Quality of Life among Postnatal Mothers attending Immunization Clinic of a Tertiary Level Hospital

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ABSTRACT

Background: Postnatal period is a transition period marked by physical, emotional and relationship changes. Yet, the most neglected period than before and during childbirth as stated by World Health organization (WHO). Quality of Life (QOL) is an individual's perception of their position in life in relation to their goals and expectations that indicates unmet needs and intervention outcomes. Demands made by childbirth on mother's wellbeing can lead to poor QOL in postnatal period. Thus, the objective of the study was to identify QOL among postnatal mothers.

Method: Descriptive cross-sectional research design was used to find QOL. 217 postnatal mothers were selected using convenience sampling technique. Data was collected using structured interview schedule containing WHOQOL-BREF questionnaires. Data analysis was done using descriptive statistics i.e. frequency, percentage, mean and standard deviation to summarize data and inferential statistics i.e. independent t-test and one way ANOVA to compare domain scores with selected variables.

Result: The highest mean score was on social relationship domain (70.06 ± 14.62) denoting highest QOL in this domain, followed by psychological (68.36 ± 17.90), Physical (67.08 ± 24.79) and environment domain (64.38 ± 16.59) respectively. Significant difference was found between domain scores and age, education, pregnancy type, ANC visit, delivery type, perineal trauma $(p<0.05)$.

Conclusion: QOL of postnatal mother tend to get affected by socio-demographic and obstetric factors. Improving quality and continuity of care from antenatal to postnatal period will help to improve QOL among postpartum mothers.

Keywords: Determinants of quality of life, Postnatal mother, Postnatal period, Quality of life.

INTRODUCTION

Postnatal period is the period beginning immediately after birth of baby and extending up to six weeks after birth. It is a transition period marked by physical, emotional and relationships changes to adapt to new identity as a mother.[1] It is the most vulnerable period in woman's life. About 2/3rd (68%) of maternal deaths occurred in postpartum period compared to antepartum period (28%) and intrapartum period (4%).[2] For every woman who dies each day from pregnancy and childbirth, approximately 20 others suffer serious injuries, infections or disabilities.[3] Major disorders i.e. Puerperal sepsis (22.11%), preeclampsia (19.23%), eclampsia (13.46%), hemorrhage (13.46%), urinary tract infection (7.69%) and postpartum depression (45.9%) and minor disorders i.e. after pain (67%), perineal discomfort (50%), constipation (43%), and fatigue (67%) occur in this period.[4-6] Still, is the most neglected period with low provision of skilled care as compared to before and during childbirth.[1]

QOL is an individual's perception of their position in life in relation to their goals, expectations, standards and

concerns. QOL helps in understanding how health or illness affects client and make therapeutic decisions.[7] QOL is equally being used to measure health status in transition period like postnatal. A study done in Malawi among postnatal mothers showed higher QOL in psychological and social domains followed by environmental and physical domains.[8] Likewise a study in Iran showed vaginal delivery group had higher QOL in physical, psychological and social domains than cesarean group.[9] Various factors i.e. sociodemographic, obstetric, clinical, neonate, psychological (depression) social support, health care utilization etc. influence QOL during postpartum period.[8,10,11]

In developing countries, studies are limited to morbidity and mortality. A comparative study in Nepal showed postnatal mother with normal vaginal delivery had better QOL than mother with caesarean section.[12] But studies on overall QOL and factors influencing it are very limited in Nepal. This shows a gap on information to improve quality of care and reduce burden of postpartum morbidity and mortality which might be fulfilled by this study. Therefore, this study aimed to identify QOL among postnatal mothers attending immunization clinic of a tertiary level hospital.

MATERIALS AND METHOD

Descriptive cross-sectional research design was used among postnatal mothers attending immunization clinic of Paropakar Maternity and Women's Hospital (PMWH), Thapathali, Kathmandu, for 1st dose Pentavalent vaccination of baby. Non probability convenience sampling technique was used to select 217 postnatal mothers. Sample size was calculated using Cochran's formula; $n = Z^2 pq/d^2$; Where, n = required sample size; p = prevalence of QOL among postnatal mothers; q = 1-p; Z = standard normal variate, value of Z at 95% confidence interval = 1.96; d = permissible error, value of d = 5% = 0.05. Taking prevalence of very good QOL as 17% from a study done in Turkey.[13] Estimated sample size (n) was 217

