

TITLE PAGE

**HEALTH-RELATED QUALITY OF LIFE OF HOUSEWIVES AND CAREER
WOMEN WITH NORMAL VAGINAL DELIVERY IN ENUGU, NIGERIA**

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NURSING**

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CERTIFICATION

This is to certify that this dissertation is the original work carried out by **Chinweuba, Anthonia U.**, in the Department of Nursing Sciences, University of Nigeria, Enugu Campus, except as specified in acknowledgements and references, and that the dissertation contained therein has not been submitted to this University or any other institution for the award of a degree.

Student

Date

Supervisor

Date

DEDICATION

To all mothers in Nigeria

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ABSTRACT

The birth of a new baby is an important event in the life of a woman that requires some physical and emotional adjustments. This study investigated the differences in health-related quality of life of housewives and career women after normal vaginal delivery in the light of their mother-worker dyad and the associated socio-demographic factors. Three objectives and five hypotheses were raised to guide the study. Response shift theory was used to appraise the quality of life of the mothers as they adapt to changes in their roles post delivery. Longitudinal, prospective descriptive design was used for the study. A sample of 234 newly delivered mothers was drawn from an estimated population of 363 that used six selected hospitals in Enugu through proportionate stratified and convenience sampling techniques. Data were collected by administration of a modified form of the short-form 36 version 2 (SF-36v2TM) health-related quality of life instrument - standardized Iranian version generic 36-item health status profile ñ and a researcher-developed five-item questionnaire to post partal at 6, 12 and 18 weeks post delivery. Data collection was through personal contacts at the hospital initially, and visits to home/workplace or cell-phone interview at subsequent times. Data were analysed descriptively using frequencies, percentages, mean and standard deviations. T-test was used for group comparison of dimensions of HrQoL of the women while two-way ANOVA was used to establish statistical significant difference in the scores. Both housewives and career women had better HrQoL during their maternity period ñ 6 and 12 weeks post partum than at 18 weeks. At 18 weeks housewives had better HrQoL than career women; career women reported bodily pains and problems with role physical and social functioning more frequently than housewives. There were significant differences in HrQoL scores of housewives and career women at 18 weeks post partum based on their age, educational status, family income, perceived social support and stress-related job category. The current four months leave maternity should be extended to six months full pay maternity leave so that mothers will have more time to adjust to their increased responsibilities. Paternity leave should be granted to fathers, on request, so that they will have time at home to assist their spouse as may be necessary. Similar studies should be conducted among housewives and career women living in rural areas.

CHAPTER ONE

INTRODUCTION

Background to the study

The birth of a new baby often arouses different emotions in the mother. It is usually a happy time, but can also be a time of huge changes; a stressful time during which the mother has to make a lot of physical and emotional adjustments for proper baby care and attention to other routine responsibilities. Women generally are responsible for home care. Often, domestic chores and baby care may be so engrossing that the woman has to work most hours of the day. Some of these women are also engaged in formal jobs outside the home. The arrival of a new baby, then, may mean the woman having more work, which in turn, can affect her quality of life (QoL) ñ a subjective feeling of comfort, happiness and satisfaction with living used to describe her ability to realize her life potentials and fulfil her needs, as well as her general well being.

There may be a shift in a woman's health-related quality of life (HrQoL) particularly on resumption of her out-of-house daily work post-delivery. HrQoL is one's perception of his limitations related specifically to health (Eastwood, Doering, Rope & Hays, 2008), which according to Hays and Morales (2001) may represent how the person's health affects his ability to accomplish daily functions or his perceived well-being in physical, mental, and social domains of life. The relationship between work and child care, therefore becomes essential to understanding the woman's life.

Social science has a long history of analysing work and baby care as separate spheres with only peripheral discussions of their inter-relationships (Zaid & Popoola, 2010). The combination of child care and domestic work (and in some cases, out-of-house work) in

both the housewives who spend most of their day times on house chores, and the working-class women who would attempt to “balance” work with domestic life, may impact on their QoL.

QoL is not static just as health itself is not static. This means that one’s level of satisfaction with life and general wellbeing can change as the individual encounters changes in his physical and psycho-social life experiences. HrQoL of women post delivery may change as they transit from the maternity season (*omugwo*) to resumption of usual routine work some weeks after delivery.

The fundamental contributions of women in their households and improved national economies are increasingly acknowledged by the international community (Manuh, 2011), and the economic roles of African women are fast changing as the world turns into a global village (Enyioha, 2011). National integration of women into the world economy through trade liberalization significantly expands their access to income (Meyer, 2007), but does the ability to have reasonable access to income necessarily mean an improved HrQoL for them, even during the post-natal period?

Most available studies on HrQoL were on self-reported chronic diseases – such as diabetes (Bowker, Pohar & Johnson, 2006), breast cancer (Ashing-Giwa, Tejero, Kim, Padilla & Hellemann, 2007), arthritis (Norimatsu, Makoto, Masato, Zhaojia, et al, 2011), and hypertension (Plugge, Douglas & Fitzpatrick, 2011) and their risk factors (body mass index, physical inactivity, and smoking status). Lubetkin, Jia, Franks, and Gold (2005) equally noted this. The World Health Organization (WHO) (2005) notes that the measurement of health and the effects of health care must include not only an indication of changes in the frequency and severity of diseases but also an estimation of well being

which can be assessed by measuring the improvement in the QoL related to health care. Also, WHO recently suggested HrQoL as a supplement to the traditional neurological outcome measures from the patients' perspectives (Wong, Poon, Boet, Chan, 2010). HrQoL assessment is, thus, a particularly important public health tool for women of child bearing age in an era where women's roles have expanded (Schoepke, Hoonakker & Carayon, 2007; Enyioha, 2011) exposing them to more physical, mental and socio-economic health risks. Generally, women perform most domestic tasks, while many also farm, trade or are engaged in formal jobs. They are responsible for the care of children, the sick and the elderly, in addition to performing essential social functions within their communities.

Okeke-Ihejirika (2004) and Chukwu (2005) assert that the Igbo women of South-Eastern Nigeria face obstacles that prevent them from reaching their professional and personal potentials ñ even with a university education. A recent British Broadcasting Cooperation (BBC) report said that 90% of these Igbo women were literate (Eze, 2011); but, a lot of them are now career women involved in jobs that make them to keep late hours ñ and it is understandable and acceptable (Enyioha, 2011). Worse still, some of these women lack social supports. Social support refers to a network of social resources such as social life, friendships, and family relationships as well as tangible and intangible assistants to the individual that is capable of influencing her psycho-social well-being. Qualls (2012) observed that quality of social support to women is declining proportionately with industrialisation and urbanisation.

Although the Federal Government of Nigeria as a member of the government delegation to the 98th International Labour Conference held in Geneva in June, 2009 was reported to have approved a 16-week maternity leave for women in the federal public service (Kolafe,

2009), the Labour Standards Bill was yet to be passed by the National Assembly. Health experts frowned at the “three months only” maternity leave currently approved by the Government and advocate for six months instead (Adeoye, 2012). However, on the basis of the current provisions, career women resume work about 12 weeks after childbirth.

Zendah, Cherif, Khattab and Ghedira (2010) observed that QoL is affected by the socio-cultural and psychological context of each individual, and thus recommend that this should be assessed in the environment where the individual lives. Similarly, Stafford, Soljak, Pledge and Mindell (2011) noted a significant association between socio-economic circumstances and HrQoL. As a subjective construct that reflects the difference or the gap between the hopes and expectations of a person and his present experience (Mala, 2004), this present HrQoL study is expected to yield self-perception data source for establishing the QoL of post-natal mothers in this part of the world where women are exposed to a lot of socio-economic challenges (Agu, 2007; Nwokocha, 2008; Chukuezi, 2010; Fox, Halpern, Ryan & Lowe, 2010).

In the light of mother-worker dyad of housewives and career women, the study examined whether HrQoL of newly delivered women differ. The study determined how the HrQoL of mothers in the two social network domains (home-based and work-based networks) – with eight empirical indicators of: general health; physical functioning; role physical; role emotional; social functioning; bodily pains; vitality; and mental health – differ in relation to their work (whether domestic or formal, paid or unpaid), and their age, educational status, family income, social support and stress-related job category in the midst of child-bearing and child-care. The researcher is of the opinion that a study of this nature might help to provide information for evidence-based practice and assist women for informed decision-making.

Statement of the problem

There has been a paradigm shift from emphasis on curative healthcare to preventive healthcare, hence health promotion and disease prevention occupy major positions in healthcare agenda of many developed and some developing countries. However, some developing countries like Nigeria are yet to see good reasons for investing substantively on preventive healthcare (Nwokocha, 2008).

In our environment, the woman is traditionally saddled with domestic responsibilities with little or no help from her husband and children. Children may be in their tender ages ñ almost completely dependent on adults for their survival needs. Her husband may spend most of daily hours outside the home. Besides, the woman may be engaged in one form of formal or informal job to compliment the family income. All these, no doubt, imply lots of physical, mental and social demands on the health of the woman especially during the post-natal period.

From anecdotal reports and personal experiences, some women who were known to be very productive at work begin to demonstrate some weaknesses or inefficiencies in their work on resumption of work after maternity leave. The woman reports to work late frequently, takes excuses often while at work, and sometimes completely absent from work with or without excuses. While on duty, she becomes less concentrating, and as such inefficient. This, in turn, exposes her to conflicts in her work place. She is sometimes physically unkempt, depressed and quarrelsome. She may sleep at work and will tend to shift or postpone responsibilities. All these leave one to wonder how comfortable the woman is with living and whether this situation still gives her the opportunity to realize her life potentials and fulfil her needs, as well as her general well being.

Betty Friedmen in her book titled “*The Feminine Mystique*” asked, “Are the women who finished college, the women who once had dreams beyond housewifery, the ones who suffer the most?” (Tubbs, Linville & Cox, 2009) – a question not yet answered, yet pertinent to understand the impact of the fast changing role of women. Is there any difference in the HrQoL of career women and housewives following their return to routine tasks after normal delivery? How does child care impact the HrQoL of these cohorts? How does work outside the house affect the health of these women three months after normal delivery? What is the influence of age, educational status, family income, social support and job category of these post-natal women on their HrQoL? The study set out to answer these questions.

Purpose of the study

The purpose of this study is to compare the post-natal HrQoL of career women and housewives, and thus, establish the differences in the general health; physical functioning; role physical; role emotional; social functioning; bodily pains; vitality; and mental health of the women, as well as determine personal factors that influence them.

Objectives of the study

Specific objectives of the study are to:

- Compare the differences in scores on the HrQoL sub-scales of housewives and career women at 6 and 12 weeks post partum.
- Compare the differences in scores on the HrQoL sub-scales of housewives and career women at 12 and 18 weeks post partum.
- Determine the mean score differences within each group over time.

Research Hypotheses

- There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their age.
- There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their educational level.
- There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their family income.
- There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post delivery based on their perceived quality of social support.
- There is no significant difference in HrQoL scores of the career women 18 weeks post delivery in relation to their perceived stress-related job category.

Significance of the study

HrQoL questions about perceived physical and mental health and function are important components of health surveillance. Findings from these will serve as valid indicators of service needs and intervention outcomes among these at-risk groups. Self-assessed health status has also proved to be a more powerful predictor of morbidity and mortality than many objective measures of health (Dominick, Ahern, Gold & Heller, 2002; DeSalvo, Bloser, Reynolds, He, & Muntner, 2006) since he who wears the shoe knows where it pinches.

The findings will reveal the influence of social support to HrQoL of housewives and career women. If some women are found to be more susceptible than others to the influence of social support, then, the result will serve as evidence for necessary interventions by social health workers and maternal health and welfare activists towards an improved HrQoL for women.

Findings from this study will be valuable to the National Health Policy makers for planning and commissioning specific health services to address health needs of women ñ such as justification for extension of maternity leave to six months ñ as well as assessing the benefits and costs of the healthcare interventions so as to ensure satisfaction and general wellbeing of these at-risk groups. Again, findings from analysis of perceived HrQoL of housewives and career women may identify subgroups with relatively poor perceived health. This can be used as a basis for making pertinent recommendations for health policies and legislation on interventions to improve situations of the vulnerable groups and avert more serious consequences; to allocate resources based on unmet needs, guide the development of strategic plans, and monitor the effectiveness of broad community interventions.

As a step towards improvement of overall health status of women of child bearing age, studies on relationships between the home and office lives of women working in the metro city of Enugu and how these affect their HrQoL is important. Findings will uncover linkages and disparities between the work roles of women in formal and informal spheres which, in turn, could be used to monitor progress in achieving national health objectives and MDG5 for 2015. The study will also yield knowledge important to governments for purposes of health and employment.

Reports on the relationship between women's daily schedule of activities and their HrQoL, especially in a less developed nation like Nigeria, are scarce. Findings will contribute literature in the area.

Scope of the study

This study is to establish differences in the HrQoL data collected from housewives and career women at three points in time after childbirth ñ starting from 6 weeks post partum to

18 weeks at 6 weeks intervals ñ based on their age, educational status, family income, quality of social support and stress-related job category. HrQoL indicators in this study include general health; physical functioning; role physical; role emotional; social functioning; bodily pains; vitality; and mental health ñ as perceived by the individual.

Operational definition of terms

Health-related quality of life (HrQoL): This is defined as self-report of subject's perceived feeling of comfort, ability to realize her life potentials and satisfaction with life as expressed in her physical, emotional and social functions of life. For this study, it is a self-report based on scores obtained on the eight sub-scales and single items of the modified Short Form 36 version 2 (SF36v2TM) HrQoL instrument by Ware and Sherbourne (1992) that includes general health, physical functioning, role physical, role emotional, social functioning, bodily pains, vitality, and mental health of housewives and career women.

Housewife: Woman who cohabits with a man to whom she is married, and has responsibility for a combination of all or some of the following ñ cooking, dishwashing, house cleaning, laundry work, child care and ñpersonal relationsö (sexual relations).

Career woman: Salaried female worker of child bearing age, either on full-time or part-time employment by another outside her home.

