QUALITY OF LIFE IN THE PUERPERIUM: ASSESSMENT IN THE IMMEDIATE, LATE AND REMOTE POSTPARTUM PERIODS

ABSTRACT
Objective: to assess the QoL of primiparous postpartum women in the three stages of the postpartum period.

Methods: This cross-sectional, exploratory study was conducted in Sao Jose do Rio Preto, SP, Brazil. Data were collected in the three stages of the postpartum period through the use of a socio-economic questionnaire and the Brazilian version of the SF-36 survey. Data analyses used descriptive statistics and nonparametric Kruskal-Wallis and Tukey tests, with significance level set at 5%. The study project was approved by a Research Ethics Committee, protocol number 3921/2011. Results: the lowest QoL scores were measured during the immediate postpartum period for the physical domain, especially for the scales Physical Functioning, Physical Role and Bodily Pain. There were differences in the quality of life scores measured for the mental domain, especially for the scales Vitality and Social Functioning, when comparing the immediate and remote postpartum periods. The highest quality of life scores were measured in the remote postpartum period. Conclusion: The feelings and needs that interfere with the quality of life of puerperal women support the implementation of intervention strategies and further research in this context.

Descriptors: Postpartum period; Quality of Life; Obstetrics.

RESUMO
Objetivo: avaliar a Qualidade de Vida (QV) de puérperas primíparas durante as três fases do puerpério.

Método: estudo transversal exploratório realizado em São José do Rio Preto - SP. Entrevistaram-se puérperas utilizando dois questionários: um sócio econômico e o SF-36, versão brasileira, nos três períodos puerperais. Realizaram-se técnicas de estatística descritiva e testes não paramétricos de Kruskal-Wallis e Tukey, ao nível de significância de 5%. Antecedeu a tudo isso a aprovação do projeto de pesquisa pelo Comitê de Ética em Pesquisa, Protocolo nº 3921/2011. Resultados: houve pior avaliação de QV no componente físico, nos domínios "capacidade funcional", "aspectos físicos" e "dor", principalmente no pós-parto imediato. No componente mental, encontraram-se diferenças na QV para os domínios "vitalidade" e "aspectos sociais" em relação ao período imediato e remoto, observando-se melhor QV no período remoto. Conclusão: identificaram-se sentimentos e necessidades que interferem na QV das puérperas, subsidiando propostas de intervenção da equipe de saúde e outras pesquisas neste contexto.

Descritores: Puerperio; Qualidade de Vida; Obstetrícia.

OBJETIVO
Objetivo: evaluar la calidad de vida de mujeres puérperas primíparas durante el puerperio inmediato, tardío y remoto.

Métodos: estudio transversal exploratorio realizado en Sao José do Rio Preto, SP, Brasil. Para la recolección de datos se utilizaron dos cuestionarios en las tres fases del puerperio: un cuestionario socioeconómico y el cuestionario SF-36. Como métodos de análisis se utilizaron: estadística descriptiva y los tests no paramétricos de Kruskal-Wallis y de Tukey, con un nivel de significación del 5%. El proyecto del estudio fue aprobado por el Comité Local de Investigación, Protocolo nº 3921/2011. Resultados: Las mujeres presentaron peor calidad de vida en el puerperio inmediato, en el componente físico, especialmente en los domínios capacidad funcional, aspectos físicos y dolor; En el componente mental, se encontraron diferencias en la calidad de vida entre el puerperio tardío y remoto, especialmente en los dominios vitalidad y funcionamiento social. Se observó una mejora en la calidad de vida en el puerperio remoto. Conclusión: Los sentimientos y necesidades que interfieren en la calidad de vida de las mujeres puérperas respaldan la implementación de propuestas de intervención y la realización de otros estudios en esta línea.

