



Original Article



Factors Affecting Sexual Health after Puerperium among Women in Karachi

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ABSTRACT

The puerperium phase represents a critical juncture in a woman's reproductive journey, marked by significant physical, emotional, and relational adjustments. Various factors beyond the mere resumption of sexual activity influence sexual well-being during this period. However, discussions surrounding postpartum sexual health remain limited, particularly in low- and middle-income countries like Pakistan. **Objectives:** To explore postpartum sexual health in Pakistani women, identifying cultural, physical, and emotional factors influencing well-being. **Methods:** A cross-sectional study was conducted at Fazaia Ruth Pfau Medical College (FRPMC) Hospitals in Karachi from August 2022 to July 2023. Within the first three months' post-*puerperium*, 263 women aged 18 to 45 participated. A comprehensive questionnaire, developed and validated through rigorous processes, assessed socio-demographic, obstetric, and sexual health factors. Statistical analyses, including chi-square tests and Kendall's tau correlation analyses, were employed. **Results:** Participants exhibited diverse socio-demographic and obstetric profiles, with a notable prevalence of resumption of sexual activity (65.1%) and concerns such as dyspareunia (66.5%) and decreased libido (53.2%). Significant associations were found between various socio-demographic and obstetric factors and postpartum sexual health outcomes. Longer marriage duration was associated with higher libido levels, while the mode of delivery and the last baby's birth weight influenced coital frequency. Age, marriage duration, and parity affected postpartum libido, vaginal dryness, and dyspareunia. **Conclusions:** It was concluded that this study provides valuable insights into the complexity of postpartum sexual experiences among women in Karachi, Pakistan. The findings underscore the need for comprehensive, culturally sensitive interventions to support women's sexual well-being during this critical period.

INTRODUCTION

The postnatal phase, commonly referred to as the postpartum period or *puerperium*, constitutes a transformative stage in a woman's reproductive journey, marked by a multitude of physical, emotional, and relational adaptations [1]. In this crucial time frame, sexual well-being emerges as a complex interplay of factors, extending beyond the mere recommencement of sexual activity [2]. This intricate shift extends beyond the immediate postnatal period, leaving a sustained impact on diverse aspects of a woman's sexual well-being [3]. On a global scale, the examination of sexual health during the postpartum period has gained escalating attention, acknowledging its profound implications for the overall health of women navigating through this pivotal life stage [4]. It is noteworthy that more than fifty percent of

postpartum women encounter delayed resumption of sexual activity, emphasizing the significance of addressing sexual health concerns within this demographic [5]. While the World Health Organization (WHO) suggests assessing women 2–6 weeks postpartum, the topic of early resumption of sexual activity in the postpartum period has received limited exploration [6]. Women who have experienced childbirth frequently express lower levels of marital satisfaction compared to those without children [3]. Furthermore, the method of delivery, whether instrumental or via cesarean section, has the potential to impact long-term sexual health, affecting factors like desire and lubrication [7]. The significant influence of childbirth on women's sexuality becomes apparent, resulting in sexual dysfunctions requiring attention and



intervention [8]. Complications, including pelvic floor disorders, are strongly associated with reduced sexual arousal, infrequent orgasm, and dyspareunia, negatively impacting women's sexual health [9]. Following childbirth, there is a noteworthy increase in sexual morbidity, with a majority of women grappling with sexual issues within the initial three months post-delivery [3]. Despite the acknowledged prevalence, in low to middle-income countries LMICs, including Pakistan, the existing body of knowledge on the sexual health of postpartum women is limited, emphasizing the critical need for expanded research in this field [1]. Pakistan reflects this gap, where discussions around sexual health are infrequent, particularly among females seeking healthcare services, considering it a sensitive and taboo subject [10, 11]. The cultural and societal norms governing female reproductive health in Pakistan require an investigation to shape targeted interventions and strategies. This research endeavors to fill this knowledge gap and advance the understanding of postpartum sexual health within the cultural context of Pakistan.

This study aims to explore postpartum sexual health in Pakistani women, identifying cultural, physical, and emotional factors influencing well-being.