CHAPTER TWO

LITERATURE REVIEW

This chapter dealt with review of literature relating to HrQoL of women in their post-natal period. Literatures reviewed were specifically on HrQoL of the population relating to their daily activities ñ housewives and career women. The conceptual review was on the concepts of HrQoL. The chapter also discussed how HrQoL is measured; mothers' personal characteristics and their HrQoL; HrQoL of housewives, career women and new mothers; comparative post-natal QoL studies; career theory for women; theoretical review ñ the response shift theory; empirical review of literatures relating to the topic as well as analysis of the reviewed literature.

Conceptual review

The concept of HrQoL

An ecological economist Costanza (2008) observed that adequate definition and measurement of the term "quality of life" has been elusive with diverse "objective" and "subjective" indicators across a range of disciplines and scales. Although the term has meaning for nearly everyone and every academic discipline, individuals and groups can define it differently. However, there are essentially two perspectives taken in QoL research: *social indicators* research which considers the elites' valuation of what the people need, and *conventional QoL* research which studies what people want in order to improve their QoL (Noll, 2002). QoL is the result of interplay among social, health, economic and environmental conditions which affect human and social development. It is a subjective well-being expressed as the degree of individual's sense of happiness, enjoyment and satisfaction experienced in everyday life (Costanza, 2008) typically reflecting a global assessment of all aspects of the person's life. Costanza further observed that it is opposed

to financial or material well-being, hence, not measured by wealth alone, but also by health. Researchers at the University of Toronto's Quality of Life Research Unit define it as "the degree to which a person enjoys the important possibilities of his or her life" (University of Toronto Quality of Life Research Unit, 2009, para. 16). It is both subjective and objective. Subjective QoL is about feeling good and being satisfied with things in general. Objective QoL is about fulfilling the societal and cultural demands for material wealth, social status and physical well-being. It is defined by the average life span of a population which reflects, in part, the relative hospitality of the environment. The environment, in turn, determines how meaningful the life of its inhabitants will be. QoL is derived from the position that there are a number of domains of living which include health among others.

Increasingly, the concept of "health-related quality of life" (HrQoL) has attracted attention in research within the medical and caring sciences (Efficace, Bottomley, Osoba, Gotay, et al, 2003). There are many definitions of it, but they are summarized by Efficace, et al, (2003) as referring to a multidimensional psychological construct, which encompasses physical, psychological, social, and functional areas of life, and the impact of health and illness on these aspects. It is a broad multidimensional concept that encompasses those aspects of overall QoL, including self-reported measures (of physical, mental, emotional and social functioning) (Gandek, Sinclair & Kosinski, 2004; Selim, Rogers, Fleishman, Qian, 2009) and their correlates (including health risks and conditions, functional status, social support, and socioeconomic status) (Fryback, 2010) that can be clearly shown to affect health. It goes beyond direct measures of population health, life expectancy and causes of death, and focuses on the impact health status has on QoL. A related concept of HrQoL is well-being, which assesses the positive aspects of a person's life, such as positive

emotions and life satisfaction. Health is seen by the public health community as a multidimensional construct that includes physical, mental, and social domains (WHO, 1946). In Nigeria, health has traditionally been measured narrowly, often using a deficit perspective of mortality or morbidity.

How HrQoL is measured

As most available studies on HrQoL were on self-reported chronic diseases and their risk factors, several measures have been used to assess HrQoL and related concepts of functional status. Among them are the Sickness Impact Profile (SIP) (Bergner, Bobbitt, Carter & Gilson, 1981), the Nottingham Health Profile (Hunt, McKenna, McEwen, Williams & Papp, 1981), the Duke Health Profile (Parkerson, Broadhead & Tse, 1990), and the Quality of Well-Being Scale.

Ware and Sherbourne in 1992, developed a generic 36-item health status profile based on the assumption that a person is an entity with a set of generic qualities and multiple dimensions of health capable of changing under certain conditions. This health status profile has been widely used to assess HrQoL of persons. They derived this from a 250-item questionnaire they developed earlier in the 1970s to assess the general health of people participating in the Rand Corporation's Health Insurance Experiment (HIE) (Lohr, Brook, Kamberg, Goldberg, et al, 1986; Lohr, Kamberg, Keeler, Goldberg, et al, 1986). The 36-item short form questionnaire covers 8 scales: physical function (PF), role function as limited by physical health (RP), bodily pain (BP), social functioning (SF), mental health (MH), role function as limited by emotional health (RE), vitality (VT), and general health perception (GH) which is self-rated health. Later, Ware and colleague changed the instructions to respondents, wording and responses for a number of the questions, and formatting of the questionnaire to improve its psychometric properties. Also, they changed

scoring on the 8 scales from 0-100 scales to norm-based T-scores, where the population norm is 50 and the population standard deviation is 10. This version is self-completed questionnaire or as interviewer-administered questionnaire under the name SF-36v2™ (Ware, 2000). SF-36v2™ has undergone changes in the questions (or items) since it was developed, an issue pertaining to standardizing questionnaires. It is used worldwide in literally thousands of studies including studies on postpartum women ñ such as Hill and Aldag (2007); Jansen, Essink-Bot, Duvekot and van Rhenen (2007); Richter, Bergmann, Bergmann and Dudenhausen (2010); Tucker, Grzywacz, Leng, Clinch and Arcury (2010); Klein, Hyde, Essex and Clark (2011); and Torkan, Parsay, Lamyian, Kazemnejad and Montazeri (2009) ñ and practice settings. It is, therefore, to be adapted for this study.

Physiological changes in post-natal period

The newly delivered woman may feel overwhelmed, exhausted, and emotionally drained. After childbirth the woman's body goes through numerous changes, some of which continue for several weeks (Curtis & Schuler, 2011). After pains, muscle aches (especially in the arms, neck, or jaw resulting from the hard work of labour), difficulty with urination and bowel movements, lochia drainage for 2 ñ 4 weeks, and episiotomy or perineal tear (with pain, discomfort, and numbness around the vagina) are common health problems and are capable of affecting the woman's HrQoL, but tend to ease off within two weeks of normal vaginal delivery (Romito, Marshall & Jones, 2012).

Housewives and their post-natal HrQoL

Manuh (2010) observe that in many African settings, women contribute unpaid labour to the household's agricultural production and spend up to 50 hours a week on domestic labour and subsistence food production, with little sharing of tasks by spouses or sons in the household. Studies have documented that women work 12-13 hours a week more than

men (Wong, et al, 2010). A housewife appears not to receive a return for her work, perhaps because all or almost all of the pay takes the form of noncash benefits. Although some women continue to enter the occupation of housewife directly from school and remain there for their life time (Greenberg, 2011), most women have only a spell of full-time housewife starting at the birth of their first child. The number and length of women's spells in the housewife occupation are decreasing, and an increasing number of women are managing to get through a life time with no spell at all. Be that as it may, however, a system in which the home makers are women with impoverished alternatives leaves much to be desired for the achievement of the MDG5 (reducing by three-quarters, between 1990 and 2015, the maternal mortality ratio).

Career women and their post-natal HrQoL

Klein, Hyde, Essex and Clark (2011) investigated the employment status, maternity leave, and role quality of women as predictors of their mental health one year after delivery. They discovered that home-makers and part-time and full-time employees did not differ on measures of depression, anxiety, anger, or self-esteem nor was there any main effect of their leave length. Distress was associated with job overload, role restriction, and infant distress. Leave length interacted with the relative salience of work and family, and employment status interacted with employment preference to predict distress. Depression was greatest among women relatively high in work salience when leaves were long. Anxiety and anger were greatest among women whose employment status was not congruent with their preferences. These interactions underscore the importance of individual differences in response to leave and work.

Women became the majority of the workforce for the first time in U.S. history in early 2010, and, of the job categories that are projected to grow most quickly in the next ten

years— nursing, home health assistance, child care, and food preparation, among others— most of which are occupied primarily by women (Siu, 2010). Siu further observes that women dominate in today’s managerial offices as well as in colleges and professional schools and posits that for every two men who get a college degree within the year, three women would do the same. Women now hold 51.4 percent of managerial and professional jobs. They make up 54 percent of all accountants, and have half of all banking and insurance jobs. About a third of America’s physicians are now women, as are 45 percent of associates in law firms — and both those percentages are rising fast (Bureau of Labor Statistics, 2010),— yet women do most of the house work and child-rearing (Siu, 2010). In general, working mothers of infants had mental health scores that were comparable to the general population of U.S. women, and physical health that was slightly better than women in general (Tucker, Grzywacz, Leng, Clinch & Arcury, 2010). Bimrose (2011) observes that women's career development is often more complex — filled with conflict between work and family — and is often characterised by different career stages or patterns like intervals away from full time employment to assume care responsibilities.

Comparative post-natal QoL studies

Studies on either post-natal QoL in general or studies that compare QoL in newly delivered women who are career women and those who are housewives are extremely limited (Symon, 2003). In fact, available literatures such as De Civita, Regier, Alamgir, Anis, Fitzgerald, and Marra (2005), Bowker, et al (2006), Ashing-Giwa, et al (2007), Norimatsu, et al (2011), and Plugge, et al (2011) view HrQoL as a framework for examining disease and its impact on a patient.

A career woman works for a salaried living often outside of her home while a housewife is not employed outside her home. This decision, according to Javaheri, Serajzadeh and

Rahmani (2010) is dependent on the woman's socio-economic status as well as her desire to earn money. Relating the woman's work day status to her HrQoL, a study from Iran by Zanjani and Bayat (2010) showed that employed women reported higher quality of life score than non-employed women. Similarly, results obtained from a cross-national data from 28 countries using multi-level analyses showed that housewives were slightly happier than wives who work full time (Treas, van der Lippe & Tai, 2011). The cross-level interactions between employment status, and social indicators at country levels also indicates that the disadvantage in happiness for full time working wives improved compared to housewives and part-time workers.

The housewife is pre-occupied with housekeeping, which Saravi, Navidian, Rigi and Montazeri (2012) described as non-paid job done in isolation. She is saddled with household responsibilities and usually not salaried. Studies have shown that housewives are often financially dependent and as a result experience more economic hardship than the career woman (Greenberg, 2011; Skuenick, 2011). Tucker, Grzywacz, Leng, Clinch and Arcury (2010) also observe that mothers with economic hardship had less stable health trajectories than mothers with low economic hardship. Sodahead (2011) asserted that if the lady in the house also works, the QoL will be better. However, Richter, Bergmann, Bergmann, and Dudenhausen (2010) observed that though working mothers were less likely to have a household income below the poverty line than those not working (47% vs. 13%), the latter had lower mental HrQoL. Willard and Rodgers (2010) in a somewhat related, but different situation, observed that although there is little difference in average levels of life satisfaction expressed by housewives and by women working outside the home, substantial differences emerge when women are distinguished by their motivation with respect to paid work: among women who want jobs, working women are more

satisfied with their lives than are housewives; while among those who would prefer not to work, housewives are more satisfied.

Work status and QoL of working and non-working women were compared by Springer in 2007. Although there is little difference in average levels of life satisfaction expressed by housewives and by women working outside the home, substantial differences emerge when women are distinguished by their motivation with respect to paid work: among women who want jobs, working women were more satisfied with their lives than were housewives; while among those who would prefer not to work, housewives were more satisfied.

In a study to determine the oral HrQoL in pregnant and post partum women in two social network domains; predominantly home-based and work-based networks by Lamarca, Leal, Leao, Sheiham, and Vettore (2012), there were marked differences in the social support dimensions between occupational context groups. Affectionate support and positive social interaction scores were statistically higher in the work-based social network group compared with those in the home-based social network ($P < 0.005$). The lower the social support, the higher the odds of having more negative oral impacts on quality of life. In addition, home-based social network women with moderate positive social interaction had significantly higher odds of having poorer oral health QoL. They suggested subsequently that women in the work-based social network group were more likely to have more friends that they felt comfortable with and could talk to about something ($P = 0.001$).

Some investigations showed that in addition to variables such as the occurrence of pregnancy complications and caesarean delivery, life stress (Dhakal, Chapman, Simkhada, van Teijlingen, Stephens & Raja, 2007; Fox, et al, 2010) and less social support (Fryback, 2010; Sawatzky, Ratner, Johnson, Kopec, & Zumbo, 2010) were predictors of poorer

mental HrQoL in postpartum women (Da Costa, Dritsa, Rippen, Lowensteyn, & Khalife, 2006; Torkan, et al, 2009). However, there is currently no instrument available for measuring the mothers' HrQoL in relation to their daily activity pattern, although the Mother-Generated Index (MGI) has been developed to identify the areas of lives that are of most concern to mothers' QoL (Symon, MacDonald, & Ruta, 2002; Symon, McGreevey, & Picken, 2003) or the Maternal Post Partum Quality of Life (MAPP-QoL) questionnaire that intend to measure QoL during the early post partal period (Hill, Aldag, Hekel, Riner, & Bloomfield, 2006; Hill, & Aldag, 2007).

Theoretical review

The Response Shift Theory

Individuals change with time; the basis on which they make a QoL judgement may also change. Response shift refers to a process whereby individuals who undergo a change in their health state may adapt by appraising their quality of life in ways that differ from those that had served them previously (Carolyn, Schwartz, Andresen, Nosek & Krahn, 2007). An important mediator of the adaptation process in this theoretical model is 'response shift' which involves changing internal standards, values or the conceptualization of QoL (Sprangers & Schwartz, 1999) which are catalyzed by external factors such as a treatment or a change in health status (Ring, Höfer, Heuston, Harris & O'Boyle, 2005). It is proposed to clarify and predict changes in QoL as a result of the interaction of: (a) a catalyst, example, changes in the post-natal mother's health status; (b) antecedents, referring to stable or dispositional characteristics of the individual (e.g. employment status, family income); and (c) mechanisms, encompassing behavioural, cognitive, or affective processes to accommodate the changes in health status (e.g. appreciating the fact that the hidden potential for enriching life really lies in the woman's acknowledgement that her wish to contribute is really deep down in human existence).

This theoretical model is relevant in HrQoL studies of this nature since response shift will entail a change in the meaning of the newly delivered mother's evaluation of her HrQoL resulting from an increased responsibility for child care in addition to house chores, and job outside the home (as may be the case) ñ a change in her internal standards of measurement, a change in her values, or a change in her definition of the construct (Sprangers & Schwartz, 1999). This implies that she may give different answers on HrQoL measures over time, not only because her health or QoL has changed, but also because she might have changed her perception on what health or QoL means to her. At two points in time, that is, between 6 and 12 weeks post partum, and between 12 and 18 weeks post partum, the woman's perception of her HrQoL may change as a result of change in her internal standards, values and conceptualisation. The diagrammatic representation of the application of the theory to this study is presented in figure I.

