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Original Research Article

Sociocultural determinants of place of birth among Sudanese women

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ABSTRACT

Background: Maternal health has been accounted as challenge to the public health policy makers around the globe, which has more commonly been threaten by the cultural and social forces. The aim of this study was to investigate the sociocultural determinants of health-seeking behavior of Sudanese women from Sharq-Alneel locality regarding the place of delivery.
Methods: A cross-sectional community based study was conducted from June 2017- January 2018 using face-to-face structured questionnaire to 576 Sudanese women age of 15-49 years from 4 Administrative Units. A multistage cluster sampling technique was adopted. Binary and multinomial logistic regression models were used to analyse the results.
Results: Rural women respondents were 329 (57%). A 147 (28.3%) of the studied population gave birth at home at least once. A 110 (20.8%) women respondents preferred delivery at home. Of those home deliveries, complications occurred to 42 (26.9%) compared to the one occurred to women 114 (73.1%) who delivered in health facility. Circumcision among respondents was 80.7% and had insignificant association with complications occurred during delivery. Multinomial analysis showed women with no education were 33.5 times more likely (O.R=33.5, CI=9.8-114.0, p<0.001), primary education (O.R=6.4, CI=2.7-15.2, p<0.001), secondary (O.R=4.9, CI=2.1-11.5, p<0.001) to seek home delivery compared to those who obtained university education. Financial reasons for delivering at home were were 11.5 (O.R=11.5, CI=2.5-53.7, P=0.002) times, while nearby (distance to health facility) as a reason for delivering at home were 3.7 (O.R=3.7, CI=1.1-13.0, P=0.04) times more likely relative to those who reported staff competency to influence delivering at health facility.
Conclusions: Age, residence area, number of children, education, financial income, distance to health facility, and source of decision for women's place of delivery were significant determinants of deliveries at home. Special attention is needed at community level for health education towards culture and believes affecting women's decision on delivery at home. To promote reproductive health of women and improve quality of care giving by health personnel.

Keywords: Sudanese woman, Sharq-Alneel, Natal care, Place of delivery, Rural and urban women, Women circumcision

INTRODUCTION

Delivery, childbirth and labour are terms used for giving birth to child. It is the process of ended pregnancy.[1] The determinants of health are the conditions in which people are born, grow, live and work. They encompass social, economic, political, environmental, and cultural dimensions. Every day in 2015, about 830 women died

due to complications of pregnancy and child birth. The risk of a woman in a developing country dying from a maternal-related cause during her lifetime is about 33 times higher compared to a woman living in a developed country. Maternal mortality is a health indicator that shows very wide gaps between rich and poor, urban and rural areas, both between countries and within them.[2] Most childbirths occur in health institutions in the developed countries, while childbirths are given by many women at home in the developing countries.[3,4] Moreover, it is necessary that skilled healthcare professionals should attend and perform the procedures competently in order to achieve the MDG 5.[5-7] During the birth giving process, there are multiple complications that a woman suffers from short and long time effects. It has been estimated that above one millions of women suffers from severe injuries after giving birth, which results in long term ill consequences in Middle Eastern and North African regions.[8] In the Sudan, institutional deliveries showed to be only (27.7%) of women age 15-49 years with a live birth.[9] A study conducted in Burkina Faso showed that approximately 11% of women delivered child at home; whereas, this percentage increases among women, who belong to lower socio-economic status. Moreover, significant correlation was observed between the distance of health facility and delivering child at home.[10-12] The level of awareness regarding health seeking behaviour increases with age. Transportation is a basic necessity required to utilize health care services by women that are located far away. Scarcity of public transport and cultural constraint are hurdle in seeking for healthcare.[13]

In India, women living in rural areas, give prevalence to old practices, fear going to hospital, and are also pressurized due to economic constraints. The old practices included the delivery, being performed at home, by midwives instead of a professional trained health worker. Similarly, most of the women, belonging to lower class, fear to visit hospital as they have a misconception that doctors might operate them instead of normal delivery and would cost more.[14]

Although many countries in the developing world removed the financial fees for delivery, but some women prefer home delivery because they are buying the medical stuff they need for the delivery.[12] Poor skilled health are personnel and lack of medical supplies were also recognized in these countries.[15-17]

Surprisingly, home delivery is also preferred by some women in the developed countries. It is evident from qualitative survey that women (1%) from the United States prefer home delivery than hospital delivery. This American study showed that many factors caused those women to prefer home delivery. American women believe that childbirth is a natural process and they fear from hospital intervention.[18]

