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Association between Reproductive Factors and Genital Prolapse in Women Attending a Tertiary Care Hospital

***Dr. Mst. Meher Afroz[1], Dr. Shamsun Nahar[2], Dr. Mousumi Saha[3], Dr. Rifat Sultana[4], Dr. Fatema Begum[5], Dr. Tahmina Begum[6]**

[1]*Senior Consultant, Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh*

[2]*Assistant Professor, Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh*

[3]*Assistant Professor, Department of Feto-Maternal Medicine, Shaheed Suhrawardy Medical College, Dhaka, Bangladesh*

[4]*Junior Consultant, Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College and Hospital, Dhaka, Bangladesh.*

[5]*Junior Consultant, Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh*

[6]*Junior Consultant, Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh*

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Corresponding Author:** ***Dr. Mst. Meher Afroz, *Senior Consultant, Department of Obstetrics and Gynaecology, Shaheed Suhrawardy Medical College Hospital, Dhaka, Bangladesh.*

Abstract

Background: *Genital prolapse is a prevalent gynaecological condition that adversely affects women's health and quality of life, particularly in low-resource settings. Its etiology is multifactorial, with reproductive and obstetric factors playing a central role. This study aimed to examine the association between reproductive factors and genital prolapse in women attending a tertiary care hospital in Bangladesh.*

Methods: *A prospective cross-sectional study was conducted at the Department of Obstetrics and Gynaecology, Dhaka Medical College Hospital, from June to December 2007. A total of 100 women diagnosed with genital prolapse were included in the study. Data on parity, antenatal care, delivery mode and circumstances, obstetric complications, postpartum recovery, and comorbidities were collected using structured data sheets. Statistical analyses were performed using SPSS version 16.0.*

Results: *Most participants had high parity (mean 5.67 ± 2.58). Antenatal care was rare (5%), and the majority of deliveries occurred at home (89%), often assisted by traditional birth attendants (81%). Obstetric complications, such as malpresentation and stillbirth, occurred in 19% of the cases. A substantial proportion of patients resumed household work prematurely (65%). Chronic cough (8%) and large pelvic tumours (3%) were the most common comorbidities.*

Conclusion: *Genital prolapse in this population was strongly associated with high parity, poor antenatal care, home delivery practices, obstetric complications, and inadequate postpartum rest. Targeted maternal health interventions that promote skilled care and postpartum recovery are needed.*

Keywords: *Genital prolapse, reproductive factors, parity, antenatal care, obstetric complications.*

1. Introduction

Genital prolapse, a condition under the broader category of pelvic organ prolapse (POP), is one of the most prevalent gynaecological morbidities affecting women across the world. It involves the descent of the uterus or vaginal walls due to weakening of pelvic floor muscles, connective tissues, and supporting structures [1]. Though not directly life-threatening, the disorder imposes profound physical, psychological, and social burdens, ranging from pelvic pressure, urinary and bowel dysfunction to sexual difficulties,

which collectively impair quality of life [2]. Reported prevalence varies considerably between populations, with hospital-based studies documenting higher rates than community-based surveys [3]. Importantly, women in low-resource settings often present with advanced stages of prolapse due to lack of awareness, cultural barriers, and limited access to skilled healthcare [4].

The development of prolapse is attributed to multifactorial causes, with pregnancy and childbirth playing central roles. Vaginal delivery, particularly when prolonged or associated with instrumental assistance, predisposes women to pelvic floor trauma [5]. Multiparity further compounds the risk, as repeated stretching and injury to pelvic support structures accumulate over successive pregnancies [6]. Short birth intervals and inadequate postpartum rest have also been highlighted as contributors [7]. In resource-limited contexts, these risks are amplified by the predominance of home deliveries, often conducted by traditional birth attendants without formal training, and by the near absence of antenatal care [8].

Advances in imaging and anatomical studies have elucidated the pathophysiology of prolapse. Research has shown that vaginal delivery leads to injury of the levator ani muscle and distortion of pelvic connective tissues, which compromise the pelvic floor's structural integrity [9,10]. Dynamic magnetic resonance imaging has provided direct evidence of these abnormalities, establishing a clear relationship between childbirth-related trauma and later development of prolapse [11]. This mechanistic understanding aligns with epidemiological data, which consistently identify high parity and obstetric complications as dominant risk factors across diverse populations [12].

Despite growing recognition globally, genital prolapse remains under-examined in many low- and middle-income countries, including Bangladesh. Studies from Africa and South Asia report disproportionately high burdens, frequently linked to obstetric practices and social determinants of maternal health [13]. In Tanzania and Ethiopia, for instance, community-based studies have shown that lack of antenatal care and repeated pregnancies are closely associated with symptomatic prolapse [14]. These findings highlight the urgent need for localized investigations that reflect the specific reproductive patterns, healthcare practices, and sociocultural dynamics of each region.