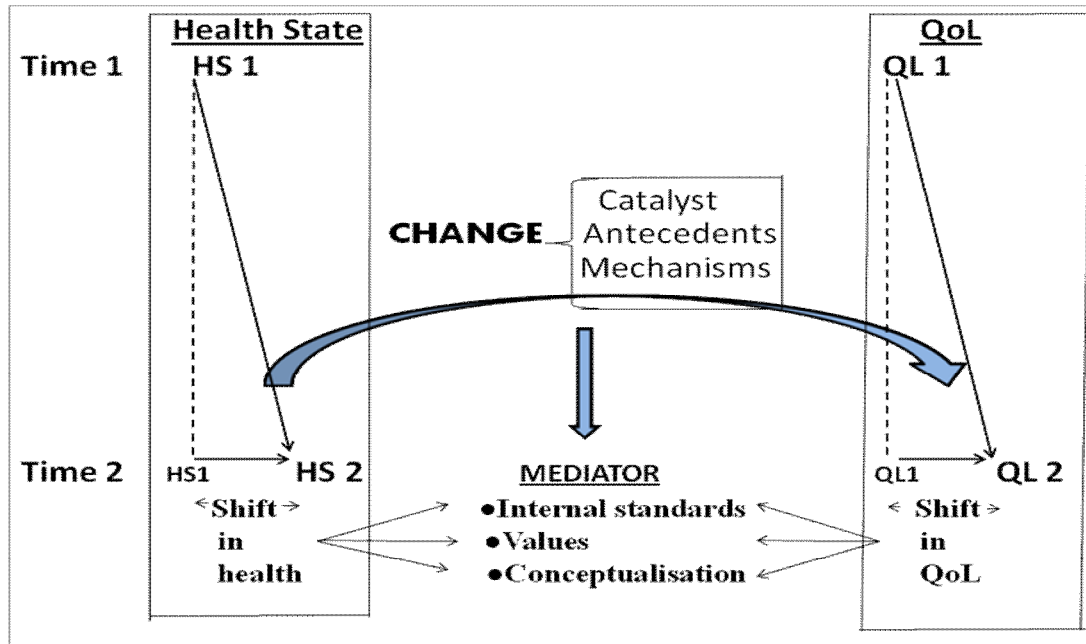


Figure I: Schematic presentation of the adaptation process using the Response Shift Theory (developed by the researcher).

This is particularly important in prospective longitudinal studies where quality is measured as a self-reported change at different points in time. The SF-36v2TM will allow mothers to nominate different cues at each assessment. It is assumed that mothers who nominated different cues as being important to their HrQoL at 6 weeks have changed their concept of what constituted QoL for them. This may reflect what Schwarz and Sprangers (1999) refer to as re-conceptualization.

Empirical review

There is a paucity of studies on HrQoL of housewives and career women that newly delivered a baby. Available literatures on empirical studies relating to the women's socio-economic status, educational status, age and their HrQoL were thus reviewed.

Socio-economic status and HrQoL

In a study on the trajectories of HrQoL by socio-economic status (SES) in a nationally representative Canadian cohort by Ross, Garner, Bernier, Feeny, et al (2011), growth curve of seven cycles of Canadian National Population Health Survey (n=13, 682) for adults aged 20 and older was analysed. Result showed consistently high HrQoL for the most affluent and the most highly educated subjects, and lower HrQoL for the middle and lower income and education groups. Myravittles, Naberan, Cantoni and Azpeitia's (2011) cross-sectional observational multicentre study on SES and HrQoL of 4,574 patients with chronic obstructive pulmonary disease showed similar result. Using EuroQol 5-dimension questionnaire (EQ-5D) and the Airways Questionnaire 20 (AQ20), Myravittles, et al, (2011) established a gradient of impairment in HrQoL according to the educational level, with significantly worse HrQoL scores for the EQ-5D and the AQ20 for medium and low educational levels compared with high education. What these studies found basically was that people who were more educated and with higher incomes had a better HrQoL than

those with lower educational and income levels. They concluded that HrQoL is graded by both income and education in the population.

Earlier in 2010, Richter, et al studied multiple roles and QoL of 311 mothers two years after the birth of their first child using the WHOQoL-BREF (a brief version of the WHOQoL-100) questionnaire. Working mothers gave more positive ratings than non-working mothers for their physical and mental QoL (both $p < 0.01$), their social relationships ($p < 0.05$), as well as their global QoL and their depression score ($p < 0.10$). They concluded that vocational activity of mothers reduced the risk of poverty as well as contributed to an improved physical and mental QoL of the mother and improved social relationships.

In 2006, the French Institute for Health Surveillance set up the Samotrace programme to assess the relationship between mental health and work. The study compared psychological disorders in women and men. It was noted that women recorded higher scores in relation to anxiety disorders than men (47% vs 28%), but the anxiety level was dependent on the occupation. Hence, they observed further that women showed much higher levels for symptoms of depression ñ ranging from 53% to 75% ñ that are dependent on the occupation, except for professionals and managers who have control of their work day. American Psychological Association (2013) also observed that lower levels of SES are associated with higher rates of attempted suicide, higher levels of emotional and behavioural difficulties, including anxiety, depression, attention-deficit/hyperactivity disorder and conduct disorders.

Similarly, Schoepke, et al, (2007) examined the quality of working life (QWL) of 624 women and men in a variety of information technology (IT) jobs looking into their job satisfaction, fatigue, tension, organizational involvement, and burnout as QWL factors;

with role ambiguity, decision control, challenge and demographics (age, marital status, parental status, and education) as predictors of QWL. Over all, analysis showed that the sample women in the jobs did not report poorer QWL (mean - 82.75; SD - 14.93) than men (mean - 79.58; SD - 16.26) in IT jobs (t-test [p-value] 0.560.010.90.770.29). These findings may imply that variations in QoL are factors of socio-economic status.

Educational status and HrQoL

Garcia-Mendizabal, Garrasco, Perez-Gomez, Aragonés, et al, (2009) assessed the differences in the relationship between body mass index (BMI) and HrQoL according to educational level of women younger than 16 years old who had finished their education and women with secondary education in 14 towns in Galicia, Spain, using the SF-36 questionnaire. In this cross-sectional study with personal interview of 1,298 women (aged 18 to 60) randomly selected from the electoral rolls the association between BMI and suboptimal scores in the different HrQoL dimensions was summarised using odds ratios (ORs), obtained from multivariate logistic regression models. Findings indicated that the impact of obesity on women's HrQoL was greater among those with a lower educational level. This group registered higher prevalence of obesity and poorer self-perceived health.

A related study by Jamabo and Ordu (2012) on the marital adjustment of working class and non-working class women in Port Harcourt metropolis, Nigeria, showed that educational attainment of women does not affect their marital adjustment. Women who are of low income status exhibit the same degree of marital adjustment as those of high income status. They held that both women who work outside in the home and full time housewives have benefits and costs attached to them and that the difference between these findings could be attributed to cultural differences.

Age and HrQoL

Regidor, Barrio, de la Fuente, Domingo, et al, (2011) analysed differences in health by educational level and age in Spanish adults by comparing the health dimensions of the SF-36 Health Survey. The result showed absolute differences in perceived health between the different categories of educational level and age. The perceived health status declined with decreasing educational level and decreased with increasing age. The greatest differences by educational level were found in mental health and general health among persons 25 to 44 years of age, and in physical function and general health among those 45 to 64 years. In persons aged 65 or older, the greatest differences are seen in physical function and vitality in men, and in bodily pain and emotional role in women.

Similarly, a sample of 585 Swedish adolescents and young adults aged 13–23 was randomly chosen from the general population by Jorngarden, Wettergen and von Essen (2006) to measure their HrQoL normative data for the SF-36 and the influence of age, (gender, and method of administration). For the age factor, the sample were stratified regarding their age group (young adolescents: 13–15 years; older adolescents: 16–19 years, and young adults: 20–23 years). One-way ANOVA of the data showed that young adolescents (13–15 years old) reported better HrQoL than the two older age groups. Age is held as a strong factor influencing HrQoL, even as reported by the Department of Family Medicine and Public Health (2011) that maternal age produces a confounding effect on results of related studies like high maternal family income that indicated low HrQoL.

Social support and HrQoL

Social support is thought to be linked to HrQoL. Using a 12-item perceived social support scale, Eastwood, et al (2008) in a prospective, longitudinal study of perceived control, uncertainty, affective distress, and HrQoL of 93 patients before angiography (baseline) and

1 year later, discovered that lack of social support was associated with lower HrQoL across multiple domains, including emotional, physical, social, and role domains. Further, Bosworth, Siegler and Olsen (2000) in their cross-sectional study of the interactions of social support with demographic characteristics, such as minority status, income, and education among patients undergoing cardiac catheterization suggested that some patients may be more susceptible than others to the effects of social support. In line with this, Koopman, Angell, Turner-Cobb, Kreshka, Donnelly, McCoy, et al. (2001) established in their study of distress, coping, and social support among rural women recently diagnosed with primary breast cancer that socio-economic status, life burden and social support in the context of rurality impacts the HrQoL of rural cancer survivors. If social support impacts the HrQoL of this group, is it likely that it will have the same impact on newly delivered mothers in an urban setting?

Studies have shown that social support has a positive relationship with psychological well-being, which in turn, increases HrQoL (Pedro, 2001; Deimling, Kahana, Bowman, & Schaefer, 2002; Pedro, 2010). However, Qualls (2012) observed that in recent years, with expanded educational opportunities for women since 1960 and modern developments of mandatory education, urbanization, and capitalism that are currently changing the Nigerian society, the support of the co-wives has diminished.

Summary of reviewed literature

HrQoL has increasingly attracted attention in research within the medical and caring sciences but health in Nigeria is traditionally measured narrowly, often using a deficit perspective of morbidity or mortality. Many authors like Efficace, et al, (2003), Gandek, et al, (2004) Selim, et al, (2009) and Fryback (2010) suggest a multidimensional approach to the concept that goes beyond direct measures of population health, life expectancy and

causes of death that currently populate HrQoL studies, to encompass those aspects of overall QoL, including self-reported measures of physical, mental, emotional and social functioning; and their correlates including health risks and conditions, functional status, social support, and socioeconomic status. These can be clearly shown to affect health, but studies addressing them are scarce. A number of empirical reviews on HrQoL of workers showed a positive correlation with SES – the lower the SES, the poorer the HrQoL (Koopman, et al, 2001; Garcia-Mendizabal, et al, 2009; Richter, et al, 2010; Regidor, et al, 2011; Ross, 2011).

There was no record of studies on role of the woman’s social support (and amount of stress she experiences relating to her job) on her HrQoL generally – it is hoped that a study like this will fill the gap, particularly in relation to the HrQoL of the study group.

CHAPTER THREE

RESEARCH METHODS

This chapter dwelt on the procedure adopted for the investigation under the following sub-headings: research design, area of study, population for the study, sampling and sampling technique, instrument for data collection, validity and reliability of the instrument, procedure for data collection, and method of data analysis.

Research design

This was a longitudinal, prospective descriptive study design as consenting newly delivered mothers who were housewives and career women were to be assessed to determine at three points their HrQoL changes as they return to pre-pregnancy daily activities, without any intervention.

Area of study

The area of study is Enugu, the capital of Enugu State, Nigeria. It is a city with an area of about 100km². Enugu urban traverses three local government areas (LGA) ñ Enugu North, Enugu South and Enugu East LGAs. It encompasses major high density residential and commercial areas in the urban part of Enugu State with a population of up to 100,000 residents (Adinna, Enete & Okolie, 2009). The residential layouts include: Ogui, Asata, and New Haven in Enugu North LGA; Uwani, Achara Layout, New Layout and Independence Layout in Enugu South LGA; Abakpa Nike and Trans Ekulu in Enugu East LGA. It is bounded in the east by Emene, west by Udi, north by Iji Nike, and Amechi Awkunanaw in the south.

Located in the city are the Military Hospital, 82 Division, Enugu; Poly Sub-District Hospital, Asata; Uwani Health Centre, including numerous private health facilities that

function as peripheral and/or referral centres for maternal and child healthcare services, as well as the National Orthopaedic Hospital, and Federal Neuropsychiatric Hospital. Also located in Enugu are the University of Nigeria, Enugu Campus; Institute of Management and Technology (IMT), and a number of other tertiary institutions. It also has numerous public and private secondary and primary schools including the Queen's School Enugu, a preeminent high school for girls in the Eastern region and Our Saviour Institute of Science and Technology, Enugu. There are also a host of private computer schools and training centres, as well as administrative and commercial centres that offer jobs to many of the inhabitants of the city including women.

Population of the study

To estimate the population of the study, the researcher used the average monthly registration for six weeks post natal visit in six selected health facilities popular in obstetric health services in Enugu, namely: Mother of Christ Specialist Hospital and Maternity, Ogui; Poly Sub-District Hospital, Asata; Uwani Health Centre; Ibezim Hospital, Awkunanaw; Military Hospital, 82 Division, Enugu; and Redeemer Maternity Home, Abakpa. The average monthly population of six weeks post natal visit registration by facility (monthly registration from the facility attendance registers is attached in Appendix IV) is presented in Table 1. An estimated population of 363 newly delivered women was, thus, used for the study.

Sample

To ensure statistical conclusion validity, power analysis was used to estimate the sample size needed for the study. Using the Creative Research Systems survey software of the Sample size calculator (n.d.),

$$ss = \frac{Z^2 * (p) * (1-p)}{C^2}$$

Where: Z = Z value (e.g. 1.96 for 95% confidence level)
 p = percentage picking a choice, expressed as decimal
 (.5 used for sample size needed)
 C = confidence interval, expressed as decimal
 (e.g., .04 = ± 4)

$$\text{Correction for finite population: } \text{new ss} = 1 + \frac{\frac{ss}{n-1}}{\frac{pop}{n-1}}$$

Where: pop = population

At 95% Confidence and 5.0% margin of error, a sample of 187 was estimated. Since data were to be collected directly from the study subjects at three different times, it was anticipated that as many as 20% of the women might withdraw from the study prior to its completion through: (1) non-response, (2) possible refusal to participate or to continue with the study, and (3) incorrect information in the sampling lists. With the formula: $q = n/(1-f)$ (where q is the adjusted sample size; n is the original sample size; and, f is the estimated non-response rate) (ANGEL, n.d.), sample size estimate was adjusted from 187 to $187/(1 - 0.2)$. The adjusted sample size was, thus, 234. This represented about 64.5% of the population. Fifty percent (117) each consisted of career women and housewives.

