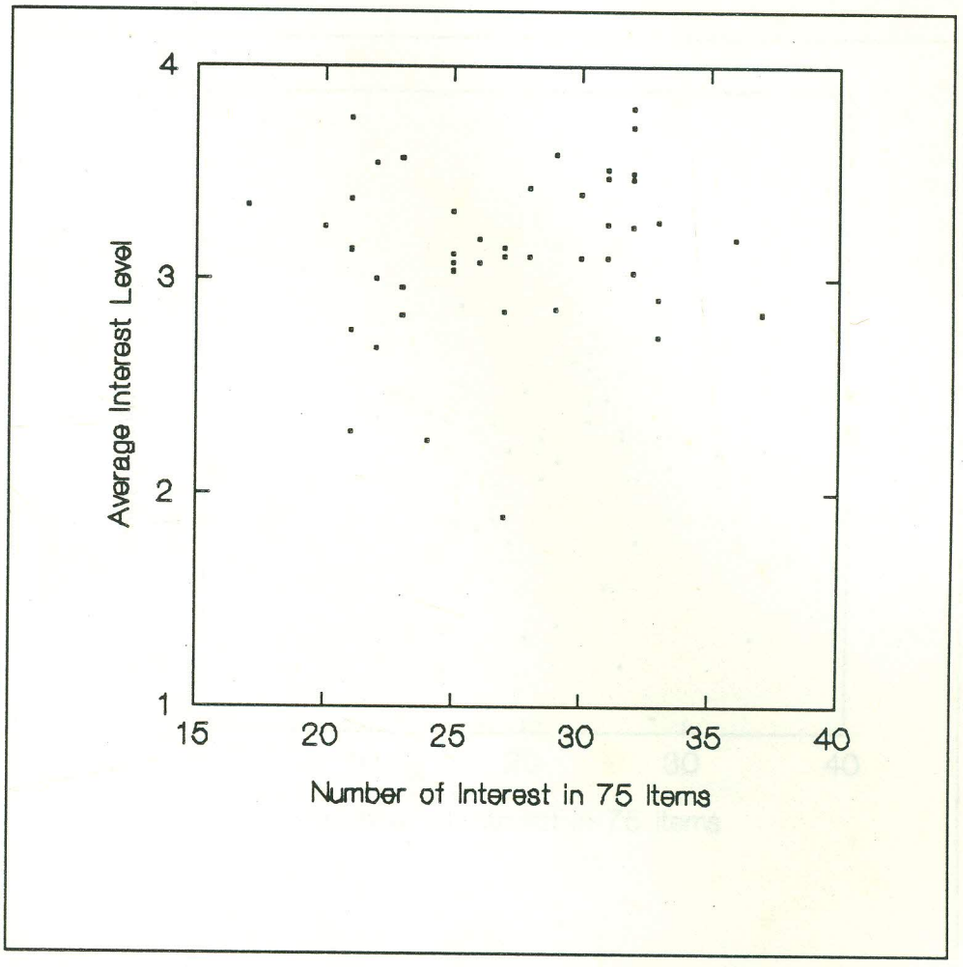


Figure 16: Scatter plot of primiparas' number of interests with the average interest scores.

Note: No significant correlation between number of interests and average interest scores (r=.12)

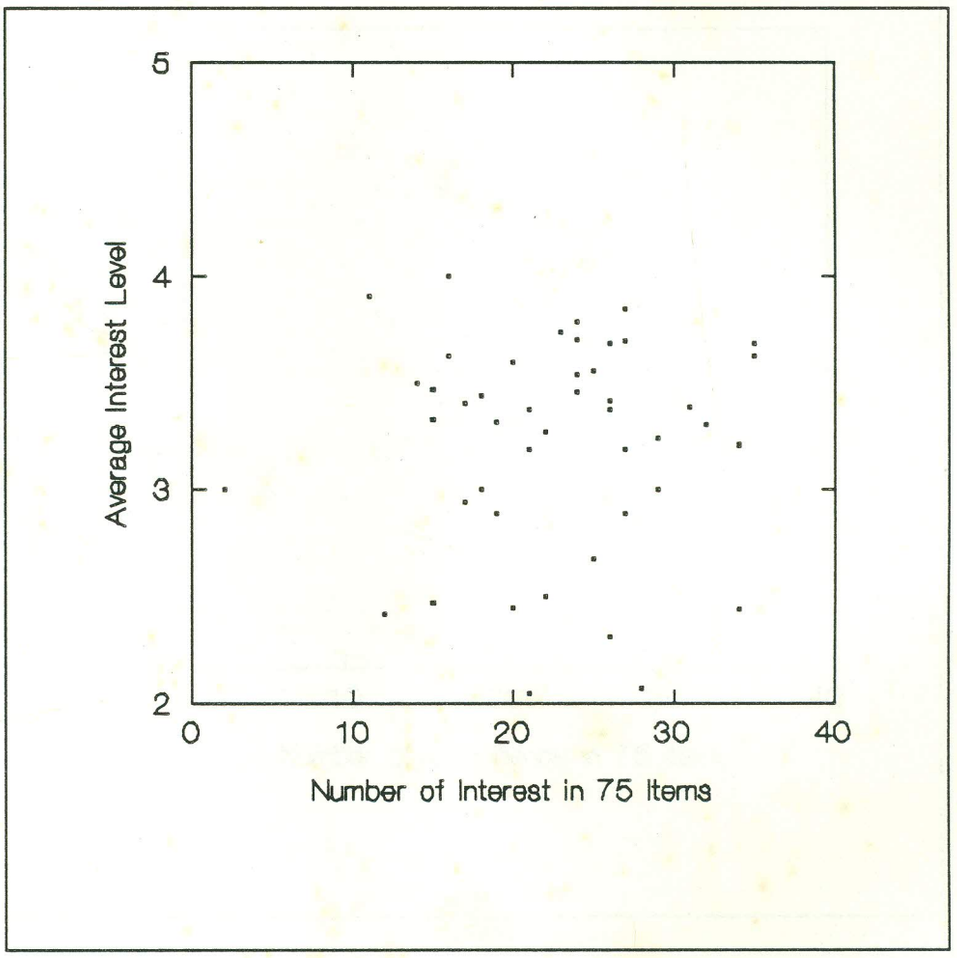


Figure 17: Scatter plot of multiparas' number of interests with the average interest scores.