Many Sudanese women also find it difficult to access local clinics and hospitals due to the remoteness of some villages, therefore home births are conducted by traditional birth attendants.[19] This has, therefore, led to high maternal and neonatal mortality in Sudan as the traditional birth attendants are not prepared to deal with the complications of birth.[19-20]

All the above mentionned evidences are also stated by the Unicef, showing that the most common factors that prevent women from seeking care during pregnancy and childbirth are "poverty, distance, lack of information, inadequate services, and cultural practices".[21]

METHODS

Community based descriptive cross-sectional study was conducted in Sharq-Alneel locality in Khartoum State in the Sudan from June 2017 to January 2018. This community is located along the eastern bank of the Blue Nile River. It is divided into 16 Administrative Units (AUs) distributed within rural and urban areas. The target population was all Sudanese married women in the reproductive age 15-49 years, who reside in the locality for at least a year (one gestational period) at the time of the survey.

Four AUs were selected randomly using computerized digital system.[22] The four AUs have a total of 62 villages/neighborhood scattered across the clusters within the locality. A proportional sample size of clusters and thereafter households were drawn from each cluster. Cochran's sample size formula (1977) for categorical variables as described by Baretlett, Kotrlik & Higgins, was used.[23,24] The study assumed 50% of the targeted population has positive maternal attitude, marginal of error and alpha level of 5% each, a design effect of 1.5 were used to obtain a sample of 576 women used. A total of 576 women were selected by using multistage cluster sampling technique. The sampled women were then later interviewed using face-to-face interview with structured questionnaire developed by the researchers. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22 (SPSS Inc, Chicago Illinois, USA).

Results were expressed in terms of odd's ratio (OR) and confidence interval (CI). Independent variables that were significant at bivariate level were included in multivariate model for avoiding confounding. Significance was assessed at 5% significance level.

RESULTS

The study population of women (15-49 years) who experienced delivering at least a child were 296 (57%) from the rural area in Sharq-Alneel locality, while 222 (43%) from urban area. Women in age group (15-20) who did not get formal education was 37 (6.5%). Working employed women were 213 (37.2%) of the total 576 women. Regarding the response rate for asking the women respondents about their monthly income, only 413 (72%) of the 576 responded to this question.

Table 1: Socio-demographic characteristics of women (15-49) respondents.

Profile	Frequency	%
Residence type		
Rural	296	57
Urban	222	43
Total	518	100
Level of education of women		
No formal education	37	6.5
Basic/Intermediate	153	26.6
Secondary	183	31.9
University & higher	201	35.0
Total	574	100.0
Current occupation		
Working/employed	213	37.2
Household wife	341	59.4
Student	20	3.4
Total	574	100.0
Monthly income		
0-1000	170	41.1
1001-2000	132	32.0
2001-3000	60	14.5
3001-4000	21	5.1
4001-5000	19	4.7
>5000	11	2.5
Total	413	100.0
Duration of marriage		
Less than a year	62	10.7
5-10 years	220	38.3
More than 10 years	294	51.0
Total	576	100.0
Ever had a child		
Yes	506	88.0
No	69	12.0
Total	575	100.0
Number of children		
No one	68	11.8
1-4 children	353	61.3
5-8 children	146	25.3
More than 8 children	9	1.6
Total	576	100.0
Circumcision among women *(FGC/FGM)		
Yes	539	93.7
No	36	6.3
Total	575	100.0
Type of housing		
Own	443	76.8
Rent	102	17.7
Sentry/ house guard	31	5.5
Total	576	100.0
Type of family		
Extended family	300	52.1
Nuclear family	276	47.9
Total	576	100.0

*FGC: Female genital cutting. *FGM: Female genital mutilation.

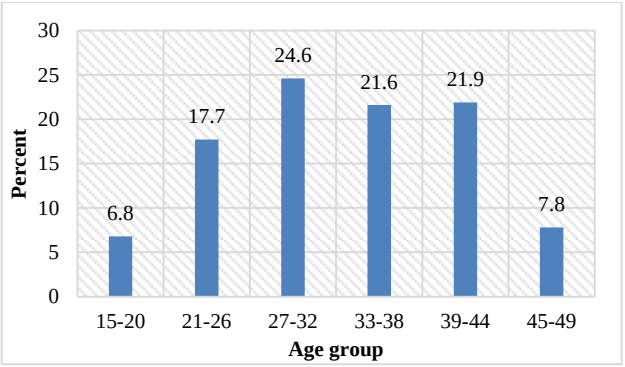

Figure 1: Proportion of women respondents (15-49 years) in six age groups (n=576).