Sampling technique

A combination of proportionate stratified and convenience sampling technique was employed to draw the sample for the study. Initially, the city was stratified into its three local government areas (LGAs) (Enugu North, Enugu South and Enugu East LGAs). Then, two health facilities from each LGA commonly used by child bearing women were purposively selected (a total of 6 health facilities). Then, 64.5% equivalent of each sub-population was determined in the first stage. The sample distribution in the various facilities is as thus:

Table 1: Monthly population distribution of expectant mothers in the facilities

Facility	Mean monthly delivery	Sample size by facility
Mother of Christ Mat. Hosp., Ogui	39	25
Poly Sub-District Hosp., Asata	54	35
Uwani Health Centre	27	18
Ibezim Hospital, Awkunanaw	50	32
Military Hospital, 82 Division, Enugu	149	96
Redeemer Maternity Home, Abakpa.	44	28
Total	363	234

Convenience sampling procedure was then used to recruit participants into the study. First, women attending post natal clinic with satisfactory family and previous medical, surgical, obstetric and gynaecological histories were identified from their hospital records. Secondly, the women with satisfactory record were approached for further history on present health status, and acceptance to participate after clear explanation of the purpose of the study, the method of data collection and the implications of her involvement. Then, using inclusion criteria, all newly delivered women who met the criteria were recruited into the study until the sample size for each stratum was reached.

Inclusion criteria

The inclusion criteria include:

- ✓ Woman with uncomplicated pregnancy.
- ✓ Woman with normal delivery of a healthy term baby within the past 6 weeks at the time of selection.
- ✓ Uncoerced consent (willingness) to participate.
- ✓ Woman aged between 20 and 44 years at the time of delivery.
- ✓ Either an unpaid housewife or paid career woman employed outside home.
- ✓ Women without history of pre-pregnancy medical conditions (such as low back pain, chronic constipation, urination problems, and breast problems), or stress-inducing experiences (such as lose of a family member, divorce, or family problems).

- ✓ Where home was to be visited, spouse's consent to allow researcher to visit his matrimonial home.

Instrument for data collection

The Iranian version of the SF-36v2TM (Montazeri, Vahdaninia, Mousavi, Asadi-Lari, Omidvari & Tavousi, 2011) was adapted for the study. The SF-36v2TM is a popular generic short form of the HrQoL survey instrument. It measures eight health-related concepts: physical functioning; role limitation due to physical problems; bodily pain, general health perceptions; vitality (energy and fatigue); social functioning; role limitation due to emotional problems; and perceived mental health (psychological distress and well-being). Psychometrically, these eight scales are hypothesized to form two distinct higher-ordered clusters – physical health and mental health – since they have certain physical and mental health variance in common. Thus, the taxonomy of items and concepts underlying the construction of the SF-36 scales and summary measures are in three levels, namely: thirty-six items; eight sub-scales that aggregate 2-10 items each; and, two summary measures that aggregate sub-scales. These are represented diagrammatically in Appendix V. All short form health surveys measure the same eight health domains, and each survey provides psychometrically-based physical component summary (PCS) and mental component summary (MCS) scores (Fryback, 2010).

In addition, personal data were collected using a researcher-developed short questionnaire that included recording of age, educational level, family income, perceived quality of social support and job category (of the respondents that were career women). For purpose of reporting HrQoL by family income, women were categorised into four groups based initially on Nigeria's minimum wage of N18,000.00 for government workers and subsequently, equivalent family income (in equivalent sizes of N50,000.00 between groups).

For every woman recruited for possible inclusion, personal data including full name, popular (or preferred) name, home address, office address (where applicable), phone number (where available), and preferred contact mode (visit at home or office) were documented.

Validity of instrument

Montazeri et al (2011) did a translation and validation study of the Iranian version of this Short Form Health Survey (SF-36v2TM). The Iranian version of the SF-36v2TM was recorded to have a well documented validity (Ware, 2000; Cheak-Zamora, Wyrwich & McBride, 2009; Fryback, 2010; Montazeri et al, 2011). Both MCS and PCS were shown to have satisfactory internal consistency reliabilities. Cronbach's alpha for the PCS was 0.87 and 0.82 for the MCS. Cheak-Zamora, Wyrwich and McBride (2009) similarly used this for a medical expenditure panel survey. Result showed a moderate high convergent validity for the EuroQoL-5 Dimension of health (EQ-5D) items (mobility, ability to do usual activities, pain, anxiety and depression and self-care) and physical health status ($r > 0.56$). For MCS there was moderate convergent validity on EQ-5D and mental health items ($r > 0.38$). The scores on each of the eight subscales range from 0 to 100 with higher scores indicating a better quality of life. However, for clarity and better understanding of terms by respondents in the study area, some modifications as indicated in Appendix II were made in the instrument.

As a modified version of the instrument was to be used, a draft of the instrument and a copy of the original instrument were presented to the researcher's supervisor and a professor in Measurement and Evaluation from Nnamdi Azikiwe University, Awka, to comment on the appropriateness of arrangements and modifications. To guide the professor in the validation exercise, the research objectives, scope, research questions and hypotheses

were also given to her. Corrections and modifications were reflected and formed the basis for the validation of the instrument.

Reliability of instrument

Although the SF-36v2TM is a well-known and validated generic HrQoL instrument that measures health related concepts, conceptualisations in the context of socio-cultural variances among the population was absent. To ascertain its reliability, twenty copies of the instrument were administered to twenty newly delivered mothers ñ ten housewives and ten career women ñ in Awka, Anambra State, with the same inclusion criteria as the study sample.

The percentage scores of responses for each section of the instrument were subjected to split-half reliability test using Pearson's Product Moment Correlation Co-efficient. Here, the copies of the instrument were divided into two, each containing five copies from housewives and five from career women. The result stood at 0.77 for section A (personal profile) and 0.87 for section B (modified SF36v2TM) (Appendix V). Devellis (1991) suggests that alpha coefficient values between 0.80 and 0.90 are very good. The reliability of the eight scales and two summary measures has previously been estimated. The Cronbach's alpha coefficients ranged from 0.77 to 0.90 with the exception of the vitality scale ($\alpha=0.65$) (Montazeri, Goshtasebi, Vahdaninia & Gandek, 2005). In addition, a reliability of 0.93 has been reported for the MH scale (McHorney & Ware, 1995).

Ethical considerations

The study was conducted after approval was obtained from the Research Ethical Committee of University of Nigeria Teaching Hospital, Enugu. All participants were fully informed of the objective and design of the study and written consents were received from

the participants for interview (Appendix IIIa). Also, because the data were to be collected in the woman's matrimonial home in some situations, written consent of the spouse was collected as applicable (Appendix IIIb).

Procedure for data collection

The researcher, at three points in time, collected HrQoL data: time 1 at 6 weeks after delivery as a baseline; time 2 at 6 weeks after the first, that is, at 12 weeks post delivery when the career woman was about to go back to her work; while time 3 was another 6 weeks after resumption of work. Because of need to visit respondents at home and/or place of work, as well as possible repeated home/office visitations, the researcher trained and used eight nurse/midwives as research assistants for data collection – one each from five of the health facilities where the subjects were contacted and recruited, and three from Military Hospital, 82 Division, with largest number of subjects. The training involved 30-60 minutes discussion of objectives of the study, contents of the instruments and how to administer the instrument as well as assist the illiterate respondents to fill in their responses. Objectivity and confidentiality on information gathered were emphasized.

At the first contact, which was when the woman visited for 6 weeks post partal care, permission was obtained from the management of the hospital before the prospective respondent was approached. Following self-introduction of researcher (or assistant) and establishment of rapport, necessary history and consent to participate were sought. Upon accepting to participate in the research, and after signing the informed consent sheet, those who met the inclusion criteria had a copy of the instrument administered to them, after the purpose of the study and need for repeat visits had been explained to them. They were asked to read the contents as carefully as possible and respond to each item as applied to them. For those who could not read and/or write, the researcher or assistant helped by

interviewing the respondents guided strictly by the contents of the instrument and filling in the responses as objectively as possible. After 6 weeks, the researcher and/or assistant visited each prospective respondent at preferred contact place for second instrument administration. For those who preferred interview through phone call, data were collected through cell phone discussion guided strictly by contents of the instrument. At the third round, data collection were repeated after another six weeks through the same process. Career women who could not resume work when due (after 12 weeks), for any reason, were removed from the study.

Method of data analysis

Descriptive statistics including frequencies (f), percentages, mean ($\bar{x}$) and standard deviations (SD) were used to present the data. For each scale of the SF-36v2TM the $\bar{x}$ was computed and scores converted to percentages to ensure true proportion of values and statistical differences, where they exist.

T-test was used for group comparison of dimensions of HrQoL of housewives and career women after normal delivery. Chi square was used to compare the SF-36v2TM scores between the study groups at two points in time (6 and 12 weeks; 12 and 18 weeks) and to compare data within each group over time. Two-way ANOVA was used to establish statistical significant difference in the scores in relation to age, educational status, family income and perceived social support. Paired t-test was used to analyse data on perceived stress-related job category of career women at 12 weeks and 18 weeks. All statistical analyses were performed using the GraphPad Prism version 5.03 bio-statistical software package.

CHAPTER FOUR

PRESENTATION OF RESULTS

This chapter dealt with analysis of data and presentation of results guided by the research objectives and hypothesis.

Return rate

Of the 234 women enrolled at the baseline, 5 (2.1%) (3 housewives and 2 career women) declined to participate in the follow-up, 7 (3.0%) (5 housewives and 2 career women) were excluded because they could not be traced with the address and phone number given; 2 (0.9%) (1 career woman and 1 housewife) were discontinued because they lost their baby; 1 (0.4%) housewife was excluded because she moved home without informing the researcher and/or research assistant and could not be contacted on phone; 3 (1.3%) career women resumed work before 12 weeks post delivery, while 5 (2.1%) did not resume work after 12 weeks. Three (1.3%) housewives were deliberately withdrawn to equalize number with career women. The final sample was 208 women (104 housewives and 104 career women), 88.9% of the baseline sample.

Table 2, and Figures II and III were on personal information of the respondents

Table 2: Characteristics of the respondents

		Total (n=208)		Housewives (104)		Career women (104)		P
		f	%	f	%	f	%	
Age	20-24	75	36.0	43	41.3	32	30.8	0.0336*
	25-29	64	30.8	34	32.7	30	28.8	
	30-34	37	17.8	18	17.3	19	18.3	
	35-39	21	10.1	8	7.7	13	12.5	
	40-44	11	5.3	1	1.0	10	9.6	
	Mean±SD	35.7±27.4		37.3±17.5		34.9±9.9		1.0000**
Education	No formal	2	1.0	2	1.9	0	0	<0.0001*
	Primary	24	11.5	21	20.2	3	2.9	
	Secondary	113	54.3	65	62.5	48	46.1	
	Higher	69	33.2	16	15.4	53	51.0	
	Mean±SD	52.0±66.5		30.3±27.2		36.2±28.4		1.0000**
Family income	Less than N18,000	52	25.0	48	46.15	4	3.8	<0.0001*
	N18,000-N50,000	95	45.7	48	46.15	47	45.2	
	N51,000-N100,000	38	18.3	6	5.8	32	30.8	
	> N100,000	23	11.0	2	1.9	21	20.2	
	Mean±SD	44.8±53.5		17.0±12.2		27.8±24.8		1.0000**

* Derived from chi-square test.

** Derived from t-test.

Full sets of data were successfully collected from a total of 208 participants comprising 104 career women and 104 housewives. The results are shown in Table 2. The mean ($\pm$ SD) age of participants was 30.2 ($\pm$ 27.4) years, comprising mainly women age groups 20-24 years (36.0%) and 25-29 years (30.8%) respectively. Majority of the women, 113 (54.3%) had secondary education. Sixty-nine women (33.2%) had a university degree out of which 53 (51.0%) were career women and only 16 (15.4%) were housewives. Career women were better educated than housewives ($P = < 0.0001$). The women's reported family income showed that 115 (55.3%) earned between N18,000.00 and N50,000.00 per month. Housewives were older than career women (mean age 37.3 vs. 34.9, $P = 0.0336$), but career women had better family income (4 vs 48 earned less than N18,000.00; while 21 vs 2 earned above N100,000.00; $P < 0.0001$).

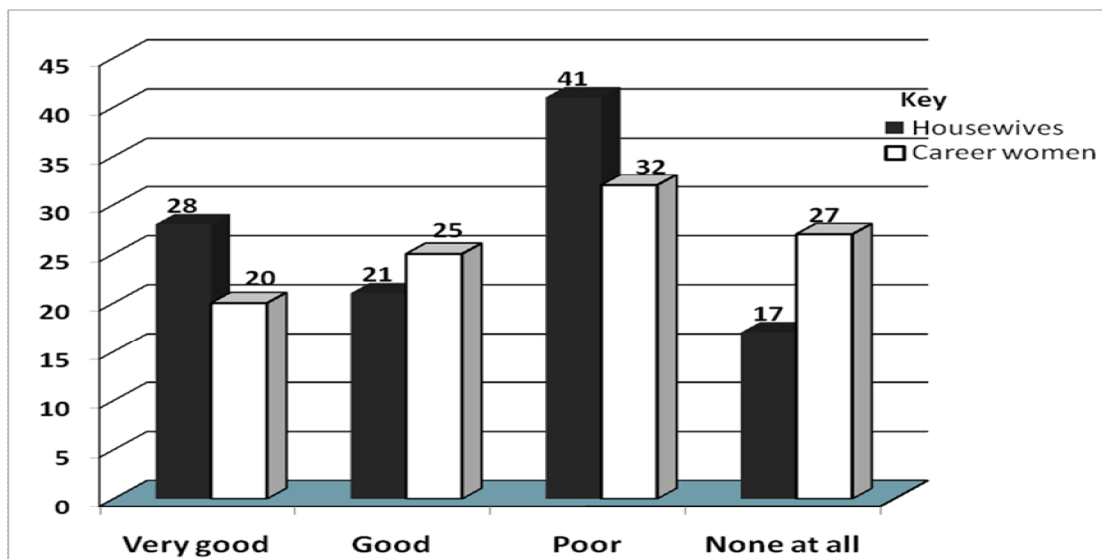


Figure II: Perceived quality of social support for housewives and career women at 18 weeks post delivery

Responses showed a fair distribution of quality of social support at 18 weeks post delivery as perceived by housewives and career women. However, 41 housewives reported poor quality of social supports while career women were 32. There were more housewives (28) also that reported very good quality of social support than career women (20); while more career women than housewives reported “good” support (career women=25; housewives=21) and none at all (career women=27; housewives=17).