Bangladesh shares many of these challenges, with a majority of births still taking place at home under the supervision of untrained attendants. Although scattered hospital-based reports exist, systematic research examining the reproductive determinants of prolapse in this setting remains limited. Understanding these associations is critical to inform prevention, guide health education, and strengthen maternal health interventions. The present study investigates the relationship between reproductive factors and genital prolapse among women attending a tertiary care hospital in Bangladesh. By analyzing parity, delivery circumstances, obstetric complications, and postpartum recovery, this study seeks to generate evidence that can inform both clinical practice and public health policy.

2. Methodology & Materials

This prospective cross-sectional study was conducted at the Department of Obstetrics and Gynaecology, Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh. The study was carried out over six months, from June 2007 to December 2007. A total of 100 women diagnosed with genital prolapse were included in the study population.

2.1. Sample Selection

Participants were selected using a simple random sampling method.

Inclusion Criteria

- Women admitted to the Department of Obstetrics and Gynaecology at DMCH with a diagnosis of genital prolapse.
- Willingness to provide informed consent.
- Age group: reproductive to post-reproductive.

Exclusion Criteria

- Patients admitted with gynaecological complaints unrelated to genital prolapse.
- Women are unwilling to participate.
- Critically ill patients are unable to provide information or consent.

2.2. Data Collection and Study Procedure

Ethical approval was obtained from institutional review board. Written informed consent was obtained from each participant after explaining the purpose and procedures of the study. Data were collected using a pre-designed, structured data sheet developed for this study. Information was obtained from clinical records, patient

interviews, and direct examination. Variables included demographic details, reproductive history, antenatal care, mode and circumstances of delivery, obstetric complications, postpartum recovery, and associated medical disorders. Data were analyzed using SPSS (version 16.0). Descriptive statistics such as frequencies, percentages, means, and standard deviations were used to summarize findings. Trained researchers ensured systematic and accurate data entry. Confidentiality was maintained throughout the study process.

3. RESULTS

Table 1. *Parity Distribution of the Study Population (N=100)*

Characteristics		Number of Patients	Percentage
Age (Year)	Mean ± SD	50.86 ± 11.52	
Number of Parity	1-4	39	39.0
	5-9	53	53.0
	9+	8	8.0
	Mean ± SD	5.67 ± 2.58	

Table 1 shows the parity distribution of the study population. The mean age of participants was 50.86 ± 11.52 years. Most women had between five and nine deliveries (53%), while 39% had one to four deliveries, and 8% had nine or more. The mean parity was 5.67 ± 2.58.

Table 2. *Antenatal Care, Delivery Mode, and Birth Intervals (N=100)*

Factor		Number of Patients	Percentage
Antenatal Care	Received	5	5.0
	Not Received	95	95.0
Mode of Delivery	Normal Delivery	79	79.0
	Difficult labour	19	19.0
	Instrumental Delivery	1	1.0
	Caesarean Section	1	1.0
Interval between Pregnancies (years)	<2	29	29.0
	2-3	63	63.0
	>3	8	8.0
	Mean ± SD	2.17 ± 0.99	

Table 2 presents findings related to antenatal care, mode of delivery, and interpregnancy intervals. Antenatal care was notably low, with only 5% of women reporting receipt, while 95% did not. The majority (79%) were delivered vaginally, with 19% experiencing difficult labour, and only 1% each undergoing instrumental or caesarean delivery. Regarding pregnancy intervals, 63% reported spacing of 2–3 years, 29% less than two years, and 8% more than three years, with a mean interval of 2.17 ± 0.99 years.

Table 3. *Circumstances of Delivery (N=100)*

Factor		Number of Patients	Percentage
Place of Delivery	Home	89	89.0
	Home and Hospital	9	9.0
	Hospital	2	2.0
Delivery Conductor	Traditional Birth Attendant (Dai)	81	81.0
	Doctor	11	11.0
	Relative	8	8.0

Table 3 describes the circumstances of delivery. Home delivery was predominant (89%), followed by combined home and hospital deliveries (9%), and only 2% exclusively in the hospital. Traditional birth attendants conducted most deliveries (81%), whereas doctors attended 11% and relatives 8%.

Table 4. *Associated Complications During and After Delivery (N=100)*

Complication	Number of Patients	Percentage
Delivered a stillborn baby due to malpresentation	19	19.0
Retained Placenta	3	3.0
Postpartum Haemorrhage (PPH)	3	3.0
Obstructed labour due to big baby/twin baby	2	2.0
Nil	73	73.0

Table 4 outlines associated complications during and after delivery. A total of 19% reported delivering a stillborn baby due to malpresentation, 3% retained placenta, 3% postpartum haemorrhage, and 2% obstructed labour due to large or twin babies. However, 73% did not report any delivery-related complications.

