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Sociodemographic and cultural determinants of seeking family planning knowledge and practice among a Sudanese community

Samia S. Abdulmageed¹*, Mustafa Khidir Elnimeiri²

¹Department of Community Health Nursing, Faculty of Nursing Sciences, ²Department of Community Medicine, Al Neelain University, Khartoum, Sudan

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*Correspondence:

Dr. Samia S. Abdulmageed,

E-mail: sabdulmageed1@yahoo.com

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ABSTRACT

Background: About 214 million women in the reproductive age in the developing countries who need to prevent and plan for their pregnancy are not using methods of modern contraceptives. The aim of this study was to investigate the socio-demographic and cultural elements that inform the health-seeking behavior towards family planning among Sudanese women in Sharq-Alneel locality in the Sudan-Africa. Furthermore, the study aimed to identify individuals within Sudanese families, who predominantly interfered with the decision of the women in using of contraceptives for family planning.

Methods: A cross-sectional community based study was conducted in September-2017 to February-2018 using 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 analyze the results using SPSS version 22.

Results: Women respondents were (57.1%), and (42.9%) from rural and urban areas respectively. Women (89.3%) of respondents were married for more than five years. A 381 (66%) women respondents were not using contraception at the time of the study. Women in rural areas were 0.9 less likely to obtain information from other sources than from PHC. There was significant association (p<0.001) between women's educational level and awareness about contraception.

Conclusions: Women use of contraception in Sharq-Alneel was low. Barrier to contraception use for majority of women was that they believe their healths are at risk for using modern contraceptives. There was also high prevalence of respondents' husbands refused the use of contraceptives.

Keywords: Sudanese women, Sharq-Alneel locality, Family planning, Contraception, Rural and urban women, Health-seeking behavior

INTRODUCTION

Pregnancy related health consequences remained a part of public health concern, which has to be considered for women in Sudan.¹ Family planning as mentioned by the United Nations is the first pillar for safe motherhood.² As stated by the World Health organization (WHO) "Family planning: allows people to attain their desired number of children and determine the spacing of pregnancies. It is

achieved through use of contraceptive methods and the treatment of infertility". 3

In spite of the reduction in maternal mortality rate since 1990, still about one woman every two minutes die due to pregnancy related causes.² About 214 million women in the reproductive age in the developing countries who need to prevent and plan for their pregnancy are not using methods of modern contraceptives. By avoiding

unintended pregnancy, contraception hinders deaths of children and mothers. Sub-Saharan African women have experienced the highest percentage of unmet reproductive health needs. West Africa is reported as the poorest country because of maternal and reproductive health safety. 74% of women were deprived of the awareness regarding modern contraception. Moreover, religion, social parity, culture, and gendered interest have also added against family planning interventions among the females.4 It was revealed that Anglican and Roman Catholic women are more prone to seek their health care as compared to other religions. It was also found that women living in urban areas seek for medical care more than those living in rural areas. Nigeria was reported to have the lowest level of family planning use, and it was indicated that only 58% of women visited clinic at least once in the whole course of their pregnancy.⁵

The financial status and gender related characteristics greatly influence the reproductive health of females. A theory was formulated to explain the fertility as an aspect of so-called new-home economics approach. This approach proposed that the value of time increases as a result of investment in human capital. On the basis of household income hypothesis it is identified that the fertility rate is likely to increase as the income rises. The rise in income also increases the desire for goods that further competes with the family resources depending on the number of children.6 Moreover, women associated with activities that generate income have greater access to the contraceptives, which decreases the chances of conception. The women who are involved in decision making tend to have higher age during marriage, reduced use of contraceptives, and access to abortion as a safety measure for sake of their health.⁶

Several studies investigated that the educational level and age at marriage are directly associated. For instance, the higher the educational level, the higher would be the age of individuals at marriage. The gender power has a great influence on the decision making regarding intercourse, use of contraceptives, and pregnancy. A higher level of illiteracy is being found among the Sudanese women, with a significant decrease in a number of school enrollments for girls. Husband's education has been associated to play a critical role in promoting the family planning setups. The low literacy of husbands has burdened the rate of maternal morbidity and mortality in Sudan. Due to the decreased literacy levels, early marriages, and decreased reproductive health education, the worst scenario of reproductive health in Sudan has been observed.