Note: No significant correlation between number of interests and average interest scores (r=.00)

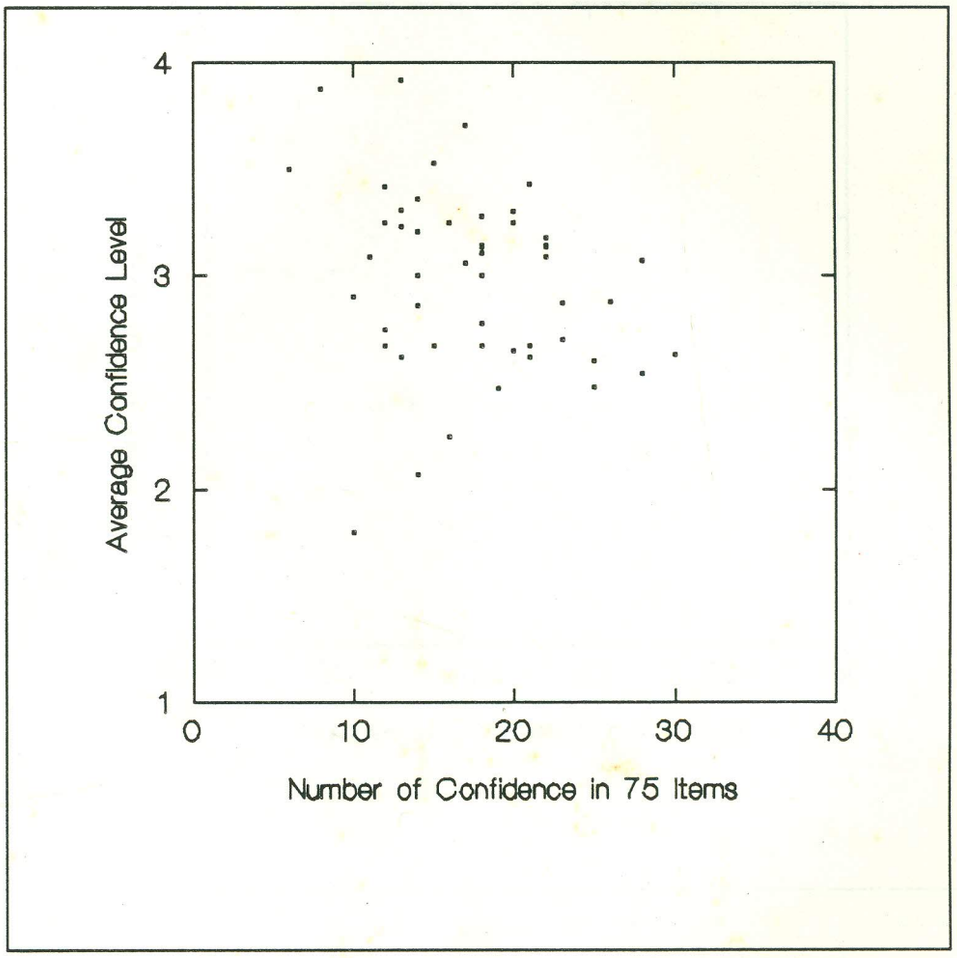


Figure 18: Scatter plot of primiparas' number of confidences with the average confidence scores.

Note: No significant correlation between number of confidences and average confidence scores (r=-.26).

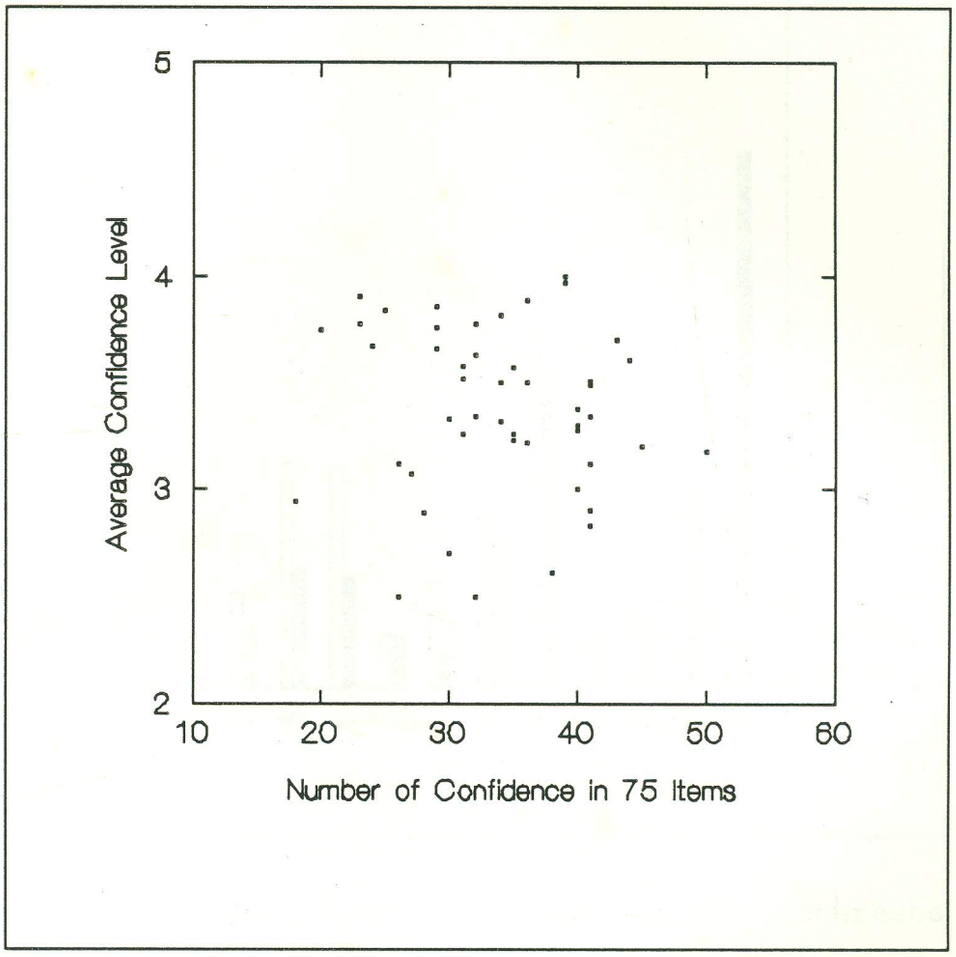


Figure 19: Scatter plot of multiparas' number of confidences with the average confidence scores.

Note: No significant correlation between number of confidences and average confidence scores (r=-.10).

