

Psychosocial Morbidity Among Patients Before and After Surgical Correction of Vesicovaginal Fistula

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Abstract

Objective: To compare the mean preoperative and post-operative quality of life scores using world Health Organization quality of life- biomedical research and education foundation (WHOQOL-BREF) following the surgically repair of vesicovaginal fistula (VVF).

Methodology: A comparative cross-sectional study was done at department of Gynae and Obstetrics at Isra University Hospital Hyderabad from Dec-2020 to June 2021. Women aged 20 to 60 year, presented with complaints of continuous leakage of urine per vagina following obstetric or gynecological procedures who were operated were included. The WHO QoL-BREF questionnaire was used as a tool to evaluate the quality of life before surgery. Surgical repair was performed in all females and quality of life was re-assessed after 6 weeks. The data was entered and analyzed using SPSS 22.

Results: The mean age of the patients was 37.70±10.96 years. Majority of the women 55.4% had poor pre-operative physical domain according WHO quality of life score. Vesicovaginal fistula was successfully repaired among 98.0% of the cases. Before surgery, 30.7% of women had poor QOL (score ≤40), 67.3% had moderate QOL (score 41 to 60), and only two women had good QOL (score >60). Psychosocial and overall quality of life scores significantly improved after treatment across all domains, including physical, psychological, environmental, and social domains, p-0.001. Overall mean pre-operative QOL score was 33.56±9.33 and after treatment significantly improved as 80.07±9.55 (P-0.001).

Conclusion: Pre-operative quality of life was observed to be very poor, which was significantly improved as good quality of life after treatment of vesicovaginal fistula by using the world health organization quality of life scoring system.

Keywords: Vesicovaginal Fistula, Quality of life, Psychological Assessment, social support.

Cite this article as: Parveen BS, Haider G, Mahmood A, Channa SH, Memon N. Psychosocial Morbidity Among Patients Before and After Surgical Correction of Vesicovaginal Fistula. J Soc Obstet Gynaecol Pak. 2025; 15(4):273-277. DOI. 10.71104/jsogp.v15i4.969

Introduction

Maternal morbidities, or non-fatal adverse birth outcomes, have recently received more attention than maternal morbidity and mortality, which now has traditionally been the primary indicator of women's reproductive health. Maternal medical complications are an important determinant in maternal health consequences for the females of developing nations, particularly those in developing nations like Pakistan.

One such terrible maternal complications that is particularly prevalent in low-income nations and frequently comes from poverty and inability to get

health care for mothers is obstetric fistula.¹

The obstetric fistula is a pathological opening that forms between the vagina and the bladder or rectum, often resulting from prolonged, obstructed, or inadequately managed labor.^{2,3} Around more than two million women are affected by obstetric fistula throughout the world.⁴ It severely impacts the women hygiene, self-confidence, social relationships, and living conditions, negatively affecting all aspects of her overall health and long-term illness and isolate themselves from society.

Authorship Contribution: ^{1,3,5}Substantial contributions to the conception or design of the work or the acquisition, ²Supervision, ^{4,6}Drafting the work or revising it critically for important intellectual content.

Funding Source: none

Conflict of Interest: none

Received: May 22, 2025

Revised: Oct 14, 2025

Accepted: Oct 21, 2025

Additionally, the fistulas negatively affect the physical, psychological, emotional, and sexual health of the women, in addition to their medical complications. Prolonged obstructed labor is the primary cause of VVF and in developing countries, quality of life of women is often reduced by ongoing urine leakage, which can cause wetness in the perineal area, skin irritation, pain, and a persistent urinary odor. It is one of the three chronic health conditions that have the greatest negative impact on HRQOL.⁴ In contrast, the most frequent cause of VVF in industrialized nations is iatrogenic injury to the urinary system, the preponderance of which are side effects of benign gynecological procedures.⁵ The occurrence of a VVF is thought to complicate 0.8 out of 1000 hysterectomies.