Descritores: Periodo Posparto; Calidad de Vida; Obstetricia.
INTRODUCTION

Childbirth is a process that encompasses pregnancy, delivery and postpartum. It is a complex experience and the biological, psychological, emotional, relational and socio-cultural changes that occur during this period can affect women’s quality of life (QoL).1,2 The postpartum period starts immediately after the expulsion of most of the content of the pregnant uterus. It lasts for six weeks or more and is divided into immediate postpartum period (0 to 10 days after delivery), late postpartum period (11 to 45 days after delivery) and remote postpartum period (46 to 60 days after delivery).3

Postpartum women experience physiological, psychological and socio-familial changes. The postpartum is a period of vulnerabilities that may affect various aspects of women’s QoL.4,5

The concept of QoL is broad and involves multidimensional aspects of health, independence, social relations and environmental characteristics. Quality of life is defined QOL is defined as ‘an individual’s perception of one’s position in life in relation to goals, expectations, standards and concerns in the context of the culture and value systems in which one lives.’6

Health professionals have much to contribute to the care of postpartum women because they can put their knowledge at the service of the welfare of mothers and their babies, recognizing those critical moments during which their interventions can improve mother and infant health outcomes and quality of life (QoL).7

Due to its specificities, the care delivered by nurses, especially obstetric nurses, can be applied across the different stages of pregnancy and childbirth. Thus, nurses are in an ideal position to plan and provide care in a systematic way, according to women’s individual and real needs. This knowledge is essential when pursuing the improvement of puerperal women’s quality of life.8

Given the above, the aim of this study was to assess the Quality of Life (QoL) of primiparous postpartum women in the three stages of the postpartum period.

METHODS

This is an analytical, descriptive, cross-sectional, quantitative study. Study participants were primiparous mothers aged 18 years or older who lived in Sao Jose do Rio Preto, SP, Brazil, and whose full-term newborns had shown good vitality at birth and at hospital discharge. All subjects attended a preparatory course for pregnant women offered free of charge by a private health care institution to all persons living in Sao Jose do Rio Preto (regardless of having a private health insurance). The course takes place in a series of eight weekly meetings during which multiple topics related to nutrition, mode of delivery, breastfeeding, emotional aspects and mother-infant care.

The study project was approved by the Research Ethics Committee of the Medical School of Sao José do Rio Preto - FAMERP-Opinion No. 134.133 prior to data collection. This study is part of a research programme named “Studies on the humanization of childbirth preparation and assistance, and newborn infants’ and breastfeeding mothers’ care - with an emphasis on the performance of obstetric nurses.” Opinion No. 323/2011 and Protocol No. 3921/2011.

Data collection took place from March to August 2013. The study was carried out in four stages. Women were recruited while they were still pregnant and attended the preparation course for pregnant women. They were informed about the study objectives and invited to participate. All participants signed an informed consent form. After giving birth, all the women who met the inclusion criteria and agreed to participate were assessed at home through interviews during three different times: the immediate postpartum period (0-10 days after delivery), the late postpartum period (11-45 days after delivery), and the remote postpartum period (46-60 days after delivery).

40 pregnant women were invited to participate in the study, but only 20 women met the inclusion criteria. Of these, only 15 agreed to participate in the assessment of all three stages. This constituted the final study sample.

Women were interviewed using a socio-economic questionnaire and their QoL in the different stages of the postpartum period was assessed using the Brazilian version of the short form 36 health survey questionnaire (SF-36).9 The SF-36 consists of 36 items, grouped into eight scales and subdivided into two components: the physical component, which includes the scales of physical functioning (PF), physical and emotional roles (RP and RE), bodily pain (BP) and general health (GH); and the mental component, which includes the scales of mental health (MH), vitality (VT) and social functioning (SF).

Quality of life is scored from 0 to 100, with scores above 50 representing good quality of...
life and scores below 50 indicating poor quality of life.

The physical functioning scale assesses both the presence and extent of physical limitations. The vitality scale assesses energy levels and fatigue, i.e., the willingness to look for and face new tasks. The scales physical and emotional roles assess how limitations affect a person's daily life, hindering the performance of usual daily activities.

Pain is assessed according to its intensity and how much it interferes with daily life activities. The social functioning scale assesses the level of interference with normal social activities. Finally, the mental health scale assesses signs and symptoms of anxiety, depression, mood or behavioral changes, emotional imbalance, and impairment of physical and psychological well-being.