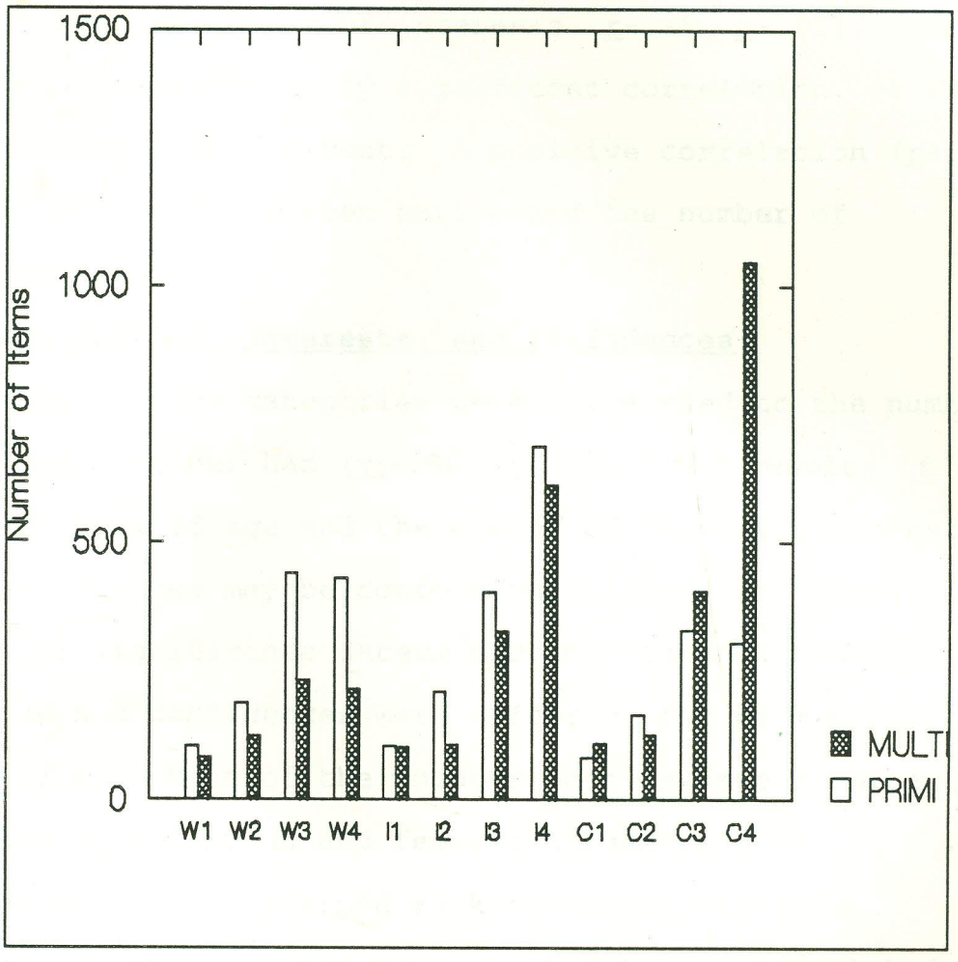


Figure 20: Frequency counts for worries (W), interests (I), and confidences (C) sorted into each level of the categories.

Correlational Analysis

Parity and Worries, Interests, and Confidences

Pearson correlation coefficients determined that there was a negative correlation (r=-.66, p=.01) between parity or the number of living children a mother had with the number of worries. A significant but weak correlation was between

parity and the number of interests (r=.38, p=.01). Although this was a statistically significant correlation, it was practically insignificant. A positive correlation (r=.76, p=.01) was found between parity and the number of confidences.

Age and Worries, Interests, and Confidences

Because age categories were correlated to the number of children a mother had (r_s=.80, p=.000), the results of correlations of age and the number of worries, interests, and confidences may be confounded. Also, the multivariate test for significance determined that the mean number of worries and confidences were different for primiparas and multiparas. Most of the younger mothers were primiparas, who had more worries and fewer confidences.

However, by Spearman rank order correlations, **hypothesis 4a**, that age would be positively correlated with the number of interests was not supported (r_s=.35, p=.000). Although this was a statistically significant correlation, it was practically insignificant. **Hypothesis 4b**, that age would be negatively correlated with the number of worries was supported (r_s=-.64, p=.000). There was a positive correlation between age categories and the number of confidences (r_s=.69, p=.000).

Experience Score and Worries, Interests, and Confidences

By Pearson correlation coefficients, **hypothesis 4c**, that the experience with child-care score would be

positively correlated with the number of confidences was supported (r=.82, p=.01). The experience with child-care score was negatively correlated with the number of worries (r=-.74, p=.01). There was a significant but weak correlation between the experience with child-care score and the number of interests (r=.37, p=.01).

Marital Status and Worries, Interests, and Confidences

The results of mothers' sorting as related to their marital status were also confounded by parity. Mothers' marital status were not independent of their parity (χ^2=19.23, df=8, p=<.025). However, by the chi-square test of independence, **hypothesis 4e**, that married mothers and those living with partners would express fewer worries was supported (χ^2=12.34, df=3, p=<.01). There were no differences between married/living with partner and single mothers' sorting of items as interests (χ^2=6.32, df=3, p=>.05). There was a significant difference between the two groups' sorting of items as confidences (χ^2=10.55, df=3, p<.05). For these chi-square tests, mothers' number of worries, interests, and confidences were grouped into four categories--low to high--and the frequency of mothers in each category for both married/living with partner and single mothers were counted.

Education and Worries, Interests, and Confidences

The hypothesis that years of education would be positively correlated with number of interests was not

tested because most mothers (95%) had basically obtained the same education level.

Tribal Groups and Worries, Interests, and Confidences

The hypothesis that there would be no difference in the number of worries, interests, and confidences for all tribal groups was not tested because there were too many (31) tribal groups.

Religion and Worries, Interests, and Confidences

The five religious affiliations were regrouped into two major groups--Christians and Moslems. Mothers number of worries, interests, and confidences were grouped into four categories--low to high--and the frequency of mothers in each category for both religious groups were counted. By chi-square tests of independence, the mothers' sorting of items as worries, interests, and confidences did not depend on their religions (χ^2=0.48, df=3, p=>.250; χ^2=0.72, df=3, p=>.250; χ^2=2.76, df=3, p>.05).

Regression Analysis

Regression analysis of age, the child care experience score, and the number of children showed a significant relationship with worries, interests, and confidences. The total F-values and p-values for the three dependent variables were: (F=40.00, p=.000), (F=5.60, p=.0014), and (F=67.60, p=.000) for worry, interest, and confidence respectively. However, experience with child care was the only variable that explained the variation in worry

(t=-4.83, p=.000). The number of children (t=.83, p=.41) and the age of the mother (t=-1.13, p=.26) were insignificant in explaining the variability in the regression. None of the independent variables was more important than the other in explaining the variability in the interests: number of children (t=-.67, p=.51), age (t=.50, p=.62), experience with child score (t=.74, p=.46).

Regression of age, number of children, and experience with child care on confidence showed that experience with child care was more important in explaining the variability (t=5.16, p=.000). Parity and the age of the mother were not significant.

Responses to the Open-ended Question

The open-ended question at the end of the card-sort allowed mothers to express additional concerns or to ask questions. Most (87%) of the mothers did not have comments or additional concerns. All mothers felt that doing the card-sort was sort of entertaining and it was also a learning experience to them. Two mothers expressed gratitude for the visit by the nurse researcher.

Three single mothers expressed concerns about raising their children as single parents. Two of these single mothers were primiparas and one was a multipara. One of the primiparous single mothers was not expecting any assistance from her partner because he had a new girlfriend.

Family planning was expressed as a special concern by

six mothers. Two of the six mothers were multiparas who were particularly interested in sterilization. One of them felt that getting an early appointment to see the doctor was not easy. Two other multiparous mothers (of the six) expressed concern about reliability of contraception methods because both of them had conceived while on the pill. Another multiparous mother said that she could not use the pill because she had high blood pressure and she was afraid of the loop. One mother, also a multipara, did not know how to get family planning services.

Two mothers (one primipara and one multipara) expressed dissatisfaction with the care and treatment they received during labour and delivery. The primipara wondered why nurses expected her to know what to do while it was her first time. The multipara felt that she did not get enough attention from the nurses.

One multiparous mother wondered why bottle-feeding was not among the items of the card-sort. Another primiparous said that she did not know what to do about her constipation.

In summary, those mothers who did not express additional concerns thought that most of what they could say was already covered in the card-sort. Also, the few who had comments seemed to talk or express more about issues that were already in the card-sort.

