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EMERGENCY HYSTERECTOMY DUE TO POSTPARTUM HAEMORRHAGE: A GYNAEO-CLINICAL AND COMMUNITY MEDICINE PERSPECTIVE ON RISK AND PSYCHOSOCIAL IMPACT

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ABSTRACT

Background

PPH is still among the most common causes of maternal morbidity and mortality, especially in resource-poor regions. In extreme scenarios where bleeding continues after medical and conservative surgical measures, emergency peripartum hysterectomy becomes necessary. Although this procedure averts death, it leaves a large burden of grief and psychosocial complications on the women.To assess the clinical risk factors, maternal and neonatal outcomes, and the psychosocial impact of emergency hysterectomy performed for life-threatening PPH at a tertiary care hospital.

Methods

This cross-sectional study was carried out at the Obstetrics and Gynaecology Department of Khyber Teaching Hospital Peshawar from January 2022 to January 2023. 83 women who underwent emergency hysterectomy for post partumhemorrhage (PPH) were included in the study. Data was gathered regarding demographic details, obstetric history, clinical assessment, and postoperative results. The impact from a psychological and social perspective was conducted through interviews. Relationships between chosen variables and outcomes were evaluated using the chi-square test with a significance level of $p < 0.05$.

Results

the majority of participants were aged 20–29 years, multiparous, and from low-income

backgrounds. Uterine atony and placenta accreta were the most common causes of PPH. Cesarean delivery was the predominant mode of birth, and nearly half of the women required ICU admission. Maternal complications included shock (22%), DIC (11%), and sepsis (10%), with a mortality rate of 3.6%. Psychologically, 40% experienced depression, 50% reported anxiety, and 30% had symptoms suggestive of PTSD. Depression was significantly associated with age and employment status ($p < 0.05$). One in five women reported not being fully informed before surgery, and over 15% experienced marital separation following the procedure.

Conclusion

Emergency hysterectomy is a life-saving measure for severe PPH but carries substantial emotional and social consequences. Greater emphasis is needed on early risk detection, improved antenatal care, and psychosocial support following surgery. Ensuring informed consent and emotional counseling, even during emergencies, should be integral to maternal health services.

Keywords: Postpartum haemorrhage, emergency hysterectomy, maternal complications, psychological impact, fertility loss, Peshawar, obstetric emergency, depression, social stigma

INTRODUCTION

Postpartum haemorrhage (PPH) is considered to be one of the most dangerous complications of childbirth, contributing significantly to maternal mortality rates across the globe [1] [2] Even with improvements in obstetric care, PPH remains a serious concern, particularly in low to middle income countries due to the frequent and critical lags in observation, channeling, and action. Pakistan is reported to have strikingly high mortality rates among mothers, with PPH cited as one of the foremost causes consistently[3] [4]

Although most cases of PPH can be treated conservatively with uterotonics, uterine massage, or surgical techniques like uterine artery ligation or balloon tamponade, there are exceptional cases that need more drastic measures [5] [6]. When all other attempts to control bleeding are unsuccessful, emergency peripartum hysterectomy becomes the only remaining option. This procedure does preserve life, but there are severe impacts to a woman's health, and significant repercussions on her mental health and sociocultural identity [7] [8]

The choice to perform a hysterectomy right after delivery is often not made casually, considering the physical, emotional, mental, and sociological scars it could leave. Countries like Pakistan lack support networks which would otherwise help ease the emotional burden associated with losing reproductive capabilities and dealing with lower mental health standards. The gap in communication between patients and caregivers adds to the stress, which escalates during emergency situations[9] [10].

Existing literature largely analyzes the clinical causes of postpartum hemorrhage (PPH) along with the surgical indications for hysterectomy, paying little attention to societal level psychosocial impacts. There is an urgent gap in exploring not just the medical risk factors structuring emergency hysterectomy, but also the social and emotional ramifications, particularly in resource-poor settings [11].

This study was designed to assess the clinical and community health dimensions of emergency hysterectomy in women presenting with PPH at a tertiary care hospital in Peshawar. It aims to describe the risk factors, maternal and neonatal outcomes, and, importantly, the psychological and social impact experienced by affected women. The findings seek to inform more holistic, woman-centered obstetric care strategies that extend beyond immediate surgical management.

METHODOLOGY

From January 2022 to January 2023, this descriptive cross-sectional study was done at the Department of Obstetrics and Gynaecology, Khyber Teaching Hospital (KTH) in Peshawar. The study highlighted cases where patients presented with acute postpartum hemorrhage (PPH) and required emergency peripartum hysterectomy as a lifesaving surgical intervention.

Khyber Teaching Hospital's Institutional Review Board (IRB) granted ethical clearance for the research. All participants provided informed consent, and confidentiality was upheld during the conduct of the study.

