

ORIGINAL RESEARCH ARTICLE

Health seeking behaviour associated with obstetric fistula care in Guinea: An analysis of the 2018 Demographic and Health survey

DOI: 10.29063/ajrh2024/v28i7.5

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Abstract

This study aimed to analyze factors associated with obstetric fistula care-seeking behavior in Guinea, based on data from the 2018 Demographic and Health Survey. Women aged 15–49 years who reported having obstetric fistula constituted the study population, statistical analysis was using Stata 16.0 software. Multivariate logistic regression was used to identify the factors associated with fistula care-seeking behavior. Among women with obstetric fistula, 78.9% sought care; 21.1% of those who sought care underwent repair. Factors associated with care-seeking behavior were being divorced (AOR =8.08; 95% CI:1.56-41.84), having a job (AOR =3.23; 95% CI: 1.11-9.44), being a member of a poor household (AOR =6.49; 95% CI:1.21-34.82) and whose fistula had appeared 6 days or more after the occurrence of the causal circumstance (AOR =3.63 95% CI: 1.28-10.28). This study suggests that the foundations on which fistula prevention and treatment programs are built should be reviewed, taking into account the factors highlighted by this study. (*Afr J Reprod Health* 2024; 28 [7]: 47-53).

Keywords: Obstetric fistula, Healthcare-seeking behavior, Factors associated, Demographic and Health Survey, Guinea

Résumé

Cette étude visait à analyser les facteurs associés aux comportements de recherche de soins pour la fistule obstétricale en Guinée, partant des données de l'enquête démographique et de santé de 2018. Les femmes âgées de 15 à 49 ans ayant déclaré avoir une fistule obstétricale ont constitué la population d'étude, l'analyse statistique a été réalisée à l'aide du logiciel Stata 16.0. La régression logistique multivariée a été utilisée pour identifier les facteurs associés aux comportements de recherche de soins pour la fistule. Parmi les femmes atteintes de fistule obstétricale, 78,9 % ont eu recours à des soins ; 21,1 % de celles qui ont recouru ont subi une réparation. Les facteurs associés aux comportements de recherche de soins étaient le fait d'être divorcée (ORA=8.08 ; 95% IC :1.56-41.84), d'avoir un travail (ORA =3.23 ; 95% IC : 1.11-9.44), d'être membre d'un ménage pauvre (ORA =6.49 ; 95% IC :1.21-34.82) et dont la fistule était apparue 6 jours ou plus après la survenue de la circonstance causale (ORA =3.63 95% IC : 1.28-10.28). Cette étude suggère de revoir les bases sur lesquelles les programmes de prévention et de traitement de la fistule sont construits, tout en prenant en compte les facteurs mis en évidence par cette étude. (*Afr J Reprod Health* 2024; 28 [7]: 47-53).

Mots-clés: Fistule obstétricale, Comportement de recherche de soins, Facteurs associés, Enquête Démographique et de Santé, Guinée

Introduction

Obstetric fistula is an abnormal connection between the genital canal, urinary tract and/or rectum. It usually occurs after childbirth and affects women's well-being¹. Worldwide, it is estimated that more than 2 million women live with untreated obstetric fistula. According to the World Health Organization (WHO), between 50,000 and 100,000 new cases occur each year worldwide². At least, a minimum 33,000 of these cases occur in sub-Saharan Africa³.

Moreover, in low and middle-income countries, particularly in sub-Saharan Africa, access to appropriate care remains a challenge^{4,5}. Previous studies show that many women with fistula have sought and received repair⁶⁻⁸. Despite all these efforts at country level, some women living with this condition do not seek care for a variety of reasons^{6,9}. In Ethiopia, a study reported that out of 110,000 women suffering from obstetric fistula, less than 2% had undergone fistula repair surgery¹⁰. In Uganda and Nigeria, an action research study highlighted a

range of factors that could help women seek care for obstetric fistula⁹.