Summary of the Findings

The findings showed that primiparas had significantly more worries than multiparas on the total scale of the card-sort. Primiparas had more items sorted as great worries than multiparas. Primiparas also had significantly more worries than multiparas on the baby items sub-scale. Primiparas sorted more items as worries than multiparas on the mother items sub-scale, and there was no significant difference in the two groups' sorting of items as worries on family items.

Although primiparas had more items sorted into the great worry category, there was no significant difference between the two groups' mean scores (1-4) on worries. Although parity was not independent of marital status in this study's subjects, analysis of worries in terms of marital status showed that married mothers and those living with partners had fewer worries than single mothers.

Analysis of the items sorted as interests by the two groups of mothers showed that primiparas had significantly more interests than multiparas on the total scale of the card-sort and the baby items sub-scale. There was no significant difference between the two groups of mothers in the sorting of items as interests on the mother items category. Sorting of items as interests on the family items also did not show a significant difference between the two groups of mothers. Also, on the whole, the findings show

that primiparas had more higher level interests than multiparas, but there was no significant difference in the two groups mean score (1-4) on interests.

The findings show that multiparas had significantly more confidences than primiparas on the total scale and the baby items sub-scale. There was no significant difference between the two groups of mothers' sorting of items as confidences on the family items. Multiparas also had, on the whole, more items sorted as great confidence than primiparas and their mean confidence score (1-4) was significantly higher than that of primiparas.

Within-groups analysis by Kendalls' test of concordance showed that there was agreement among primiparous mothers to the relative number of worries, interests, and confidences. The same test showed that there was also agreement among multiparas to the relative number of worries, interests, and confidences.

Spearman's rank order correlations showed that age categories were negatively correlated with the number of worries, and positively correlated with the number of confidences. There was no relationship of age categories with interests. Pearson's correlation coefficients showed a negative relationship between parity and the number of worries, and a positive correlation between parity and the number of confidences. Also, by Pearson's correlation coefficients, a negative correlation was found between the

child-care experience score and the number of worries; and a positive correlation was found between child-care experience and the number of confidences; but there was no relationship of child-care experience with the number of interests. Experience with child care was the variable that explained most of the variability in the number of worries and confidences.

CHAPTER IV

DISCUSSION

This chapter presents a discussion of the findings related to the concerns identified by mothers in this study. The discussion considers findings from previous research within the Lazarus and Folkman (1984) stress, appraisal and coping framework, of which the concepts of "threat", "challenge", "benign-positive", and "irrelevant" stress appraisal were operationalized as "worry", "interest", "confidence", and "not-applicable" variables respectively. General concerns are discussed in the first section; concerns specifically related to the baby, the mother, and the family are then discussed separately. In each section, concerns of both primiparous and multiparous mothers are discussed. Lastly, the items that were added to the card-sort to make it socially and culturally congruent and the difficulties that were encountered during home visits are discussed.

General Concerns

Worries were the anxiety-related concerns or those that were classified as threats to the mothers. Although threats are usually identified in association with negative feelings, they can also be associated with anticipatory coping, in which the person is able to plan for dealing with the threats (Lazarus & Folkman, 1984).

Some aspects of postpartum concerns were equally worrisome to both groups of mothers; however in others primiparous and multiparous mothers identified different issues as being worrisome to them, and in general, primiparas had more worries than did multiparas. These findings are consistent with those of a number of studies that defined concern in relation to anxiety only. Summer and Fristch (1977) found that primiparas made 3.5 more telephone calls to health facilities than did multiparas, although when they did call, multiparas spoke longer and asked more questions than primiparas, indicating that multiparas may have fewer but more intense worries. Had the contents of the phone calls been categorized as either worry-based or interest-based, probably it may have been seen that not all of them were worries but also interests in seeking more information. It may have been that multiparous mothers were better able to articulate the concerns and were better able to ask follow-up questions. Similarly, in studying postpartum concerns of mothers and their sources of help, Harrison and Hicks (1983) found that mothers with their first child had more concerns than mothers with two or more children. Taken together, these data suggest that, whether they live in Western or non-Western societies, primiparas have more worries than multiparas.

The primiparous mothers' higher amount of worry is supported by the Lazarus and Folkman (1984) framework, which

states that people's sense of ambiguity and vulnerability can affect their appraisal of a situation and their coping. Ambiguity in a situation may be a result of their experience, and according to Lazarus and Folkman (1984), it can also be a result of the amount of information a person has about a situation. Thus, if a person is faced with an unfamiliar situation, increase in ambiguity may result in increased anxiety and worry. Although the amount of information they had was not measured in this study, the results of the experience with children scores showed that primiparas had lower experience, and thus less information.

It is important to note that, although they differed in amount, both groups of mothers expressed concerns that were worrisome to them. According to Lazarus and Folkman, expression of anxiety or worry should not be treated as an inability to cope but rather as appraisal associated with negative feelings that call for mobilization of coping resources. This indicates the importance of postpartum teaching and support strategies that would aim at helping mothers to gain appropriate information and skills needed to reduce their anxiety.

Consistent with Curry (1983), this study found experience with child care to be positively related to mothers' number of confidences. Thus, experience in child care may be a cross-culturally important factor in the mother's sense of confidence.

Like the findings of Rutledge and Pridham (1987), the findings from this study did not show any relationship between reported religious affiliation and worries, interests, or confidences. This should be interpreted with caution, however, because data collection and analysis about how closely the mothers were abiding to the various religious beliefs and values was beyond the scope of this study.

Although there was an association of parity and age, the findings from this study showed a negative correlation between age categories and the number of worries, no correlation between age and the number of interests, and a positive correlation between age and the number of confidences. These findings are consistent with those of Mercer's (1986) study. Although teenage mothers demonstrated considerable growth in the mothering role, they were hampered by their psychosocial maturity in cuing to their infants' needs. Also, although all mothers responded similarly in describing the joys and challenges of motherhood, older women compared in that study were more adaptive and competent in mothering behaviours than were younger mothers. Thus, younger mothers worry more and older mothers are more confident. Mercer's findings are, however, not in agreement with those of Rutlege and Pridham (1987), who did not find a relationship between age and competence scores.

The stress, appraisal, and coping model recognizes that developmental timing of an event influences the way a person appraises the situation and copes with it. For younger women, change in their life situations such as having a first baby, is apt to be more stressful than it would be for older women. Stress studies have established the influence of people's age and personal characteristics on their adaptation to life changes (Stewart, 1982; Stewart, Sokol, Healy, Chester, Weinstock-Savoy, 1982).

Findings from this study show that married mothers and those living with partners had fewer worries than single mothers. However, the above results should be interpreted with caution because, although weakly, marital status was not independent of parity. Most (88%) of the multiparas were married or living with partners, whereas only 58% of the primiparas were married or living with partners.

Contrary to the hypothesis, primiparas had significantly more interests than multiparas on the total scale. However, when analyzed separately, primiparas' worries and interests were within similar ranges and their range for confidences was lower than those for worries and interests, and multiparas' range for interest was higher than the range for worries but the range for confidences was highest. This study's findings show that primiparas as a group have a similar number of worries and interests, which is greater than their number of confidences. On the other

hand, multiparas as a group have more interests than worries and more confidences than either worries or interests. The findings about multiparas having more interests than worries support previous research findings (Moss, 1981; Hiser,1987). Also, this study's findings about the relationship of mothers' parity with mothers' confidence are consistent with Rutledge and Pridham's (1987) findings.