Women included in the study were those who had delivered either vaginally or via cesarean section and subsequently underwent hysterectomy within 24 hours due to uncontrolled bleeding unresponsive to conservative measures. Patients with hysterectomies performed for reasons other than postpartum haemorrhage, such as malignancy or uterine rupture unrelated to delivery, were excluded from the sample.

A total of 83 women met the inclusion criteria and were recruited through consecutive non-probability sampling. Data were collected using a structured proforma that captured demographic details, obstetric history, clinical presentation, type and timing of delivery, cause of haemorrhage, blood loss estimation, use of uterotonics, and time interval between delivery and hysterectomy. Additionally, intraoperative findings, ICU admissions, transfusion requirements, and maternal and neonatal outcomes were recorded.

Psychological impact was evaluated during the postpartum period using a face-to-face interview approach. Women were asked about symptoms suggestive of depression, anxiety, and post-traumatic stress disorder (PTSD), based on standard screening questions. Their perceptions of emotional support, social stigma, and satisfaction with medical care were also documented. Furthermore, the study explored whether patients were adequately informed before surgery and whether the experience had affected their marital relationships or future fertility desires.

Data were analyzed using SPSS software version 25. Frequencies and percentages were calculated for categorical variables. Chi-square tests were applied to determine associations between key demographic factors and outcomes such as maternal complications and depression. A p-value less than 0.05 was considered statistically significant.

RESULT

The study included 83 women who underwent emergency hysterectomy due to postpartum haemorrhage. Nearly half of the participants were aged between 20 and 29 years, indicating that the procedure was most common in women of prime reproductive age. A majority of the women came from urban areas and belonged to lower-income backgrounds, reflecting socioeconomic vulnerabilities. Educational attainment was low overall, with most having primary or secondary schooling. The vast majority were housewives, and multiparity was common. Antenatal care was suboptimal, with almost half of the women receiving fewer than four antenatal visits. These findings highlight a concerning trend of inadequate maternal health services and delayed risk identification during pregnancy.

Table 1: Demographic and Obstetric Profile of Participants (n = 83)

Variable	Category	Frequency (%)
Age Group	<20	7 (8.4%)
	20–29	41 (49.4%)
	30–39	22 (26.5%)
	≥40	13 (15.7%)
Residence	Urban	50 (60.2%)
	Rural	33 (39.8%)
Socioeconomic Status	Low	44 (53.0%)
	Middle	31 (37.3%)
	High	8 (9.6%)
Education Level	No Education	18 (21.7%)
	Primary	23 (27.7%)
	Secondary	24 (28.9%)

	Higher	18 (21.7%)
Employment Status	Housewife	60 (72.3%)
	Employed	17 (20.5%)
	Unemployed	6 (7.2%)
Parity	Primipara	20 (24.1%)
	Multipara	42 (50.6%)
	Grand multipara	21 (25.3%)
Antenatal Visits	None	7 (8.4%)
	1–3	33 (39.7%)
	≥4	43 (51.8%)

Clinically, the majority of deliveries occurred in hospitals, with cesarean section being the dominant mode. A significant proportion of patients were referred from other facilities, indicating delayed interventions. Primary postpartum haemorrhage accounted for most cases, with uterine atony emerging as the leading cause. The volume of blood loss was substantial in more than half the patients, and nearly half underwent hysterectomy within three hours of delivery. Use of uterotonics and blood transfusions was almost universal. ICU admission was necessary for nearly half of the patients, reflecting the critical nature of their condition. Overall, the table paints a picture of acute obstetric emergencies requiring rapid surgical intervention and intensive care.

Table 2: Clinical Characteristics and Risk Factors (n = 83)

Variable	Category	Frequency (%)
Place of Delivery	Home	22 (26.5%)
	Public Hospital	38 (45.8%)
	Private Hospital	23 (27.7%)
Referral Status	Direct Admission	35 (42.2%)
	Referred	48 (57.8%)
Delivery Type	Vaginal	31 (37.3%)
	Cesarean	52 (62.7%)
Gestational Age	Preterm	12 (14.5%)
	Term	59 (71.1%)
	Post-term	12 (14.5%)
Type of PPH	Primary	68 (81.9%)
	Secondary	15 (18.1%)
Cause of PPH	Uterine Atony	30 (36.1%)
	Placenta Accreta	20 (24.1%)
	Retained Placenta	14 (16.9%)
	Uterine Rupture	11 (13.3%)
	DIC	8 (9.6%)
Blood Loss Estimate	<1000 ml	20 (24.1%)
	1000–2000 ml	45 (54.2%)
	>2000 ml	18 (21.7%)
Timing of Hysterectomy	<1 hr	25 (30.1%)
	1–3 hrs	39 (47.0%)
	>3 hrs	19 (22.9%)
Uterotonics Given	Yes	76 (91.6%)
	No	7 (8.4%)
Blood Transfusion	Yes	79 (95.2%)
	No	4 (4.8%)
ICU Admission	Yes	41 (49.4%)
	No	42 (50.6%)

A considerable number of women experienced serious physical and emotional consequences following the hysterectomy. While one-third of participants recovered without complications, the remainder suffered from life-threatening outcomes such as shock, sepsis, or coagulopathies. Maternal death occurred in a small but concerning proportion (3.6%). Neonatal survival was 74.7%, but 18% of births resulted in stillbirths and 7% in early neonatal deaths, indicating adverse perinatal outcomes.