All three postpartum periods were compared with each other and their peculiarities were taken into account in order to identify possible changes in the QoL of participants. Descriptive statistics were used to characterize study participants. Nonparametric Kruskal-Wallis and Tukey tests were used to assess changes in the quality of life of participants during the three postpartum periods (immediate, late and remote). The significance level was set at 5%.

RESULTS

The results showed that all postpartum women (100%) were married, gave birth by cesarean delivery, were employees and had no addictions.

The mean age of patients was 30.7 years (SD: 5.5 years, median = 30 years; range = 19-40 years). The age variation coefficient was 17.8%, characterizing a distribution with low dispersion.

Data relating to the characterization of the study participants are shown in Table 1.

As regards the QoL assessment, five of the eight scales measured showed statistically significant differences in the QoL scores of women in the postpartum periods evaluated (immediate, late and remote) (Table 2).
Table 2. Description of the Quality of Life scales measured according to each postpartum period, São José do Rio Preto, SP, 2013.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Postpartum period</th>
<th>n</th>
<th>Mean ± SD</th>
<th>Md</th>
<th>Min</th>
<th>Max</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Functioning</td>
<td>Immediate</td>
<td>15</td>
<td>40.0±26.9</td>
<td>35.0</td>
<td>5.0</td>
<td>90.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>85.3±13.4</td>
<td>85.0</td>
<td>60.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Physical role</td>
<td>Immediate</td>
<td>15</td>
<td>13.3±35.2</td>
<td>0.0</td>
<td>0.0</td>
<td>100</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>66.7±44.0</td>
<td>100</td>
<td>0.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Bodily pain</td>
<td>Immediate</td>
<td>15</td>
<td>34.6±13.9</td>
<td>41.0</td>
<td>10.0</td>
<td>52.0</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>68.2±36.8</td>
<td>74.0</td>
<td>0.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote</td>
<td>15</td>
<td>82.0±25.3</td>
<td>100</td>
<td>22.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>General health</td>
<td>Immediate</td>
<td>15</td>
<td>84.0±14.5</td>
<td>87.0</td>
<td>100</td>
<td>100</td>
<td>0.342</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>82.6±17.2</td>
<td>87.0</td>
<td>35.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote</td>
<td>15</td>
<td>89.1±11.8</td>
<td>92.0</td>
<td>67.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Vitality</td>
<td>Immediate</td>
<td>15</td>
<td>47.0±17.7</td>
<td>45.0</td>
<td>10.0</td>
<td>80.0</td>
<td>0.023</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>51.3±24.1</td>
<td>55.0</td>
<td>15.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Social functioning</td>
<td>Immediate</td>
<td>15</td>
<td>49.8±27.8</td>
<td>50.0</td>
<td>10.0</td>
<td>100</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>67.0±19.2</td>
<td>80.0</td>
<td>20.0</td>
<td>85.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote</td>
<td>15</td>
<td>62.2±24.8</td>
<td>100</td>
<td>0.0</td>
<td>100</td>
<td>0.929</td>
</tr>
<tr>
<td>Emotional role</td>
<td>Immediate</td>
<td>15</td>
<td>64.3±44.5</td>
<td>100</td>
<td>0.0</td>
<td>100</td>
<td>0.353</td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>55.6±44.8</td>
<td>34.0</td>
<td>0.0</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Mental health</td>
<td>Immediate</td>
<td>15</td>
<td>71.2±16.3</td>
<td>72.0</td>
<td>40.0</td>
<td>92.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Late</td>
<td>15</td>
<td>72.8±13.2</td>
<td>72.0</td>
<td>44.0</td>
<td>92.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Remote</td>
<td>15</td>
<td>78.2±11.4</td>
<td>84.0</td>
<td>52.0</td>
<td>92.0</td>
<td></td>
</tr>
</tbody>
</table>

The lowest quality of life scores were measured in the immediate postpartum period (when compared with the late and remote postpartum periods), for the scales physical functioning (p<0.001), physical role (p<0.001) and bodily pain (p<0.001). This shows that patients experienced greater difficulties in the immediate postpartum period and that their quality of life improved gradually after 10 days of delivery up to the remote postpartum period.