METHODS

This cross-sectional study was conducted from August 2022 to July 2023 at FRPMC Hospital, Karachi, after approval from the ethical committee (IRB/27). The study included 263 women aged 18–45 within 6 months following delivery, visiting post-natal care, vaccination, and family planning clinics. The sampling technique used was non-probability convenience sampling. Women with preterm deliveries, divorced/widowed, diagnosed pre-existing sexual health conditions, or significant psychological disorders were not eligible to participate in the study and thus were excluded. Delineating the intricacies of sample size determination, the study adhered to the WHO sample size calculator 2.0. A 5% margin of error was chosen to strike an appropriate balance between statistical precision and practical considerations (e.g., resource constraints and participant availability). Precision levels were set at a 95% confidence interval, and a conservative estimate for the prevalence of sexual problems post-*puerperium* in Pakistan, denoted as 24 % [12], was used for calculation. Consequently, a requisite minimum sample size of 257 was ascertained. From the total pool of 325 women, only 263 eligible participants meeting the stringent inclusion criteria were approached. Informed consent was obtained, and trained interviewers conducted face-to-face questionnaires in English and Urdu. The questionnaire assessing post-*puerperium* sexual health was developed through an extensive literature review and validated by three obstetrics experts specializing in postpartum care.

All the items were translated into the National Language, Urdu, and were provided in both English and Urdu to eliminate any potential miscommunication and guarantee that all answers were provided after careful consideration. Each item was rated for relevance on a 10-point scale, and the Content Validity Ratio (CVR) was calculated. Items with a CVR of 0.7 or higher were retained, while those below were revised or removed based on expert feedback. A pilot study with 20 participants from the target population was conducted to evaluate face validity and address issues such as item ambiguity or formatting. Feedback from the pilot test was used to refine the final questionnaire. The study's tool, a comprehensive questionnaire, explores post-*puerperium* sexual health and its influencing factors. It comprises three sections: Section 1 captures socio-demographic details like age, education, and spousal characteristics. Section 2 focuses on obstetric history, covering parity, birth details, and complications such as episiotomy. Section 3 addresses sexual health, examining coitus resumption, libido, dryness, dyspareunia, lubrication use, and the impact of childbirth on sexual life. Reliability was assessed by measuring the internal consistency of the questionnaire items using Cronbach's alpha, which indicated satisfactory reliability (Cronbach's alpha=0.72). The collected data were systematically stored and analyzed using IBM SPSS version 26.0. Counts and percentages for the entire questionnaire were reported to provide a thorough overview of the dataset. An extensive analysis was conducted to uncover patterns and associations between socio-demographic, obstetric profiles, and post-*puerperal* sexual health. Comparative analyses were performed using the Chi-square test to examine the relationships between socio-demographic and obstetric factors with sexual health outcomes. Correlation analyses, including Kendall's Tau or Spearman correlation, were utilized to explore the relationships between various variables. Effect sizes for the correlation coefficients (e.g., values <0.3 considered weak, 0.3–0.5 moderate, and >0.5 strong) were reported to clearly illustrate the magnitude of the associations. A significance level of $p < 0.05$ was established to determine statistical significance, with p -values below this threshold indicating robust and meaningful associations or patterns within the dataset.

RESULTS

Out of 263 individuals, 62.4% fall within the 20–30 age bracket, and 50.2% have intermediate qualifications. A substantial majority identified themselves as homemakers (73.8%). Regarding parity, 46.4% have 2 to 5 children, and 70% of women have their last childbirth within the last 3 months. Cesarean delivery was conducted in 62.4% of the participants, (Table 1).

Table 1: Stratification of Severity of COPD with Respect to Age, Gender and Smoking

Variables	Frequency (%)
Age of Patient	
20 -30	164 (62.4%)
31-40	94 (35.7%)
>40	5 (1.9%)
Education of Patient	
Illiterate	28 (10.6%)
Primary	30 (11.4%)
Intermediate	132 (50.2%)
Graduate	73 (27.7%)
Occupation of Patient	
Working	69 (26.2%)
Housewife	194 (73.8%)
Age of Husband	
20-30	89 (33.8%)
31-40	160 (60.9%)
>40	14 (5.3%)
Education of Husband	
Illiterate	7 (2.7%)
Primary	13 (5.1%)
Intermediate	137 (53.3%)
Graduate	100 (40.9%)
Occupation of Husband	
Employed	238 (90.5%)
Unemployed	25 (9.5%)
Duration of Marriage	
1 Year Or Less	26 (9.9%)
2-5 Years	122 (46.4%)
6-10 Years	97 (36.9%)
More Than 10 Years	18 (6.8%)
Satisfaction with Marriage Life	
Yes	231 (87.8%)
No	32 (12.2%)
Parity	
1	77 (29.3%)
2-5	142 (54%)
More Than 5	44 (16.7%)
Last Birth	
<3 months	184 (70%)
3 to 6 months	79 (30%)
Birth Weight of Last Baby	
Less Than 3 Kg	113 (43%)
3-4 Kg	136 (51.7%)
More Than 4 Kg	14 (5.3%)
Mode of Delivery	
Vaginal	99 (37.6%)
LSCS	164 (62.4%)

Out of 263 participants, 65.1% mentioned a return to intimate relations, with husbands being the initiators in 91.7% of cases. The majority of coitus resumption occurred between 6 weeks to 2 months after childbirth (48.6%).

