

Maternal Quality of Life During the Transition to Motherhood

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Background: One of the elements of the broadening focus of health care beyond its traditional and restricted concept has been the increasing adoption quality of life approach to health care research and practice.

Objectives: To investigate the QOL of women in the third trimester of pregnancy and at 8 weeks postpartum and factors associated with the overall QOL.

Materials and Methods: Three hundred and fifty seven pregnant women attending urban health centers in Shahrood city, located in Northeast of Iran, completed the World Health Organization Quality of Life questionnaire (WHOQOL)-BREF and General Health Questionnaire (GHQ28) in the third trimester of pregnancy and at 8 weeks postpartum. Also, breastfeeding difficulties were assessed at 4 weeks postpartum. Statistical analysis was performed using SPSS 18 for descriptive statistics, paired t-test, linear regression and multiple regression analysis.

Results: There were significant differences between the ante-and postnatal periods in mean scores in the physical ($P < 0.001$) and social relationship ($P = 0.033$) aspects of QOL. Multiple regression analysis revealed that factor adversely affected the global score of the QOL in the antenatal period was antepartum psychological disorders. Factors that adversely affected the global score of QOL in the postnatal period were postpartum psychological disorders, breastfeeding difficulties, multiparity, higher pregnancy weight gain, and cesarean.

Conclusions: Results indicated that in this low risk group of women physical health and social relationship improved from pregnancy to postpartum. Interventions to promote psychological status during pregnancy and early postpartum should be designed.

Keywords: Quality of Life; Postpartum Period; Pregnancy; Women

1. Background

In recent decades, the traditional narrow concept of health has been replaced with a broad, holistic and positive concept of health epitomized by the WHO definition as "not merely the absence of disease or infirmity" but "a state of complete physical, mental and social well-being" (1). In the field of maternity care, decreasing morbidity and mortality rates in recent decades have prepared the ground for other expectations like enhancing the quality of life (QOL), and the focus of antenatal and postnatal care in developed countries has expanded from its traditional goal of preventing, detecting and managing problems and complications (2). It now includes broader aims such as "supporting psychological adaptation to pregnancy". This approach reflects the increasing shift of emphasis to the QOL in healthcare research and practice (3).

Pregnancy, childbirth and facing newborn baby's needs

in the early postpartum, are common events in the life of most women, which influence all aspects of their lives (4). Some studies have reported that compared to pre-pregnancy conditions, physical performance of women and their perception of their level of health and well-being decrease during pregnancy (5, 6). Although most of the physical changes during pregnancy reverse after birth and the body returns to its normal state within 8 weeks of postpartum, women may experience many physical and mental symptoms relating to childbirth during this critical period (7). Results of a study indicated that one or more health problems such as tiredness, backache, sexual problems, hemorrhoids, perineal pain and depression were reported by 94% of the women in the first six postnatal months (8). It is also evident that the experience of pain and fatigue can negatively affect QOL after birth (9).

Implication for health policy/practice/research/medical education:

The finding of the present study highlights the importance of quality of life (QOL) as a measure of well-being of women in the ante-and postnatal periods. In particular, considering that the psychological aspect of the QOL did not show any improvement in the transition to the postpartum and also psychological disorders were the most important factors affected QOL, there should be more emphasis on planning in the provision of counseling and other services in this area. Further research should be designed to investigate the effects of interventions to control weight gain in pregnancy and cesarean rate on QOL of mothers. Interventions to help breastfed mothers in the early postpartum are needed. Also, considering that breastfeeding was the predominant method of infant feeding among the participants in our study, it is recommended that in future studies the QOL of breastfeeding and non-breastfeeding mothers be compared.

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Also, during the early postpartum period, women have to deal with various problems relating feeding the baby (4). A Pakistani study found that difficulty in breastfeeding at birth was significantly associated with postpartum anxiety and depression (10). Results of another study demonstrated a relationship between maternal emotional well-being and physical health in the postnatal period (11).

