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Health-related quality of life five years after birth of the first child

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ABSTRACT

Objectives: The aim of this study was to describe the overall health-related quality of life (HRQoL) in women five years after the birth of their first child as well as the HRQoL in relation to mode of delivery.
Methods: 545 first-time pregnant women, drawn from a hospital situated in Sweden, consented to be included in a cohort. Five years after the birth of the first child, 372 (68%) women agreed to participate in a follow-up study. HRQoL was measured using the Swedish Health-Related Quality of Life Survey (SWED-QUAL) questionnaire. Socio-demographic background and variables related to pregnancy and childbirth were collected using a self-report questionnaire.
Results: Overall, the HRQoL was perceived to be good. Suboptimal scores were obtained for the three variables: Sleeping problems, Emotional well-being – negative affect and Family functioning – sexual functioning. Women having a vaginal birth, an instrumental vaginal birth or women who underwent caesarean section on maternal request were more likely to report better perceived HRQoL than women who had undergone an emergency caesarean section or caesarean section due to medical indication.
Conclusion: This study demonstrates that the overall HRQoL of the women in the cohort was reported as good. Mode of delivery was associated with differences in HRQoL five years after birth of the first child. Our result suggests that some differences in perceived HRQoL persist in the long term.

Introduction

Health Related Quality of Life (HRQoL) is a multidimensional concept that refers to aspects such as general health, physical functioning, physical symptoms, emotional functioning, role functioning, social support and well being, sexual functioning and also existential issues [1,2]. The concept of HRQoL has evolved to include those aspects of overall quality of life that may affect health, either physical or mental [3].

To give birth to the first child is a major event in life and involves many changes, both from a physical as well as a psychological perspective, which may affect women's quality of life. Postpartum mothers' experience of certain physical and psychological health issues may affect their life and future health. The health of a new mother might not only be important for her own well-being, but might also affect the newborn child and the family. The standard 6-week postnatal visit is the last routine assessment following childbirth, marking the end of the puerperium based on the assumption that the women then are physically recovered. Nevertheless, there are studies showing that some time after childbirth many physical and emotional health problems like extreme tiredness, headache, perineal pain, urinary incontinence and depressive symptoms, are rather common [4–8] and that some symptoms even appear to increase during the first year of parenthood [5–7]. It has also been suggested that there is a relationship between the woman's mode of delivery and perceived health. Women who had a caesarean section or an assisted vaginal birth have been found to report lower postpartum general health status during the first year after birth as compared to women with unassisted vaginal birth [4,6,8,9]. Moreover, postnatal physical health or social health issues have been found to be risk factors for poorer mental health and postnatal anxiety [10,11].

Although there are some studies of the effects of recent motherhood on general health status [12–15] it remains unclear how women perceive their health and HRQoL in a longer perspective. The aim of this study was to describe the overall HRQoL as well as the HRQoL in relation to mode of delivery, in women five years after the birth of their first child.

Methods

This study is a five-year follow-up of a prospective matched cohort study.

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Ethical approval

Ethical approval was obtained by the Research Ethics Committee of Karolinska Institute, Stockholm, Sweden, Dnr 2007/1614-31. Written consent was obtained from all participants. The participants were informed that they could withdraw from the study at any time.

Setting

The hospital, where this study was conducted, is situated in the northern part of Stockholm, Sweden, and has two labour wards with approximately 10,000 deliveries per year. The caesarean section rate in the two labour wards including both primiparous and multiparous was 23% and 16% respectively in 2012. Elective caesarean section accounted for approximately 10% of all deliveries. The percentage of instrumental vaginal deliveries in the two labour wards was 6% and 8% respectively. The area, where the study was conducted, is a well-situated area of the Stockholm County.

Participants

The women in this study gave birth to their first child between January 2003 and June 2005. The criteria for inclusion at baseline were being a healthy, Swedish-speaking, first-time mothers with a normal pregnancy in gestational week between 37 and 39 weeks. In order to find participants for the case-group, with a planned caesarean section, one of the researchers identified patients scheduled for elective caesarean section at the hospital. One of the researchers telephoned the women scheduled for elective caesarean section, provided them with information about the study and asked if they were willing to participate. For every woman scheduled for a caesarean section one to two controls living in the same geographical area as the case-group and planning a vaginal birth were consecutively telephoned and asked to participate. In total, 545 healthy first-time mothers with normal pregnancies were recruited. Data from this cohort have previously been reported in several articles and details of the recruitment process and study procedures have been described elsewhere [16].