Malignancy and pelvic radiotherapy are two other causes in affluent nations. The usual postsurgical (post hysterectomy) fistula is caused by more direct and localized harm to healthy tissue as opposed to postpartum and irradiation fistulas.⁶ The victims of vesicovaginal fistula have reportedly experienced severe physical, mental, financial, and social devastation. The psychiatric challenges are made worse by a lack of assistance from relatives, community, and the spouses of VVF victims.⁷ The ladies experience torture, rejection, and hopelessness.⁸

Surgical management is the only effective treatment for fistulas, and it not only alleviates symptoms but also enhances quality of life. According to an analysis of the health-related quality of life (HRQOL) before and after fistula repair showed that, prior to surgery, women experienced significant challenges in the physical, emotional, psychosocial, and environmental domains. After surgery, assessments showed significant improvements in social, emotional, behavioral, and overall psychosocial functioning. Overall comparative analysis of pre- and post-operative quality of life revealed substantial gains in physical, psychological, and social well-being, while scores related to general health and environmental conditions remained largely unimproved.⁹

Present study was conducted to assess the quality of life in females suffering from VVF and to evaluate the improvement in their quality of life following surgical repair. However, this holds a particular importance in our population, where many women hesitate to seek medical attention for this condition due to social stigma and confusion. In resulting, they often endure significant psychological distress in addition to the

physical complications. After identifying the extent of improvement in quality of life after surgical intervention, this study may provide valuable evidence to support the need for comprehensive care including psychological counseling for affected women. Additionally, the findings may encourage healthcare providers to establish specialized clinics dedicated to fistula repair, ensuring timely treatment and comprehensive rehabilitation among these women.

Methodology

This comparative cross-sectional study was conducted at department of Gynae and Obs. Isra University Hospital Hyderabad. The duration of study was six months from 30 Dec-2020 to 30 June 2021. Non-probability sampling technique was used. All the women aged 20 to 60 year of life who underwent obstetrical or gynecological surgical interventions and reported recurrent vaginal leakage were included. All the women with rectovaginal fistula, determined on history and physical examination, women with malignant fistula, determined on history and physical examination, women with radiation induced fistula, determined on history and physical examination and patients with co-morbidities affecting QOL, determined on history and physical examination were excluded. After approval from hospital ethical committee patient of vesicovaginal fistula full filling the inclusion and exclusion criteria were enrolled from Gynae ward.

Written informed consent was taken. Demographic details including age, parity and their level of literacy were noted. It was taken in-depth history of the occasions leading to fistula creation. Incontinence duration, delivery method, previous surgical operation, and related co-morbidities were documented. An intravenous urogram (IVU) was carried out in chosen participants to assess the upper urinary systems and in individuals with a suspected of an accompanying ureterovaginal fistula. Renal, ureter, and urinary bladder ultrasonography (KUB) was also conducted. To establish urine leakage, the location of the fistula, and the degree of fibrosis surrounding the fistula, per vaginal and per speculum examinations were carried out. The WHO QoL-BREF questionnaire was used as a tool to evaluate the quality of life before surgery. Surgical repair was performed in all females.

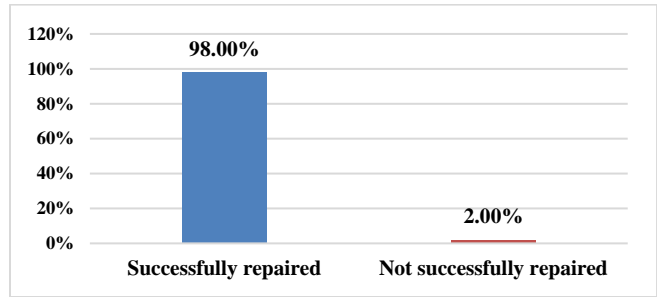
The WHO QoL-BREF questionnaire was filled before and after 6 weeks of surgery in look for improvement in quality of life. All data was noted on specially designed proforma. All data was entered and analyzed using

SPSS 22. The results were presented in mean \pm standard deviation for age, duration of incontinence, size of the fistula, preoperative and postoperative quality of life scores in all domains of WHO QoL-BREF questionnaire. The type of genitourinary fistula, parity, literacy level and success rate of genitourinary fistula was presented as frequency and percentages. The unpaired t-test was used to compare the pre-operative and post-operative QOL score and p-value ≤ 0.05 was considered statistically significant.

Results

In this study mean age of women was 37.70 ± 10.96 years. Most of the participants (40.6%) were uneducated, and the majority were multiparous. Out of all, 55.4% of the women demonstrated a poor pre-operative physical domain score, 27.7% had very poor, and 16.8% had neither poor nor good. According to psychological domain, 64.4% showed poor pre-operative scores, 4.0% were categorized as very poor, and 31.7% were neither poor nor good. Similarly, before surgery, 64.4% of the women had poor and 21.8% had very poor social domain scores. Additionally, in the environmental domain, 60.4% scored poorly and 14.9% were classified as very poor, indicating generally low pre-operative quality of life among women suffering from VVF as shown in table I.