In Guinea, there are three fistula repair sites in the regions of Conakry, Labé and Kissidougou, with 16 doctors trained in obstetric fistula repair and 55 nurses/midwives trained in fistula management. These sites are only operational during repair campaigns, which could be a barrier to seeking care because of the shameful, marginalizing and abandoned nature of the procedure¹¹. However, obstetric fistula repair should be included in routine healthcare packages¹¹. To date, very few studies have looked at the factors associated with seeking care for obstetric fistula. The first study, which examined associated factors, focused on baseline socio-demographic characteristics, but did not take obstetrical factors into account. The second study is a hospital-based study, unlike the present one, which is a population-based study^{6,12}.

In the Guinean context, those that focused on obstetric fistula looked at the factors associated with failed repair on the one hand and loss to follow-up in women after repair on the other^{13,14}, but they did not interest the behavior of care-seeking, which is a lever for improving fistula screening and management programs.

To help solve this problem, we intend to answer this research question: what factors are associated with obstetric fistula care-seeking behavior in Guinea? These results will help fill data gaps and serve as the basis for further research into obstetric fistula care-seeking behavior. The objective of this study was to analyze factors associated with obstetric fistula care-seeking using the 2018 Guinea Demographic and Health Survey (DHS).

Methods

Specific setting

Guinea is located in West Africa, with an area of 245,857 km² and a population of almost 14 million. According to data from the 2019 global vulnerability analysis in Guinea, 55.2% of the population lived below the poverty line on GNF13717/person/day, or 1.1 euros (Ministry of Agriculture, Guinea). The proportion of women of childbearing age (15-49) was 48.4% in the general population, the fertility rate is 4.4 children per woman in 2024¹⁵. The prevalence of obstetric fistula

is 4%, ranging from 5% in Conakry to 12% in Kindia¹⁶.

Study design

This was a secondary analysis of data from the DHS conducted in 2018 in Guinea.

Source, study population and sampling

The study population consisted of all women aged 15 to 49 with data collected from the individual questionnaire. The number of women surveyed was 10874. For this analysis, we retained only 442 women aged 15 to 49 who reported having an obstetric fistula. The study excluded women whose information on their fistula status was missing. The 2018 DHS used a stratified, weighted, two-stage random sample that was representative at national level and in terms of place of residence¹⁶.

Study variables

In this study, the dependent variable was seeking care for obstetric fistula, coded 1 if the woman reported using care (yes) and coded 0 if she reported not using care (no).

The independent variables were: women's age in years, their level of education classified as: none, primary, secondary and tertiary, place of residence, region, parity (1, 2-4 and 5 or more children), the woman's occupation, the circumstances in which the fistula occurred, the duration between the circumstance in which the fistula occurred and the appearance of the fistula, the repair of the fistula and the outcome of the repair. For the purposes of analysis, wealth index was recoded into three modalities (poor, moderately wealthy and wealthy), marital status into three (single, married or living with a partner and divorced or separated or widowed) and category of personnel who provided fistula care into three modalities (doctors, midwives and others).

Data processing and analysis

The statistical analysis was carried out using Stata software version 16.0. A descriptive analysis of all the selected variables constituted the first stage of our analysis. The univariate analysis consisted of measuring the association between the dependent variable and each of the selected independent

variables using simple logistic regression. The variables included in the multivariate model were those for which the significance level of the p-value in the univariate analysis was less than 20%. This analysis enabled us to obtain the crude odds ratios with their confidence intervals.

In the multivariate analysis, a significance level of 5% was used. The adjusted odds ratios were estimated with their p-values and confidence intervals. For the specification of the final model, goodness-of-fit and specification tests were performed. At each stage of the analysis, the clustering of the data and the statistical unit's weight in the sample have been taken into account.

Ethical considerations

Permission to use the data analyzed was obtained following a request approved by the DHS-Program(<https://dhsprogra.com>).

Results

Socio-demographic characteristics of women with fistula

Table 1 presents the socio-demographic characteristics of women who reported having had obstetric fistula during the study period. Of the women who reported having obstetric fistula during the survey, 78.9% sought care. The majority (83.3%) of women were married, aged 35-49 (36.4%), had between two and four children (44.8%), lived in urban areas (52.9%), had no formal education (67.6%) and belonged to the wealthy category (55.2%). In terms of the circumstances in which fistula occurred, just over half the women reported that it had occurred after childbirth (54.6%).