We also found differences in the quality of life scores measured for the scales vitality (P = 0.023) and social functioning (P = 0.006), when comparing the immediate and remote postpartum periods. The highest quality of life scores were measured in the remote postpartum period. This result shows that patients had lower vitality and poorer social functioning in the period immediately after delivery, when compared with the remote postpartum period.

The quality of life scores measured for all scales showed a rising trend with time, i.e., there was a tendency that the quality of life of mothers increased over the postpartum period (Figure 1).
Figure 1. Trend of quality of life scores of postpartum women in the three postpartum periods assessed and according to the scales measured, São José do Rio Preto, 2013.

**DISCUSSION**

In this study, there was a prevalence of cesarean deliveries among participants. This corroborates the growing rates found in the public health systems of the city of São José do Rio Preto in recent years: from 56.6% in 2008 to 72.0% in 2012.\(^{10}\)

Although the World Health Organization (WHO) recommends a cesarean section rate of no more than 10 to 15 percent of all deliveries\(^ {12}\), the predominance of cesarean sections is not exclusive to the city of São José do Rio Preto, but rather a national trend. Brazil has a high rate of cesarean sections. In 2012, 40.0% of all deliveries in this country were C-sections.\(^ {10}\)

Faced with this problem, the Ministry of Health has been investing in strategies to prioritize normal delivery, by creating indicators and goals associated with this procedure, namely: Contrato Organizativo da Ação Pública da Saúde (COAP, Organisational Contract of the Public Health Action), established by Resolution No. 5 of June 19th, 2013,\(^ {12}\) in the Development Index of the Unified Health System (IDSUS)\(^ {12}\) launched in March 2012, which evaluates the performance of the Unified Health System by assigning a score (grade) to each municipality, State and to the country as a whole; and the creation of the Stork network, which aims to implement a care network to ensure women’s right to reproductive planning and humanized and safe care during pregnancy, delivery and postpartum, in addition to ensuring the right to birth, growth and healthy development.\(^ {13}\)

It is consolidated in the literature that women have higher well-being levels and quality of life during the prenatal period, when compared with the postpartum period.\(^ {14}\)

Studies assessing the QoL of women in the three postpartum periods (immediate, late and remote), however, are scarce, although this is an important discussion topic.\(^ {15,16}\)

In this study, the lowest QoL scores were measured for the physical domain, especially for the scales Physical Functioning, Physical Role and Bodily Pain. In addition, the lowest scores were measured during the immediate postpartum period, with a progressive improvement with increasing time of puerperium, as disclosed in other studies.\(^ {17}\)

The literature has shown that physical functioning and physical role are the most affected scales among postpartum women. In a study conducted in 2013, all participants reported having failed to carry out some kind of activity during this period. Physical activity was the most cited activity, followed by activities related to work.\(^ {18}\)

This result may also be due to the invasive and painful surgical procedure to which these women had been subjected, as they had had cesarean section. Other studies that assessed the QoL of postpartum women have found...
that the mode of delivery, number of deliveries and number of prenatal consultations seem to influence the perception of QoL in the postpartum period.\textsuperscript{16,17} Regarding the mode of delivery, the aforementioned study showed that women who had had vaginal deliveries (30.3\%) had higher QoL scores measured for the scale physical role than those women who had had C-sections.\textsuperscript{16,17} In contrast to these results, studies have revealed that there is no relationship between the mode of delivery and changes in the QoL of postpartum women, although it was expected that a cesarean section, due to its longer recovery time, would interfere with women’s QoL results.\textsuperscript{19,20}

Bodily pain, though often ignored, is also seen as a factor that interferes with the QoL of postpartum women. Pain may represent an obstacle to an appropriate breastfeeding positioning, to self-care and the provision of newborn care, and to the performance of daily activities, such as sitting and standing up, walking, performing personal hygiene tasks, among others.\textsuperscript{21} This may thereby have also affected the aspects measured by the scales physical functioning and physical role.