The regulatory morality policy usually lacks direct economic component. For instance, the racial and ethnic composition, state ideology, and the urbanization have a great impact on the health seeking behavior of women. Similarly, the restriction against abortion is observed as an aspect of regulatory morality policy. Before 1973, it was believed that the socioeconomic factors had no impact on the legalization of abortion. Furthermore, very little research has been performed to determine the

differential aspects of the state restriction for getting access to contraception. Specifically the services of family planning are often perceived as conservative as it encourages moral decay and promiscuity. Subsequently, it is believed that the family planning services is directly associated with the decreased rate of abortion.⁸

Guidelines related to health services of female students needs to be established to communicate about the information related to women's health. The traditional methods of contraception were undermining because of some barriers that included the liability, policy, and controversy concerns. A study suggested that a guideline is required for the use of contraceptives, for examining pelvis, and for pregnancy testing. It should be made necessary that all the female students, seeking for information related to sexual and reproductive health, should receive consistent and comprehensive education about the health seeking behavior. 9,10

The urban areas are regarded by substantial need of modern contraceptive procedures. Women usually fear the bleeding and pain as a result of induced abortion. It is still not distinguished to women that sterilization and oral pills are other methods for contraception. Similarly, women lack the knowledge about the use of injectable contraceptives, condoms, and other safe methods. The healthcare providers have not acknowledged women about the reaction of contraceptive drugs in the body; therefore, the women have not achieved a proper understanding related to the use of contraceptives. Due to lack of detailed and adequate information about the modern procedures of contraception, women usually face fear to use the modern procedures.11 The use of contraceptives plays a major role to prevent unplanned pregnancy; however, women reported about changing contraceptive methods due to side effects related to use of contraceptives. The major side effects of using contraceptives included heavy and irregular bleeding, mood swings, weight issues, skin related issues, decreased libido, and headaches. Healthcare provider needs to discuss the issues related to the use of contraceptives, and allow women to choose any contraceptive method accordingly.¹²

The use of contraceptives is acceptable in Islam only if the method does not cause any harm to the health of mother. Islam permits abortion only if the pregnancy may cause harm to the mother, otherwise abortion is not permitted.⁶

In respect to maternal health services including family planning the international organizations have focused on three measures, which should be followed in order to prevent the rate of maternal mortality. These aspects include an access to the contraceptive procedures to avoid unintended conception, an increased number of skilled healthcare professionals and the provision of an immediate emergency obstetric care. By providing an access for the family planning through the use of contraceptive procedures, the maternal and child health consequences can be reduced by 20%.

The increased maternal death rates in Sudan recommend gaps in reaching and quality of maternal healthcare services. The family planning policy makers are responsible for the avoidance of pregnancy in a younger age and maintain a proper gap between two pregnancies. Therefore a broad spectrum of family planning procedures should be implied in order to accommodate different individuals. The health care providers must be well trained for the application of intrauterine devices. The tertiary health care facilities provided by the policy makers, which should be updated with a course of time. This requires a refresher course of the clinical staff. ¹³

METHODS

This is a community based cross-sectional study, conducted in Sharq-Alneel locality in Khartoum State in the Sudan from September 2017 to February 2018. The locality is divided into sixteen Administrative Units (AUs), has ten rural area and six urban areas. The AUs were selected randomly using computerized digital system.¹⁴ A proportional sample size of clusters and thereafter households were derived from each cluster. Cochran's sample size formula was used as described for categorical variables. 15,16 Design effect of cluster sampling of 1.5 was used. 17 Using this formula, the sample size was determined as 384*1.5. A total of 576 women were selected by using multistage cluster sampling technique. Women were then allocated following the rule of proportional to the size of households in each cluster. All Sudanese married women in the fertile age of 15-49 years old, all sought reproductive health services from their residence area health facility, who live in Sharq-Alneel locality for at least one complete gestational period at the time of the data collection were requested to participate in the study. face-to-face interview with structured questionnaire developed by the researchers.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 22. Results were expressed in terms of odd's ratio (OR) and confidence interval (CI).

