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CLINICAL ARTICLE

Depression among women with obstetric fistula in Kenya

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ABSTRACT

Objective: To establish the prevalence of depression and describe associated factors among fistula patients attending an obstetric fistula surgical camp in Kenya. **Methods:** A cross-sectional study was conducted focusing on obstetric fistula patients attending a national fistula camp held in August 2008 at Kenyatta National Hospital, Nairobi, Kenya. A structured questionnaire was used to obtain sociodemographic data and medical histories for all consenting patients before surgery. Depression measures were obtained using the Patient Health Questionnaire-9. **Results:** Of the 70 women interviewed, 2 (2.9%) and 12 (17.1%) reported a history of psychiatric illness and suicidal ideations, respectively. Depression was present in 51 (72.9%) patients, with 18 (25.7%) meeting criteria for severe depression. Depression was significantly associated with women older than 20 years of age ($P=0.01$), unemployment ($P=0.03$), lack of social support following fistula ($P=0.04$), and living with fistula for over 3 months ($P=0.01$). **Conclusion:** Women with obstetric fistula are predisposed to high levels of depression. A holistic management approach, including mental health care and family support, is recommended.

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1. Introduction

Obstetric fistula is a debilitating complication of childbirth; in low-income countries, more than 90% of fistula cases occur because of prolonged and unrelieved obstructed labor [1,2]. Women with obstetric fistula are incontinent of urine, feces, or both; the resulting malodor may lead to avoidance of social gatherings (e.g. markets and churches) and can cause problems at home. Sexual intercourse is often affected, thus putting strain on marital relationships and increasing rates of divorce [3]. As a consequence, affected women may become stigmatized and isolated by their partners, family, and friends.

Several medical complications—including fetal loss, pelvic infection, pelvic nerve damage, and subsequent amenorrhea and infertility—can arise as a result of obstructed labor [4]. The medical and social consequences of obstetric fistula are distressing and can have a profound effect on psychiatric health. Women affected by fistula who have been shunned and isolated typically experience intense feelings of shame, self-loathing, and depression. [5]. These depressive feelings may affect individual performance of daily activities, worsen interpersonal relationships, and even lead to self-neglect and suicidal thoughts [3,6].

The important impact of depression in low-resource countries has been previously noted: “depression is recognized as a common problem in developing countries and it is one of the most important causes of morbidity and mortality” [7]. “Economic difficulties, marital status, gynecological morbidity and self-reported chronic illness have been reported as independent risk factors to depression” [8].

Although an abundance of data exists on the surgical and medical aspects of fistula, only a few studies have specifically addressed the mental health consequences of the condition [9–11], and no prior studies have looked at the East African experience. The aim of the present study was to contribute to the existing literature by establishing the prevalence of depression and describing associated factors among a cohort of obstetric fistula patients attending an obstetric fistula surgical camp in Kenya.

2. Materials and methods

A cross-sectional study was conducted based on obstetric fistula patients attending a national obstetric fistula camp held from August 8 to 22, 2008, at Kenyatta National Hospital, Nairobi, Kenya.

Data collection was performed by a trained nurse working in the wards during the camp. A structured questionnaire assessing women's sociodemographic information, together with medical, obstetric, psychiatric, and social history, was administered to all consenting patients attending the camp. All women with a physician-

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confirmed diagnosis of fistula were included; because this comprised all women attending the camp, there were no exclusion criteria. Ethics approval was obtained from Kenyatta National Hospital/University of Nairobi Ethics and Research Committee.

Levels of depression were obtained using a validated form of the Patient Health Questionnaire (PHQ)-9 in Kiswahili. The PHQ-9 is a brief 9-item scale that has been validated previously in a population of head and neck cancer patients in Kenya [12]. It is scored between 0 and 27 by creating a sum of individual scores of the 9 items. Levels of depression are categorized according to the following scale: mild (score 5–9); moderate (10–14); moderately severe (15–19); and severe (≥ 20). The scale measures depression and includes questions aimed at evaluating the impact of depression on activities of daily living. Data were analyzed using SPSS version 16.0 (SPSS, Chicago, IL, USA). $P < 0.05$ was considered to be statistically significant.

3. Results

In total, 70 women were interviewed. Mean patient age was 29 years (range, 13–76 years). There were 12 (17.1%) teenaged girls and 58 (82.9%) women who were 20 years of age or older. The majority were married (43 [61.4%]) and unemployed (38 [54.3%]), with some education (51 [72.9%]) and living children (43 [61.4%]) (Table 1).

Overall, 33 (47.1%) patients were primiparous. Most patients delivered the index pregnancy that resulted in the fistula at a health facility (55 [78.6%]), whereas 15 (21.4%) delivered at home. The majority of the deliveries were stillbirths (45 [64.3%]) and were mainly males (48 [68.6%]).