Frequency of seeking obstetric fistula care

A total of 78.9% of women who reported having had obstetric fistula sought care for it. Midwives (47.2%) and doctors (41.9%) were the main people women sought care from. Of those who had sought care (n=352), 67 women (21.5%) had had their fistula repaired. Of those who had undergone repair, 66.8% reported that their fistula had been healed (Table 2).

Table 1: Socio-demographic characteristics of women seeking care for obstetric fistula in Guinea (DHS 2018)

Variables	Number (n=442) %
Age group	
15-24	129(32.4)
25-34	138(31.2)
35-49	175(36.4)
Women's education levels	
No formal education	308(67.6)
Primary	56(13.1)
Secondary	63(15.9)
Higher	15(3.4)
Marital status	
Single	47(12.8)
Married/ in union	375(83.4)
Divorced	20(3.8)
Place of residence	
Rural	208(47.1)
Urban	234(52.9)
Regions	
Boké	22(3.6)
Conakry	66(19.3)
Faranah	26(4.0)
Kankan	17(3.9)
Kindia	163(42.0)
Labé	8(1.4)
Mamou	113(15.9)
N'Zérékoré	27(9.9)
Parity	
No birth	58(17.4)
1 birth	72(16.4)
2-4 births	213(44.8)
5 and more births	99(21.4)
Income-generating activity	
Yes	289(68.6)
No	153(31.4)
Wealth index	
Poor	137(30.9)
Medium rich	63(13.9)
Rich	242(55.2)
Circumstances of the occurrence of fistula according to the woman	
After childbirth	264(54.6)
After a miscarriage	29(7.3)
Sexual assault	9(2.2)
Other causes	2(0.3)
Don't know	138(35.6)
Duration between the circumstance in which the fistula occurred and the appearance of the fistula	
<2 days	123(38.2)
2 à 5 days	84(27.9)
6 days or more	97(33.9)

Table 2: Characteristics of women who underwent obstetric fistula repair

Variables	Number (n=442) %
Seeking care for fistulas	
Yes	352(78.9)
No	90(21.1)
Category of personnel who provided fistula care	
Doctor	152(41.9)
Midwife/nurse	162(47.2)
Other	38(10.9)
Woman benefited from fistula repair	
Yes	67(21.5)
No	285(78.5)
Place of residence benefiting from the repair	
Rural	41(58.8)
Urban	26(41.2)
Outcome of the repair	
Fistula repaired	43(66.8)
Fistula reduced	22(30.4)
Repair failure	2(2.8)

Factors associated with seeking care for obstetric fistula

Table 3 shows the factors associated with seeking care for obstetric fistula. The univariate analysis showed that age, marital status, administrative region, parity, poor wealth index and the duration between the circumstance in which the fistula occurred and the appearance of the fistula were statistically associated with seeking care.

However, multivariate analysis showed that divorced, separated, or widowed women were eight times more likely to seek care than married women (AOR= 8.08; 95%CI:1.56-41.84)]. Similarly, women who were employed were 3.23 times more likely to seek care for obstetric fistula (AOR=3.23 95%CI: [1.11-9.44]); those who were poor were similarly more likely to seek care compared to those who were rich (AOR=6.49 95%CI :1.21-34.82). In addition, women whose fistula had appeared for 6 days or more after occurrence of the causative circumstance were more likely to seek care (AOR=3.63 95% CI: [1.28-10.28]) than those whose fistula had appeared for 2 to 5 days.

Discussion

This study found that in Guinea, between 2013-2018, 4 out of 5 women suffering from obstetric fistula sought care. Midwives and doctors were the

main providers of healthcare at initial contact for these women. Of those who sought care, 21.5% were repaired. The main factors associated with seeking care for obstetric fistula among women in Guinea were marital status, wealth index, whether the woman worked and whether the fistula appeared for 6 days or more after occurrence of the causative circumstance. These results raise questions about interventions to combat obstetric fistula in Guinea.