The multiparas' identification of relatively more items as interests and confidences than worries is also supported by Lazarus and Folkman's (1984) model, which maintains that a situation that is appraised as more threatening than challenging at one time can come to be appraised as more challenging than threatening at another because of cognitive efforts or changes in a person's environment that allow that person to view the situation in a more positive way. Although Lazarus and Folkman contend that there is a need for more empirical evidence about challenge (as opposed to threat), challenge has important implications for adaptation. Although they differed in amount, both groups of mothers had concerns that were expressed as interests. Given the mothers' sense of motivation, this finding indicates the need for postpartum teaching and support strategies that would aim at working with the mothers to meet their learning needs. Appraisal of postpartum concerns may vary according to personal and situational factors, but, to plan for intervention

programmes, nurses must have a basic understanding of the concerns of mothers.

Baby-Related Concerns

The findings of this study show that primiparas had more baby-related worries and interests than multiparas. When the baby concerns were analyzed according to the minor categories, primiparas also had significantly more worries and interests than multiparas on items related to the appearance and general condition of the baby and care of the baby. These findings are consistent with those of Gruis (1977), who also found that primiparas had more infant concerns than did multiparas, and those of Smith (1989), who found that primiparas had more major concerns related to care of the infant and meeting the needs of a dependent infant than did multiparas. This consistency indicates that primiparas' perceived need for more assistance in infant-care concerns may be cross-cultural. It would be interesting to investigate the role of prenatal education in reducing the number of worries and probably increasing the number of interests during the postpartum period, given that primiparas in North America (where prenatal education exists) have more worries than multiparas. Prenatal childbirth and parenting classes frequently enable mothers to engage in discussions and receive anticipatory guidance (Evans, 1991). However, several studies established that mothers who participated in those classes thought that

postpartum concerns were not covered as well as other subjects, that they did not receive enough information about common problems encountered at home, and that the information they got during those classes did not reduce the number of concerns they perceived (Gruis, 1977; Jordan, 1973). These findings raise questions such as whether actual experience with infant care is more important than the education these women receive prenatally, or whether the education they receive is appropriate in terms of what they want to learn and when they want to learn it? Such incongruencies indicate that individualized assessment is an essential component to any prenatal education programme.

Primiparas had more interest in learning about breast-feeding and the amount of breast milk than multiparas. Multiparas' sense-of-competence about breast-feeding may be due to the experiential learning they had acquired through previous childrearing. Unlike North American mothers, who choose between breast-feeding or formula-feeding during the early postpartum period, almost all mothers in Tanzania breast-feed. Breast-feeding concerns have also been reported in previous research done on breast-feeding mothers (Grassley & Davis, 1978; Gulick, 1982; Summer & Fritsch, 1977; Graef et al, 1988; Chapman et al, 1985). For example, Grassley and Davis (1978) identified key questions of mothers during the early postpartum period such as: "What do I do about sore nipples?" "Why do my breasts feel

hard and heavy?" "Why is my baby always sleepy?" Thus, regardless of their culture, it appears that inexperienced mothers tend to have more breast-feeding concerns than experienced mothers.

Baby's safety was also identified as an interest by both primiparas and multiparas. This finding supports previous research findings (Gruis, 1977; Moss, 1981; Hiser, 1987). Although they studied only primiparous adolescents, Howard and Sater (1985) also found that mothers were concerned about infant safety. Therefore, whereas health hazards may vary from culture to culture, it would appear that all mothers are concerned about keeping their infants safe from those hazards.

There were no significant differences between primiparas and multiparas in their sorting of items as worries and interests on the minor category of baby behaviour. This finding is compatible with previous research (Graef et al., 1988; Howard & Sater, 1985; Rovers, 1986; Summer & Fristch, 1977). In Rovers' study, both primiparas and multiparas identified infant behaviour and infant development as areas of continuing worry. Both primiparas and multiparas identified how babies act and how babies grow and develop more as interests than worries. Moss (1981) also found similar results among her multiparous subjects, in whom the two above-mentioned items ranked lowest as worries but highest as interests. Infant crying

and sleeping were identified as an interest by both groups of mothers in this study. Summer and Fritsch (1977) also found that mothers asked more questions in the areas of infant crying and infant sleeping. Thus, although mother-infant interaction patterns may differ in different cultures, primiparous and multiparous women's concerns about how the baby behaves and reacts are similar. This is reflective of the unique characteristics of each infant. With each new baby, mothers seem to need help in identification of these unique characteristics and how to respond to them. These findings seem to indicate that the mothers' familiarity with physical care, as opposed to her familiarity about the infant's behaviour, does carry over to the current infant.

The results of this study also show that multiparas had more baby-related confidences than primiparas on the baby items sub-scale and its three minor scales. These findings are compatible with those of Rutledge and Pridham (1987) but not with those of Pridham and Schultz (1983). However, as in Curry (1983), regression analysis showed that experience with child care was the most important variable that explained the variations in confidence among mothers. The baby items that both groups of mothers were most confident in were baby's urinating, baby's eyes, baby's sucking, and baby's sex. As a function of baby boys, baby's vaginal discharge was most frequently identified as not applicable.

These findings are compatible with those of Moss (1981), who, although she studied multiparas only, found that baby's sex was a non-concern. Hiser (1987) also studied multiparas only and found that baby's vaginal discharge and baby's urinating were non-concerns. Similarly, whereas baby's weight loss and baby's jerking or trembling were most frequently identified as worries by primiparas, multiparas in this study, like those studied by Hiser's (1987) identified them as non-concerns.

Mother-Related Concerns

The study findings show that primiparas sorted significantly more items in the mother category as worries than did multiparas, but there was no significant difference in the two groups' sorting of mother items as interests. These findings are similar to Moss's (1981) results, in which multiparous mothers' concerns about themselves ranked low except for the concerns about weight gain and return of figure to normal. These study findings about mother-related worries are also consistent with those in Hiser's (1987) study in which multiparas sorted fewer mother-related items as worries. In this study however, items about mothers' body image were insignificant. "My flabby figure" was most frequently sorted as "not applicable" and "return of my figure to normal" and "change of my figure" did not reach the selected frequency (40%) for any category of the independent variables. These findings also do not support

Gruis's (1977) findings, in which the most frequent concerns were return of figure to normal and the mothers' perceived flabby figures. This incongruence in the perception of mothers' body image may be cultural. While Western culture may place more emphasis on the ideal woman's being slim and lean, whether a woman is slim or not is usually not an issue in Tanzania. However, different values may be expected in a more educated population or one that has been influenced by Western culture. Lazarus and Folkman's model also recognizes the influence of situation factors, of which cultural beliefs are part, on the way a person will view and respond to the situation.

