

Relationship of Parity and Health Related Quality of Life among women

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ABSTRACT: *Background: Women have unique health issues and these are paid increased concern in recent time. Pregnancy is an important event for reproductive-age women, where in nine months body undergoes many physiological changes. Even though these changes are normal, women experience a substantial decline in health status during and after pregnancy. Quality of life (QOL) is used to define overall wellbeing of person and it includes physical, psychological, social, economic and political perspectives. In recent times medical decision making research have focused increasingly on health related quality of life (HRQOL) as an important variable as this can benefit patients, clinicians, researchers and health maintenance organizations.*

Aim –The study was done to determine the impact of parity status among women on their health related quality of life.

Method – Total 60 female subjects meeting the inclusion criteria constituted population of the study. The health related quality of life was assessed using SF-36v2 questionnaire.

Results –The analysis of coefficient of correlation for SF-36v2 components indicated significant negative correlation between parity status and seven components of SF-36v2: PF ($r = -0.49$), RP ($r = -0.39$), BP ($r = -0.51$), GH ($r = -0.42$), VT ($r = -0.43$), RE ($r = -0.29$) and MH ($r = -0.41$) at $p \leq 0.05$. Whereas, a non-significant correlation was observed between parity and one of the component SF (Social Function) of the questionnaire, SF ($r = -0.14$) at $p \leq 0.05$. Scoring of SF-36v2 questionnaire also provided total component scores i.e. PCS (Physical Component Score) and MCS (Mental Component Score). Coefficient of correlation analysis for PCS ($r = -0.50$) and MCS ($r = -0.30$) showed significant negative correlation with parity status at $p \leq 0.05$.

Conclusion – Females with higher parity status tend to have poorer health related quality of life.

Key Words – Parity, Nulliparous, Primiparous, Multiparous, Health Related Quality Of Life

INTRODUCTION

Each milestone in women's life starting from adolescence, pregnancy and menopause affects their health and wellbeing. Pregnancy is an important event for reproductive-age women, where in nine months body undergoes many physiological changes which are entirely normal. Even though these changes are normal, women experiences substantial decline in health status during and after pregnancy (Haas *et al.*, 2004).

Parity is a technical term used in obstetrics and midwifery practice that refers to number of times female have given birth to a fetus with gestational age of 24 weeks or more, regardless of whether the child was born alive or still born. According to parity status; women can be classified as nulliparous - who has not given birth previously, primiparous - who has given birth once and multiparous - who has given birth more than once (Borton, 2009).

Physical and mental health of women is affected by physiological and psychological demands of repeated childbearing, delivery, breastfeeding and childrearing. Limitation of physical activity due to problems like low back pain and pelvic pain (Noren *et al.*, 2002), urinary incontinence (Rortveit *et al.*, 2001), cardiovascular problems (Humphries *et al.*, 2001), obesity (Linne' *et al.*, 2004), postpartum stress and general tiredness (Schytt *et al.*, 2005) is common in parous women. All these factors ultimately lead to poor quality of life among women.

Quality of life (QOL) is used to define overall wellbeing of person and it includes physical, psychological, social, economic and political perspectives (Revecki *et al.*, 2000). In recent times medical decision making research have focused increasingly on health related quality of life (HRQOL) as an important variable as this can benefit patients, clinicians, researchers and health maintenance organisations (Crosby *et al.*, 2003). Testa and Simonson, (1996) defines HRQOL as the 'physical, psychological and social domains of health, seen as distinct areas that are influenced by person's experiences, beliefs, expectations and perceptions'.

The study conducted by MacLennan *et al.* (2000) states that pelvic floor disorders like urinary and anal incontinence are strongly associated with first pregnancy, ageing and parity which leads to poor HRQOL in women. Women reported physical health problems (like perineal pain, urinary incontinence, back pain, more cough and cold and sexual problems) and emotional

problems (like tiredness and depressive symptoms) six to seven months postpartum in self reported health survey in Australia (Brown and Lumley, 2000).

In the nutshell HRQOL in women's life especially after pregnancy, is an important component of women's health and cannot be ignored. Though in this modern age, educated women are more aware of the importance of health and fitness, their own health is ignored as transition of their family role after childbirth make them more concerned about needs of their children. Viewing the importance of health among women, present study attempts to explore the effect of parity on health related quality of life.

MATERIALS AND METHOD

The present study was carried out at Department of Physiotherapy, Punjabi University, Patiala. The study was carried out for period of five months. A written consent was taken from every participant after receiving their genuine interest, 60 volunteers willing to participate in study between the age group of 20 – 35 years who satisfied the inclusion criteria, constituted population of the study. Any history of cardiovascular, musculoskeletal, neurological and respiratory disorder before pregnancy and any present medical or surgical condition which will prevent safe participation in the study were excluded.

SF-36v2 questionnaire was used to assess health related quality of life. The permission to use SF-36v2 was taken from Quality Metric Incorporated (License No. QM020769) and it was effective from 1st September 2013 to 1st September 2014. It's a self administered questionnaire. The SF-36v2 (4-week recall) was developed to be brief, broad generic measure of eight domains or aspects of health status that are considered important in describing and monitoring individual's suffering from disease or illness in past 4 weeks. It includes eight domains to measure health status – physical functioning (PF), role participation with physical health problems (role physical - RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role participation with mental health problems (role emotion - RE) and mental health (MH). It also included component summary measures that aggregate the health domain scale: physical component score (PCS) and mental component score (MCS) (Ware *et al.*, 2008).