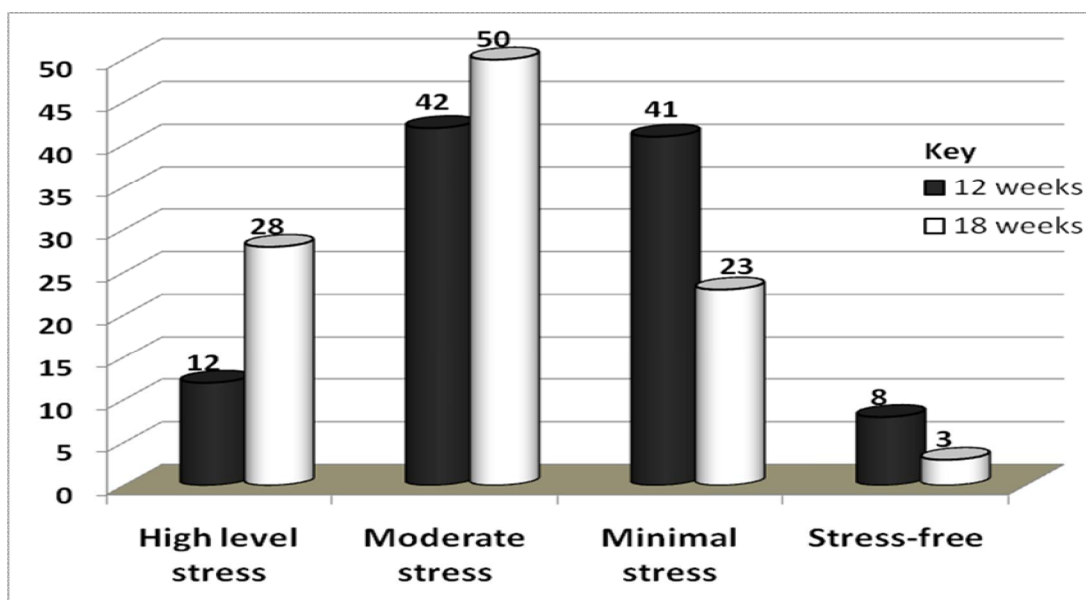


Figure III: Perceived job-stress category of career women 12-18 weeks post delivery

The career women reported minimal to high levels of stress relating to their job at both 12 weeks when they were going back to work and 6 weeks after resumption of work. However, a larger number of each group had moderate and high level stress at 18 weeks (moderate level= 50; high level=28) than at 12 weeks (42 and 13 respectively). The reverse was thus the case for minimal stress with 41 women at 12 weeks and 23 at 18 weeks. Only 8 and 3 had stress free job at 12 and 18 weeks respectively.

Objective 1: To compare the differences in scores on the HrQoL sub-scales of housewives and career women at 6 and 12 weeks post partum.

Table 3: Comparison of differences in scores on HrQoL sub-scales of housewives and career women at 6 and 12 weeks post partum.

HrQoL sub-scales	Housewives (n = 104)		Career women (n=104)		p
	Mean(SD)		Mean(SD)		
	6 weeks	12 weeks	6 weeks	12 weeks	
Physical functioning	93.5(4.19)	98.2(3.99)	92.3(6.46)	96.0(8.83)	1.0000
Role physical	80.6(4.56)	93.1(5.42)	75.2(8.22)	90.2(5.24)	0.8395
Bodily pain	81.5(0.35)	85.5(7.07)	80.1(0.35)	89.6(2.62)	0.8277
General health	91.6(5.28)	94.3(5.68)	86.7(9.77)	89.4(9.00)	1.0000
Vitality	82.4(4.53)	93.2(5.66)	83.1(1.84)	88.9(4.38)	0.8301
Social functioning	84.5(5.80)	88.4(1.98)	84.8(3.11)	86.8(0.28)	1.0000
Role emotional	81.7(5.55)	88.5(9.82)	80.5(6.54)	94.1(1.33)	0.8295
Mental health	85.4(8.91)	88.6(5.71)	87.1(4.71)	88.2(8.77)	1.0000

$P=X^2_{crit}$

The scores in table 3 showed no difference in scores on the SF-36v2™ subscales of housewives and career women at six weeks and twelve weeks. The lowest and highest ratings for the housewives were on the role physical (role limitations due to physical problems) at 6 weeks (mean=80.6, SD=4.56) and physical functioning (limitations in physical activities due to health problems) at 12 weeks (mean=98.2, SD =3.99), respectively. Similarly, rating for the career women ranged from a low mean of 75.2 (SD=8.22) for role physical at 6 weeks to a high mean of 96.0 (SD=8.83) for physical functioning at 12 weeks. There was strong relationship in scores obtained from physical functioning, general health, social functioning and mental health subscales of housewives and career women (p value=1.000 respectively).

Objective 2: To compare the differences in scores on the HrQoL sub-scales of housewives and career women at 12 and 18 weeks post partum.

Table 4: Comparison of differences in scores on HrQoL sub-scales of housewives and career women at 12 and 18 weeks post partum

HrQoL sub-scales	Housewives (n = 104)		Career women (n=104)		P
	12 weeks Mean(SD)	18 weeks Mean(SD)	12 weeks Mean(SD)	18 weeks Mean(SD)	
Physical functioning	98.2(3.99)	95.8(4.78)	96.0(8.83)	93.9(7.69)	1.0000
Role physical	93.1(5.42)	88.3(5.77)	90.2(5.24)	51.2(2.74)	0.0311*
Bodily pain	85.5(7.07)	84.5(9.90)	89.6(2.62)	51.0(3.96)	0.0216*
General health	94.3(5.68)	89.3(6.58)	89.4(9.00)	85.3(5.34)	1.0000
Vitality	93.2(5.66)	85.0(12.4)	88.9(4.38)	87.6(5.94)	0.7505
Social functioning	88.4(1.98)	88.4(0.28)	86.8(0.28)	52.9(0.14)	0.0402*
Role emotional	88.5(9.82)	93.9(3.56)	94.1(1.33)	81.9(5.59)	0.3988
Mental health	88.6(5.71)	87.0(10.6)	88.2(8.77)	87.5(5.50)	0.7476

P= χ^2_{crit} ; *significant p=value

The lowest means in both groups were ascribed to role physical (p value=0.0311), bodily pain (p value=0.0216) and social functioning (limitations in social functions due to physical or emotional problems) (p value=0.0402). Career women had higher scores for role physical at 12 weeks (x=90.2; SD=5.24) than at 18 weeks (x=51.2; SD=2.74). Similar scores were obtained for bodily pains and social functioning for the same group. Generally, housewives had better HrQoL at 12 weeks and 18 weeks than career women.

Objective 3: Determine the mean score differences within each group over time.

Table 5: Mean score differences within housewives and career women over time

HrQoL sub-scales	Housewives (n = 104)			Career women (n = 104)			P
	6 wks	12 wks	18 wks	6 wks	12 wks	18 wks	
Physical functioning	93.5	98.2	95.8	92.3	96.0	93.9	0.1000
Role physical	80.6	93.1	88.3	75.2	90.2	51.2	0.0687
Bodily pain	81.5	85.5	84.5	80.1	89.6	51.0	0.0391*
General health	91.6	94.3	89.3	86.7	89.4	85.3	0.9987
Vitality	82.4	93.2	85.0	83.1	88.9	87.6	0.9487
Social functioning	84.5	88.4	88.4	84.8	86.8	52.9	0.0483*
Role emotional	81.7	88.5	93.9	80.5	94.1	81.9	0.5678
Mental health	85.4	88.6	87.0	87.1	88.2	87.5	0.9942

P= χ^2_{crit} ; *significant p=value

Comparing the findings within each group, the analysis showed that at 18 weeks, career women were more likely to have low scores for bodily pains ($x=51.0$), role physical ($x=51.2$) and social functioning ($x=52.9$) than the housewives. There were significant differences in bodily pains subscales ($p=0.0391$) and social functioning subscales ($p=0.0483$) within housewives and career women at the three time-points. All the women had consistently high scores on physical functioning within the three time-points.

Hypotheses testing

H₀₁: There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their age.

Table 6: Differences in HrQoL scores of housewives and career women at 18 weeks post partum based on their age

Age (years)	20-24		25-29		30-34		35-39		40-44		P
	x	y	x	y	x	y	x	y	x	y	
Physical functioning	71.1	72.7	78.2	73.2	85.6	73.1	100	91.0	82.0	86.6	0.5404
Role physical	62.9	67.2	75.3	51.8	93.3	47.1	98.7	74.6	70.0	31.0	0.0383*
Bodily pain	58.2	42.6	73.3	55.8	72.8	47.1	86.9	54.6	55.0	29.5	0.0157*
General health	73.9	63.3	75.5	72.0	84.4	80.4	97.9	79.7	83.3	77.7	0.1670
Vitality	74.4	64.1	73.8	82.6	80.0	81.0	96.2	79.2	90.0	85.0	0.4683
Social functioning	53.7	48.4	76.7	57.0	73.3	53.6	100	62.3	80.0	23.0	0.0236*
Role emotional	68.8	61.7	74.5	69.3	93.3	67.5	91.7	76.9	80.0	81.3	0.1155
Mental health	68.2	65.9	74.8	87.5	70.0	85.8	98.1	85.8	90.0	85.5	0.8069

ANOVA summary result

F	5.122
df	4
Mean square	1051
P value	0.0021<p0.05

NB: x=Housewives; y=Career women

$P=t_{crit}$; *significant p =value

HrQoL scores of the women on the subscales of role physical ($p=0.0383$), bodily pain ($p=0.0157$), and social functioning ($p=0.0236$) differed at 18 weeks post partum based on their age. Career women aged 40-44 years seemed to have the highest problem with social functioning (mean=23.0), bodily pain (mean=29.5) and role physical (mean=31.0) than the

rest of the women. These women also had the poorest HrQoL due to bodily pain. However, the lowest scores on mental health were among housewives and career women aged 20-25 years (mean=68.2 and 65.9 respectively). Generally, two-way analysis of variance (ANOVA) of the score showed significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their age ($f=5.122$, $df=4$, $p=0.0021$).

H₀2: There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their educational level

Table 7: Differences in HrQoL scores of housewives and career women at 18 weeks post partum based on their educational level

Educational level	No formal education		Primary		Secondary		Higher		P
	x	y	x	Y	x	y	x	y	
Physical functioning	60.1	0	75.4	61.9	85.5	68.3	95.5	92.7	0.3117
Role physical	48.7	0	65.0	55.5	75.0	62.0	94.1	93.3	0.4420
Bodily pain	51.5	0	58.3	58.4	70.0	55.7	83.7	88.3	0.4689
General health	66.2	0	60.1	65.1	78.3	65.7	71.9	88.9	0.5321
Vitality	61.2	0	49.0	75.6	75.0	66.8	94.6	90.0	0.6171
Social functioning	68.8	0	59.5	57.5	70.0	51.4	90.9	91.6	0.3111
Role emotional	58.3	0	65.5	57.0	80.0	75.0	74.6	88.9	0.5062
Mental health	59.7	0	54.0	71.7	77.5	53.6	73.0	95.8	0.6365

ANOVA summary result

F	18.50
df	3
Mean square	0669
P value	<0.0001<p0.05

NB: x=Housewives; y=Career women; $P=t_{crit}$

There was no difference in scores on the eight subscales of HrQoL of housewives and career women at 18 weeks post partum based on their socio-economic variable of education attainment. HrQoL of both groups increased as their educational level increased. Women with only primary education had low scores on the scales as the housewives without any formal education. The scores on general health, role emotional and mental health for the housewives with higher education, although high, were below that of the career women. All career women had some form of formal education. ANOVA result of

the scores at $\alpha=0.05$ showed significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their educational level ($f=18.50$, $df=3$, $P<0.0001$)

H₀₃: There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their family income.

Table 8: Differences in HrQoL scores of housewives and career women at 18 weeks post partum based on their family income

Family income (₦)	< 18,000		18,000-50,000		51,000-100,000		>100,000		P
	x	y	x	y	x	y	x	y	
Physical functioning	86.0	61.9	91	84.4	100	89.2	96.3	89.2	0.1126
Role physical	67.5	54.7	80.0	44.4	100	60.8	92.5	60.8	0.0068**
Bodily pain	82.5	60.2	66.7	40.9	88.7	66.2	91.2	66.2	0.0075**
General health	81.7	78.3	83.3	83.3	95.2	83.3	94.1	83.3	0.1321
Vitality	60.0	69.5	83.3	82.2	97.5	85.7	72.0	85.7	0.6947
Social functioning	75.0	49.0	76.6	48.8	98.7	62.3	65.4	62.3	0.0168*
Role emotional	66.7	62.8	77.8	68.8	98.3	76.5	77.8	76.5	0.3926
Mental health	62.5	60.5	83.3	80.9	93.7	87.9	71.0	87.9	0.8995
ANOVA summary result									
F			4.148						
df			3						
Mean square			1032						
P value			0.0137<p0.05						

NB: x=Housewives; y=Career women

$P=t_{crit}$; *significant p=value;

HrQoL scores of both groups improved with increasing family income, except for role physical, bodily pain and social functioning. Unpaired t-test of individual scales showed significant p values for role physical ($p=0.0068$), bodily pain ($p=0.0075$) and social functioning ($p=0.0168$). Career women with family income less than ₦51,000.00 had low scores on social functioning just as those that earn ₦18,000.00 – ₦50,000.00 had low scores for role physical (mean=44.4) and had high bodily pains (mean=40.9). Both housewives and career women had closely the same scores on mental health. Two-way ANOVA result at $\alpha=0.05$ and $df=3$ showed $f=4.148$, and $p=0.0137<0.05$. There was

statistically significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their family income.