Five years after the birth of the first child, all women from the cohort were invited to participate in a follow up study; 372 (68% of the initial cohort) accepted to continue to participate in the follow-up. Two hundred and forty-nine or 67% of those who had agreed to the follow-up completed two questionnaires. The participants had five different modes of delivery: vaginal birth (n = 86), instrumental vaginal birth (n = 25), emergency caesarean section (n = 25), caesarean section on maternal request (n = 38) and caesarean section due to medical indication (n = 75). Women who underwent an elective caesarean section due to breech presentation were referred to as caesarean section on medical indication. Caesarean section on maternal request is referred to an elective birth on maternal request in the absence of any medical or obstetric indications.

Questionnaires

Five years after the participants gave birth to their first child a letter with information about the follow-up study and an enquiry to participate was distributed to the cohort. If they agreed to continue to participate in the study they were asked to return a written consent. Two separate forms designed for self-administration concerning estimated health and HRQoL were then sent out. The participants were asked to complete the forms, marked with an identification number, and to return them in a closed envelope. If questionnaires were not returned within three weeks, a reminder was sent out.

Swedish Health-Related Quality of Life questionnaire

The HRQoL in this study was measured with *the Swedish Health-Related Quality of Life questionnaire (SWED-QUAL)*, an inventory developed by Brorsson and colleagues [17], based on the Medical Outcomes Study (MOS) [18,19]. The inventory consists of 61 items summarized into seven scales, which measures the following aspects of HRQoL: Physical function, Pain, Role functioning, Emotional well-being, Sleep, General health perceptions, and Family functioning (Table 1). All items were administrated using a "during the last week" or "now" time frame. The items are designed as both questions and statements with both positive and negative response alternatives. Items within a health domain are summed and linearly transformed into scores 0–100% of the maximum score, where a high score indicates better HRQoL/more favourable HRQoL state. The questionnaire is translated and tested for use in Swedish populations. In a general population sample the reliability, which was calculated by using Cronbach's α, coefficients, ranged from 0.79 to 0.89. Preliminary support for the construct validity has also been reported [17]. A cut off was set at 70% and women who scored below 70% of the maximum score were considered to have suboptimal quality of life. The main reason why we chose a cut off level at 70% was based on clinical judgement and the fact that we studied a healthy sample. A variety of different instruments for measurement of health have been developed, for example SF36 [20] and EQ-5D [21,22] Based on our knowledge, there is no specific instrument measuring the health and quality of life among childbearing women. In our case the SWED-QUAL was preferred, as it is rather brief with wider approaches to the concept of health considered to be appropriate for women of childbearing age. Unlike the more well-known HRQoL instrument SF-36 it includes issues of quality of life such as sleep, family, partner functioning and sexual functioning, which were considered to be aspects of interest for this study.

Table 1
Quality of life items in SWED-QUAL.

Scale	Description
Physical functioning (7)	Perform activities (work, sports, stairs, dressing)
Mobility (1)	Need for assistance
Satisfaction with physical ability (1)	Satisfaction with ability to do what one wanted
Pain (6)	Pain frequency, intensity and interference with daily activities, sleep and mood
Role limitations due to	
Physical health (3)	Extent to which physical problems interfere with activities of daily living
Emotional health (3)	Extent to which physical health problems interfere with activities of daily living
Emotional well-being	
Positive affect (6)	A happy person, harmonic, feel liked, optimistic
Negative affect (6)	Felt nervous, tense, down, sad, impatient, annoyed
Sleep problems (6)	Sleep initiation, maintenance, somnolence
General health perception	
Current health (2)	Overall rating of health
Prior health (2)	Been sick for a long time
Resistance to illness (3)	Ones body resists illness quite well
Health concern (1)	Concerns about own health
Family functioning	
Satisfaction with family (4)	Satisfaction with cohesiveness, talking things over, understanding
Marital functioning (6)	Expressing wishes, sharing feelings, being supportive
Sexual functioning (4)	Lack of interest, inability to enjoy sex

Number in parenthesis indicates the number of items for that scale.