However, 34.9% who do not resume sexual relations have concerns about the fear of pain and the absence of their partners. Participants reported distinct changes in sexual patterns as a decrease in libido (53.2%) and dyspareunia (66.5%), (Table 2).

Table 2: Sexual History of study participants

Variables	Frequency (%)
Resumption of Coitus	
Yes	170 (65.1%)
No	91 (34.9%)
Who Initiated Resumption of Coitus	
Husband	188 (91.7%)
Wife	17 (8.3%)
Frequency of Coitus	
Decreased	63 (37.1%)
Same	65 (38.2%)
Increased	42 (24.7%)
Resumption of Coitus in Weeks	
6 Weeks	57 (27.4%)
6 Weeks-2 Months	101 (48.6%)
3 Months	50 (24%)
Libido of Women	
Decreased	140 (53.2%)
Same	117 (44.5%)
Increased	6 (2.3%)
Dryness	
Yes	59 (23%)
No	198 (77%)
Dyspareunia	
No	75 (33.5%)
Superficial	129 (57.6%)
Deep	20 (8.9%)

Reasons for resuming intercourse are analyzed (Figure 1).

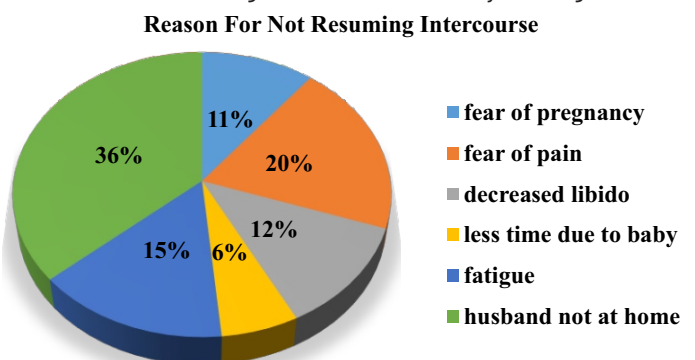


Figure 1: Distribution of Responses for Not Resuming Intercourse Results show the Influence of Socio-demographic and obstetric profiles on Sexual Health. Socio-demographic factors such as the age of the women, husband's age, husband's occupation, marriage duration, and parity were identified as influential factors impacting coitus resumption (p<0.05). Particularly compelling was the robust correlation between marriage duration and

resumption of sexual activity ($r=0.232$, $p=0.002$), alongside the negative correlation observed between the last baby's birth weight and coitus resumption ($r=-0.339$, $p<0.001$). Additionally, the husband's age ($p=0.032$) exhibited a significant association with coital frequency. Marriage duration ($p=0.024$) emerged as a substantial determinant of coital frequency, while the mode of delivery demonstrates a notable correlation ($r=0.254$, $p=0.010$). The age of the patient ($r=0.218$, $p=0.015$) and the last baby's birth weight ($r=0.377$, $p<0.001$) impacted a positive correlation with resumption time, indicating older age and heavier newborns were associated with delayed resumption of sexual activity. Moreover, marriage duration ($p<0.001$),

marriage satisfaction ($p=0.008$), and parity ($p=0.040$) were identified as influential factors affecting postpartum libido, with longer marriage durations associated with higher libido levels ($r=0.253$, $p=0.001$), and increased parity correlating positively with libido ($r=0.213$, $p=0.005$). Significant correlations were observed between age, dryness ($r=0.32$, $p<0.001$) and dyspareunia ($r=-0.398$, $p<0.001$). However, marriage duration exhibited a positive correlation with dryness ($r=0.296$, $p<0.001$) and a negative correlation with dyspareunia ($r=-0.285$, $p=0.003$). A negative correlation was found between parity and dyspareunia ($r=-0.331$, $p=0.001$), (Table 3).