The issue of how well mothers did during labour and delivery was identified as a worry by 25 (50%) primiparas. Mercer, Hackley, and Bostrom (1983) also found similar results, in that the age of the first-time mothers they studied was not related to those mothers' feelings about the birth experience. This study's finding that multiparas were not concerned about how well they did during labour and delivery is consistent with Hiser's (1987) findings. Multiparous mothers' previous experiences of childbirth may have reduced their need to learn more about labour and delivery, since experience may reduce ambiguity of a situation and thus the need for more information about it (Lazarus & Folkman, 1984).

These findings raise the question of how hospital environments and interactions affect the amount of stress during childbirth, and what impact professional prenatal preparation for childbirth (which is non-existent in Tanzania) may have in reducing stress during childbirth. Other mother-related items that were most frequently identified as interests are discussed in the social and cultural aspects section.

Family-Related Concerns

Findings from this study show that there was no significant difference between primiparas and multiparas in their sorting of family items into worries, interests, and confidences. These findings, as pertaining to worries and interests taken together as concerns, are not consistent with previous research (Gruis, 1977; Smith, 1989; Tribotti et al., 1988) in which multiparas showed more family-related concerns than primiparas. The argument in previous research is that multiparas may have had more family concerns because they lived in more complex family situations than primiparas.

When the two groups of mothers were analyzed separately, family items, which comprised 21% of the total card-sort items, accounted for 24.60% of primiparas' worries and 36.90% of multiparas' worries. Thus, as a group, multiparous mothers had more family-related than either baby-related or mother-related worries, and as a group,

primiparas had more baby-related than either mother-related or family related worries. However, interpretation of these findings should be done with caution because, although family items comprised a higher percentage of multiparas' worries, the actual number of worries, as determined by the subscale f-test, was not different from that of primiparous mothers.

On the basis of family situations, a sizeable number (40%) of the primiparas were single and they were living in extended family situations with their parents or their relatives. The incongruence in this study findings with previous research may be due to differences in the study sample characteristics and methods of data analysis. For example, while both married and single mothers were included in this study, Smith's (1989) subjects included mothers who were living with the father of the baby. Further, Tribotti et al. (1988) included mothers with a mean education level of 13.8 years, while this study's mothers predominantly had only primary education.

Both primiparas and multiparas identified the reaction of their husbands or partners to them (mothers) or to their babies as areas of worry. These findings are consistent with Graef et al.'s (1987) findings that although 17% of the mothers reported lack of concern from fathers of their babies, overall, the fathers and family members were viewed as positive sources of support. Thus, the reaction of

family members is a concern to both primiparas and multiparas.

Although social support was not addressed in this study, Lazarus and Folkman's model recognizes its importance in stress appraisal and coping. The model supports the importance of family and social functioning in peoples' lives, and recognizes that a person's history has implications regarding dependency, autonomy, trust, and intimacy. In addition though, cultural values and expectations regarding social roles are important in the development of human relationships. In this study it was not possible to examine the role of the extended family network in which the single mothers were living, and thus conclusions cannot be drawn. However, it might be that these mothers would have fewer worries if a family network was in place and played a positive role in providing social support. As well, a different worry pattern might be found among mothers living in rural areas.

Resumption of sexual relations was frequently identified as a worry by both multiparas and primiparas. The above findings about mothers' worries related to the resumption of sexual relations support previous research findings which determine a decline in sexual interest and activity during pregnancy and, for most women, for one year after delivery (Fischman et al, 1984). Both primiparas and multiparas need information about sexuality in the

postpartum period. However, Moss (1981) found that resuming sexual relations was a non-concern among her study multiparas.

More multiparas than primiparas identified finding time for themselves as a worry. This finding supports Hiser's (1987) results. Multiparous mothers also have more responsibilities that involve care of other children than primiparous mothers. Although both primiparas and multiparas in this study were living in extended family situations, the multiparas were married and thus had more responsibilities. Thus, the existence of an extended family may be both a demand to the mother and also a source of support.

Socio-Economic and Culture-Specific Aspects

Although socio-economic and cultural aspects were not major study variables, items that were deemed to address differences between North American mothers and mothers in developing countries like Tanzania were included in the card-sort.

Knowing about baby's immunizations was identified as an interest by 76% of the mothers (44 primiparas and 32 multiparas). Prevention of infant infections was identified as an interest by 68% of the mothers (35 primiparas and 33 multiparas). These findings suggest that mothers are motivated to learn about communicable diseases. The above mothers' attitude should be strengthened to increase the

immunization coverage for children. However, success has been demonstrated in immunization coverage, which is over 80% of all children under five years for all antigens (Government of the United Republic of Tanzania / UNICEF, 1990).

Family finances was identified as a worry by 64% of the mothers (34 primiparas and 30 multiparas). In a study of mothers and children in Zambia, Watts, Ng'andu, and Wray (1989) also found that women in urban townships faced considerable problems in rearing their children because they relied on a cash economy that was not usually sufficient. Providing nutritious food to the whole family was identified as an interest by 59% of the mothers (32 primiparas and 27 multiparas). The findings from this study are consistent with the information documented in the Government of the United Republic of Tanzania / UNICEF (1990) analysis of the situation of women and children in Tanzania. Household income and food security depends on the relationship between food price and employment (formal and informal). Because earning from formal employment is not adequate in most cases, people, mostly women, have to engage in small business.

Sixty-five percent (33 primiparas and 33 multiparas) of the mothers were interested in learning about prevention of infections to themselves, a finding that can be explained by the high prevalence rate of communicable diseases. For

example, malaria is one of the top causes of outpatient attendance and admissions (Government of the United Republic of Tanzania / UNICEF, 1990).

Making home and household decisions was identified as an interest by 50% (31 primiparas and 29 multiparas). It is also documented in the Government of the United Republic of Tanzania / UNICEF (1990) analysis of the situation of women and children in Tanzania that, while women may have the information, they are usually not allowed access to resources needed for action regarding their health or care of children.

Both primiparas and multiparas were interested in knowing about family planning, which may be a good indication that efforts are needed to increase the contraceptive acceptance rate in Tanzania, which is reported to be 7 percent. The National Family Planning Programme aims at increasing the contraceptive acceptance rate to 25 percent by 1993, reducing the proportion of women having children before they are 20 years old, and increasing the proportion of couples spacing pregnancies at three-year intervals (Government of the United Republic of Tanzania / UNICEF, 1990).

Summary

The differences between primiparas and multiparas may be due to their experience, level of ambiguity and vulnerability, and developmental timing. Although

definitive cross-cultural conclusions cannot be drawn, based on previous research findings, this study's findings provide information on how mothers in developing countries like Tanzania are different or similar in their perception of early postpartum concerns. Whereas the similarities seem to be the inherent factors to every mother-infant relationship, the differences seem to be the culturally imposed factors.

CHAPTER V

OVERVIEW, LIMITATIONS, AND IMPLICATIONS

Overview

The findings from this study and from other studies on similar topics, and the propositions in the stress appraisal and coping model suggest that nurses' assessment of mothers' concerns in the postpartum period is important. To assist mothers in making realistic judgements about the postpartum period, nurses must understand what issues are worrisome, of interest, of confidence, or not applicable to the mothers' situation. Knowledge of postpartum concerns may help nurses to identify mismatches in what mothers may express as concerns and what is actually happening. To be able to mobilize coping resources, individuals need to appraise situations within their own contexts.