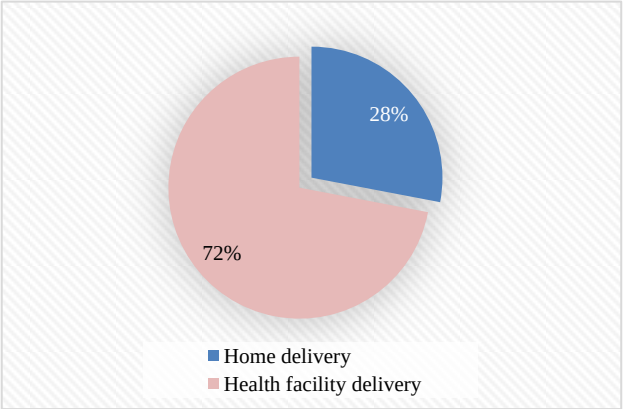

Figure 2: Proportion of women's place of delivery (n=519).

Table 2: Behaviour of respondents' women towards natal care preferences.

Health behaviors	Frequency	%
Preferred healthcare provider during delivery		
Village skilled midwife	129	24.4
Village traditional midwife	6	1.1
Nurse-midwife	49	9.3
Medical doctor	341	64.3
No specific cadre	5	.9
Total	530	100.0
Preferred place of delivery		
Home	110	20.8
Health facility	419	79.2
Total	528	100.0

Women 294 (51%) of respondents were married for more than ten years, while those who were married for less than a year were only 62 (10.7%) of the total response 576 women. Those who got children at least one were 506 (88%). Sixty eight (11.8%) of the women respondents had never had a child. Women who had more than eight children were only 9 (1.6%) of the total respondents of 576. Percentage of women who had at

least one incidence of abortion was 190 (33.2%) of the studied population 574. Cultural practices of female genital mutilation (FGM)/circumcision was done to 539 (93.7%) of the total studied women having. A culture practice was also investigated regarding the type of family and results showed that 300 (52.1%) of women respondents live either with their own extended families or their families in law (Table 1).

The age of selected women of Sharq-Alneel locality that participated in the study ranged between 15 and 49 years old. Only 39 (6.8%) were between age of 15 and 20 years old. Women of age group 45-49 years account for only 7.8% of the total women respondents (Figure 1).

Women respondents who delivered at home at least once were 147 (28%) of the 519 women (Figure 2). Women 341 (64.3%) mentioned that they prefer medical doctor for assisting them during delivery (Table 2).

The relationship between women's characteristics and cultural practices were investigated in this study. The association between place of delivery (p<0.001) and the demographic and sociocultural determinants (p=0.012), type of resident, and age were highly significant (p<0.001). While no significant relationship was found between place of delivery and circumcision status of women respondents. Similarly, there was no significance between place of delivery and complications occurred to women during delivery (Table 3).

Table 3: Associations between place of delivery and women's characteristics and socio-cultural practices.

	Factors	Home (%)	Health facility (%)	Statistic
Associated factors with selection of place of delivery	Financial reasons	2 (28.6)	5 (71.4)	P<0.001
	Distance problem	11 (47.8)	12 (52.2)	
	Culture and traditions	22 (55.0)	18 (45.0)	
	Safety concern	75 (16.6)	378(83.4)	
Complications occurred during delivery	**Response**			
	Yes	42 (29.2)	114 (31.2)	P=0.723
	No	102 (70.8.8)	251 (68.8)	
Type of residence	**Response**			
	Rural	98 (66.7)	198 (66.9)	P=0.012
	Urban	49 (22.1)	172 (46.5)	
Age	**Response**			
	≤20yrs	3 (2.0)	24 (6.5)	P<0.001
	21 -33 yrs	71 (48.0)	155 (41.8)	
	34-44 yrs	53 (35.8)	176 (47.4)	
	Above 44 yrs	21 (14.2)	16 (4.3)	

Table 4: Association between complications occurred during delivery and circumcision status (FGC/FGM) among women respondents.

Circumcision	Complications occurred during delivery		Total (%)
	Yes (%)	No (%)	
Yes	146 (30.7)	330 (69.3)	476 (93.2)
No	11 (31.4)	24 (68.6)	35 (6.8)
Total	157 (30.7)	354 (69.3)	511 (100)

P=0.530

There was no association between the complications that occurred to women respondents during delivery and the place where women delivered at any times of delivery (Table 4).

Results of this study also showed that women with no education were (O.R=33.5, CI=9.8-114.0, p<0.001), primary education (O.R=6.4, CI=2.7-15.2, p<0.001), secondary (O.R=4.9, CI=2.1-11.5, p<0.001) more likely to seek home delivery compared to those who obtained university education. The effect size of seeking home delivery was observed to be reducing with increase in education level.