Data was collected through face-to-face interview using structured interview schedule. QOL was assessed by using validated tool developed by WHO i.e. WHOQOL-BREF in Nepali version after getting permission.(7) WHOQOL-BREF measures QOL in four domains i.e. Physical health (activities of daily living, dependence of medical substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest and work capacity), Psychological health (bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality/ Religion/ personal beliefs and thinking, learning, memory and concentration), Social Relationships (personal relationship, social support and sexual activity) and Environment (financial resources, freedom, physical safety and security, health and social care: accessibility and quality, home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation/leisure activities, physical environment and transport). The mean score of items within each domain was used to calculate the domain score (higher scores denoted higher QOL). Before data collection, ethical clearance was obtained from Institutional Review Board of National Academy of Medical Sciences and permission was taken from IRC of PMWH. Informed consent was obtained from each respondent. The study was conducted from 2078/05/06 to 2078/06/02. Privacy and confidentiality were maintained throughout the study. Collected data were entered in Statistical Package for Social Science (SPSS) version 22 for further analysis. Descriptive statistics i.e. frequency, mean and standard deviation were used to summarize socio-demographic and obstetric variables. Inferential statistics i.e. an independent t- test and one way ANOVA were used to find out difference between domain scores and selected variables. The level of significance was considered 5 % with p value<0.05 and 95% confidence interval.

RESULT

Majority of postnatal mothers (63.12 %) were in the age group 20-29. Nearly half (46.54%) of postnatal mothers had secondary education. Likewise, majority of mothers (54.83%) were homemaker and most of the mothers (81.56%) had family income ranging between NRs. 13001-50000. Similarly, more than half (57.14%) mothers needed more than 30 minutes to reach to health facility and more than 2/3rd (70.04%) had nuclear family (Table 1).

Table 2 reveals more than half of postnatal mothers (52.53%) were primiparous and nearly two third (62.67%) had planned pregnancy. More than two third (67.28%) had done ANC visit as per protocol. Similarly, almost all (99.07%) had institutional delivery. Majority of mothers (59.90%) had delivered their last baby

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Table 1: Socio-demographic characteristics of respondents

Variables	Frequency	Percentage
Age (Completed Years)		
15-19	17	7.83
20-24	68	31.33
25-29	69	31.79
30-34	42	19.35
≥35	21	9.67
Mean age ± SD in years= (26.52 ± 5.21)		
Education		
Illiterate	16	7.37
Primary Education (1-8)	77	35.48
Secondary Education (9-12)	101	46.54
Higher education (graduate and above)	23	10.59
Occupation		
Home maker	119	54.83
Business	43	19.81
Service	44	20.26
Agriculture	11	5.06
Monthly Family Income (In NRs.)		
< 13000	5	2.30
13001-30000	89	41.01
30001-50000	88	40.55
>50000	35	16.12
Time to Reach Health Facility		
More than 30 minutes	124	57.14
Within 30 minutes	93	42.85
Type of Family		
Nuclear	152	70.04
Joint	50	23.04
Extended	15	6.91

Table 2: Obstetric characteristics of respondents

Variables	Frequency	Percentage
Parity		
Primiparous	114	52.53
Multiparous	103	47.46
Planned Pregnancy		
Yes	136	62.67
No	81	37.32
ANC Visit as per Protocol		
Yes	146	67.28
No	71	32.71
Place of Delivery		
Government health institution	208	95.85
Non- government health institution	7	3.22
Home	1	0.46
On the way	1	0.46
Mode of Delivery		
Vaginal	130	59.90
Caesarean Section	87	40.09
Perineal Trauma (n=130)		
Yes	98	75.38
No	32	24.61
Type of Trauma (n=98)		
Perineal Tear	60	61.22
Episiotomy	38	38.77
PNC Visit		
Yes	216	99.53
No	1	0.46
PNC Visit as per protocol (n=216)		
Yes	87	40.27
No	129	59.72

Table 3: Scores on different domains of quality of life

Domains	Transformed Scores (Mean ± SD)	Minimum	Maximum
Physical Health	67.08 ± 24.79	0.00	100.00
Psychological Health	68.36 ± 17.90	8.33	100.00
Social Relationship	70.06 ± 14.62	25.00	100.00
Environment	64.38 ± 16.59	21.88	100.00

Score was transformed to 0-100.

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vaginally. Among them, more than two third (75.4%) had perineal trauma and nearly two third (61.22%) among them had episiotomy. Likewise, almost all mothers (99.53%) had done at least one PNC visit. Among them, majority (59.72%) had not done PNC visit as per protocol.