This comparative study examined the differences between the concerns of primiparous and multiparous mothers. Primiparas had more concerns expressed as worries and interests than multiparas, and multiparas had more confidences than primiparas. The findings suggest that primiparous and multiparous mothers need different types of guidance and support during the postpartum period. Nurses can play a very important role in making sure that there are programs that meet mothers' specific needs during the postpartum period.

The findings from this study support North American research showing that primiparas have more concerns expressed as worries and interests, and multiparas have more confidences. The lack of concern about body image, as reported by mothers in this study and which is different from North American study findings, may be due to cultural values that do not emphasize an ideal body structure. Mothers' concern about family issues may be due to the socio-economic environment and the living situations that may be a source of stress to mothers. The findings from this study also suggest that mothers have concerns about specific issues such baby's immunizations, prevention of infections, availability of nutritious food, family finances, family planning, and sexuality.

Limitations

Several factors related to the sample should be considered when interpreting and making generalizations from this study's findings. Although the sample was sufficiently large to warrant generalization of the results to other groups of postpartum mothers, the sample was not representative of all urban areas in Tanzania as only Dar-Es-Salaam city was used. Also, although randomization was incorporated in sampling, the sample was basically a convenience one. Generalization of the study findings even within Dar-Es-Salaam city should be made with caution because not all hospitals that conduct labour and delivery

were used for subject identification. The above factor limited the variability of the subjects, especially in terms of their educational status.

Other limitations pertain to the method of data collection. Even though the mothers were told that there was no right or wrong way to do the card-sort, that they were in control of the whole process, and that the researcher was only there to clarify for them areas they did not understand well, the presence of the researcher during the card-sort could have influenced the way mothers sorted the items. To minimize the above effect, however, the researcher explained to the mothers that she would not watch them, and in many cases did activities like reading or offered to hold the baby. With adequate explanation at the beginning, many mothers understood the instructions and were able to complete the card-sort without difficulty.

Another methodological limiting factor in many cases was the difficulty of obtaining complete privacy to do the card-sort. In many instances friends and / or family members indicated an interest in hearing or seeing what the researcher had to do with the new mother. Privacy could be obtained at the beginning of the card-sort but sometimes other members of the family or visitors came during the process. Such an interruption could have influenced the way mothers did the sorting.

The fact that items from the original tool had to be translated to Swahili may have influenced the meaning of concepts that were being measured. However, to control for this, translation was done from English to Swahili and back to English by two different language experts. Then the researcher, after consulting with other Swahili-speaking people decided on the final Swahili version of the items.

Another methodological limitation was the time selected for data collection. Although it was assumed that two weeks at home would be a good time to measure mothers' postpartum concerns because by then they would have experienced what it was to have the baby, concerns that they would have had during the period after delivery to the time they did the card-sort may have changed and thus interpreted differently. To cover the whole two-week period, mothers were instructed to examine their perceptions about the items from the time they had the baby to the time they were doing the card-sort. Even with the above-mentioned limitations, however, this study's findings can be generalized to the population that uses government maternity facilities in Dar-Es-Salaam.

Difficulties Encountered During Home Visits

It is interesting to note the follow-up rate, the reasons for non-follow-up, and the difficulties that were encountered during home visits. The following information may be useful to others' consideration of postpartum follow-up programmes that may involve home visiting.

Out of 159 mothers who were recruited into the study, 100 were followed for the measurement by the card sort and 59 either were not followed up or were discontinued from the study. The reasons for non-follow-up or discontinuation were:

Insufficient Directions

Fifteen (25%) of the mothers who did not do the card sort had given insufficient directions about locating their homes. Some did not know important information like their CCM (The Tanzania ruling party) branch, zone, or division offices and the leaders in those offices. Some mothers did not know their Ten Cell Leaders. The CCM party leadership structure, when known, was helpful in locating mothers' homes. It was also realized at almost a quarter of the way through the data-collection period that important landmarks like shops, hotels, bars, and institutions were helpful in describing how to get to some locations.

Wrong Address

For some unknown reason, eight mothers (14%) of those who could not be traced or were discontinued from the study) gave home addresses that could be traced but at which those mothers were not known to live. In several instances, mothers were missed because people were reluctant to help as the researcher had asked a police officer to assist in locating homes.

Travelling

Eight mothers (14% of all non-follow-up subjects) had travelled out of the city to stay with their parents or relatives for the period of 40 days (arobaini) after delivery. The above is usually the custom practiced by people along the coast of Tanzania. The above happened despite efforts made on recruitment to ask the mothers if they had intentions of travelling. Four mothers had gone out of the city to search for traditional medicine/advice because they were sick. Another two with breast-feeding problems had also gone to search for traditional advice.

Sickness of the Mother and or Newborn

Three mothers (5%) of the non-follow-up group did not do the card-sort because they had signs of puerperal infection when they were visited. One was already being treated and the other two were advised to go for treatment. Two mothers were excused from doing the card-sort because their infants had fever on the day of the visit.

Death of the Newborn

Two mothers did not do the card-sort because their infants had died during the first week after discharge from the hospital. The causes of death for both infants were not known because, according to the parents, they died suddenly at home. One infant had a birth weight of 3.5 Kg, the other had a birth weight of 2.7 kg, and both had a five minutes Apgar score of 10.

Road Inaccessibility

Three mothers (5%) could not be visited for the card-sort because the roads to their homes were inaccessible during the rainy season. Another 12 (14%) were not visited because, due to transportation difficulties, time ran out of the prescribed measurement period.

Implications for Nursing

The demands, potential anxieties, and challenges of the early weeks at home with an infant are great. The new mother is not only dealing with her physical recovery from the birth process but is also dealing with the infant and other demands from her family and society.

There is no organized system to ensure that important postpartum health education needs are met before the mother and the child are discharged. Because in-hospital teaching is important in preparing the mother to adapt during the first days at home, there is a need for establishment of a teaching programme that would serve as a guide for nurses in making assessment and planning for teaching.

Early discharge (within 24 hours of delivery) is the norm in most hospitals in Tanzania, yet there is no organized follow-up system for postpartum care. After discharge, mothers usually have no contact with health-care providers until they take their babies for their first visit to maternal and child health (MCH) clinics at 4 weeks. Even then, assessment is usually focused on the baby's health,

administering appropriate immunizations to the baby, and counselling the mother about the baby's health. There is no care for the mother and her health in the postpartum period, thus compromising the quality of care for childbearing mothers.

There is a need to bridge this gap in the delivery of care to childbearing mothers and their families. To assist mothers adapting, postpartum follow-up is a nursing intervention that should be given priority in Tanzania. Nurses could coordinate policies within the Ministry of Health to provide opportunity for meeting the needs of mothers during the postpartum period. Comprehensive programs for all mothers, combined with specific programmes for specific groups, could be established. These programmes may include in-hospital teaching and demonstrations on various postpartum concerns of mothers; postpartum follow-up visits at MCH clinics for assessment, teaching, guidance, and support; home visiting and postpartum support groups either at MCH clinics or at an area closer to where mothers live.