RESULTS

Table 1 – shows correlation between health related quality of life (SF-36v2 components) and parity status. Analysis of coefficient of correlation suggests significant negative correlation between parity status and seven components of SF-36 (PF, RP, BP, GH, VT, RE and MH).

Table 1: Correlation of Parity Status with Health Related Quality Of Life (SF-36v2 Components)

| Variables (SF-36v2 Components) | r value | P value |
|--------------------------------|---------|---------|
| PF (Physical Function) | -.49* | <0.0001 |
| RP(Role Function) | -0.39* | 0.002 |
| BP(Body Pain) | -0.51* | <0.0001 |
| GH(General Health) | -0.42* | 0.0007 |
| VT(Vitality) | -0.43* | 0.0005 |
| SF(Social Function) | -0.14 | 0.258 |
| RE(Role Emotion) | -0.29* | 0.02 |
| MH(Mental Health) | -0.41* | 0.0009 |

* $p \leq 0.05$

Table 2 – Correlation of Parity Status with PCS (Physical Component Score) and MCS (Mental Component Score)

| Variables (SF-36v2 - total component score) | r value | P value |
|---|---------|---------|
| PCS (Physical Component Score) | -0.50* | <0.0001 |
| MCS (Mental Component Score) | -0.30* | 0.01 |

* $p \leq 0.05$

Table 2 – Analysis of coefficient of correlation showed a significant negative correlation between physical component score (PCS) and mental component scores (MCS) of health related quality of life with parity status. This suggests that increment in parity among women decreases both physiological and psychological domains among women.

DISCUSSION

The present study was done to study the impact of parity status on health related quality of life among the women. The analysis of coefficient of correlation for SF-36v2 components indicated significant negative correlation between parity status and seven components of SF-36v2: PF (r = -0.49), RP (r = -0.39), BP (r = -0.51), GH (r = -0.42), VT (r = -0.43), RE (r = -0.29) and MH (r = -0.41) at $p \leq 0.05$. Whereas, a non-significant correlation was observed between parity and one of the component SF (Social Function) of the questionnaire, SF (r = -

0.14) at $p \leq 0.05$. Scoring of SF-36v2 questionnaire also provided total component scores i.e. PCS (Physical Component Score) and MCS (Mental Component Score). Coefficient of correlation analysis for PCS ($r = -0.50$) and MCS ($r = -0.30$) showed significant negative correlation with parity status at $p \leq 0.05$.

The observed compromise in the health related quality of life among the parous women could be attributed to various problems associated with pregnancy. Problems like urinary incontinence and low back pain are common after childbirth. The study conducted by MacLennan *et al.* (2000) states that pelvic floor disorders like urinary and anal incontinence are strongly associated with first pregnancy, ageing and parity which leads to poor health related quality of life in women. Smith *et al.* (2006) found women with disorders of continence and respiration have significantly higher prevalence of back pain than women who do not have these disorders. This relationship may be explained by physiological limitations of coordination of postural, respiratory and continence functions of trunk muscles. In another study Smith *et al.*, (2007) reported that prevalence of back pain differs between non-pregnant parous and nulliparous women. They found that even younger parous women, who were not pregnant reported higher levels of back pain than women who had never previously given birth (nulliparous). Another study, conducted by Noren *et al.* (2002) reported that lumbar back pain and pelvic pain disable some women 3 years after the delivery and reason behind the persistence of this pain is muscular insufficiency in large pelvis and dorsal muscles. Physical health problems like backache and urinary incontinence are reported both by primiparous and multiparous women after delivery and these problems are likely to resolve by 6 months following delivery in primiparous women but not in multiparous women (Thompson *et al.*, 2002).

In addition to the above problems physical symptoms associated with childcare such as tiredness, sleep problem also affects both primiparous and multiparous women (Schytt *et al.*, 2005). These factors not only affects the physical function of a women but also may depreciate mental health of a women The results of the current study also indicated a decline in emotional wellbeing of women with parity ($r = -0.41$, $p \leq 0.05$).

A study by Brown and Lumley (2000), suggested that physical problems like tiredness, urinary incontinence and back pain increases depression in women during postpartum period which may affect emotional wellbeing of a women. Depressive symptoms decreases self-rated

health in both primiparous and multiparous women. In primiparous struggle towards maternal identity and demands of motherhood for first time leads to increase stress during postpartum while stress in multiparous women is due to lack of support by partner and other close persons (Schytt and Waldenström, 2007). Similar findings are also reported by Hung (2007), they suggested that primiparous and multiparous women experience unique postpartum stressors, primiparous postpartum stress concerns mainly about maternal role attainment and negative body changes whereas multiparous women concerns are mainly about less support from families and society. All the above factors must have added to decline in the physical and mental function leading to reduced quality of life among the women with higher parity status in the current study

CONCLUSION

Parity has a negative impact health related quality of life of women. Females with higher parity status tend to have lower Health related quality of life. Both physical and mental function declined with rise in parity status; however increment in parity status does not affect social function of the women.

Present study recommends that physical activity and exercise must be an important component during and after pregnancy. Physiotherapists and medical practitioners should formulate and incorporate suitable pre and post-natal exercises regimes for better quality of life among parous women.

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