Association between background characteristics and social profile of family planning (FP), were measured using $\chi 2$ -test and level of statistical significance was assumed to be p<0.05 and where the value of a cell was observed to be less than 5, Fischer's exact (F) test was used. Following test of significance where p<0.05, multinomial logistic regression was used to estimate determinants of family planning practices.

RESULTS

Majority of women respondents 381 (66%) were not using contraceptives, while only 194 (34%) were using contraceptives (Figure 2).

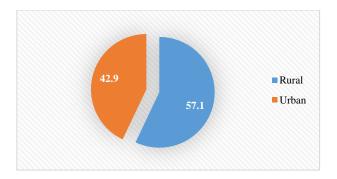


Figure 1: Proportion of women respondents in residence area (n=576).

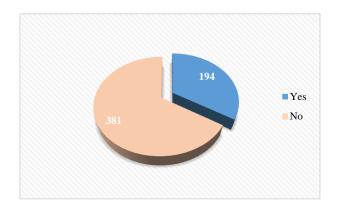


Figure 2: Current use of contraception among women respondents (n=575).

The knowledge about contraception methods was taken more frequent from the primary healthcare center (PHC) by 266 (46.1%) of women respondents (Figure 3).

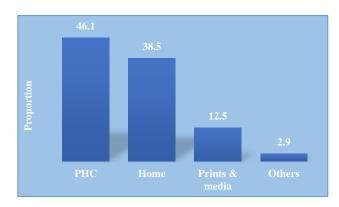


Figure 3: Source of knowledge of respondents regarding family planning.

Women who reported obtaining their contraceptive method from their locality health center were 92 (41.8%). While twenty seven percent of women met their own needs of contraception from the pharmacy by direct purchase. Women respondents whose husbands refused for them to use any contraception were 140 (65.4%) of the total women who did not use contraception. Husbands who refused to use condom as contraception were 116 (20.2%) (Table 1).

Table 1: Healthcare seeking-behaviors of respondents towards family planning practice.

Healthcare seeking-behaviors	Frequency	%				
The source for getting the method of contraception						
Public locality health center	92	41.8				
Private health center	18	8.2				
TBA (traditional birth attendant)	39	17.7				
Pharmacy	60	27.3				
Friends/relative	11	5				
The reasons for not using contr	aception	•				
Want to get children	53	24.8				
Husband refuse	140	65.4				
It causes health problems	21	9.8				
Opinion regarding the use of condom						
Useful	87	15.1				
Don't prefer it	265	46.2				
Husband refuse to use it	116	20.2				
Has no idea	107	18.5				

The association between the source of knowledge about the methods of different contraception and residence type of women was significant (p=0.003). Urban women utilizing the healthcare centers for getting the knowledge about contraception was (49.2%) while rural women (43.8%). Association between family type and women seeking behavior for the source of knowledge about contraception was significant (p=0.004). Women from nuclear families were 149 (56%) sought knowledge from healthcare centers, while women from extended families were 117 (44%) did. Decision making for spacing between children, use of contraception and others was significantly different across the two-residence type (rural/urban). Women and their husbands were sharing the decision in planning for family (number of births, spacing, use of contraceptives, etc.) in rural families were 258 (89.6%). A significant association between the level of education of husbands and decision making for the women respondents in family planning, spacing, and other use of reproductive healthcare was shown to be (p<0.001) (Table 2).

Table 2: The relationship between women's characteristics and seeking family planning knowledge and practices.