Most women with fistula in Guinea sought care, mainly from midwives/nurses or doctors. A study covering 16 countries in sub-Saharan Africa reported that 3 out of 5 women with fistula had sought care and more than a quarter had had a repair and the majority had sought care from health professionals in health facilities⁶. However, in Kenya, Ethiopia and Zimbabwe, studies reported that traditional healers and clerics were the first port of call for women with fistula^{8,17,18}. In the Guinean context, women's confidence in the services provided by health facilities could explain their use of health workers. It would therefore be appropriate to encourage the routine provision of obstetric fistula care alongside the care so far offered through campaigns or temporary projects¹³.

This study showed that divorced or widowed women were more likely to seek care than married women. The results found in Somalia are similar to our own⁵ but opposed to the results found in Guinea, which showed that women suffering from obstetric fistulas had benefited from the support of their partners^{19,20}. One of the direct consequences is that the status of divorced women is not favorable in society, so the desire to remarry may lead them to seek care for fistulas. This would help to reduce the number of cases of fistula among these women should post-repair success be achieved. However, our result implies the social consequence notably the stigma of divorce and the social challenges of remarrying of fistula status for these women in the event of non-access to or failure of repair. It is therefore important to prioritize psychological care for women facing multiple social difficulties, including the challenges of social reintegration^{21,22}.

The study also showed that poor women were more likely to seek care than rich women. These findings corroborate those of Keya *et al.*, who found that poverty is a barrier to seeking care for fistula²³. The fact that poor women are more likely to seek care for fistula merits a qualitative study to

Table 3: Factors associated with seeking care for obstetric fistulas (univariate and multivariate analysis)

Variables	Seeking care for obstetric fistula			
	OR [95 % CI]	P Value	AOR [95 % CI]	P Value
Age group				
15-24	2.04[1.14-3.67]	0.017 *	1.74 [0.41-7.42]	0.454
25-34	1.34 [0.7-2.43]	0.340	1.27 [0.48-3.41]	0.628
35-49	Ref.		Ref.	
Women's education levels				
No formal education	2.24 [0.42-11.89]	0.343	1.97 [0.16- 23.51]	0.592
Primary	1.87 [0.32-11.04]	0.488	1.42 [0.09- 20.47]	0.797
Secondary	2.99 [0.53-16.85]	0.213	1.43 [0.10-20.01]	0.789
Higher	Ref.		Ref.	
Marital status				
Single	2.68[1.47-4.87]	0.001*	0.94 [0.08-10.43]	0.958
Married/in union	Ref.		Ref.	
Divorced	1.95 [0.66-5.68]	0.221	8.08 [1.56-41.84]	0.013**
Place of residence				
Urban	Ref.		Ref.	
Rural	1.08 [0.68-1.71]	0.731	0.41 [0.99-1.69]	0.216
Regions				
Boké	3.01 [0.31-9.94]	0.070*	3.13 [0.50-19.54]	0.221
Conakry	Ref.		Ref.	
Faranah	5.85 [1.94-17.59]	0.002*	3.96 [0.58-26.92]	0.160
Kankan	1.24 [0.31- 4.94]	0.753	0.49 [0.04-5.21]	0.551
Kindia	0.96 [0.46-1.98]	0.914	0.29 [0.06-1.52]	0.144
Labé/Mamou	1.24 [0.54-2.88]	0.605	1.13 [0.23-5.60]	0.881
N'Zérékoré	6.93 [2.98-16.11]	0.000*	2.46 [0.47-13.03]	0.289
Parity				
No birth	2.86 [1.30-6.32]	0.009*	0.51 [0.06-4.27]	0.538
1 birth	Ref.		Ref.	
2-4 births	1.34 [0.65-2.77]	0.425	0.74 [0.20-2.79]	0.657
5 or more births	1.19 [0.52-2.71]	0.680	1.18 [0.25-5.59]	0.831
Income-generating activity				
Yes	1.33 [0.80-2.21]	0.272	3.23 [1.11-9.44]	0.032**
No	Ref.		Ref.	
Wealth index				
Poor	5.57 [2.25-13.82]	0.000*	6.49 [1.21-34.82]	0.029**
Medium rich	Ref.		Ref.	
Rich	1.59 [0.64-3.96]	0.316	1.03 [0.13-8.06]	0.975
Circumstances of the occurrence of fistula according to the woman				
After childbirth	1.12 [0.19-6.62]	0.897	0.82 [0.07-9.25]	0.874
After a miscarriage	1.58 [0.22-10.90]	0.642	0.97 [0.08-12.47]	0.980
Sexual assault	Ref.		Ref.	
Duration between the circumstance in which the fistula occurred and the appearance of the fistula				
<2 days	1.16 [0.50-2.66]	0.720	1.33 [0.44-3.96]	0.613
2 à 5 days	Ref.		Ref.	
6 days or more	2.24 [1.01-4.94]	0.142*	3.63 [1.28-10.28]	0.015**