It is worth to point out that pain is a condition that is difficult to measure, because it is a subjective symptom that varies from person to person. Parity is considered a confounding variable for pain assessment. The literature indicates that the pain experienced by primiparas is considerably different from the pain experienced by multiparas.\textsuperscript{22}

The progressive improvement of QoL with increasing time of puerperium has also been evidenced in another study that analyzed women’s perception of the postpartum period. The authors have found that up to one month after delivery most women characterized the postpartum period as “troubled”. After two or three months of delivery, this period was characterized by women as “smooth”. Thus, it can be said that the first month after delivery usually tends to be more complicated for women.\textsuperscript{18}

The aforementioned study has also found that the difficulties experienced during the first days of postpartum life are mainly reported by primiparas, as is the case of the participants of this study. This implies that, among other things, the postpartum period is a period full of new experiences, new feelings, new life routines, new attitudes from people who surround them - as their family and friends also want to participate in this period.\textsuperscript{18}

In this study, when comparing the immediate and remote postpartum periods, we found differences in the quality of life scores measured for the mental domain, especially for the scales vitality and social functioning. The highest QoL scores were measured in the remote postpartum period.

This result differs from those previously published by other authors, in which postpartum women reported feeling “okay” about having to give up some activities such as going to the mall or to a hair salon due to maternal care responsibilities, because they see it as just a momentary abdication.\textsuperscript{16}

Vitality is assessed in the SF-36 questionnaire with questions about feeling full of pep, having energy, feeling tired and feeling worn out. According to another study\textsuperscript{18}, although only reported by a minority of postpartum women, household chores and social life and personal care activities have also been cited as aspects affected childbirth. Participants reported encountering difficulties in coordinating motherhood with everyday life activities due to the fact that the baby requires close attention and mothers have a hard time in being apart from the baby.\textsuperscript{18}

The feeling of helplessness is also be very common in postpartum women, because they usually dedicate themselves completely to the care of the baby and eager for recognition.\textsuperscript{23}

A study by Lara (2010) \textsuperscript{14} found that the impact of physical and physiological changes caused by pregnancy can result in fatigue and compromise self-care, leading to psychological damages that affect women’s QoL.\textsuperscript{13}

The results of the assessment of women’s QoL found in this study are in line with the literature in relation to the fact that the first difficulties experienced by mothers are associated with physical aspects and physiological changes resulting from pregnancy. These aspects and changes tend to improve with time, but sometimes also lead to psychological problems that remain unaltered by a longer period of time, showing a gradual improvement.

Due to these factors, the Ministry of Health recommends that newborns and their mothers visit the basic health unit again five to ten days after delivery. The purpose of this visit is to assess the health status of mothers and newborns, provide education on breastfeeding and basic baby care, and assess mother-infant interaction. This care aims at preventing maternal and neonatal morbidity and mortality, since many of the complications occur in the first week after delivery. Note that the care provided to postpartum women should not focus solely on
their reproductive and hormonal system. Special attention should also be paid to psychological aspects. In addition, the education and guidance provided during prenatal care and during specific courses for pregnant women are important because they can help new mothers understand which functions cease to be exercised and which will be activated after delivery. This will help avoid the appearance of conflicting situations and thus contribute to an improved quality of life in the postpartum period.24

**CONCLUSION**

The results showed that women’s quality of life was mainly affected by changes in the physical domain, especially in the immediate postpartum period. They also evidence the relevance of this study to the clinical practice of nurses and other health professionals, as the postpartum period is the most neglected area in the birth process. Further and more comprehensive research on common postpartum occurrences, such as women’s beliefs, values, feelings and needs, and how they interfere with quality of life is warranted in Brazil. Finally, this study contributes to different analytical approaches for the implementation of intervention proposals for improving women's and infant's care, and makes suggestions for further research in this context.

**REFERENCES**

Dr. Soler, Ponce MAZ, Soler ZASG et al.

Quality of life in the puerperium: assessment…