The additional complications of foot drop and infertility were reported by 22 (31.4%) and 14 (20.0%) participants, respectively. Mean age at fistula occurrence was 23 years (range, 11–45 years); mean fistula duration was 4 years (interquartile range, 0.98–4 years; range, <1 to 37 years). Only 8 (11.4%) women had lived with fistula for 3 months or less, whereas the rest had lived with fistula for more than 3 months (62 [88.6%]). Nearly two-thirds (44 [62.9%]) of patients were presenting for primary repair, with the remaining 26 (37.1%) presenting for repeat surgery.

Depression was identified in 51 (72.9%) of the women interviewed; 10 (14.3%) scored in the mild range, whereas 18 (25.7%) were classified as experiencing severe depression (Fig. 1).

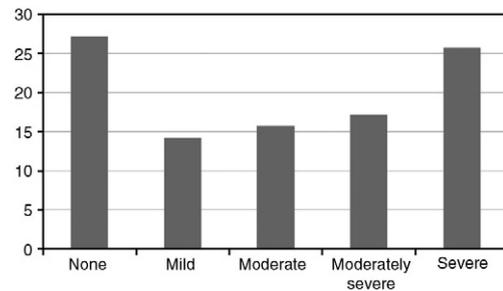


Fig. 1. Categorization of the severity of depression.

Self-reported history of psychiatric illness or suicidal ideation was present in 2 (2.9%) and 12 (17.1%) patients, respectively. Those who answered affirmatively to any of the questions on the PHQ-9 were asked to rate the level to which their symptoms made it difficult for them to engage in their activities of daily living (specifically, doing their work, taking care of things at home, and getting along with family and friends). The majority of patients (55 [78.6%]) reported varying levels of difficulty with the above.

For the purposes of cross-tabulation, women with mild depression were grouped together with those without depression to form a “minimally or not depressed” cohort, whereas those with moderate, moderately severe, or severe depression constituted the “depressed” cohort. Using these cohorts, it was noted that depression was more likely to be observed in women who were 20 years of age or older ($P = 0.01$), were unemployed ($P = 0.03$), had been living with fistula for more than 3 months ($P = 0.01$), or reported receiving little or no social support ($P = 0.04$). Depression was also associated with increased difficulty engaging in activities of daily living ($P < 0.001$) (Table 2).

There was no significant difference in depression between women undergoing repeat repair and those undergoing fresh repair ($P = 0.24$). Childlessness and infertility following fistula were also not significantly associated with depression ($P = 0.34$ and $P = 0.91$, respectively).

4. Discussion

A high rate of depression (72.9%) was identified in the present study population, with 17.1% of these patients reporting suicidal ideation. Although this rate of depression is high, it is lower than the 100% reported by Browning et al. [9] in Ethiopia and the 97% reported

Table 1
Sociodemographic characteristics (n = 70).

Characteristic	No. (%)
Age at marriage, y	
<18	11 (24.4)
≥ 18	43 (45.7)
Marital status	
Single	16 (22.9)
Married	43 (61.4)
Separated/divorced	8 (11.5)
Widowed	3 (4.3)
Education	
None	19 (27.1)
Primary	42 (60.0)
Secondary and above	9 (12.9)
Occupation	
Unemployed	56 (80.0)
Employed	14 (20.0)
Number of living children	
0	27 (38.6)
1–2	22 (31.4)
≥ 3	21 (30.0)
Social support following fistula	
None	11 (15.7)
Husband	43 (61.4)
Other relatives	16 (22.9)

Table 2
Association between patient characteristics and depression^{a,b}.

Characteristic	Depression	P value
Age, y		
<20 (n = 12)	4 (33.3)	0.01
≥ 20 (n = 58)	37 (63.8)	
Occupation		
Employed (n = 14)	5 (35.7)	0.03
Unemployed (n = 56)	36 (64.3)	
Social support		
Close relatives (n = 48)	25 (52.1)	0.04
No support/distant relatives (n = 22)	16 (72.7)	
Duration of fistula		
≤ 3 months (n = 8)	1 (12.5)	
>3 months (n = 62)	40 (64.5)	
Difficulties in activities of daily living due to depression		
None/somewhat difficult (n = 31)	8 (25.8)	<0.001
Very/extremely difficult (n = 39)	33 (84.6)	

^a Values are given as number (percentage) unless otherwise indicated.

^b Women with mild depression were grouped together with those without depression to form a “minimally or not depressed” cohort, whereas those with moderate, moderately severe, or severe depression constituted the “depressed” cohort (n = 41).

by Goh et al. [10] in a combined analysis of Ethiopian and Bangladeshi fistula patients.

Study findings indicate that women who undergo a severe event are less likely to develop depression if they have social support after the event [7]. One explanation for the lower rate of depression in the present study could be the comparatively lower rate of divorce reported by participants (11.5%) compared with that reported by Browning et al. [9] in their cohort (42%). The present study demonstrated a positive association between depression and having little or no social support.

