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RESEARCH PAPER

The Relationship between Body Image Perception and Depression among Obstetric Fistula Patients

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ABSTRACT

This study investigated the relationship between depression levels and body image perception among obstetric fistula patients in South Punjab, Pakistan.Obstetric fistula, a result of prolonged and obstructed labor, significantly affects the psychological well-being of Pakistani women, especially those in rural areas with limited healthcare access. By using cross sectional design 223 women aged 18-35 from various South Punjab cities were recruited. Depression levels were assessed using the Patient Health Questionnaire (PHQ-9), and a researcher-developed Body Image Perception Scale evaluated body image perceptions.Significant correlations emerged among variables. Residence, socioeconomic status, and employment status correlated negatively with depression, while age correlated positively. Education level showed a paradoxical relationship with depression. Additionally, a significant negative correlation existed between depression and body image perceptions, indicating the impact of negative body image on depression levels. Targeted interventions and further research are crucial to address the mental health challenges faced by obstetric fistula patients in Pakistan, particularly in rural areas, emphasizing comprehensive support for affected women.

Keywords: Body Image perception, Depression, Obstetric Fistula

Introduction

Obstetric fistula, a devastating condition primarily affecting women in less developed regions, arises from prolong and obstructed labor, resulting in an abnormal connection between the vagina and the bladder or rectum (Changole et al., 2017). This condition, as defined by the World Health Organization (WHO), manifests as a continuous involuntary leakage of urine or feces into vaginal vault, severely impacting women physical, social and psychological well being (WHO, 2018). Notably Obstetric fistula has various forms and the most common are vesicovaginal fistula (VVF) and rectovaginal fistulas (RVF) both type are stemming from labor complications (Tunclep et al., 2014).

In less developed nations like South Asia Sub Saharan Africa, where early aged marriages are encouraged, Obstetric fistulas are alarmingly common due to inadequate intrapartum care (Andargie&Debu, 2017). Conversely developed nations with robust healthcare system seldom witness such cases, where predictive prenatal care and timely interventions mitigate obstetric complications (Rundasa et al., 2021). Nonetheless, resource poor regions grapple with limited access to medical facilities, perpetuating the prevalence of obstetric fistula despite its preventable nature (Wall 2020). Although treatment like reconstructive surgery is considered as a successful treatment for obstetric fistula patients, yet its accessibility remains a challenge, especially for women living in rural areas (Odonkor&Yeboah, 2023). Despite its not life threatening condition , obstetric fistula profoundly impacts women's quality of life, by impeding physical, social, psychological and sexual functions (Metiwos et al ., 2021).

The Toll of Obstetric Fistula: Medical and Psychological Effects

Obstetric Fistula imposes a heavy toll on affected women, both medically and psychosocially. The profound consequences of urinary and fecal incontinence extend beyond physical discomfort, impeding cleanliness and inhibiting participation in social and work activities (Adler et al., 2013). Moreover, the development of deep ulcers on external genitalia intensifies pain and mobility challenges, worsening the overall wellbeing affected women. Likewise untreated obstructed labor not only increases the risk of fetal loss but also undermines women's prospects of successful marriage due to societal rejection and exclusion (Khisa et al 2011). Misconceptions regarding the causes and treatment of this disease increases social marginalization and it causes psychological distress among affected women (Alio et al ., 2010). Consequently, obstetric fistula sufferers face economic hardships, social stigmatization, and profound psychological distress (Wilson et al., 2015) which impair their ability to perform daily life activities and it ultimately leads to self neglect (Belayihun&Mudzuis, 2018) .

Body image Perception among Obstetric Fistula Patients

Body image is a psychological construct that pertains to an individual's perception and attitude regarding their body. This concept impacts numerous facets and psychosocial wellbeing, and feeling of discontentment with one's body. Earlier studies have highlighted the detrimental aspects of body image as a risk factor for mental health problems (Nayır et al., 2016). As Cash and Fleming (2002) reported that dearth of the past studies indicated that body image affects psychosocial functioning of individual having various type of physical illness, however less attention has been paid towards patients having obstetric fistula patients.