Vesicovaginal fistula was successfully repaired among 98.0% of the cases, while among 2 cases it was not successfully repaired. Figure 1.



In this study pre-operatively 30.7% women had poor quality of life (WHQOL score ≥ 40), 67.3% had moderate quality of life (WHQOL score 41-60) and only two women had good quality of life (WHQOL score >60), this may be because in these two women had very mild disease and having full social and family support. Table II

Table II: Patients distribution according pre-operative QOL. (n=101)

Quality of life	N	%
Poor quality of life (WHQOL score ≥ 40)	31	30.7
Moderate quality of life (WHQOL score 41-60)	68	67.3
Good quality of life (WHQOL score >60)	2	2.0
Total	101	100.0

Average pre-operative score for the physical domain was 41.23 ± 4.23 , which improved to 79.44 ± 7.88 following treatment. The psychological domain also showed improvement, rising from a pre-operative value of 37.33 ± 6.11 to 69.21 ± 5.66 post-treatment. In the social domain, scores progressed from 28.77 ± 12.57 before treatment to 70.33 ± 11.07 afterward. Likewise, the environmental domain demonstrated a substantial enhancement, increasing from a baseline mean of 44.28 ± 8.46 to 80.22 ± 10.78 after treatment. Overall, the total WHOQOL score improved markedly, moving from a pre-operative average of 33.56 ± 9.33 to 80.07 ± 9.55 post-treatment. Table III

Table III: Comparison of psychosocial and quality of life score pre and post treatment. (n=101)

Domain description	MEAN SCORE OF QOL		p-value
	Before surgery	After surgery	
Physical Domain	41.23 ± 4.23	79.44 ± 7.88	0.0001
Psychological Domain	37.33 ± 6.11	69.21 ± 5.66	0.0001
Social Domain	28.77 ± 12.57	70.33 ± 11.07	0.0001
Environmental Domain	44.28 ± 8.46	80.22 ± 10.78	0.0001
Overall QOL Score	33.56 ± 9.33	80.07 ± 9.55	0.0001

Discussion

VVF significantly affects the lives of women, often forcing them to modify their lifestyles to cope with the condition, which greatly impacts their overall QOL.

Table I: Demographic and clinical characteristics of patients. (n=101)

Variables	N	%	
Educational status	Uneducated	41	40.6
	Primary	33	32.7
	Secondary	25	24.8
	Higher	02	02.0
	Total	101	100.0
Parity	Parity 1-3	33	38.6
	Parity > 3	62	61.4
	Total	101	100.0
Physical domain	Very poor	28	27.7
	Poor	56	55.4
	Neither poor nor good	17	16.8
	Total	101	100.0
Psychological domain	Very poor	4	4.0
	Poor	65	64.4
	Neither poor nor good	32	31.7
	Total	101	100.0
Environmental Domain	Very poor	22	21.8
	Poor	65	64.4
	Neither poor nor good	14	13.9
	Total	101	100.0
	Very poor	15	14.9

Although urinary incontinence itself is not a life-threatening condition, it profoundly influences a woman's social, economic, psychological, marital, and sexual well-being, leading to distress, anxiety, and a loss of self-confidence.

In this study vesicovaginal fistula was successfully repaired among 98.0% of the cases, while among 2 cases it was not successfully repaired. Consistently Chimamise C et al¹⁰ reported that the success rate of treatment was noted to be high (96%), with 24 out of 26 women having their fistula closed, although two of these, still had stress incontinence. Such high success rates have also been realized in other studies when fistula repairs were performed.^{11,12} On the other hand, Hawkins L et al¹³ reported that the fistula closure rate was 86% for women undergoing their VVF repair, while those receiving initial treatment for a VVF accompanied by a rectovaginal fistula (RVF) had a success rate of 67%. In the recent study by Zeleke LB et al¹⁴ showed slightly lower successful surgical repair 77.5%. The variations in the reported success rates of VVF repair across the studies may due to several factors, like variation often arises from differences in patient characteristics, like as the location, size, and duration of the fistula, along with the skill and experience of the surgeon, the surgical approach used, and the availability of specialized equipment and postoperative monitoring.