Other factors that were significantly associated with depression were age, employment status, and duration of fistula. Older age and unemployment were noted to predict higher scores in the depression scale; a possible explanation is that the condition was felt more acutely by those past their “prime” reproductive years and those who were unemployed and, thus, limited in their opportunities for economic empowerment. Both the social capital associated with the ability to reproduce and the effect of economic opportunities for empowerment on depression have been recognized previously [13,14].

There is evidence that depression markers are likely to increase with chronicity of illness (i.e. lasting more than 1 month) [7]. Depression was significantly associated with fistula duration of greater than 3 months in the present study, which highlights the need for increased and rapid access to fistula repair.

A 2004 needs assessment conducted by the UNFPA and Ministry of Health documented the fact that fistula repair in Kenya (as in much of Africa) is addressed primarily by non-governmental organizations, with the majority of providers based outside of Nairobi [15]. The results of the present study support the need for increased access to surgical treatment, as well as prevention, to decrease the morbidity associated with obstetric fistula.

It is of concern to note that a large proportion of the women were attending for repeat repair of fistula, with some having undergone up to 4 repairs. However, it was observed that there was no significant difference in depression between first-time and repeat cases. One possibility is that exposure to other patients with fistula, in addition to health education and counseling at a hospital or surgical camp, helps to diminish women's sense of isolation.

Lack of knowledge about the root cause of fistula persists in many communities; this heightens stigma and discrimination, in addition to increasing delays in seeking surgical repair. A comprehensive model of care addressing fistula would, ideally, include education, as well as psychosocial care.

In conclusion, obstetric fistula patients in the present study reported high levels of depression. The depression was significantly

associated with several factors such as duration of fistula, poor socioeconomic status, and age. A holistic approach to fistula management aimed at true rehabilitation should encompass the need for psychiatric and psychologic care.

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Conflict of interest

The authors have no conflicts of interest.

References

- [1] Allen AM, Lakin T, Shobeiri SA, Nihira M. Transmural vaginal-to-bladder injury from an obstructed labor pattern. *Obstet Gynecol* 2011;117(2 Pt 2):468–70.
- [2] Falk HC, Tancer ML. Vesicovaginal fistula; an historical survey. *Obstet Gynecol* 1954;3(3):337–41.
- [3] Ahmed S, Holtz SA. Social and economic consequences of obstetric fistula: life changed forever? *Int J Gynecol Obstet* 2007;99(Suppl 1):S10–5.
- [4] FIGO Committee for the Ethical Aspects of Human Reproduction and Women's Health. Ethical guidelines on obstetric fistula. *Int J Gynecol Obstet* 2006;94(2):174–5.
- [5] UNFPA, Engender Health. *Obstetric Fistula Needs Assessment Report*; 2003.
- [6] Harrison KA. Obstetric fistula: one social calamity too many. *Br J Obstet Gynaecol* 1983;90(5):385–6.
- [7] Patel V, Abas M, Broadhead J, Todd C, Reeler A. Depression in developing countries: lessons from Zimbabwe. *BMJ* 2001;322(7284):482–4.
- [8] Patel V, Kirkwood BR, Pednekar S, Weiss H, Mabey D. Risk factors for common mental disorders in women. Population-based longitudinal study. *Br J Psychiatry* 2006;189:547–55.
- [9] Browning A, Fentahun W, Goh JT. The impact of surgical treatment on the mental health of women with obstetric fistula. *BJOG* 2007;114(11):1439–41.
- [10] Goh JT, Sloane KM, Krause HG, Browning A, Akhter S. Mental health screening in women with genital tract fistulae. *BJOG* 2005;112(9):1328–30.
- [11] Alio AP, Merrell L, Roxburgh K, Clayton HB, Marty PJ, Bomboka L, et al. The psychosocial impact of vesico-vaginal fistula in Niger. *Arch Gynecol Obstet* 2011;284(2):371–8.
- [12] Omoro SA, Fann JR, Weymuller EA, Macharia IM, Yueh B. Swahili translation and validation of the Patient Health Questionnaire-9 depression scale in the Kenyan head and neck cancer patient population. *Int J Psychiatry Med* 2006;36(3):367–81.
- [13] Kermod M, Herrman H, Arole R, White J, Premkumar R, Patel V. Empowerment of women and mental health promotion: a qualitative study in rural Maharashtra, India. *BMC Public Health* 2007;7:225.
- [14] Patel V, Kirkwood BR, Pednekar S, Pereira B, Barros P, Fernandes J, et al. Gender disadvantage and reproductive health risk factors for common mental disorders in women: a community survey in India. *Arch Gen Psychiatry* 2006;63(4):404–13.
- [15] Ministry of Health, Division of Reproductive Health, UNFPA Kenya. *Needs Assessment of Obstetric Fistula in Kenya*. http://www.endfistula.org/docs/na_kenya.pdf. www.endfistula.org. Published 2004.