The source of	f knowledge	e about o	contraception m	ethods					
	Study var	riable	PHC (%)	Home (%)	Prints and 1 (%)	nedia	Others (%)	x^2	P value
Residence	Rural		144 (43.8)	134 (40.7)	48 (14.6)		3 (0.9)	14.1	0.003
Residence	Urban		121 (49.2)	88 (35.8)	24 (9.8)		13 (5.3)	14.1	0.003
Family type	Extended		117 (44.0)	132 (60.3)	39 (54.2)		9 (56.3)	13.1	0.004
	Nuclear		149 (56.0)	87 (39.7)	33 (45.85)	7 (43.8)		13.1	0.004
The reasons	not using co	ontracep	tives						
		Use nat contract (%)	tural ceptive method	To get children (%)	Husband refusal (%)		ing health lems (%)	x^2	P value
	No one	8 (18.6)		0 (0.0)	17 (12.1)	18 (8.	5.7)		
Number of	(1-4)	162 (65.6)		39 (73.6)	84 (60.0)	0.0)))	164.3	< 0.001
children	5 and more	77 (31.	2)	14 (26.4)	39 (27.9)	3 (14	.3)	104.3	<0.001
Awareness al	bout the ad	vantages	of family plann	ing rather th	an contraception	n			
			Yes (%)		No (%)			x^2	P value
	No educat	tion	9 (3.5)		27 (8.7)				
Education	Primary		50 (19.5) 96 (30.9)					21.3	< 0.001
level	Secondary	/	86 (33.6)		98 (31.5)			21.5	<0.001
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	University		111 (43.4)		90 (28.9)				
Decision mak			· · · · · · · · · · · · · · · · · · ·	of births, spac	90 (28.9) cing, use of cont				
Decision mak		ing for f	111 (43.4)		90 (28.9) cing, use of cont		ves, etc.) s & others	x^2	P value
Decision mak	er in plann	ing for f	111 (43.4) Camily (number	and (%)	90 (28.9) cing, use of cont lusband (%)	Parents			
	ser in plann Study va	ing for f	111 (43.4) Camily (number Wife and hush	and (%) H	90 (28.9) cing, use of cont (usband (%) 4 (8.3)	Parents (%)		x^2 6.5	P value <0.05
Residence type	ser in plann Study va Rural	iing for f	111 (43.4) family (number Wife and husb 258 (89.6)	eand (%) H	90 (28.9) cing, use of cont lusband (%) 4 (8.3) 8 (11.8)	Parents (%) 6 (2.1)			
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Residence type	Study va Rural Urban No educat	ning for f	111 (43.4) family (number Wife and hush 258 (89.6) 210 (88.2) 48 (90.6)	2 2 3 6	90 (28.9) cing, use of cont Iusband (%) 4 (8.3) 8 (11.8) (5.7) (5.0)	Parents (%) 6 (2.1) 0 (0.0) 2 (3.8)			

Table 3: Determinants of the source of knowledge about family planning among women respondents.

	Home (family members)			Prints & media			Others		
	OR	95% CI	P value	OR	95% CI	P value	OR	95% CI	P value
Residence									
Rural	1.3	(0.8-2.1)	0.273	1.53	(9.80-2.97)	0.201	0.1	(0.0-0.6)	0.006*
Urban referen	ce								
Age							-		
≤20yrs	8.6	(2.5-2.9)	0.001*	1.938	(0.468-8.03)	0.361			
21-33yrs	5.0	(2.0-2.3)	0.001*	0.678	(0.250-1.84)	0.446			
34-44yrs	1.5	(0.6-3.6)	0.385	0.516	(0.200-1.34)	0.173			
Above 44 yrs r	eference	e					-		•
Having childre	en								
Yes	0.9	(0.4-1.7)	0.706	0.682	(0.305-1.52)	0.352	0.6	(0.1-4.1)	0.605
No reference									
Type of home									
Own	1.2	(0.4-3.1)	0.765	0.903	(0.140-5.84)	0.915	0.6	(0.1-5.6)	0.676
Rent	1.6	(0.6-4.4)	0.366	0.757	(0.103-5.56)	0.784	0.5	(0.0-5.2)	0.556
House guard r	eference	e							
Education									
No education	6.6	(2.6-7.2)	0.000*	0.291	(0.046-1.86)	0.191			
Primary	2.7	(1.6-4.7)	0.000*	0.250	(0.103-0.608)	0.002*			
Secondary	1.0	(0.6-1.6)	0.928	0.360	(0.188-0.691)	0.002*			
University refe	erence								

^{*}Significant at 5% significant level

Table 4: Determinants of family planning regarding who takes the decision for planning for the family.