In this study WHOQOL-BREF scores improved significantly across all domains following treatment. These findings are consistent with those reported by Chimamise C et al¹⁰ where notable improvement in the physical health domain indicated that participants experienced a substantial change in their physical well-being before and after repair. Symptoms such as vulval and thigh rashes, as well as persistent wetness, resolved once continence was restored. The improved post-treatment physical health scores highlight the considerable physical challenges faced by women with obstetric fistula prior to surgical repair. Overall, our results align with other studies assessing pre- and post-treatment quality of life among obstetric fistula survivors.¹¹⁻¹⁶

In this study the psychosocial and quality of life score was improved after treatment. Overall pre-operative score for the physical domain was 41.23 ± 4.23 , which improved to 79.44 ± 7.88 following treatment. The psychological domain also showed improvement, rising

from a pre-operative value of 37.33 ± 6.11 to 69.21 ± 5.66 post-treatment. In the social domain, scores progressed from 28.77 ± 12.57 before treatment to 70.33 ± 11.07 afterward. Likewise, the environmental domain demonstrated a substantial enhancement, increasing from a baseline mean of 44.28 ± 8.46 to 80.22 ± 10.78 after treatment. Overall, the total WHOQOL score improved markedly, from a pre-operative average score of 33.56 ± 9.33 to post-treatment score 80.07 ± 9.55 . In aligns to this study Debela TF et al¹⁷ reported significant postoperative improvements, with mean physical health scores rising from 16.51 to 21.77, mean social domain scores increasing from 5.19 to 7.13, and average environmental health scores improving from 17.41 to 21.65, indicating significant differences between pre- and post-surgical values ($P < 0.001$). In the comparison of these findings Shaikh I et al¹⁸ reported that the mean WHOQOL-BREF score was 12.17 before genitourinary fistula repair, and after surgery it improved significantly to 96.67, reflecting a major improvement in quality of life. Few previous studies on the impact of fistula on survivors support these findings, highlighting that the condition restricts mobility, limits participation in recreational activities, and impairs the ability to perform daily activities.¹⁸⁻²⁰ Consistently Paluku JL et al²¹ reported that the overall, quality of life significantly improved after obstetric fistula repair, with mean scores rising from 1.58 preoperatively to 3.83 postoperatively, including significant increases in the physical, social, psychological, and environmental domains, $p < 0.05$. generally, studies have shown significant improvements in quality of life across all psychosocial domains following treatment. Hence it should be highlighted that the patients can achieve substantial recovery and enhance various aspects of their lives with proper care and monitoring. Though, the study still has some limitations, highlighting the need for further larger-scale studies with extended follow-up, addressing all aspects of these women's lives to better understand long-term outcomes.

Conclusion

Pre-operative quality of life was observed to be very poor, which was comparatively significantly improved as good quality of life after treatment of vesicovaginal fistula by using the world health organization quality of life scoring system. Early treatment is very essential to prevent the poor quality of life and psychosocial life.