H₀₄: There is no significant difference in HrQoL scores of housewives and career women at 18 weeks post delivery based on their perceived quality of social support.

Table 9: Differences in HrQoL scores of housewives and career women at 18 weeks post delivery based on their perceived quality of social support

Perceived quality of social support	Very good		Good		Poor		None at all		P
	x	y	x	y	x	y	x	y	
Physical functioning	97.9	87.4	90.4	91.5	96.8	67.0	69.9	52.8	0.2430
Role physical	97.0	72.0	93.9	82.6	86.6	61.7	66.8	41.5	1.0000
Bodily pain	87.3	75.5	86.4	78.4	87.4	51.7	48.5	55.3	0.3764
General health	92.3	86.7	87.8	84.5	88.6	55.4	62.0	59.8	0.3352
Vitality	87.1	86.0	88.8	85.2	97.5	73.4	52.9	73.3	0.8358
Social functioning	88.9	81.5	85.7	78.8	97.5	60.6	50.5	60.0	0.4206
Role emotional	93.1	74.0	94.6	84.8	78.9	63.8	60.0	53.5	0.2738
Mental health	95.5	75.0	79.9	85.6	88.8	61.2	55.6	60.1	0.4038

ANOVA summary result

F	17.56
df	3
Mean square	2884
P value	<0.0001<p0.05

NB: x=Housewives; y=Career women P=t_{crit}

Result in table 9 showed that housewives and career women who had social support of any sort had better HrQoL than those who had none. Hence, ANOVA result of scores showed significant difference in HrQoL scores of both housewives and career women at 18 weeks post delivery based on their perceived quality of social support (f=17.56, df=3, p<0.0001). However, there was no significant difference in the p value of individual HrQoL subscales for housewives and career women.

H₀₅: There is no significant difference in HrQoL scores of the career women 12 and 18 weeks post delivery in relation to their perceived stress-related job category.

Table 10: Differences in HrQoL scores of the career women at 12 and 18 weeks post delivery in relation to their perceived stress-related job category

Perceived stress-related job category	12 wks				18 wks				P
	Hl	Mo	Mi	Sf	Hl	Mo	Mi	Sf	
Physical functioning	7.7	25.9	30.2	6.8	24.5	43.1	16.1	1.7	0.7512
Role physical	4.5	21.0	28.0	5.2	23.5	40.0	13.2	1.2	0.6164
Bodily pain	5.5	15.5	29.5	5.5	23.5	39.0	13.0	2.0	0.5793
General health	7.7	23.3	28.3	6.8	22.8	39.5	13.8	1.3	0.7296
Vitality	9.5	23.0	29.0	7.0	21.5	39.5	12.5	1.5	0.8820
Social functioning	6.5	21.0	32.0	6.5	22.0	35.5	15.0	1.5	0.8166
Role emotional	6.7	20.3	30.0	6.7	24.0	40.0	11.3	1.3	0.7695
Mental health	8.0	29.0	29.5	7.0	22.2	40.2	13.0	1.2	0.9227

ANOVA summary result

F	19.35
df	3
Mean square	2066
P value	<0.0001<p0.05

Hl=High-level stress; Mo=Moderate stress; Mi=Minimal stress; Sf=Stress free
 $P=t_{crit}$

Comparing mean scores at 12 to 18 weeks postpartum the results showed that the career women had higher scores for high to moderate levels of stress for all the subscales of the SF-36v2TM at 18 weeks than at 12 weeks. The women's job were rarely stress free at 18 weeks post partum. There was a statistically significant difference in HrQoL scores of the career women 12 and 18 weeks post delivery in relation to their perceived stress-related job category as ANOVA result showed, thus: $f=19.25$, $df=3$, $p<0.0001$

Summary of result

- The mean age of participants was 30.2 years.
- Career women were better educated than housewives
- There was no difference in scores on the SF-36v2TM subscales of housewives and career women at 6 weeks and 12 weeks.
- Housewives had better HrQoL at 18 weeks than career women.

- There was significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their age
- There was significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their educational level
- There was significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their family income.
- There was significant difference in HrQoL scores of both housewives and career women at 18 weeks post delivery based on their perceived quality of social support.
- There was significant difference in HrQoL scores of the career women at 12 and 18 weeks post delivery in relation to their perceived stress-related job category

CHAPTER FIVE

DISCUSSION OF FINDINGS

In this chapter, findings of the study were discussed. Report on the findings were done under: discussion of the major findings, conclusions, implications of the findings, recommendations, limitations of the study, suggestions for further studies, and summary of the study.

Discussion of the results

HrQoL of housewives and career women at 6, 12 and 18 weeks post partum

At 6 weeks and 12 weeks when both housewives and career women were at home and had fewer tasks, they had relatively the same HrQoL scores which were high. In fact, it is most likely appropriate to state that the women had the best HrQoL within this maternity period since a high role physical mean score of 75.2 (for career women at 6 weeks) was recorded as the lowest of all scores. This finding is in a way related to Klein, Hyde Essex and Clarkö's (2011) discovery that home-makers and part-time and full-time employees did not differ on their HrQoL measures of depression, anxiety, anger, or self-esteem a year after delivery. Removed from work environment, both groups of mothers were commonly concerned with the home and baby care, had enough time to rest and have good physical and mental health. This finding also has significant implication for the babyö's health as the motherö's good health will most likely enable her to give a better physical and emotional quality of care to the baby within the period.

However, at 18 weeks post delivery housewives had better HrQoL than career women. With the commencement of work, the career women reported a drop in their physical health components of role physical and bodily pain scores as well as their social

functioning mental health component scores. This means that after six weeks of resuming work, they reported having bodily pains and problems with their work or other regular daily activities as a result of their physical health at some times. Further, as a result of their physical health (or emotional problems) their normal social activities were reported to have been interfered with. These were likely to affect their job performance. Also, their interpersonal relationships with family, friends, neighbours or groups in form of visits, meetings, wedding, and burial ceremonies might be compromised. In this case, the finding is in contrast to Klein, Hyde Essex and Clarkös (2011) observation that leave length had no main effect on the womenös role quality. Also, the findings were opposite to that from Iran by Zanjani and Bayat (2010) on the womanös work day status and her HrQoL in which employed women reported higher quality of life score than non-employed women. Women's career development seems to be filled with conflict between work and family. These differences may be as a result of socio-cultural factors in Nigeria where, as Chukuezi (2010) pointed out, women perform most domestic tasks and are engaged in one form of formal or informal job to compliment the family income. These, in turn, may mean palpable physical, mental and social demands on the health of this group of women.

HrQoL of housewives and career women at 18 weeks post partum and age

There was significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their age. Findings from this study indicated that with an increased age the women, especially the career women, experienced more bodily pains, which expectedly, affected their social functions and regular daily activities. This finding was consistent with Jorngarden, Wettergen and von Essen (2006) and Department of Family Medicine and Public Health (2011). The older women were likely to have a higher parity. This and similar social and cultural factors may mean increased responsibilities and increased demand for physical energy and social involvements.

Housewives and career women age group 20-25 years had the lowest scores on mental health. Young housewives and career women are likely to be young, inexperienced mothers also. Lack of experience can be a source of frustration and stress as the woman still undergoes some motherhood adaptation processes. It is not clear however why housewives age group 25 to 35 years had poorer mental health than career women of the same age. Further studies are required for this.

HrQoL of housewives and career women at 18 weeks post partum and educational level

HrQoL scores of housewives and career women at 18 weeks post partum differed significantly based on their educational level. Career women reported increased HrQoL as their education increased. Several studies have earlier documented an improved HrQoL with increased socio-economic status, including increased education (Schoepke, et al, 2007; Richter, et al (2010); Myravittles, Naberan, Cantoni & Azpeitia, 2011; Ross, Garner, Bernier, Feeny, et al, 2011). Individuals with high education will likely have increased chance of getting a well-paid job which in turn will make them better positioned to access quality living conditions. The finding therefore strongly suggests that people who were more educated and with higher incomes have better HrQoL than those with lower educational and income levels.

Housewives with higher education somehow had reduced scores on the subscales of general health, role emotional and mental health when compared with their counterparts who were within the working class. This seems to be in disagreement with Jamabo and Ordu (2012) that educational attainment of women does not affect their marital adjustment. When one acquires educational certificates but has nothing tangible to do with the certificate, then the certificate is as good as useless. This will most likely be prominent among women who become housewives not by their own volition but as a result of some

external factors such as spouse disapproval. Being a housewife but restricted from formal work despite educational attainment may affect the woman's psyche which may be manifested in poor physical and mental health. In addition, desire (or motivation) to work may have significant influence when talking about the woman's HrQoL in relation to her work status. Hence, a woman who is desirous of job so as to earn money will most likely have contentment, wellbeing and a higher HrQoL than one not motivated to work.

Also, findings from this study showed that primary education attainment does not really impact on the HrQoL of women as the scores were similar to that for housewives without any formal education. It is possible that education enhances one's introspective ability for more appropriate assessment of his/her physical and psychological health states. It is equally likely that women with higher education in this study were also within the chronologically older age groups. These are likely to have increased their socio-cultural responsibilities which, in turn, that could pose challenges to their job and their HrQoL.

HrQoL of housewives and career women at 18 weeks post partum and family income

Family income appeared to have significant impact on the HrQoL of housewives and career women at 18 weeks post partum. Although more career women (21) than housewives (2) that entered the study had monthly family income above N100,000.00. It is significant to observe that women with higher family income, whether housewives or career women, had higher scores on the HrQoL scales. Several studies such as (Koopman, et al, 2001; Garcia-Mendizabal, et al, 2009; Richter, et al, 2010; Ross, Garner, Bernier, Feeny, et al, 2011; Ross, 2011) support this positive correlation of HrQoL with socio-economic status. Working, whether in the house or outside the home has benefits attached to it because it reduces the woman's poverty risks and adds to her physical and mental HrQoL. It may be true, therefore, to say that socio-economic status is a measure of health

and that working class women, particularly those that also have higher education that increases their chances of better placement on the job, have more satisfactory life than non-working women. This is supported by Myravittles, Naberan, Cantoni and Azpeitia (2011) who asserted that people who were more educated and with higher incomes had a better HrQoL than those with lower educational and income levels. With evidence from the findings, the ability to have reasonable access to income is essentially a means to an improved HrQoL. The findings, therefore, were in support of Meyerös (2007) declaration that national integration of women into the world economy through trade liberalization significantly expands their access to income.

Women who earn high are usually also high ranked officers with better working conditions than low wage earners who are also in the lower cadres of the job. Women who earn high salaries will better take care of themselves and afford to employ assistants in the house. Career women with lower family incomes, on the other hand, had poorer physical health probably because they could not afford to employ assistants due to their meagre income. In addition, their normal social activities such as visits to friends, neighbours and meetings will reduce because they have more jobs in the house, namely baby care and other household tasks. It is probably against this backdrop that the American Psychological Association (2013) stated that lower levels of socio-economic status are associated with higher levels of emotional and behavioural difficulties.

HrQoL of housewives and career women at 18 weeks post partum and perceived quality of social support

HrQoL of career women and housewives changed as their quality of social support changed although these were not related to their work status. The better the quality of social support a woman perceived, the better the HrQoL she has and vice versa. This

finding supports Eastwood, et al's (2008) discovery that associated lack of social support with lower HrQoL. It is equally true, then, to say that the impact of social support on HrQoL is common among persons irrespective of socio-economic status, life burden or health status, thus concurring with the findings of Koopman, Angell, Turner-Cobb, Kreshka, Donnelly, McCoy, et al. (2001) that social support in the context of rurality impacts the HrQoL of rural cancer survivors. Social support, therefore, has the same impact on newly delivered mothers in an urban setting.

Scores for the various social support qualities indicated that women who had no support at all had far poorer HrQoL. A woman with a newborn definitely has an increased task and as a necessity desires assistance or support from others. Unfortunately, in the Nigerian culture women perform most domestic tasks and at the same time are responsible for the care of children, the sick and the elderly, in addition to performing essential social functions within their communities. Fellow women, as co-wives, seem also to be too busy in the recent time so that they rarely have the time to spare with the newly delivered women as was done some years back. Against this backdrop Qualls (2012) observed that with expanded educational opportunities for women since 1960 and modern developments of mandatory education, urbanization, and capitalism that are currently changing the Nigerian society, the support received by newly delivered mothers from fellow women of the co-wives has diminished. A change of the mindset that child care is sole responsibility of the woman may likely offer some relieve to the women folk especially in this part of the world so that they will have more resting times in-between work hours and have an improved HrQoL.

HrQoL of housewives and career women at 18 weeks post partum and perceived stress-related job category

The level of stress perceived by the career women increased six weeks after they resumed work. With an additional daily work load through child care responsibilities, the women

may perceive their job as even more stressful than before birth. This situation may be compounded by the relatively short official maternity leave period approved by the Nigerian government.

Child care alone is an enormous task, hence even at 12 weeks, only 8 out of the 104 career women had stress-free moments. The fact that care of the baby is an intricate and challenging one, therefore, cannot be over-emphasized. After all, as has been said earlier, childbirth is a time of huge changes and a stressful time during which the woman has to make a lot of adjustments in her daily tasks. In support of this was the findings of Klein, Hyde, Essex and Clark (2011) that associated distress with job overload, role restriction, and infant distress.

Breastfeeding the newborn is even more challenging to a working class woman, especially where she is restricted from bringing the baby to work. She is psychologically torn apart and will seem to perceive stress with the least tasks. This might not have been the case if she had more, at least the first six months that is most crucial for her to stay with her baby exclusively. Again, the fact that the women had to return to work after just three months of delivery seems not to support the campaign for exclusive breast feeding and the attendant benefits to the woman (and her baby).