However, despite the importance of this period of transition, there are only a limited number of studies on the QOL of women in pregnancy or postpartum considering the important events such as mode of delivery, breastfeeding difficulties and psychological disorders during these periods. Also, there are few studies examining the QOL of women in both pregnancy and postpartum to clarify how it changes during this period. Two studies have reported that compared to pre-pregnancy conditions, physical performance of women and their perception of their level of health and well-being decrease during pregnancy or postpartum (7, 8). The findings of another study, which examined the effects of pregnancy complications on women's QOL, reported that women with preterm birth or hypertensive disorders had significantly lower QOL scores on the physical domain during pregnancy than those without complications (10). Contrary to most studies which reported lower levels of physical and mental health during pregnancy and specially early postpartum, Mota N et al. reported that pregnant women had a lower likelihood of mental disorder than both non-pregnant and past year pregnant women (11).

Considering the WHO's emphasis on abandoning a merely "mechanistic model of medicine" (1) and its initiative in developing WHOQOL-100 and WHOQOL-BREF instruments (12), it is surprising to find only a small number of studies on the QOL during pregnancy or postpartum using these instruments that cover specific health areas.

2. Objectives

With regard to the cultural differences and expectations of women, the aims of this study is therefore to investigate the QOL of women in the third trimester of pregnancy and early postpartum and also the factors associated with QOL during this period using WHOQOL-BREF instrument.

3. Materials and Methods

This study was started in May 2011 in urban health centers in Shahroud city, which is located in Northeast of Iran. Ethics Committee of the Shahroud University of Medical Sciences (approval No. 900.02) approved the study protocol. We calculated the sample size at 343 using the following formula: $[n = 2(Z_{1-\alpha/2} + Z_{1-\beta})^2 \times \sigma^2 \div \delta^2]$. In the above formula, σ (standard deviation of QOL) was set at 14 based on the results of a previous study (13). Also, α (type one error), β (type two error), and δ (expected effect size) were set at 5%, 20%, and 3 respectively. We increased the sample size to cover for the possible loss of participants

in the follow up observations. Finally, 357 of the 390 women who attended Shahroud Health Centers to receive prenatal care and met the inclusion criteria accepted to participate in the study and gave informed consent of which 340 were followed up until 8 weeks postpartum. They were selected over 6 months using non-probability sampling method. The inclusion criteria was gestational age more than 28 weeks and absence of major psychological and medical problems (e.g. depression, disabilities, and drug intake) and the exclusion criteria were fetal death, infant abnormality, infant death during the first 8 weeks of postpartum, and acute stressful events during the course of study (e.g. loss of a family member or divorce). After explaining the aims of study and obtaining written informed consent from women, women were given instructions on how to fill out the questionnaires. The participants completed the WHOQOL-BREF and GHQ28 in the third trimester of pregnancy and at 8 weeks postpartum. They completed the breastfeeding experience scale at 4 weeks postpartum. Midwives of health centers were responsible of distributing and gathering questionnaires.

3.1. Instruments

3.1.1. Interview Form

An interview form containing personal information (i.e., age, years of education, occupation, family income, housing, preconception health) and obstetrical information (parity, wantedness of pregnancy, mode of delivery, BMI, weight gain in pregnancy, women hospitalization during pregnancy and postpartum, infant hospitalization, breastfeeding method, pregnancy complications) were completed during the third trimester of pregnancy and at the first visit postpartum. Information about BMI, and weight gain during pregnancy was collected by the midwives in the health centers and was routinely entered in women's files.

3.1.2. WHOQOL-BREF

World Health Organization developed the WHOQOL-BREF as a shortened version of the WHOQOL-100 instrument (12). It contains 24 questions in four domains: physical, psychological, social relationships and environment. There are also 2 more questions that are examined separately: question 1 asks about an individual's overall perception of her QOL and question 2 asks about an individual's overall perception of her health. The items are rated on a 5-point Likert scale. The raw domain scores can be transformed to a 0-100 scale. Each domain requires that a minimum number of questions be answered in order to generate a score. We followed the WHOQOL-BREF scoring guideline to score missing data in the questionnaire. Where an item was missed, we substituted the mean of other items in the domain. Also, where more than two items were missed from a domain, we did not calculate the domain score.