Table 5. *Postpartum Recovery and Associated Medical Disorders (N=100)*

Factor		Number of Patients	Percentage
Puerperal Rehabilitation	Early resumption to work without adequate rest	65	65.0
	Took some rest	29	29.0
	Became sicker at early puerperium	6	6.0
Associated Medical Disorder	COPD / Chronic Cough	8	8.0
	Constipation	1	1.0
	History of large pelvic tumour	3	3.0
	Nil	88	88.0

Table 5 reports postpartum recovery and associated medical disorders. The majority (65%) resumed household or work responsibilities prematurely without adequate rest, while 29% took some rest and 6% became ill during the puerperium. Regarding associated medical conditions, 8% had chronic cough/COPD, 3% reported a large pelvic tumour, and 1% had constipation. The majority (88%) had no concurrent medical disorders.

4. Discussion

The present study investigated reproductive and obstetric determinants of genital prolapse among women attending a tertiary care hospital. Findings demonstrate strong associations with high parity, lack of antenatal care, home deliveries conducted predominantly by traditional birth attendants, obstetric complications, and inadequate postpartum rest. These results are consistent with the broader literature, which identifies reproductive history and perinatal care as central to the pathogenesis of genital prolapse.

One of the most striking findings in this cohort was the predominance of high parity, with the majority of women reporting five or more deliveries. This aligns with research by Scherf et al. in rural Gambia, which highlighted parity as a critical predictor of prolapse severity [3]. Similarly, Megabiaw et al. reported a direct relationship between increasing parity and prevalence of pelvic floor disorders in Ethiopia [15]. Repeated vaginal births are thought to cause cumulative weakening of pelvic connective tissue and musculature, predisposing women to prolapse over time [16]. Antenatal care uptake was notably poor, with only 5% of participants reporting attendance. Lack of antenatal care has been associated with poor birth preparedness and delayed detection of obstetric complications, which in turn increase the risk of pelvic floor injury. Masenga et al. emphasized that women without access to antenatal services were significantly more likely to develop symptomatic prolapse [4]. Similarly, Asresie et al. demonstrated that antenatal and intrapartum factors play a pivotal role in determining pelvic floor outcomes [13].

Mode and circumstances of delivery further reinforce the obstetric basis of prolapse. Nearly 90% of births occurred at home, with traditional birth attendants conducting over 80% of deliveries. This mirrors findings from Nepal and Ethiopia, where reliance on untrained attendants has been identified as a driver of birth trauma and prolapse [12,17]. In contrast, studies in higher-resource settings show lower rates of prolapse, attributed to widespread institutional delivery and availability of skilled obstetric care [18].

Obstetric complications such as malpresentation, stillbirth, and postpartum haemorrhage were

reported in nearly one-third of participants. Complicated labours subject the pelvic floor to prolonged mechanical strain, contributing to connective tissue and neuromuscular injury. Handa et al. demonstrated that women with larger genital hiatus following difficult deliveries were more likely to progress to symptomatic prolapse [19]. Thus, the complications observed in this cohort are not only acute concerns but also long-term risk factors for pelvic floor dysfunction.

Postpartum recovery patterns also emerged as important. A majority of women resumed domestic or agricultural work shortly after delivery, often without adequate rest. This early return to physically demanding tasks has been recognized as a risk factor in multiple South Asian studies [14]. Cultural expectations that women quickly resume responsibilities during the puerperium may exacerbate pelvic floor injury sustained during childbirth.

Medical comorbidities such as chronic cough and constipation were present in a small proportion of women, yet these conditions are recognized contributors to pelvic floor strain. Persistent increases in intra-abdominal pressure are associated with prolapse progression [20]. Though less prevalent in this study, they remain clinically relevant, particularly in chronic disease contexts.

When compared with regional studies, the findings in Bangladesh reveal similar patterns to those in East Africa and South Asia, underscoring the universality of obstetric risk factors in low-resource contexts. However, the predominance of home deliveries and lack of antenatal care in this cohort may indicate even higher vulnerability. As highlighted by Abhyankar et al., the lived experience of prolapse is profoundly shaped by access to healthcare and cultural norms surrounding childbirth [2]. Addressing these structural determinants is therefore as crucial as managing clinical risk factors.

Overall, this study reinforces the established link between reproductive factors and genital prolapse while situating the problem within the specific maternal health context of Bangladesh. Preventive strategies must prioritize antenatal care coverage, promotion of institutional deliveries, skilled birth attendance, and community education on postpartum rest. Future studies should employ longitudinal designs to clarify temporal associations and assess the impact of preventive interventions.

5. Limitations of the Study

This study was limited by its cross-sectional design, which precludes causal inference, and by reliance on hospital-based participants, potentially restricting generalizability to community settings. Recall bias may also have influenced the reporting of obstetric histories.

6. Conclusion

This study highlights the role of reproductive and obstetric factors in genital prolapse among Bangladeshi women. High parity, inadequate antenatal care, home deliveries by traditional attendants, obstetric complications, and early postpartum workload were associated with prolapse. Although comorbidities like chronic cough and constipation contributed in some cases, the primary determinants were reproductive. These findings underscore the importance of strengthening maternal health services, promoting skilled birth attendance, and educating communities about postpartum rest to reduce prolapse and improve women's reproductive health outcomes.

7. Acknowledgment

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8. Conflicts of Interest

There are no conflicts of interest.

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