Table 3: Chi-Square Test and Kendall's Tau or Spearman Correlation Socio-Demographic and Obstetric Profile with Sexual History

Asked Questions	Coitus Resumption	Coital Frequency	Resumption Time	Libido	Dryness	Dyspareunia
Chi-Square Test (p-value)						
Age of Patient	0.042	0.075	<0.001	0.573	0.001	<0.001
Education of Patient	0.778	0.513	0.029	0.112	0.138	0.089
Occupation of Patient	0.074	0.913	0.244	0.031	0.834	0.150
Husband's Age	0.046	0.032	0.025	0.062	<0.001	<0.001
Husband Education	0.092	0.244	<0.001	0.695	0.001	0.142
Husband's Occupation Status	0.037	0.219	0.596	0.832	0.258	0.135
Marriage Duration	<0.001	0.024	<0.001	<0.001	0.056	<0.001
Marriage Satisfaction	0.055	0.321	0.207	0.008	<0.001	0.304
Parity	0.019	0.727	0.001	0.040	0.398	0.072
Duration since Last Birth	0.065	0.104	0.185	0.796	0.459	0.103
Last Baby's Birth Weight	0.662	<0.001	0.122	0.550	0.357	0.236
Mode of Delivery	0.140	0.073	0.011	0.774	<0.001	0.007
Kendall's Tau or Spearman Correlation (p-value)						
Age of Patient						
Correlation Coefficient	0.083	0.009	0.218*	0.123	0.32**	-0.398**
Sig. (2-tailed)	0.256	0.918	0.015	0.09	<0.001	<0.001
Education of Patient						
Correlation Coefficient	0.012	0.159	0.137	0.117	0.085	0.162
Sig. (2-tailed)	0.87	0.085	0.139	0.116	0.257	0.087
Husband's Age						
Correlation Coefficient	-0.035	-0.055	0.166	0.113	0.318**	-0.346**
Sig. (2-Tailed)	0.628	0.538	0.064	0.12	<0.001	<0.001
Husband Education						
Correlation Coefficient	0.046	0.13	0.149	0.004	0.154*	0.127
Sig. (2-Tailed)	0.554	0.171	0.119	0.963	0.048	0.195
Marriage Duration						
Correlation Coefficient	0.232*	-0.068	0.131	0.253**	0.296**	-0.285*
Sig. (2-Tailed)	0.002	0.465	0.159	0.001	<0.001	0.003
Parity						
Correlation Coefficient	0.11	-0.084	0.163	0.213*	0.089	-0.331*
Sig. (2-Tailed)	0.146	0.369	0.118	0.005	0.241	0.001
Duration since Last Birth						
Correlation Coefficient	-0.147	-0.097	0.011	0.031	0.059	0.131
Sig. (2-Tailed)	0.066	0.323	0.913	0.692	0.46	0.196
Last Baby's Birth Weight						
Correlation Coefficient	-0.339**	-0.051	0.377**	-0.056	-0.104	-0.251*
Sig. (2-Tailed)	<0.001	0.605	<0.001	0.475	0.183	0.013

Mode of Delivery						
Correlation Coefficient	-0.129	0.254**	0.041	-0.05	-0.331**	0.11
Sig. (2-Tailed)	0.107	0.01*	0.675	0.53	<0.001	0.277