Table 3 depicts mean scores on 4 domains of QOL. The highest mean score was found on social relationship domain (70.06 ± 14.62) followed by psychological health (68.36 ± 17.90), physical health (67.08 ± 24.79) and environment domain (64.38 ± 16.59) respectively.

Table 4: Comparison of scores on different domains of quality of life with socio-demographic variables

Variables	Physical Domain Mean ± SD	Psychological Domain Mean ± SD	Social Relation Domain Mean ± SD	Environment Domain Mean ± SD
Age[a]				
<20	57.35 ± 24.56	57.35 ± 14.69	70.09 ± 15.88	52.57 ± 13.45
20-34	70.94 ± 22.62	71.21 ± 16.54	70.83 ± 14.31	66.62 ± 15.84
≥ 35	42.00 ± 26.98	52.97 ± 20.67	63.49 ± 15.36	54.91 ± 18.34
P-Value	<0.001	<0.001	0.093	<0.001
Time to Health Facility[x]				
≤ 30 minutes	72.38 ± 23.03	72.60 ± 17.09	72..26 ± 13.92	67.77 ± 16.51
>30 minutes	63.10 ± 25.41	65.18 ± 17.90	68.41 ± 14.98	61.84 ± 16.25
P-Value	0.006	0.002	0.055	0.009
Educational Qualification[x]				
Illiterate	62.27 ± 26.34	60.15 ± 20.58	55.98 ± 19.42	52.14 ± 18.17
Literate	67.46 ± 24.70	69.02 ± 17.56	71.18 ± 13.62	65.36 ± 16.11
P-Value	0.422	0.056	<0.001	0.002
Occupational Status[x]				
Unemployed	66.02 ± 24.48	65.72 ± 17.87	68.10 ± 15.70	60.87 ± 15.36
Employed	68.36 ± 25.24	71.58 ± 17.48	72.44 ± 12.88	68.65 ± 17.10
P-Value	0.490	0.016	0.029	<0.001
Monthly Family Income (RS.) [a]				
< 13000	55.00 ± 24.56	55.83 ± 9.59	66.66 ± 19.32	44.37 ± 9.47
13001-30000	61.91 ± 24.70	61.04 ± 17.71	66.19 ± 13.89	56.56 ± 15.85
30001-50000	69.07 ± 24.85	71.24 ± 15.57	70.45 ± 14.64	67.79 ± 13.42
>50000	76.93 ± 21.76	81.54 ± 15.13	79.40 ± 11.65	78.57 ± 13.08
P-Value	0.010	<0.001	<0.001	<0.001
Type of Family[x]				
Nuclear	64.14 ± 25.88	64.95 ± 16.90	67.90 ± 14.77	61.22 ± 15.82
Joint	73.95 ± 20.63	76.34 ± 17.74	75.12 ± 13.03	71.77 ± 16.09
P-Value	0.007	<0.001	<0.001	<0.001

[a] = ANOVA (one way); [x] = Independent t- Test

Mother who had higher monthly family income and who lived in a joint family had higher mean score indicating higher QOL in all domains than other mothers and the result was significant at 5% level (p≤ 0.05). Likewise, mothers in the age group 20-34 and those who needed less than 30 minutes to reach to health facility had higher mean scores in physical, psychological and environment domains of QOL (p<0.05). In addition, employed mothers had higher mean scores in psychological (p= 0.016), social relation (p= 0.003) and environment domain (p<0.001) as compared to unemployed mother. Likewise, literate mothers had higher mean scores on social (p≤ 0.01) and environment domain (p= 0.002) as compared to illiterate mothers (Table 4).

Postnatal mothers who had planned their pregnancy, had done ANC visit as per protocol, had delivered their last baby vaginally and had no perineal trauma had higher mean scores in all four domains of quality of life than other mothers and the result was significant at 5% level (p<0.05). Whereas parity and place of delivery had no significant difference on any domain of quality of life. (Table 5)

Table 5: Comparison of scores on different domains of quality of life with obstetric variables