Women who deliver at home and with children (1-4) were 2.7 times more likely compared to those having children (5 and above). While mothers with age above 44years were 2.9 more likely to deliver at a health facility staffed with competent personnel. Those reporting financial reasons for delivering at home were 11.5 (O.R=11.5, CI=2.5-53.7, p=0.002) times, while nearby (distance to health facility) as a reason for delivering at

home were 3.7 (O.R=3.7, CI=1.1-13.0, p=0.04) times more likely relative to those who reported staff competency to influence for delivering at health facility (Table 5).

Table 5: Multivariable that determine preference of home delivery over health-facility delivery.

	OR	95% CI		P value
Residence area				
Rural	1.287	0.687	2.409	0.431
Urban	Reference			
Age				
20-33 yrs	0.462	0.163	1.307	0.146
34-44 yrs	0.345	0.126	0.946	0.039
Above 44 yrs	Reference			
Education				
No education	33.5	9.817	113.992	0.000
Primary	6.362	2.657	15.237	0.000
Secondary	4.925	2.108	11.505	0.000
University	Reference			
Family type				
Extended	1.621	0.911	2.886	0.101
Nuclear	Reference			
Number of children				
No one	1.452	0.186	11.302	0.722
(1-4)	2.722	1.240	5.975	0.013
(5 and above)	Reference			
Reasons for preference				
Financial reasons	11.5	2.455	53.7	0.002
Near distance place	3.7	1.1	13.0	0.040
Good previous experience	2.725	0.579	12.823	0.205
Family preference	0.173	0.029	1.017	0.052
Used to the place	2.104	0.625	7.090	0.230
Staff are more competent	Reference			

DISCUSSION

The results of this study demonstrated that respondents who had received no education or had attained primary and secondary levels of education were more prone to opt for home-based deliveries as compared to those respondents who had received university education. These results were seen to be in line with previous research that highlighted the preference of expectant mothers in Sudan to seek home-based deliveries [25]. Furthermore, the type of residence was seen to be associated with the place of birth by the respondents in this study. Health facility was more utilized for delivery by rural women than those in urban. This was not in line with existing research that has highlighted that poor healthcare facilities for maternal services was observed in rural regions.[26]

The significance of age was also highlighted; women above the age of 44 were more prone to make use of healthcare facilities for delivering children as opposed to their homes. This was in line with a previous study which indicated that older Sudanese women were less prone to make use of home-based deliveries.[27] Furthermore, financial and distance-based reasons were also given for not attending clinics for natal care, which were corroborated by a previous study pertaining to Sudan and also reported by others.[10-12,28]

Majority of Sudanese women showed health facility as a preference place for delivery. Moreover, they showed interest for the medical doctors for assisting them during delivery because they are safer and competent, this was reported also by research from, and at the same time this was reported in reverse that women did not prefer health facility delivery because of the mistrust and the bad behaviour by the healthcare workers.[10,12]

It was additionally seen that culturally negative practices in the form of female genital mutilation (FGM) were reported by a majority of the respondents. Studies have reported the prevalent use of customs such as FGM in Sudan.[29] It was additionally seen that rural respondents were more likely to undergo FGM as compared to their urban counterparts, which was corroborated by previous research.[30] However, bad cultural practice as FGM was not a significant factor for complications occurred during delivery.

The study further noted that the nearest healthcare facilities were situated less than 5 kilometres away for approximately 49% only of the participants. Since this percentage represents less than half of the participants, it may be seen that there is a need for a greater number of healthcare facilities that are situated in closer proximity to Sudan's rural areas. This was corroborated by a recent research, which noted long distance to be a significant factor in impeding visits to healthcare facilities in Sudan.[28]

CONCLUSION

Women with lower education than university level opt for home-based deliveries. It is concluded also that older women at the age of 44 and more used to seek delivery in health facility. Low economic status is also determinants for not using health facility for deliveries. One of the vital determinant for women to deliver at home was the distance to the healthcare facility. It is concluded also that women above age of 33 years, and had achieved high level of education demonstrated a great power in decision making for utilizing health facility for delivery and other reproductive healthcare services. It is highly recommended for policy makers to observe the quality and review the distribution and placement of the public healthcare facilities in Sharq-Alneel locality. Since home delivery is continuing to exist in any Sudanese community, it is very important to provide continuous training for skilled birth attendants especially in the rural areas. Developing and conducting appropriate programs of health education guided by model in health promotion that concern with believes and attitudes for women in Sharq-Alneel locality at community level.

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