From a psychosocial standpoint, nearly 40% of women experienced depression, and 50% reported anxiety, highlighting the emotional toll of emergency hysterectomy. Post-traumatic stress symptoms were seen in 30%. Emotional support was lacking for over 40% of the women, and one-third reported moderate to high levels of stigma, possibly due to perceptions of lost femininity or fertility. About one-fourth were dissatisfied with the care received, and 15.7% experienced marital separation, emphasizing the wider social impact of the procedure. Notably, 65% of women still desired future fertility, and one in five stated they had not been adequately informed about the surgery beforehand pointing to gaps in communication and consent practice

Table 3: Psychosocial Impact and Postoperative Experiences (n = 83)

Variable	Category	Frequency (%)
Maternal Complications	None	30 (36.1%)
	Shock	18 (21.7%)
	DIC	9 (10.8%)
	Sepsis	8 (9.6%)
	Renal Failure	7 (8.4%)
	Death	3 (3.6%)
Neonatal Outcome	Alive	62 (74.7%)
	Stillbirth	15 (18.1%)
	Neonatal Death	6 (7.2%)
Depression Symptoms	Yes	33 (39.8%)
	No	50 (60.2%)
Anxiety Symptoms	Yes	42 (50.6%)
	No	41 (49.4%)
PTSD Symptoms	Yes	25 (30.1%)
	No	58 (69.9%)
Emotional Support	Adequate	47 (56.6%)
	Inadequate	36 (43.4%)
Perceived Stigma	Low	38 (45.8%)
	Moderate	27 (32.5%)
	High	18 (21.7%)
Satisfaction with Care	Satisfied	37 (44.6%)
	Neutral	25 (30.1%)
	Dissatisfied	21 (25.3%)
Marital Relationship Impact	No Impact	47 (56.6%)
	Strained	23 (27.7%)
	Separated/Divorced	13 (15.7%)
Desire for Future Fertility	Yes	54 (65.1%)
	No	29 (34.9%)
Informed Consent	Yes	65 (78.3%)
	No	18 (21.7%)

This table explores statistical associations between selected demographic characteristics and two important outcomes: maternal complications and postoperative depression. The results revealed that age group had a significant association with depression (p = 0.034), suggesting younger or older women may experience psychological distress more acutely following hysterectomy. Similarly, employment status was also significantly linked to depression (p = 0.026), possibly due to differing levels of financial independence, social support, or coping ability.

No demographic variables showed statistically significant associations with maternal complications. However, residence (urban vs. rural) approached significance (p = 0.078), indicating a potential trend where location might influence complication rates due to access disparities in healthcare facilities. Socioeconomic status and education level showed no significant relationship with either outcome in this study.

Table 4: Association of Demographic Variables with Key Outcomes (Chi-square Test)

Variable	P-value with Maternal Complications	P-value with Depression
Age Group	0.690	**0.034**
Residence	0.078	0.965
Socioeconomic Status	0.409	0.980
Education Level	0.899	0.690
Employment Status	0.841	**0.026**

Note: $p < 0.05$ considered statistically significant.