Variables	Physical Domain Mean ± SD	Psychological Domain Mean ± SD	Social Relation Domain Mean ± SD	Environment Domain Mean ± SD
Parity[x]				
Primiparous	66.76 ± 22.20	68.73 ± 16.04	71.12 ± 13.36	65.04 ± 15.43
Multiparous	67.44 ± 27.49	67.96 ± 19.82	68.89 ± 15.89	63.65 ± 17.83
P-Value	0.841	0.751	0.262	0.537
Planned Pregnancy[x]				
No	58.64 ± 28.09	60.39 ± 19.12	66.20 ± 15.52	58.98 ± 18.12
Yes	72.11 ± 12.16	73.11 ± 15.32	72.36 ± 13.61	67.60 ± 14.76
P-Value	< 0.001	< 0.001	0.003	< 0.001
ANC Visit as per Protocol[x]				
No	59.75 ± 26.79	57.80 ± 17.76	65.02 ± 15.94	55.54 ± 17.92
Yes	70.64 ± 23.03	73.50 ± 15.61	72.51 ± 13.32	68.68 ± 14.07
P-Value	0.002	< 0.001	<0.001	<0.001
Place of Delivery[x]				
Non institutional	60.71 ± 5.05	47.91 ± 2.94	50.00 ± 0.00	45.31 ± 6.62
Institutional	67.14 ± 24.90	68.55 ± 17.87	70.25 ± 14.56	64.56 ± 16.56
P-Value	0.716	0.105	0.051	0.103
Mode of Delivery[x]				
Caesarean	47.16 ± 22.02	60.22 ± 15.64	65.46 ± 14.79	58.04 ± 15.70
Vaginal	80.41 ± 16.12	73.81 ± 17.28	73.14 ± 13.73	68.62 ± 15.85
P-value	<0.001	<0.001	<0.001	<0.001
Perineal Trauma[x] (n=130)				
No	91.96 ± 9.51	84.37 ± 16.99	77.86 ± 13.19	76.66 ± 16.16
Yes	76.63 ± 16.07	70.36 ± 16.00	71.59 ± 13.62	66.00 ± 14.91
P-Value	<0.001	<0.001	0.024	<0.001
Type of Trauma[x] (n=98)				
Perineal Tear	80.29 ± 15.17	72.63 ± 17.55	71.04 ± 12.96	68.22 ± 15.13
Episiotomy	70.86 ± 15.94	66.77 ± 12.61	72.47 ± 14.74	62.50 ± 14.05
P-value	0.004	0.077	0.614	0.064

[x] = Independent t- Test

DISCUSSION

The highest mean score was obtained on social relationship domain (70.06 ± 14.62) followed by psychological (68.36 ± 17.90), physical (67.08 ± 24.79) and environment domain (64.38 ± 16.59) in this study which showed postnatal mothers had higher QOL on social and psychological health domain followed by physical health and environment domain. Majority of mothers were satisfied with personal relationship and family support. This finding is similar to finding of a study conducted in Nigeria where highest mean score was in social relationships domain (7 2.5 9 ± 1 6. 9 7) and the least score was in the environmental domain (62.50±13.19).[14] Whereas this contradicts with a study done in Bangalore where the mean scores were higher on environmental and physical domain followed by psychological and social relationship domain.[15] This

might be due to difference in setting and study population.

In this study, mother who lived in a joint family and who had higher family income had higher mean scores in all four domains of QOL (p≤ 0.05) as compared to mother living in nuclear family and having low family income. Also mothers in the age group 20-34 had higher mean scores in all domains except social relationship domain as compared to mothers of other age group (p<0.05). Similar is the finding of a study done in Turkey where the environment scores of mothers with higher income was significantly higher than other mothers (p=0.001) whereas in contrast mother living in nuclear family had higher mean score in environment domain (p=0.029). Likewise, physical health scores of mothers in 20-34 age group was found significantly higher compared to other mothers (p=0.046).[16]

Likewise postnatal mothers who did ANC visit as per protocol, delivered vaginally and had no perineal trauma had higher mean scores in all four domains of QOL than other mothers and the result was significant at 5% level (p<0.05). This finding is consistent to a study conducted in Iran where QOL scores for physical, psychological and social domains were higher in vaginal delivery group than the cesarean group. (9) Similarly a study in Bangladesh showed mother who received a limited antenatal consultations (0 or 1) had significantly lower QOL scores compared with mothers who received recommended consultations (4 or more).(11) In addition a study in Spain showed perineal tears or episiotomy negatively affected postpartum QOL score.[17]

Limitation of this study is that non-probability convenience sampling technique was used which limits generalizability of the study findings.

CONCLUSION

QOL of postnatal mother tends to get affected by socio-demographic and obstetric factors, most of which are modifiable. So, improving quality and continuity in maternity care from antenatal to postnatal period through combined efforts of family, health workers and health authorities will help to improve QOL among postnatal mothers.

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