Wife and husband				Husban	d	
	OR	95%CI	P value	OR	95%CI	P value
Family type						
Extended	3.0	(0.5-19.0)	0.252	4.5	(0.7-30.9)	0.126
Nuclear	Reference					
Type of house	•					
Rent	3.46	(0.90-3.32)	0.070	0.74	(0.74-0.74)	0.613
Other	Reference					
Education						
Secondary	0.81	(0.14-4.58)	0.814	1.328	(0.20-8.65)	0.767
University	Reference					

In multivariate analysis and after controlling for other factors, those in rural areas were found to be 0.9 less likely to obtain information from other sources than from PHC. While those who were below 20 years and between 21-33 years of age were found to be 8.6 and 5.0 times more likely to obtain information from home than from PHC. Extended families obtained information from home and were 2.1 times more likely while nuclear families are 1.8 more likely. Women respondents who had no education were 6.6, and those with primary education 2.7 times more likely to obtain information from home compared to health center as a source of information. Women who attended primary and secondary education were found to be 75% and 64% less likely to obtain information from prints and media compared to health center (Table 3).

Multinomial logistic regression analysis showed insignificantly different in terms of who had decision

making on family planning in the family within family types, housing type, and educational level of women. Unadjusted odds ratio for the family planning decision-maker (Table 4).

Selected socio-demographic factors were found to be significant determinants of family planning advantages over contraceptives. Women's age below 20 years were 0.7 times less likely to report advantages of family planning (O.R=0.3, p=0.033) over contraceptive. No Education and primary education were found to be 0.26 and 0.29 less likely to perceive family planning rather than contraceptive relative to tertiary education. While those in rural areas were 0.3 times less likely to report family planning advantages (O.R=0.5, p<0.001) over contraceptives. Women from extended families (O.R=0.7, CI=0.45-0.97, p<0.001) were 0.7 less likely to know family planning advantages more than contraception uses. Occupation of women had no effect

on determining other advantages of family planning over contraception (Table 5).

Table 5: Determinants of other family planning advantages over contraception.

	OR	95%CI	P value
Age	-		
≤20 yrs	0.294	(0.09-0.90)	0.033*
21-33 yrs	0.561	(0.25-1.21)	0.143
34-44 yrs	0.656	(0.32-1.32)	0.241
Above 44yrs	Reference		-
Education leve	el		
No education	0.26	(0.10-0.67)	0.006*
Primary	0.29	(0.17-0.51)	0.000*
Secondary	0.65	(0.41-1.02)	0.063
University	Reference		
Residence	-		
Rural	0.52	(0.34-0.79)	0.00*
Urban	Reference		
Type of house			
Rented	1.69	(0.98-2.91)	0.058
Own	Reference		
Family type			
Extended	0.67	(0.45-0.97)	0.04*
Nuclear	Reference		
Occupation			
Employed	1.182	(0.42-3.29)	0.749
House wife	1.501	(0.53-4.23)	0.443
Student	Reference		

^{*}Significant at 95% significance level.

DISCUSSION

This study has aimed to conduct an investigation into the socio-demographic and cultural elements that inform the health-seeking behavior towards family planning among Sudanese women in Sharq-Alneel. Furthermore, the study aimed to identify individuals within Sudanese families, who predominantly interfered with the decision of the women in using of contraceptives for family planning.

Women of Sharq-Alneel locality showed weak awareness about contraceptives and family planning rather than very few they stated. Rogers and Earnest in their study discussed the lack of awareness pertaining to reproductive health-seeking among migrant Sudanese communities in Australia. This knowledge extended to awareness about sexual and reproductive health, use of contraceptives and the role of familial elements in influencing the role of those women to seek reproductive healthcare. The study utilized a wider age range pertaining to the participants as compared to the present study; specifically, 18 to 55 years old women were recruited. ¹⁸

A significant relationship was noted between the age of the participants and the duration of their marriages, whereby women's ages and the duration of marriage were negatively correlated. Similar trends were seen in recent studies that highlighted increases in women's age to a primary factor contributing to high divorce rates.¹⁹