These postpartum services should focus on assessing and planning for interventions for both the mother and the baby. For the mother, assessment of a variety of multiple variables that may affect a smooth transition to parenthood and planning for nursing interventions that target those variables are important. Recognition of maternal concerns

can assist nurses in developing nursing diagnoses that reflect the mother's priorities. Guidance regarding physiological changes, emotional changes, energy conservation, infant care, and infant behaviour are particularly important. The findings from this research suggest that mothers have similar concerns across cultures, but there are also important differences to be considered as relates to the infant, the mother, and her family. Since virtually every Tanzanian mother breast-feeds during the early postpartum period, assessment in that area is very important. Since both groups of mothers in this study showed a need to learn more about infant behaviour, assessment and counselling of the mother about individual infant characteristics is also important. Assessment about the mother's body image should meet both the need for a healthy body and should be consistent with mothers' cultural values. Emphasis should be on nutritional assessment and the availability of nutritious food for the mother and her family. Objective assessment, rather than assumptions about the role of extended families, is also necessary.

Several postpartum-care intervention strategies are suggested in the literature, for example, home visits and postpartum support groups with teaching as an integral component interwoven throughout all forms of nursing interventions. Family-centred care is also the philosophical basis of most postpartum-care programmes.

Family-centred maternal, newborn, and early-childhood care is the delivery of safe, quality care of both the physical and psychosocial needs of the mother, the infant, and the family (Reeder & Martin, 1987). Even though all elements of family-centred care during the childbearing process cannot be easily applied in all situations in Tanzania, involvement of the family during the postpartum period is quite possible.

Family Involvement

The findings from this study suggest a need for both primiparas and multiparas to be assisted in family matters that would affect their adjustment in the postpartum period. Both groups of mothers were similar in terms of their concerns about general family interactions and family economy.

Nurses have the responsibility to make an accurate assessment of family functioning and to promote, implement, and evaluate creative nursing interventions to facilitate adaptation. These goals can be achieved in a variety of settings, for example, the hospital, MCH clinics, and the home. Nurses also should assist new mothers in planning for using available human and material resources. Because trying to meet the demands of a husband/partner and a child/children is stressful to new mothers, nurses should assist families in working together to ease the stress of the postpartum period. An important factor to be considered

is the role of the husband/partner, which both primiparas and multiparas identified as a concern area. To ease the load or stress that childbearing has on women, nurses need to involve the husband and depart from the traditional view that men have little to do with the process. Nurses should use strategies that would aim at changing peoples' attitudes about childbearing and childrearing as unique roles of women only. One strategy is to do research on fathers to identify their perception about mothering and fathering roles. Research methods such as interviews or doing a card-sort with relevant items may help to bring to men an awareness about what they could do to change their attitudes about mothering and fathering. Rather than assuming that fathers are less involved, such research would also determine the extent of fathers' involvement or non-involvement. Findings from that type of research would also serve as a guide in setting priorities and selecting ways of involving them within their cultural contexts.

Community-based Care

To assist the mother to a more complete recovery, that includes not only the physiological aspects but also the emotional and social aspects, postpartum care must be community-oriented with focus on the home. Transportation problems in Tanzania may make home visits seem impractical but strengthening and encouraging the already available MCH aides to do postpartum home visits may be a starting point

in postpartum care.

Teaching

The noted differences in the amount of worry, interest, and confidence between the two groups of mothers suggest that the two groups require different support and teaching strategies. Nurses need to apply principles of adult teaching and learning in choosing strategies that aim at reducing anxieties so that mothers adapt positive attitudes to learning. Nurses should also assist mothers to meet their needs for information and acquisition of the desired skills necessary for a smoother postpartum experience. When mothers' concerns focus on the baby, it is appropriate for nurses to initiate teaching or guidance related to the baby, and when the mothers' concerns focus on self or the family, teaching or guidance in that area is necessary.

From the study findings, both primiparous and multiparous mothers show the need to learn and understand their infants' behaviours and characteristics. Nurses have the responsibility of providing guidance to mothers in the area of infant behaviour. It has been evidenced that teaching mothers on infant behaviour and infant characteristics improve mother-infant interactions (Anderson, 1981; Buckner, 1983; Furr & Kirgis, 1982).

This study's findings also suggest that, in addition to infant care, infant behaviour and mothers' physical and emotional changes, other important health-education topics

for this population include family planning and sexuality.

Prenatal preparation for childbirth and parenting also is an important area to be considered. Such preparation (by professional health workers) is virtually non-existent in Tanzania. The findings from this study show that women, particularly primiparas, were concerned about how they did during labour and delivery. Also, two mothers responded to the open-ended question by expressing dissatisfaction with the type of care they received during labour and delivery.

Implications for Nursing Education

The findings from this study suggest that mothers need assistance and support during the early postpartum period. To meet this demand, planners of nursing curricula in Tanzania should emphasize individual assessment, planning, and implementing nursing care during the postpartum period as part of midwifery, maternal/child health and community health training.

Implications for Future Research

Although this study was done in one urban area, Dar-es-Salaam is quite representative of many urban areas in Tanzania. The findings and limitations of this study suggest several areas for future research. To establish validity, postpartum-concern research should be done with samples from other urban areas in Tanzania. Also, studies that will determine how differences in education level and socio-economic status influence mothers' expressed concerns

and adaptation during the postpartum period are important. Research on the impact of social support on the postpartum adaptation process is also important.

There is also a need to study postpartum concerns of rural women in Tanzania and their social support, and how their socio-economic environment may affect how they perceive and adapt during the postpartum period. Comparative studies to determine differences between rural and urban women's concerns and their ways of coping during the postpartum period may help in establishing relevant postpartum programmes. It is important to ask whether the presumed positive role of the extended family in Africa is a myth rather than a reality today. Would the changing values among urban people, when compounded with difficulties that poverty brings to families, be an important factor in the amount of worry postpartum mothers have?

Also, to strengthen and broaden the applicability of maternal (parental) and child-care research requires more cross-cultural research in all areas of the childbearing process. It was also evident from this study that, for example, there are variety of ethnic or tribal groups that may have significantly different values related to and practices during childbearing and childrearing. Research into different groups' patterns of care at home during the early postpartum period may assist nurses and health-care workers in communicating more effectively and selecting

teaching strategies to enhance good practices and to discourage practices that may be harmful to the baby or the mother.

Since this study's findings identify concerns related to family and husband/partner involvement, examination of the roles of the family and of the husband or partner in childbearing and childrearing may help in selecting strategies for family or mate involvement.

Studies to examine nurses' and MCH aides knowledge' and attitudes about postpartum care are also important. Such studies can help educators plan training programmes that would prepare nurses and MCH aides to function more effectively in assisting families during the postpartum period.

Summary

Even with the identified limitations, this study provides a beginning in the area of postpartum care nursing research in Tanzania. Awareness about the stressful nature of the postpartum period, combined with the normative practice of early discharge, makes care during the postpartum period an important priority. Implications for practice and education have been identified. Areas for further research have also been identified. To improve the quality of care given to mothers during the postpartum period, incorporation of these recommendations and exploration of the identified and other gaps are necessary.