References

- Wilson SM, Sikkema KJ, Watt MH, Masengac GG, Mosha MV. Psychological symptoms and social functioning following repair of obstetric fistula in a low-income setting. *Matern Child Health J.* 2016;20(5):941-5. <https://doi.org/10.1007/s10995-016-1950-z>
- Tsakos E, Xydias EM, Ziogas AC, Bimpa K, Doumouchtsis SK, Karydas G, et al. Surgical and quality of life outcomes following robotic-assisted (da Vinci) laparoscopic repair of vesicovaginal fistula: a case report and video demonstration. *Cureus.* 2023;15(7):e42171. <https://doi.org/10.7759/cureus.42171>
- El-Azab AS, Abolella HA, Farouk M. Update on vesicovaginal fistula: a systematic review. *Arab J Urol.* 2019;17(1):61-8. <https://doi.org/10.1080/2090598X.2019.1590033>
- Matiwos B, Tesfaw G, Belete A, Angaw DA, Shumet S. Quality of life and associated factors among women with obstetric fistula in Ethiopia. *BMC Womens Health.* 2021;21(1):321. <https://doi.org/10.1186/s12905-021-01458-3>
- Bodner-Adler B, Hanzal E, Pablik E, Koelbl H, Bodner K. Management of vesicovaginal fistulas (VVF) in women following benign gynaecologic surgery: a systematic review and meta-analysis. *PLoS One.* 2017;12(2):e0171554. <https://doi.org/10.1371/journal.pone.0171554>
- Soeroharjo I, Khalilullah SA, Danarto R, Yuri P. Laparoscopic repair of vesicovaginal fistulae with a transperitoneal approach at Universitas Gadjah Mada Urological Institute: a case report. *J Med Case Rep.* 2018;12(1):41. <https://doi.org/10.1186/s13256-018-1582-6>
- Bohio R, Brohi ZP, Bohio F. Vesicovaginal Fistula: Depression among Women. *The Professional Medical Journal.* 2015 ;22(06):804-10.
- Nweke DN, Igwe MN. Psychosocial experiences of subjects with vesicovaginal fistula: A qualitative study. *Int J Med Sci Public Health.* 2017;6(1):1-8.
- Singh V, Jhanwar A, Mehrotra S, Paul S, Sinha RJ. A comparison of quality of life before and after successful repair of genitourinary fistula: Is there improvement across all the domains of WHOQOL-BREF questionnaire? *Afr J Urol.* 2015;21(4):230-4. <https://doi.org/10.1016/j.afju.2015.06.003>
- Chimamise C, Shiripinda I, Munjanja SP, Machinga M. A comparison of quality of life of obstetric fistula survivors in Zimbabwe before and after surgical treatment. *Afr J Urol.* 2021;27(1):20. <https://doi.org/10.1186/s12301-020-00118-6>
- Mwangi J, Mutiso S, Puri R, Gatebi J. Quality of Life in Pre-and Post-Treatment among Obstetric Fistula Patients at Kisii Hospital, Kenya 2012. *Clin Mother Child Health.* 2024;21(1). <https://doi.org/10.29102/clinhp.12009>
- Hawkins L, Spitzer RF, Christoffersen-Deb A, Leah J, Mabeya H. Characteristics and surgical success of patients presenting for repair of obstetric fistula in western Kenya. *Int J Gynaecol Obstet.* 2013;120(2):178-82. <https://doi.org/10.1016/j.ijgo.2012.08.014>
- Zelege LB, Welsh A, Abeje G, Addisie YS, Khajehei M. Successful surgical repair outcomes and determinants among obstetric fistula patients: A multi-centre study from Ethiopia. *Midwifery.* 2025;111:104516. <https://doi.org/10.1016/j.midw.2025.104516>
- Dennis AC, Wilson SM, Mosha MV, Masenga GG, Sikkema KJ, Terroso KE, et al. Experiences of social support among women presenting for obstetric fistula repair surgery in Tanzania. *Int J Womens Health.* 2016;8:429-39. <https://doi.org/10.2147/IJWH.S110202>
- Umoyiyo AJ, Inyang-Etoh EC, Abah GM, Abasiattai AM, Akaiso OE. Quality of life following successful repair of vesicovaginal fistula in Nigeria. *Rural Remote Health.* 2011;11(3):1734. <https://doi.org/10.22605/RRH1734>
- Debela TF, Hordofa ZA, Aregawi AB, Sori DA. Quality of life of obstetrics fistula patients before and after surgical repair in the Jimma University Medical Center, Southwest Ethiopia. *BMC Womens Health.* 2021;21(1):212. <https://doi.org/10.1186/s12905-021-01360-y>
- Shaikh I, Mahar NA, Pyarali S, Zehra F, Mughal N, Lal M, et al. Quality of Life before & after Genitourinary Fistula Repair-Insights from WHOQOL-BREF. *Preprints* 2024;2024090167. <https://doi.org/10.20944/preprints202409.0167.v1>
- Animut M, Mamo A, Abebe L, Berhe MA, Asfaw S, Birhanu Z. "The sun keeps rising but darkness surrounds us": a qualitative exploration of the lived experiences of women with obstetric fistula in Ethiopia. *BMC Womens Health.* 2019;19(1):37. <https://doi.org/10.1186/s12905-019-0732-3>
- Bashah DT, Worku AG, Mengistu MY. Consequences of obstetric fistula in sub Sahara African countries, from patients' perspective: a systematic review of qualitative studies. *BMC Womens Health.* 2018;18(1):107. <https://doi.org/10.1186/s12905-018-0605-1>
- Luz R, Pereira I, Henriques A, Ribeirinho AL, Valentim-Lourenço A. King's Health Questionnaire to assess subjective outcomes after surgical treatment for urinary incontinence: can it be useful? *Int Urogynecol J.* 2017;28(1):139-45. <https://doi.org/10.1007/s00192-016-3089-2>
- Paluku JL, Bartels SA, Kataliko BK, Furaha CM, Aksanti BK, Kalole BK, et al. Access to High Quality Surgical Repair Services is a Fundamental Right of Patients with Obstetric Fistulas: A Study on Quality of Life Data in the Democratic Republic of the Congo. *Int J Womens Health.* 2024;16:645-53. <https://doi.org/10.2147/IJWH.S451929>