The present study demonstrated a significant relationship between the type of residence and the number of children for the respondents. Specifically, women residing in rural settings were seen to have a significantly greater number of children as compared to those respondents who resided in urban areas. These results may be in line with a previous study, which addressed the lack of awareness of rural residents with regard to undertaking appropriate family planning measures. Furthermore, a significant association was seen between the type of residence and the monthly financial income of the female respondents. Specifically, respondents with lower income levels were seen to mostly reside in rural settings. The association between low income levels and rural residences in Sudan was previously addressed. In supplementary the supplementary that the supplementary the supplementary that the supplementary that the supplementary the supplementary that the supp

The study results showed that the respondents mainly sought healthcare-oriented information regarding family planning from their primary healthcare center (PHC). These respondents stood at 46.1% of the study population. As noted by the results, a relatively greater proportion of the respondents reported that they did not contraceptives. Quantitatively, 66% of the participants reported their lack of contraceptive usage; whereas, 34% of the respondents reported that they utilized contraceptives. The causal factors attributed to these low percentages were primarily rooted in the refusal of husbands to utilize contraceptives (65.4%). The refusal of husbands to actively participate in contraceptive usage was highlighted in previous studies which had evaluated the presence of family planning in Sudan. 22,2 Furthermore, the primary reason due to which condoms were not used was attributed to the respondent's lack of preference (46.1%). Only 15.1% of the respondents regarded condoms to be useful in family planning and gave it significant importance.

Similar results were observed in additional studies which indicated that there was a very low level of condom usage in Sudan, due to lack of awareness regarding its significance.²⁴ Other factors; due to which there was a lack of contraceptive use, were attributed to the desire of the respondents to have children (24.8%) in addition to fear that contraceptive use was linked to health concerns (9.8%). Similar studies noted that there was a significant lack of modern contraceptive use among sub-Saharan African communities due to a gap in knowledge regarding their proper use and fear pertaining to health concerns.²⁵ Therefore, it is clear that there is a significant lack of knowledge and awareness regarding appropriate use of contraceptives in Sudan and other African communities.

This gap in knowledge needs to be suitably addressed through the use of educational intervention programs. Furthermore, an easier access to contraceptives should be made possible for the rural communities within Sudan. It is of additional importance that the refusal of husbands to use contraceptives be greatly addressed, since this is a significant cause for concern.

Additionally, the results highlighted that there was a stark difference between the use of contraceptives employed by women from rural family settings and those from urban ones. Specifically, 57.2% of the rural respondents did not engage in contraceptive usage, whereas, 42.8% of the urban respondents did not utilize contraceptives. However, these results were seen to contrast with those attained by a previous study, which highlighted the lack of difference in postpartum contraceptive usage based on rural and urban locations. Nevertheless, the results are in line with a study which indicated that a higher level of contraceptive usage was noted in urban communities as compared to rural ones. Therefore, further investigation is necessary in this regard, so that an appropriate conclusion may be reached.

With regard to the sources of knowledge regarding contraceptive use, both rural and urban respondents predominantly sought knowledge from their PHCs. Following this, the both rural and urban respondents sought information from their homes and consecutively, from print and media sources. However, based on extended and nuclear family settings, it was seen that most of the respondents within the extended setting sought information from their homes. Respondents from nuclear families mostly referred to PHCs for their knowledge. The significance of the relationship between the type of family setting and the health-seeking attitudes of women was highlighted in an additional study.²⁸ Therefore, the results of this study affirm the relationship between the type of family and family planning attitudes, as indicated by previous studies.

The results indicated that there was a lack of knowledge pertaining to the appropriate use of contraceptives even among those respondents that aimed to carry out family planning. This was indicated by the high number of respondents who relied on natural contraceptive methods to prevent pregnancies. To this end, previous studies have highlighted the ineffectiveness of using natural contraception methods with regard to preventing cases of pregnancies. ^{29,30} It is essential that Sudanese communities therefore be equipped with adequate knowledge pertaining to the proper use of contraceptives and be notified about the ineffectiveness of natural contraceptive methods for preventing pregnancies.