Implications of the findings

- The woman's HrQoL improves as her length of stay at home post delivery increases.
- The woman's good health at 6 and 12 weeks post partum will most likely enable her to give a better physical and emotional quality of care to the baby within this period.
- Women's career developments are filled with conflict between work and family that affect their physical and emotional health. These, in turn, may mean high physical, mental and social demands on their health.

- Increased age coupled with increased responsibility reduced one's HrQoL.
- High education increases the chances of getting a well-paid job which in turn increases one's access to quality living conditions.
- Educated housewives kept back from formal work may have certain psyche problems which may be manifested in poor physical and mental health.
- Education will likely enhance one's introspective ability and meaningful assessment of his/her physical and psychological health states.
- High family income increases the woman's access to comfort and enhances her psycho-social well being. This implies a better state of mind and body.
- The impact of social support on HrQoL is common among persons irrespective of socio-economic status, life burden or health status. Social support has the same impact on newly delivered mothers in an urban setting.
- Work is a common stressor to every career woman with new baby; the younger the baby, the more the stress.
- Breastfeeding the newborn will be even more challenging to a working class woman with restrictive conditions on baby care while in office.

Limitations of the study

The study was limited by the repeated number of times that data needed to be collected since some of the respondents were lost before completion of data collection.

The study was restricted to only full-time housewives and career women. Self-employed and part-time working class women may have different HrQoL at the various stages. Findings of the study therefore cannot be generalized to all categories of women of child bearing age.

The sample for data collection was drawn from women who delivered in health facilities. Women of lower income class who used alternative birth services by unskilled providers were not covered by the study.

The study was conducted in an urban area where most women had access to good quality living conditions. Rural dwellers lack many of the resources needed for improved lives. Research has provided evidence that there is a difference of risk perception between more affluent people with higher education and the poor with lower educational levels (Ross, Garner, Bernier, Feeny, et al 2011) and rural dwellers live with higher level of poverty than urban dwellers. The findings therefore cannot be extended to housewives and career women in rural settings.

The convenient sampling technique was biased in terms of representation of the entire population in the two groups. However, both housewives and career women were equitably represented in the sample distribution. Low educational levels of some participants, especially the housewives without any formal education may have influenced their understanding and interpretation of the instrument. The respondents were constrained by the scales, and they did not have enough space to express any ideas outside of the questions in the SF-36v2™.

Suggestions for further studies

Based on findings of the study, the following were suggested for further studies:

- Why do young housewives have poorer HrQoL scores than career women of the same age?
- There is need on further studies on why the HrQoL of career women increased with their educational levels.

- Post natal health-related quality of life of women living in urban and rural settings should be studied.

Summary of the study

This study investigated the differences in HrQoL of housewives and career women with normal vaginal delivery in Enugu. The purpose of this study is to compare the post-natal HrQoL of career women and housewives and establish the differences in their general health; physical functioning; role physical; role emotional; social functioning; bodily pains; vitality; and mental health of the women, as well as determine personal factors that influence these. Three objectives and 5 null hypotheses were formulated to guide the study before outlining the significance of the study. The study was delimited to distinctions between HrQoL of career women and housewives at 6, 12 and 18 weeks post partum based on their age, educational status, family income, quality of social support and job category.

Literature was reviewed on the concept of HrQoL, how HrQoL is measured, the response shift theory, comparative HrQoL studies with housewives and career women, empirical review of the HrQoL in relation with socio-economic and educational status, age and social support. Analysis of reviewed literature showed paucity of HrQoL studies addressing the overall QoL, including self-reported measures of physical, mental, emotional and social functioning; and their correlates including health risks and conditions, functional status, social support, and socioeconomic status that can affect health. The review also showed dearth of studies on role of the woman's social support on her HrQoL generally.

A longitudinal, prospective descriptive study design was employed because consenting newly delivered mothers who were housewives and career women were to be assessed to determine at three points their HrQoL changes as they return to pre-pregnancy daily activities, without any intervention.

An estimated population of 363 newly delivered women was, thus, used for the study. Power analysis was used to estimate the sample size of 234 newly delivered mothers (117 housewives and 117 career women) and a combination of proportionate stratified and convenience sampling technique was employed to draw this sample into the study.

The Iranian version of the SF-36v2TM (a standardized generic short form HrQoL survey instrument) was adapted for the study. It measures eight health-related concepts: physical functioning; role limitation due to physical problems; bodily pain, general health perceptions; vitality; social functioning; role limitation due to emotional problems; and perceived mental health. Also, personal data were collected using a researcher-developed short questionnaire for age, educational level, family income, perceived quality of social support and stress-related job category (of career women). To ascertain its reliability, twenty copies of the instrument were pilot-tested and percentage scores of responses for each section subjected to split-half reliability test using Pearson's Product Moment Correlation Co-efficient. The results were 0.77 for personal profile and 0.87 for the modified SF36v2TM.

The study was conducted after approval obtained from the Research Ethical Committee of University of Nigeria Teaching Hospital, Enugu and written informed consent from participant (and spouse where necessary).

Data were collected at three points in time: first at 6 weeks after delivery at the hospital when the woman came for six weeks post partum visit; second and third at 12 and 18 weeks post partum respectively at the woman's home or office or through cell phone calls. Eight assistants were trained and used for data collection. Data were presented using descriptive statistics ñ frequency, %, $\bar{x}$ and SD. T-test and 2-way ANOVA were used for

inferential analyses. All statistical analyses were performed using the GraphPad version 5.03 Biostatistical Package.

The acceptance rate was 90.2% (211). Three housewives were deliberately withdrawn to equalize number with career women. The final sample was 208 women (104 housewives and 104 career women).

After analysis, the major findings were made, thus:-

- The mean age of participants was 30.2 years.
- Career women were better educated than housewives
- There was no difference in scores on the SF-36v2TM subscales of housewives and career women at 6 weeks and 12 weeks.
- Both housewives and career women had better HrQoL during their maternity period ñ 6 and 12 weeks post partum than at 18 weeks.
- At 18 weeks post delivery housewives had better HrQoL than career women. Career women reported bodily pains and problems with role physical and social functioning
- With an increased age the women, especially the career women, experienced more bodily pains which affected their social functions and regular daily activities.
- There was significant difference in HrQoL scores of housewives and career women at 18 weeks post partum based on their educational level. The finding strongly suggests that people who were more educated and with higher incomes have better HrQoL than those with lower educational and income levels
- Women with higher family income, whether housewives or career women, had higher scores on the HrQoL scales.

- There was significant difference in HrQoL scores of both housewives and career women at 18 weeks post delivery based on their perceived quality of social support. The better the quality of social support a woman perceived, the better the HrQoL she has and vice versa.
- There was significant difference in HrQoL scores of the career women at 12 and 18 weeks post delivery in relation to their perceived stress-related job category. The level of stress perceived by the career women increased six weeks after they resumed work.

Conclusions

- Housewives and career women seem to have better HrQoL during their maternity period ñ 6 and 12 weeks post partum than at 18 weeks.
- At 18 weeks post delivery housewives had better HrQoL than career women. Career women were more likely to report bodily pains and problems with role physical and social functioning.
- With an increased age the women, especially the career women, experienced more bodily pains which affected their social functions and regular daily activities. Young mothers had poorer HrQoL scores than their older counterparts.
- Career women reported increased HrQoL as their education increased.
- The finding therefore strongly suggests that people who were more educated and with higher incomes have better HrQoL than those with lower educational and income levels.
- Housewives with higher education had lower scores on the subscales of general health, role emotional and mental health when compared with their counterparts who were within the working class.
- Primary education attainment does not really impact on the HrQoL of the women

- Women with higher family income, whether housewives or career women, had higher scores on the HrQoL scales.
- Working class women, particularly those that also have higher education that increases their chances of better placement on the job, have more satisfactory life than non-working women.
- The better the quality of social support a woman perceived the better the HrQoL she has and vice versa.
- The level of stress perceived by the career women increased six weeks after they resumed work.

Recommendations

- The traditionally accepted postpartum recovery period of six weeks and attending benefits, such as paid maternity and sick leave, as well as stable yet flexible work schedules is very important.
- To encourage good mother-child bonding, the time the woman spends with her baby should be increased through an elongated maternity leave. Findings of the study provided justification for the extension of maternity leave to six months. Also, paternity leave should be granted to fathers, on request, so that they will have time at home to assist their spouse as may be necessary.
- To help the newly delivered mothers adapt to their job post-delivery, the work schedule should be as stable, but yet flexible, as possible.
- The findings of this study should be considered in the development of national healthcare programmes aimed at improvement of the HrQoL in women generally and those with increased social roles, in particular.
- Since career women were more susceptible to the influence of social support on HrQoL than full-time housewives, the attention of social health workers and

maternal health and welfare activists will be invaluable in designing interventions that will help relieve the women of the physical and emotional problems resulting from daily work over-load and improving their HrQoL.

- The study revealed that women with lower education and family income as well as those without social support were the most vulnerable for poor HrQoL. Health policies and legislation should therefore address increased resource allocation based on unmet needs, guide the development of strategic plans, and monitor the effectiveness of broad community interventions.
- Gender sensitive employment opportunities should be created to empowered more women economically. Programmes should be designed to ensure that these at risk groups earn at least the national minimum wage of N18,000.00 to enhance their economic status.
- Health, education, social security and employment plans for women generally should be reviewed upward.

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APPENDIX I:

INSTRUMENT

Department of Nursing Sciences,
Faculty of Health Sciences and Tech.
College of Medicine
University of Nigeria,
Enugu Campus.

Date

Dear Respondent,

The questionnaire that follows is developed to collect data on “*Health-Related Quality of Life of Career Women and Housewives with Normal Vaginal Delivery in Enugu*” to accomplish a research project for a University Masters Degree in Nursing Sciences.

Your co-operation in carefully supplying information as required in the instrument is earnestly desired and will, therefore, be highly appreciated as it will assist the researcher to effectively complete this work.

Please, note that every information you provide will be treated with utmost confidentiality.

Thanks.

CHINWEUBA Anthonia U.

Instruction:

This checklist explores the post-delivery quality of life of housewives and career women in Enugu urban. There are no right or wrong answers, because each woman has her own peculiar life circumstances. Be sure to answer every item. Begin by completing the following:

Section A: Personal profile of respondent
--

- 1 **Age group (in years)**

20 ñ 24 ☐	25 ñ 29 ☐
30 ñ 34 ☐	35 ñ 39 ☐
Ö40 ☐	

- 2 **Educational status**

No formal education ☐	Primary ☐
Secondary ☐	Higher/University ☐

- 3 **Employment**
Housewife ☐
Employed ☐

- 4 **Estimated family income per month**
Less than N18,000.00 ☐
N18,000.00 ñ N50,000.00 ☐
N51,000.00 ñ N100,000.00 ☐
> N100,000.00 ☐

- 5 **How would you grade the assistance you get from others in your house in respect to your domestic role/function as a mother? Please tick “None at all” if you have no assistance.**
Very good ☐
Good ☐
Poor ☐
None at all ☐

- 6 **If you are a career woman, how would you categorise your job in terms of amount of stress you encounter at work? Indicate your current job category by ticking ✓ in the corresponding box.**
High-level stress ☐
Moderate stress ☐
Minimal stress ☐
Stress free ☐

Section B: Modified SF-36v2™

Instructions for completing the Questionnaire

This survey asks for your views about your health. This information will help you keep track of how you feel and how well you are able to do your usual activities. It will help the researcher determine how daily activities affect the health-related quality of life of mothers four months after delivery.

Please answer every question. Some questions may look like others, but each one is different. Please take the time to read and answer each question carefully by filling in the bubble that best represents your response. If you are unsure about how to answer a question, please give the best answer you can.

EXAMPLE

This is for your review. Do not answer this question. The questionnaire begins with the section ***Your Health in General*** below.

For each question you will be asked to fill in a bubble in each line.

- 1 How strongly do you agree or disagree with each of the following statements?
- | | Strongly Agree | Agree | Disagree | Strongly disagree |
|--------------------------------|----------------|-------|----------|-------------------|
| (a) I enjoy listening to music | í | χ | í | í |
| (b) I enjoy reading magazines | χ | í | í | í |

Please begin answering the questions

Your Health in general

- 1 **In general, would you say your health is** (*general health – GH*)

Excellent	Very good	Good	Fair	Poor
í	í	í	í	í

GH01

- 2 **Compared to one year ago, how would you rate your health now?**

Much better now than one year ago	Somewhat better now than one year ago	About the same as one year ago	Somewhat worse now than one year ago	Much worse now than one year ago
í	í	í	í	í

GH02

- 3 **The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so how much?** (*physical functioning – PF*)

	Yes, limited a lot	Yes, limited a little	No, not limited at all
a. Vigorous activities such as running, lifting heavy objects, participating in strenuous sports	í	í	í
b. Moderate activities like moving a table, lifting a bucket of water, pushing a vacuum cleaner	í	í	í
c. Lifting or carrying food items from market	í	í	í
d. Climbing several flights of stairs (more than one	í	í	í

PF01

PF02

PF03

PF04

storey building)				
e. Climbing one flight of stairs (first floor of a storey building)	í	í	í	PF05
f. Bending, kneeling or stooping	í	í	í	PF06
g. Walking up to half kilometre	í	í	í	PF07
h. Walking less than half kilometre	í	í	í	PF08
i. Walking one hundred yards	í	í	í	PF09
j. Bathing or dressing yourself	í	í	í	PF10

- 4 During the past 6 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of your physical health? (*role physical – RF*)

	All of the time	Most of the time	Some of the time	A little of the time	None of the time	
a. Cut down on the amount of time you spend on work and other activities	í	í	í	í	í	RP01
b. Accomplish less than you would like	í	í	í	í	í	RP02
c. Were limited in the kind of work and other activities	í	í	í	í	í	RP03
d. Had difficulty performing the work or other activities (for example, it took extra effort)	í	í	í	í	í	RP04

- 5 During the past 6 weeks, how much of the time have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)? (*role emotional – RE*)

	All of the time	Most of the time	Some of the time	A little of the time	None of the time	
a. Cut down on the amount of time you spend on other activities	í	í	í	í	í	RE01
b. Accomplished less than you would like	í	í	í	í	í	RE02
c. Did work or other activities less carefully than usual	í	í	í	í	í	RE03

- 6 During the past 6 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities, that is, your interpersonal relationships with family, friends, neighbours, or groups such as visits, meetings, wedding and burial ceremonies, etc? (*social functioning – SF*)

Not at all	Slightly	Moderately	Quite a bit	Extremely	
í	í	í	í	í	SF01

- 7 How much bodily pain have you had during the past 6 weeks? (*bodily pain – BP*)

None	Very mild	Mild	Moderate	Severe	Very severe	
í	í	í	í	í	í	BP01

- 8 During the past 6 weeks, how much did pain interfere with your normal work (including both work outside the home and housework?)
(*bodily pain – BP*)

Not at all	A little bit	Moderately	Quite a bit	Extremely	
í	í	í	í	í	BP02

- 9 These questions are about how you feel and how things have been with you during the past 6 weeks. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 6 weeks ... (*vitality – VT/mental health – MH*)

	All of the time	Most of the time	Some of the time	A little of the time	None of the time	
a. Did you feel full of strength?	í	í	í	í	í	VT01
b. Have you been very nervous?	í	í	í	í	í	MH01
c. Have you felt so sad, hopeless, downhearted and depressed that nothing could cheer you up?	í	í	í	í	í	MH02
d. Have you felt calm and peaceful?	í	í	í	í	í	MH03
e. Did you feel tired and worn out?	í	í	í	í	í	VT02
f. Have you been happy?	í	í	í	í	í	MH04

- 10 During the past 6 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting friends, relatives, etc)? (*social functioning – SF*)

All of the time	Most of the time	Some of the time	A little of the time	None of the time	
í	í	í	í	í	SF02

- 11 How TRUE or FALSE is each of the following statements for you? (*general health – GH*)

	Definitely true	Mostly true	Mostly false	Definitely false	
a. I seem to get sick a little more readily than other people	í	í	í	í	GH03
b. I am as healthy as anyone I know	í	í	í	í	GH04
c. I expect my health to get worse	í	í	í	í	GH05
d. My health is excellent	í	í	í	í	GH06

Thank you for completing these questions!