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; OR: Odds ratio, 95% IC: 95% confidence interval, Iroc: 0.8358

further elucidate this finding. However, it is important to emphasize the risk of poor women having poor access to fistula care, as this requires direct expenditure (drugs, tests) and indirect expenditure (transport, food, etc.)²⁴. Making

obstetric fistula care free of charge, by integrating it into prefectural or regional hospitals, would therefore reduce the barriers to access to care for poor women. The results show that women in income-generating activities were more likely to

seek care for obstetric fistulas. The risk of losing such a job could be the reason why these women seek care. Fistula is an impoverishing disease if repair is unsuccessful. The Studies in Guinea and India have shown that women who had worked before the onset of fistula were unable to continue working because of it fistula^{25,22}. Financial empowerment would therefore be an essential dimension of social reintegration to be taken into account in the management of obstetric fistula in Guinea.

Strengths and limitations

This study was based on data from the DHS, which is a cross-sectional survey. As such, we cannot establish a causal link between seeking care for obstetric fistula and the various explanatory variables. Because of the secondary nature of the analysis, we were unable to analyze how often women had sought care, how often they had had fistula, the results of clinical examinations and the costs associated with care, as this information had not been collected. Despite these limitations, this study deserves to be published as it sheds light on the national realities associated with the use of obstetric fistula care in Guinea. It also serves as a basis for future, more in-depth studies on this subject.

Implication for research and practice

The results of this study will help guide future Demographic Health Surveys and feed into other research on the subject. Future research should take a broader national perspective to better understand the practical use of care by health providers. Making routine obstetric fistula treatment free of charge is one strategy that would reduce barriers to access to care. Finally, prioritize psychological care for these women to facilitate their social reintegration.

Conclusion

This study explored factors associated with obstetric fistula care-seeking behavior in Guinea. The main factors were: marital status, wealth index, woman's occupation and fistula onset, which lasted 6 days or more after fistula onset. It recommends that, in addition to the medical and surgical care offered to women with fistula in Guinea, psychological care

and social reintegration should also be provided. It is also necessary, for better overall management of fistula cases, to create free fistula centers in the various prefectural and regional hospitals, and to disseminate information on existing obstetric fistula care structures to make it easier for these women to seek care. They will better support efforts to promote high-level obstetric fistula care in a safe, effective and efficient manner.

Acknowledgments

We thank the DHS Program for approval and access to the original data.

Ethical considerations

Ethical approval of this study was not required as the data are secondary and available in the public domain. Further details regarding DHS data and ethical standards are available at <http://dhsprogram.com/data/available-datasets.cfm>.

Data availability

The Guinea Demographic and Health Survey data analyzed in this study are available and accessible on the DHS Program website <http://dhsprogram.com/data/available-datasets.cfm>.

Funding

No funding was provided for this study.

Competing interests

The authors have declared no conflict of interest with respect to the publication of this article.

Authors' contributions

Ramata Diallo designed the study, carried out the data analysis and wrote the results. Mamadou Diouldé Baldé, Bienvenu Salim Camara, Karifa Kourouma and Tiany Sidibé critically reviewed the article for its intellectual content. All the authors read and approved the content of the manuscript.

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