The study also investigated the association between the level of education attained by these respondents and their awareness regarding the advantages of family planning as opposed to contraception. The results of the study indicated that women who had received university level educations were more aware in this context as compared to respondents who had attained primary or secondary levels of education, in addition to those who had received

no prior education in any form. It was additionally seen that women who had received higher levels of education were less prone to refer to print and media sources and sought information from more authentic sources such as PHCs. Therefore, a significant and directly proportional relationship may be seen between the level of education attained by the respondents and their level of awareness regarding family planning.

Similar results may be noted in previous studies that indicated the presence of a significant association between the level of education attained by a woman and awareness of family planning.³¹ The study further highlighted that the most effective way to reduce the rates of unplanned pregnancies stemmed from educating women and promoting gender equality in this regard. It is also noticed that barrier to contraception use for majority of women was that they believe their health are at risk for using modern contraceptives. Furthermore, the power of the media should be harnessed for disseminating authentic and reliable information about appropriate contraceptive usage and overall family planning.³²

The study additionally investigated the relationship between the husbands' level of education and their role as decision makers with regard to family planning. This was inclusive of items such as the number of births, spacing between the births and use of contraceptives. It was also seen that women in rural families were sharing the decision for family planning with their husbands in a majority of cases, as compared to those women in urban settings. Furthermore, there was a significant association between the level of education attained by the husbands and their awareness regarding the significance of family planning. These results were seen to be strongly in line with those affirmed the role of education to be a primary factor influencing the awareness levels of husbands about family planning. ³³

Since this study has noted an extremely high prevalence of respondents whose husbands refused the use of contraceptives, it is essential that appropriate educational programs be conducted to inform them in this context. Such programs were conducted on a sample population in Ethiopia, whereby it was seen that the male respondents were more willing to adopt family planning measures as compared to before the interventions took place. Therefore, the use of educational interventions may have a strong relevance in positively influencing the attitudes and perceptions of husbands in this regard. It is required also to conduct a study to determine the reasons for not accepting contraceptives use among women's husbands in Sharq-Alneel locality.

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REFERENCES

- Abdel-Tawab N, El-Rabbat M. Maternal and neonatal health services in SUDAN: results of a situation analysis. Project Brief. Population Council. 2010.
- 2. United Nations Population Fund (UNFPA). Maternal Health. Available at: https://www.unfpa.org/maternal-health. Accessed on 9 June 2018.
- World Health organization. Fact sheet: Family-planning/Contraception, 2018. Available at: http://www.who.int/en/news-room/factsheets/detail/family-planning-contraception. Accessed on 9 June 2018
- 4. Ayanore MA, Pavlova M, Groot W. Unmet reproductive health needs among women in some West African countries: a systematic review of outcome measures and determinants. Reproductive Health. 2016;13(1):5.
- Uchechukwu C, Mary U, Allison E, Chinasa A, Adanna C. Assessment of Maternal Health Seeking Behavior and Service Utilization among Women of Reproductive Age in South-Eastern, Nigeria. Scientific Rev. 2015;1(3):64-73.
- 6. Sunil TS. Reproductive Health in Yemen: A Theoretical Approach (Doctoral dissertation, University of North Texas). 2002.
- 7. Ali AAA, Okud A. Factors affecting unmet need for family planning in Eastern Sudan. BMC Public Health. 2013;13(1):1.
- Finer LB. The consistency and the determinants of reproductive health policy in the American States. 1999.
- 9. Mowson RE. Reproductive Health Seeking Behaviors among Female University Students: An Action Oriented Exploratory Study. 2015.
- Hay PE, Kerry SR, Normansell R, Horner PJ, Reid F, Kerry SM, et al. Which sexually active young female students are most at risk of pelvic inflammatory disease? A prospective study. Sexually transmitted infections. 2016;92(1):63-6.
- 11. Islam M, Montgomery M, Taneja S. Urban health and care-seeking behavior: a case study of slums in India and the Philippines. Final report. 2008.
- 12. Wigginton B, Harris ML, Loxton D, Lucke JC. A qualitative analysis of women's explanations for changing contraception: the importance of noncontraceptive effects. J Family Planning Reprod Health Care. 2016;42(4):256-62.
- 13. Roudi-Fahimi F, Ashford L, Khalil K. Advancing research to inform reproductive health policies: the Middle East and North Africa. 2008.