APPENDIX II:

INSTRUMENT MODIFICATION

- * 2 Substitute "compared to *one year* ago" with "compared to *six weeks* ago" at second and third visits.
- * Change four (4) weeks (interval between visits) to six (6) weeks
- * 3 (b) Delete "bowling or playing golf" Add "lifting bucket of water"
(c) Substitute "groceries" with "food items from the market"
(d) Add (more than one storey building)
(e) Add (first floor of a storey building)
(g) Substitute "mile" with "kilometre"
(h) Change "Walking several hundred yards" to, "Walking up to half kilometre"
(i) Change "Walking one hundred yards" to, "Walking less than half kilometre"
- * 6 Instead of "During the past 6 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours, or groups?", Ask "During the past 6 weeks, to what extent has your physical health or emotional problems interfered with your normal social activities, that is, your interpersonal relationships with family, friends, neighbours, or groups such as visits, meetings, wedding and burial ceremonies, etc"
- * 9 Delete "Did you have a lot of energy?"
Substitute: - "pepp" (informal for pepper) with "strength"
- "down in the dumps" with "sad and hopeless"
- "blue" with "depressed"
- "been a happy person" with "been happy"
Merge "Did you feel worn out?" with "Did you feel tired?" to have "Did you feel tired and worn out?"
Change "a little easier" to "a little more readily"
- Merge "Have you felt so sad and hopeless that nothing could cheer you up?" and "Have you felt downhearted and depressed" to be: "Have you felt so sad, hopeless, downhearted and depressed that nothing could cheer you up?"
- * HrQoL Sub-teams of components indicated after each question to guide the respondent

APPENDIX IV

SUBJECT INFORMED CONSENT FORM

Instruction to researcher or research assistant

Please read the introductory statement to the respondent. Her response will determine whether you should proceed with the instrument administration:

Introduction

Dear respondent,

You are being invited to participate in this study on health-related quality of life of career women and housewives with normal vaginal delivery in Enugu being conducted by a Masters Degree student of Department of Nursing Sciences, University of Nigeria, Enugu Campus.

Findings may identify subgroups with relatively poor perceived health. This can be used as a basis for making pertinent recommendations for health policies and legislation on interventions to improve situations of the vulnerable groups and avert more serious consequences; to allocate resources based on unmet needs, guide the development of strategic plans, and monitor the effectiveness of broad community interventions. The findings will serve as evidence for necessary interventions by social health workers and maternal health and welfare activists towards an improved health-related quality of life for women.

The present study asks for your views about your health. You will be required at three different times ñ with six weeks intervals ñ to answer questions on how you feel and how able you are to do your usual activities. You will be presented with a copy of the questionnaire and required to kindly give honest answer to the questions. If you cannot read or write, the researcher or a research assistant will help to read out contents of the questionnaire and record your responses. This information will help you keep track of how well you are able to do these usual activities and will help the researcher determine how daily activities affect the health-related quality of life of mothers four months after normal delivery.

The study will involve initial information collection during your six weeks post natal visit to the clinic, the second and third may involve visits of the researcher or research assistant

to you in your matrimonial home (after consent also from your spouse, as may be necessary) at which time you will also be required to supply some information on your health since after childbirth. If you are a career woman, you may be visited at your place of work, if you chose so.

Apart from contents of the questionnaire, you do not need to disclose further personal information to anybody. The exercise will not cause any physical or social harm to you or any member of your family. Every information given, reports or publications of the results of this study shall not bear your personal identities. You are free to accept or decline to be involved in the study, and to leave the study at any time.

If you are willing to participate, please fill in the following form:

Consent from postnatal woman (respondent) (Appendix IIIa)

I understand that a study is being conducted on health-related quality of life of career women and housewives with normal vaginal delivery in Enugu.

The researcher requested my consent to participate in the study.

I also understand that the study will involve initial information collection during my six weeks post natal visit to the clinic; that the second and third may involve visits of the researcher or research assistant to me in my matrimonial home (or my place of work, if I chose so) at which time I will also be required to supply some information on my health since after childbirth.

I was informed that every information I give will be treated as confidential, that the exercise will not cause any physical or social harm to me or any member of my family and that I am free to accept or decline to be involved in the study.

I hereby give my free consent to participate in the study.

Respondent's name and signature

Date

Name and signature of witness

Date

If you have any question or problem, contact:

The Chairman, Health Research Ethics Committee
UNTH, Ituku-Ozalla

Through

Dr Ijeoma Okoronkwo (*The Supervisor*)
Dept of Nursing Sciences
University of Nigeria, Enugu Campus
08063581297

Researcher's contact address is

Department of Nursing Sciences
Faculty of Health Sciences and Technology
University of Nigeria, Enugu Campus

Phone: 08032162180; 08056413297

Thank you.

Chinweuba, Anthonia
(*Investigator*)

Consent from postnatal woman's spouse (Appendix IIIb)

I understand that a study is being conducted on health-related quality of life of career women and housewives in Enugu in which my wife may be involved as a respondent.

I also understand that the study will involve initial information collection during my wife's six weeks post natal visit to the clinic; that the second and third may involve visits of the researcher or research assistant to my wife in my matrimonial home at which time she will also be required to supply some information on her health since after childbirth.

I was informed that the visit is strictly for this information collection, that all information obtained will be treated as confidential, and that the exercise will not cause any physical or social harm to any member of my family.

The researcher requested my consent to visit my matrimonial home for information gathering for the purpose of the study.

I hereby give my free consent that my wife be visited in my matrimonial home for the information gathering.

Name and signature of respondent's spouse

Date

Name and signature of witness

Date

If you have any question or problem, contact:

The Chairman
Health Research Ethics Committee
UNTH, Ituku-Ozalla

Through
Dr Ijeoma Okoronkwo
(*The Supervisor*)
Dept of Nursing Sciences
Faculty of Health Sciences & Technology
University of Nigeria, Enugu Campus
08063581297

Researcher's contact address is

Department of Nursing Sciences
Faculty of Health Sciences and Technology
University of Nigeria, Enugu Campus

Phone: 08032162180; 08056413297

Thank you.

Chinweuba, Anthonia
(*Investigator*)

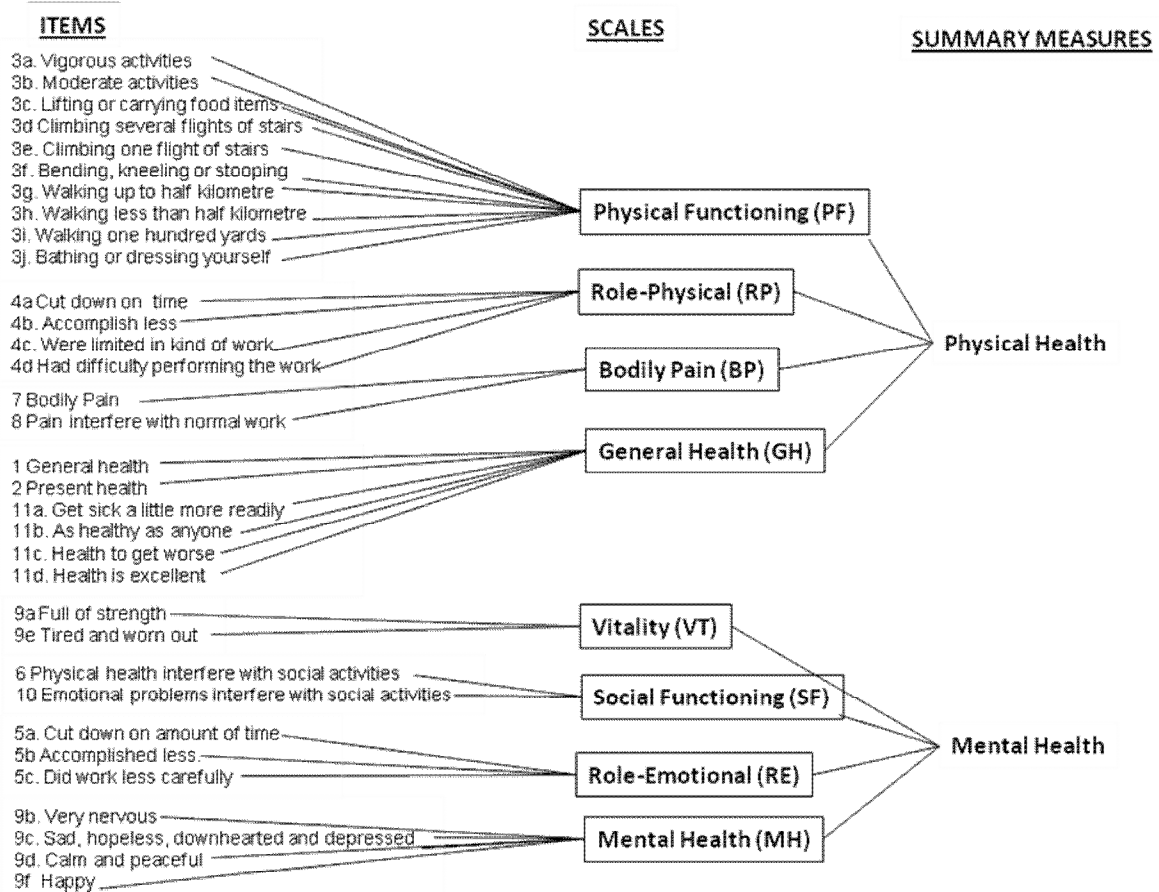
APPENDIX V

Monthly Antenatal attendance according to facility

M o n t h	Mother of Christ Specialist Hosp, Ogui	Poly Sub-District Hosp., Asata	Uwani Health Centre	Ibezim Hospital, Awkunanaw	Military Hospital, 82 Division, Enugu	Redeemer Mat. Home Abakpa
Jan	41	45	23	44	166	48
Feb	37	50	25	48	158	34
Mar	35	54	21	66	149	47
Apr	36	47	30	45	157	49
May	44	64	32	45	142	41
Jun	39	53	24	53	163	38
Jul	37	66	23	48	151	43
Aug	46	47	28	60	107	40
Sep	42	59	32	52	145	45
Oct	39	56	26	54	147	57
Nov	42	54	31	43	150	42
Dec	40	53	29	42	153	44
Total	468	648	324	600	1788	528
$\bar{x}$	39	54	27	50	149	44

APPENDIX VI

The SF-36® Measurement model



APPENDIX VII

SPLIT HALF RELIABILITY TEST USING PEARSON PRODUCT MOMENT CORRELATION COEFFICIENT

SECTION A

S/n	SCORE		x^2	y^2	xy
	Group A (x)	Group B (y)			
1	5	5	25	25	25
2	5	5	25	25	25
3	5	5	25	25	25
4	5	5	25	25	25
5	5	5	25	25	25
6	5	5	25	25	25
7	5	5	25	25	25
8	5	5	25	25	25
9	5	4	25	16	20
10	4	4	16	16	16
Σ	49	48	241	232	236
n	=	10			

SECTION B

S/n	SCORE		x^2	y^2	xy
	Group A (x)	Group B (y)			
1	11	11	121	121	121
2	11	11	121	121	121
3	11	11	121	121	121
4	11	11	121	121	121
5	11	11	121	121	121
6	11	11	121	121	121
7	11	10	121	100	110
8	10	10	100	100	100
9	10	9	100	81	90
10	9	9	81	81	81
Σ	106	104	1128	1088	1097
n	=	10			

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{(n\sum x^2 - (\sum x)^2)(n\sum y^2 - (\sum y)^2)}}$$

Number of xy pairs 10
Pearson r **0.77**
 95% confidence interval 0.06365 - 0.9131
 P value (two-tailed) 0.0353 < p0.05
 P value summary *
 Is the correlation
 significant? (alpha=0.05) Yes

Number of xy pairs 10
Pearson r **0.87**
 95% confidence interval 0.5221 - 0.9681
 P value (two-tailed) 0.0012 < p0.05
 P value summary **
 Is the correlation
 significant? (alpha=0.05) Yes

APPENDIX IX

PERSONAL INFORMATION FORM

Name in full ë ..

Popular (or preferred) name ë ë ë ë ë ë ë ë ë ë ë ë ë ë ë ë ë ë .

Home address ë

ë ..

ë ..

ë ..

[illegible]

ë ..

Phone number ¨ .

Preferred contact mode: (a) Visit to home ☐

(b) Visit to office ☐

[illegible][illegible][illegible]