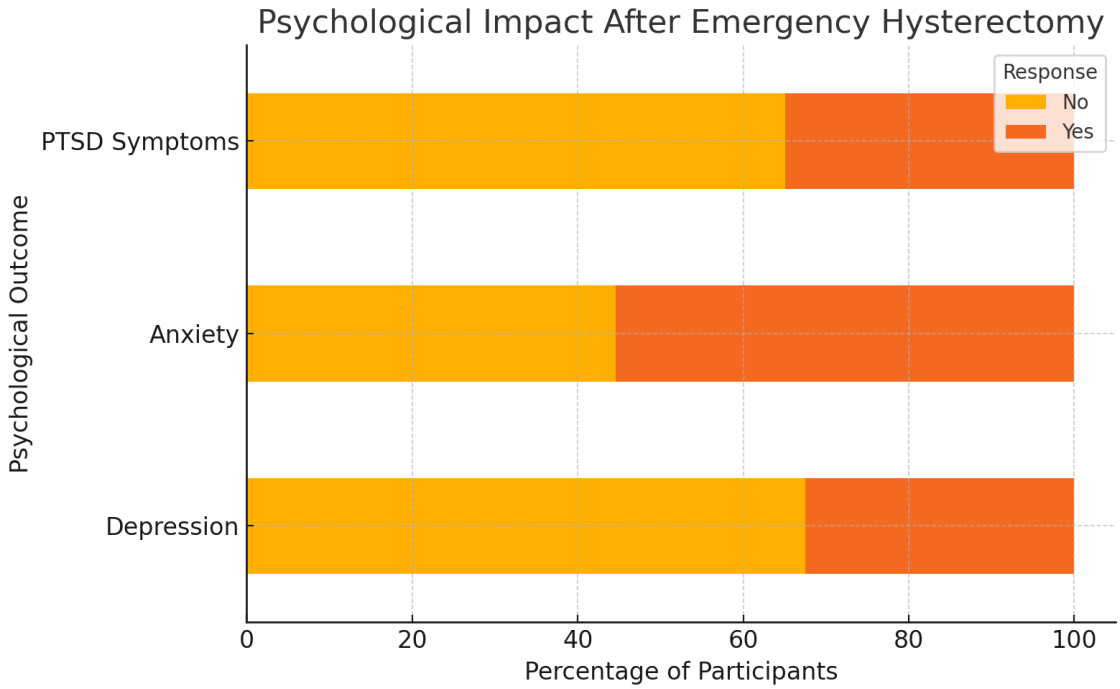

Figure 1

Graph depicting the mental health effects following an emergency hysterectomy. It highlights the proportion of women with symptoms of depression, anxiety, and PTSD. There is substantive psychological anguish attendant to this surgery, which makes mental health problems more acute, makes depression worse and intensifies anxiety symptoms.

DISCUSSION

This study offers insight into the clinical, emotional, and social challenges experienced by women who underwent emergency hysterectomy following postpartum haemorrhage (PPH) at a tertiary care

center in Peshawar. The findings reflect both the urgency of the condition and the multidimensional impact it imposes on patients.

A significant number of women were in their twenties and early thirties, aligning with peak reproductive years. This age distribution mirrors trends observed in previous studies from South Asia, where younger multiparous women remain at heightened risk due to repeated pregnancies and insufficient birth spacing. The high proportion of referrals from peripheral facilities suggests a delay in accessing skilled obstetric care an issue echoed by studies reported that delayed transfer from primary centers contributed to poor maternal outcomes in PPH cases[12-14].

Uterine atony emerged as the leading cause of haemorrhage, consistent with studies identified atony and morbid placental adherence as dominant contributors to surgical intervention. In this study, cesarean sections were more frequently associated with hysterectomy, which may point to rising surgical deliveries and related complications like abnormal placentation[15-17]. Similar observations were reported by studies linked placenta accreta and prior cesarean history to higher emergency hysterectomy rates[18-20].

The psychosocial findings of this research underscore a critical yet often overlooked dimension of maternal health. Nearly 40% of women experienced depressive symptoms, and 30% showed signs of post-traumatic stress, which correlates with results study who noted significant mental health burdens in women undergoing obstetric surgeries. Factors like loss of fertility, marital strain, and perceived social stigma contributed heavily to psychological distress. This highlights the need for integrating mental health support into postpartum care, especially in cases involving irreversible reproductive loss[21].

In addition, only 78% of patients recalled receiving clear information about the procedure beforehand. This gap raises concerns about the adequacy of preoperative counseling and informed consent, particularly in emergencies. Study emphasized the ethical necessity of clear communication even in time-sensitive scenarios, advocating for rapid but meaningful counseling before life-altering interventions like hysterectomy[22].

From a community health standpoint, the study reveals critical gaps in antenatal care utilization and emergency obstetric preparedness. Despite WHO recommendations for at least four antenatal visits, nearly half of the women had fewer, reflecting a pattern also documented studies stressed the role of early risk identification in preventing severe maternal outcomes[23].

No significant association was found between most demographic factors and maternal complications; however, depression was significantly associated with age and employment status. Younger women and those not engaged in employment may be more vulnerable to emotional distress due to financial dependency, social expectations, and limited access to psychological resources.

CONCLUSION

Emergency peripartum hysterectomy remains a life-saving intervention for women experiencing severe postpartum haemorrhage, but it comes at a substantial physical, emotional, and social cost. The procedure is most commonly performed in younger, multiparous women, often following cesarean delivery and referral from other facilities. Beyond survival, affected women face significant psychological challenges, including depression, anxiety, stigma, and disruptions to marital life.

To improve outcomes, there is an urgent need for strengthening antenatal care, ensuring timely referrals, enhancing access to skilled delivery services, and providing structured psychosocial support during recovery. Emergency obstetric protocols must also emphasize informed consent, even in crisis settings. Policymakers and healthcare providers must adopt a holistic approach that considers not just clinical survival but also the emotional well-being and dignity of women undergoing this critical intervention.

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