**Correlation was significant at the 0.01 Level (2-tailed). **Correlation was significant at the 0.05 Level (2-tailed).

DISCUSSION

Pakistan's complex socio-cultural landscape presents unique challenges that profoundly impact women's reproductive health rights, reinforcing gender disparities and shaping the understanding of sexual health in the postpartum period [13]. Research on postpartum sexual health in Pakistan has several gaps. There is limited focus on postpartum sexual health specifically, with most studies addressing general maternal health. Cultural and religious norms around sexuality, societal taboos, and a lack of open discussion often hinder research [14]. Qualitative insights into women's personal experiences, including communication with healthcare providers, are scarce. Socioeconomic, educational, and psychological factors affecting postpartum sexual health are understudied. Additionally, there is little focus on partner dynamics and access to postpartum sexual health services. These gaps highlight the need for culturally sensitive research and targeted interventions in Pakistan, which we have studied. Our study of 263 women highlights key socio-demographic and obstetric factors affecting post-childbirth sexual well-being. Most participants were aged 20-30, homemakers, and had recently given birth (70% within 3 months), with 46.4% having 2-5 children and 62.4% undergoing cesarean sections. Educational backgrounds vary widely, mostly in the intermediate category (50.2%). It revealed that 65.1% of women resumed intimate relations postpartum, mostly initiated by husbands (91.7%), with 48.6% resuming between 6 weeks and 2 months. Challenges included decreased libido (53.2%) and increased dyspareunia (66.5%). For 34.9%, fear of pain or partner absence delayed sexual activity. Our study identifies key socio-demographic and obstetric factors influencing post-*puerperium* sexual health. Marriage duration, the husband's age, and the baby's birth weight significantly impacted coitus resumption, libido, and coital frequency. Age and parity influenced dyspareunia and dryness, with longer marriages linked to higher libido and reduced dyspareunia, highlighting complex postpartum sexual dynamics. Current study found that 65.1% of participants wanted to resume intimacy after childbirth, aligning with global trends. Pooled data from 21 studies (4,482 participants) show 67.27% of women resumed sexual activity early postpartum [5]. This observation highlights the significant role of sociocultural norms, values, and beliefs in shaping postpartum sexual activity, with diverse practices influencing women's experiences across different societies worldwide [15].

Current study found that 91.7% of husbands initiate coital resumption postpartum, reflecting cultural norms that position men as primary initiators of sexual intimacy in our society. This dominance of husbands aligns with prevailing cultural norms in Pakistan, where traditional gender roles steeped in gender bias often dictate intimate aspects of marital life [16]. Comparative study shows that men initiate coital resumption 3.5 times more often across cultures [17]. A study conducted in Ethiopia showed that 46.6% had experienced pressure from their husbands to resume sexual intercourse [18]. Current study reveals that younger women and those with high resume coitus earlier postpartum, similar to a study conducted in Ethiopia [19]. Studies conducted in Uganda and Nigeria revealed that Employed women and those with higher incomes also showed earlier resumption, influenced by cultural, economic, and educational factors corresponding to the results of previous research [20, 21]. Similar to the results of previous research, Current study also reflects Husbands' higher education delays coital resumption, emphasizing postpartum health awareness [18]. Current study highlights newborn weight as a significant factor in delayed coital resumption postpartum, aligning with research linking heavier newborns to obstetric injuries, influencing postpartum sexual activity [22-25]. The study reveals that 66.5% of women experienced increased dyspareunia postpartum, aligning with prior research. Addressing dyspareunia through comprehensive care, including pelvic rehabilitation and sexual health counseling, is crucial for improving postpartum well-being [26, 27]. Our study reveals 53.2% experienced decreased libido postpartum, highlighting childbirth's impact on sexual health and the need for comprehensive postpartum support, endorsing the results of previous research [28]. Current findings highlight notable associations between key demographic and obstetric factors with various aspects of postpartum sexual health. Specifically, longer marriage duration demonstrated a significant positive correlation with libido and a negative correlation with dyspareunia, suggesting that as couples spend more time together, they may develop stronger emotional intimacy and sexual compatibility. Future studies, ideally with broader populations and longitudinal designs, are warranted to expand our understanding of these relationships, identify potential confounders, and formulate evidence-based guidelines for optimizing postpartum sexual health. One key limitation of current study is that responses with missing data were excluded but did not apply more robust

methods (e.g., test-retest reliability, factor analysis) to further ensure consistency and reliability of the questionnaire. Future investigations may benefit from additional psychometric assessments to better validate the instrument and strengthen the overall conclusions.

CONCLUSIONS

It was concluded that our study explores postpartum sexual health among women in Karachi, Pakistan, identifying cultural, physical, and emotional factors influencing well-being. While 65.1% desired coital resumption, challenges like dyspareunia (66.5%) and decreased libido (53.2%) were prevalent. Age, parity, mode of delivery, and socio-cultural norms significantly impacted outcomes. Our findings underscore that socio-demographic aspects such as the woman's age, husband's age, and marriage duration significantly affect the timing and frequency of coital resumption. Obstetric factors, particularly the mode of delivery, birth weight of the last child, and parity, also emerged as key predictors of sexual well-being. These findings highlight the need for culturally sensitive interventions to address multifaceted postpartum sexual experiences.

Authors Contribution

Conceptualization: RM, SAM, AT

Methodology: RM, SAM, AT, ZIK, HM

Formal analysis: RM

Writing review and editing: RM

All authors have read and agreed to the published version of the manuscript

Conflicts of Interest

All the authors declare no conflict of interest.

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