Literature Review

According to Jokhio et al. (2014) two million cases worldwide and 50,000–100,000 new cases annually are the prevalence estimates that are most frequently cited. It is worth noting that the majority of studies are facility-based, and the few that are population-based may not have been appropriate for correctly diagnosing obstetric fistula. In a cross-sectional study conducted in India, it was observed that several factors were significantly associated with the development of obstetric fistula. Women who had received one or no antenatal care follow-up were 1.76 times more likely to develop obstetric fistula compared to those who had attended two or more ANC visits. Additionally, women who had undergone three or more deliveries faced a 2.5 times higher risk of developing fistula compared to those with only one childbirth. The study also found that delivering at home substantially increased the risk, with women delivering at home being 4.38 times more likely to develop fistula than those delivering in a health facility. Moreover, delivering at home with traditional birth attendants elevated the risk by 65% compared to delivering at a health institution. Finally, women living more than two hours away from a health facility had a 1.78 times higher likelihood of developing obstetric fistula compared to those living within a two-hour distance. These findings emphasize the critical importance of adequate antenatal care, facility-based deliveries, and accessible obstetric care in preventing obstetric fistula (Swain et al., 2020). Likewise Andargie and Debu (2017) identified that the incidence of obstetric fistula is most prevalent among adolescent women, particularly those whose age at first childbirth is below 15 years, with a rate of 29.9%. Additionally, the prevalence is elevated among women who give birth for the first time within the age range of 15-19 years, accounting for 19.4% of cases. Comparatively, the prevalence decreases among women in the age groups of 20-24 years (15.5%) and those aged 25 and above at the time of their first childbirth (13.8%). In Pakistan few researchers have highlighted this physical illness. There are only few researches that have addressed this issue. One of them was conducted in Sakhar to identify the factors responsible for this disorder. The findings of the study uncovered significant trends regarding obstructed labor and difficulties in access to delivery services

among patients specifically from rural areas of Pakistan. Notably in such areas majority of women experience prolonged obstructed labor, while delays in reaching health facilities and accessing delivery services were prevalent (Shoaibunisa et al., 2022). Likewise another study was carried out by Khan and Zaheer (2017) to analyze the socio demographic profile of women exhibiting signs of obstetric fistula patients and to identify factors contributing to its development in Pakistan. For this purpose secondary data analysis of the Pakistan demographic and health survey 2006-2007 was conducted which revealed that among women of reproductive age (15-49 years), approximately 3.0% experience signs of obstetric fistula. Moreover analysis indicated that women from Punjab region, those who underwent caesarian section delivery and those who reported complications were likely to develop obstetric fistula. Similarly according to a recent review article obstetric fistula is a terrible condition that arises from obstructed labor and has a substantial impact on a woman's life in various ways. Likewise in a recent systematic review Bari et al. (2024) revealed that due to this devastating condition women face profound economic challenges. To identify these challenges they comprehensively review 517 published papers and the main findings indicated that women with obstetric fistula experience significant economic challenges, including job loss, dependence on others, and financial strain resulting from seeking care.

Material and Methods

Participants

In this study, participants were recruited from a cohort of patients diagnosed with obstetric fistula across various cities in South Punjab.

Sample Size

Sample was calculated by using G power statistical software. According to estimated sample of 223 patients, aged between 18 and 35, were included in the study. The following are some of the various demographic factors that were examined in the study: age, place of residence, education, socioeconomic status, employment status, age at marriage, number of children, delivery method, and complications during delivery.

Sampling Technique

In this study cross sectional research design was used to assess the relation of variables.

Measurement Tools Used in the Study

Patient Health Questionnaire (PHQ-9)

A structured Patient Health Questionnaire (PHQ-9) screening tool for depression was used to assess the level of depression among obstetric fistula patients The PHQ-9 is a multi-purpose instrument that can be used for screening, diagnosing, monitoring and measurement of severe depression in clinical practice. The PHQ-9 is a psychometrically sound, brief screening assessment instrument targeting depression severity over the past 2 weeks with nine items. Each item is rated from “not at all,” to “several days,” to “more than half the days,” to “nearly every day,” with scores greater than 20 indicating severe depression (Zimmerman, M. 2012).

Body Image Perception Scale

Body image perception scale is a researcher developed instrument that was design to assess the body image perceptions of obstetric fistula patients. As research observed that in Pakistan no any specific scale was available to assess this aspect. The scale comprises 14

items specifically tailored to evaluate the various aspects of body image. Participants respond to each item on a likert type scale, indicating the extent to which they agree or disagree with statement they related to body image. Scores are typically summed across items to obtain a total score, with higher score indicating more negative body image perception.

Hypotheses

1. There is a significant relationship between body image perceptions among obstetric fistula patients and their level of depression and other study variables.

2. Obstetric fistula patients with more negative body image perceptions will report higher levels of depression compared to those with more positive body image perceptions.