- 14. Random.Org. Random Integer Generator, 2018. Available at: https://www.random.org/integers/. Accessed 20 February 2017.
- 15. Cochran WG. Sampling techniques (3rd ed.). New York: John Wiley & Sons. 1977.
- Baretlett HE, Kotrlik JW, Higgins CC.
 Organizational Research: Determining Appropriate
 Sample Size in Survey Research. Information
 Technology, Learning, Performance JI.
 2001;19(1):43-50.
- 17. Yeshewas A, Zelalem BM, Gizachew AT. Postpartum contraceptive use in Gondar town, Northwest Ethiopia: a community based cross-sectional study. BMC Women's Health. 2015;15:19.
- 18. Rogers C, Earnest J. Sexual and reproductive health communication among Sudanese and Eritrean women: an exploratory study from Brisbane, Australia. Culture, Health Sexuality. 2015;17(2):223-36.
- 19. Rotz D. Why have divorce rates fallen? the role of women's age at marriage. J Human Resources. 2016;51(4):961-1002.
- 20. Chambers R. Rural development: Putting the last first. Routledge; 2014.
- 21. Abdelatti H, Elhadary Y, Samat N. Addressing Poverty in Sudan and Malaysia: A Story of Success and Constraints. J Sustainable Develop. 2016;9(2):206.
- 22. Abdalla AAA, Ahmmed EH. Evaluate Use and Barriers to Accessing Family Planning Services among Reproductive Age Women in the White Nile, Rural Districts, Sudan. Health Sci J. 2017;11(6):531.
- 23. Metusela C, Ussher J, Perz J, Hawkey A, Morrow M, Narchal R, et al. "In My Culture, We Don't Know Anything About That": Sexual and Reproductive Health of Migrant and Refugee Women. Int J Behavioral Med. 2017;24(6):836-45.
- 24. Ebrahim NB, Davis S, Tomaka J. Psychosocial determinants of intention to use condoms among Somali and Ethiopian immigrants in the US. Psychol Health Med. 2017;22(5):611-7.
- 25. Ackerson K, Zielinski R. Factors influencing use of family planning in women living in crisis affected areas of Sub-Saharan Africa: A review of the literature. Midwifery. 2017;54:35-60.
- Starr KA, Martins SL, Watson S, Gilliam ML. Postpartum contraception use by urban/rural status: an analysis of the Michigan pregnancy risk assessment monitoring system data. Women's Health Issues. 2015;25(6):622-7.
- 27. Garenne, M. Trends in marriage and contraception in sub-Saharan Africa: a longitudinal perspective on factors of fertility decline. 2014.
- 28. Kaur A, Kaur B, Gupta A, Singh A. Assessment of knowledge and attitude regarding use of contraceptive methods among women at selected rural area, Ambala, Haryana, India. Int J Reprod, Contracept Obstetr Gynecol. 2017;4(6):1907-13.

- 29. Murshid NS, Ely GE. Does the Use of Unreliable Contraceptive Methods Increase the Number of Abortions? Results from a National Survey of Women in the United States. Social work in public health. 2018: 1-18.
- 30. Husain Z, Dutta M. Behavioural Contraception Methods. In Fertility Control in a Risk Society. Springer, New Delhi; 2017: 1-18.
- 31. Jiang L, Hardee K. Women's education, family planning, or both? Application of multistate demographic projections in India. Int J Population Res. 2014:940509:9.
- 32. Jacobs J, Marino M, Edelman A, Jensen J, Darney B. Mass media exposure and modern contraceptive use among married West African adolescents. The Eur J Contracept Reprod Health Care. 2017: 1-11.

- 33. Kamruzzaman M, Hakim MA. Family planning practices among married women attending primary health care centers in Bangladesh. Int J Bioinfo Biomed Eng. 2015;1(3):251-5.
- 34. Tilahun T, Coene G, Temmerman M, Degomme O. Couple based family planning education: changes in male involvement and contraceptive use among married couples in Jimma Zone, Ethiopia. BMC Public Health. 2015;15(1):682.

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