Results and Discussion

Table 1
Relationship between Body Image Perceptions, Level of Depression, and Other Study Variables (N = 223)

		M	*SD*	1	2	3	4	5	6	7
1	Age	1.52	.50	--						
2	Residence	1.50	.50	-.229**	--					
3	Socio-economic status	1.15	.36	-.146*	.048	--				
4	Employment status	1.51	.50	-.257**	.614**	.019	--			
5	Level of education	1.92	.86	.391**	-.730**	-.105	-.845**	--		
6	Body Image	34.86	15.64	-.289**	.524**	.133*	.724**	-.749**	--	
7	Depression	14.99	5.97	.310**	-.579**	-.158*	-.697**	.758**	-.887**	--

**. Correlation is significant at the 0.01 level (2-tailed).*. Correlation is significant at the 0.05 level (2-tailed).

Table 2
Summary of Hierarchical Regression Analysis for Variables Predicting Depression (N = 223)

	Model 1			Model 2		
Variable	***B***	***SE***	***β***	***B***	***SE***	***β***
(Constant)	15.02**	3.27		24.57**	2.31	
Age	.35	.57	.03	.23	.39	.02
Residence	-.79	.76	-.07	-1.14*	.52	-.10*
Socio-economic status	-1.57*	.73	-.10*	-.65	.50	-.04
Employment status	-2.74**	.98	-.23**	.23	.69	.02
Level of education	3.42**	.69	.49**	.10*	.50	.14*
Body Image				-.28**	.02	-.73**
R^2			.58			.81
F			64.18**			156.47**
ΔR^2			.59			.81

Note. CI = Confidence interval: **p<.05, **p<.01*

Discussion

Table (1) illustrates noteworthy associations among variables concerning obstetric fistula patients, highlighting key connections. Here age is positively correlated with depression (r = 0.310, p < .01), indicating that older patients tend to experience elevated levels of depressive symptoms. On the other hand, residence (r = -0.579, p < .01), socio-economic status (r = -0.158, p < .05), and employment status (r = -0.697, p < .01) exhibit negative correlations with depression. Such negative correlations imply that living in urban areas, having a lower socioeconomic status, and being unemployed are associated with

increased risk of depression. It's interesting to note that there is a positive link between education level and depression ($r = 0.758$, $p < .01$), suggesting that those with greater education levels may paradoxically experience more depressive symptoms. Interestingly, there is a strong negative association between depression and body image perceptions ($r = -0.887$, $p < .01$). This means that patients who report higher levels of depression are significantly more likely to have poor body image views. These results confirm the first hypothesis and highlight the complex interaction between psychological, socioeconomic, and demographic factors affecting depression in patients with obstetric fistulas.

Likewise in table (2) the results of a hierarchical regression analysis that was conducted to determine the factors that influence depression in patients with obstetric fistulas are presented in Table 2. The investigation focused on the influence of body image perceptions in addition to other demographic and socioeconomic variables. Age shows a non-significant positive correlation ($\beta = 0.03$, $p > .05$) with depression in the first Model 1, which includes demographic and socioeconomic variables. On the other hand, residence shows a significant negative correlation ($\beta = -0.07$, $p < .05$), suggesting that living in an urban area protects against depression. Likewise, there is a noteworthy inverse correlation between socio-economic status and depression levels ($\beta = -0.10$, $p < .05$), suggesting that poorer socio-economic status is associated with higher levels of depression. On the other hand, there is a noteworthy inverse relationship between work status and depression ($\beta = -0.23$, $p < .01$), indicating that patients who are employed typically have higher depression levels. Furthermore, education level is found to be a significant positive predictor ($\beta = 0.49$, $p < .01$), suggesting a link between greater levels of education and depression. Moving on to Model 2, body image perceptions are added along with the previously mentioned variables. It is found that body image perceptions predict depression significantly ($\beta = -0.73$, $p < .01$), meaning that patients who have more negative body image perceptions also report higher levels of depression. Furthermore, the overall model fit substantially improves in Model 2, with a notable rise in R^2 from .58 to .81, suggesting that the inclusion of body image perceptions enhances the explanatory capacity of the model. Regarding model statistics, both Model 1 and Model 2 exhibit strong overall fits, evidenced by high F-values (64.18 and 156.47, respectively) and significant ΔR^2 values, indicating that the additional variables significantly contribute to depression prediction. Thus, the findings indicate that beyond demographic and socioeconomic factors, negative body image perceptions notably contribute to increased depression levels among obstetric fistula patients.

Conclusion

The results of this study have shed important light on the intricate interactions between psychological, socioeconomic, and demographic variables that affect this population's prevalence of depression. According to the findings living in an urban area appears to be a protective factor against depression, despite the fact that older age, lower socioeconomic status, unemployment, and higher education levels are associated with an increased risk of depression, . Notably, even when other factors are taken into consideration, negative perceptions of one's body are found to be a significant predictor of depression. These findings demonstrate the complex nature of depression in patients with obstetric fistulas and emphasize the need for comprehensive interventions that target psychological issues like body image perceptions in addition to demographic and socioeconomic inequalities.

In order to properly address the complex needs of obstetric fistula patients who are depressed, more research is necessary to investigate the underlying mechanisms underlying the observed associations. Finally, by paying attention to these complex factors, medical professionals can improve the quality of life and general health of patients with obstetric fistula who are depressed.

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