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Prevalence and factors associated with unintended pregnancy among married women in an urban and rural community, Khartoum state, Sudan

Majdi Mohammed Sabahelzain[1] *,Sawsan Mustafa Abdalla*[2*], *Syed Ahmed Meraj*[2], *ElsadigYousif Mohamed*[2], *Mohamed Abdalla Almansour*[3], *Khaled Tohami Medani*[2], *Fahmi Ezaldin Awad*[1]

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*Corresponding Author:
E-mail:s.abdalla@mu.edu.sa, sawsanmust@gmail.com

1 Reproductive and Child Health Research Unit, University of Medical Sciences and Technology, Khartoum, Sudan.
2 Department of Community Medicine and Public Health, College of Medicine, Majmaah University, Kingdom of Saudi Arabia
3 Departments of Family Medicine, College Of Medicine, Majmaah University, Kingdom of Saudi Arabia

Conflict of Interest—none

ABSTRACT

Introduction: Unintended or unplanned pregnancy has been a distressing reality among females in the reproductive age group particularly in developing countries. The repercussions of such events range from illegal abortions to various health related problems associated with pregnancy in mothers. The current study aimed to determine the prevalence of unintended pregnancy among married women in an urban and rural community in Khartoum state, to determine the associated factors of unintended pregnancy and to verify the reasons behind unintended pregnancy as perceived by the married women in the area.

Methodology: It was a community-based; cross sectional study conducted in Riyadh and Alshekh Elfadni areas in Khartoum state. The sample size was calculated as 341. The study population were married women of reproductive age (15-49 years), selected by multistage stratified sampling. Data was collected by a pre-tested questionnaire and analysed by SPSS software. Chi square test was used to test the association between the dependent and independent variables. Level of significance was determined at 95% (*P* value < 0.05 was considered as significant).

Results: Prevalence of unintended pregnancy was high at 30.2% among the study sample. Significant association (95% CI, p<0.05) was seen between unintended pregnancy and education, household size, parity and use of modern contraceptives methods

Conclusion: This study concluded that the prevalence of unintended pregnancy among married women in rural and urban communities in Khartoum state is high. The unintended pregnancy increases as the level of education increases. Women with big household size and high parity are more likely to have experienced unintended pregnancy. The most important reason behind unintended pregnancy is less spacing between one pregnancy and the other.

Keywords: Reproductive health, education, contraceptive, spacing

INTRODUCTION

Historically, there has always been a conflict to differentiate between unintended pregnancy and unplanned pregnancy even when they never implied the same. Unintended pregnancies in women are events that either have been mistimed (a child was not desired at that point of time) or was unwanted (no children or no more children was desired). Unplanned pregnancies occur in spite of even when the women used contraceptive methods or didn't desire a child but also didn't use any contraception during intercourse.[1]

Unintended pregnancy is not just a problem of young, poor women or minorities; it affects all segments of the community. Globally, it is estimated that around one-third (38%) of all pregnancies are unintended and studies have indicated that risk factors for unintended pregnancy in Arab countries include early marriage, low socioeconomic status, low education and certain local socio-cultural factors.[2] Furthermore, unintended pregnancies in the Middle East and North Africa countries (MENA) were estimated between 15% and 58%, either mistimed when occur or unwanted at all.[3] A national study in Egypt found that increased chances of an unintended pregnancies occurred in those who were of older age, living in remote areas, having poor knowledge of the ovulatory cycle, having a more than ideal family size, using contraceptive methods or having four or more children.[4] Similar studies also indicated that women aged less than 25 and of low socioeconomic status were more likely to have unplanned pregnancies.[5, 6]
Cheap and effective interventions are available for preventing unplanned pregnancies, providing safe abortions, antenatal and postnatal care but still the mortality and morbidity associated with maternal and child health is high particularly in developing countries. Statistics have shown that around 80 million women have unintended or unwanted pregnancies each year, of which around 45 million abortions take place of which more than 19 million are unsafe. It was found that more than 40% of these abortions are done on women aged less than 25 years and around 80 000 women die every year from complications related to unsafe abortions.[7] This can be understood from the fact that studies have found a significant gap in the unmet need for contraception in more than 120 million couples worldwide.[8]

Review of Literature

Taking into consideration previous studies projecting the findings of low CPR prevalence among eligible Sudanese females and the study report of WHO stating that the Eastern Mediterranean region has one of the lowest reported CPRs, [9] it reflects sadly on the current dismal scenario of female empowerment to allow them to make their own choice to protect their health. A geographically non – uniformly displaced population of Sudan does conceals many health related facts like inaccurate reporting of maternal deaths including proper spacing, reported abortions etc. that could provide policy makers a firm plan on how to proceed.[10] Multiple studies worldwide have shown that demographic risk factors for unplanned births included age, education level, annual income, length of relationship, and marital status. [11, 12,13,14,15] These factors are also found in studies done in African and Afro – Asian countries for which multiple strategies have been devised to bring down such incidences through greater awareness among the population.[16, 17] An assessment by WHO at country level in Africa had also revealed that factors responsible for unplanned/unwanted pregnancy commonly have been early age of marriage, early pregnancy and little knowledge of contraception.[18]
Many studies suggested that contraceptive method choice is a leading cause of unintended pregnancy. In 2002, more than half of contraceptive users in USA relied on short acting methods which required to be used repeatedly such as contraceptive pills, male condoms or the 3-month injectable. The effectiveness of these methods is limited by their relatively high failure and continuation rates under typical use. Further, many unintended pregnancies occur in women as a result of using these methods inconsistently, incorrectly or both. [2, 19, 20]
Generally, the lack of information about the unintended pregnancy in Sudan may be due to lack of this question in the national household surveys. With maternal mortality ratio 216 per 100,000 live births, Sudan has one of the highest maternal death rates in the EMRO countries and still far away from achieving the target of Millennium Development Goal (MDG) in 2015 in which the maternal mortality ratio should be 134 per 100,000 live births.[21] One of the leading causes of maternal death in Sudan is unsafe abortion, since the circumstances under which an abortion is considered legal are one of these three conditions; firstly, the miscarriage is necessary to save the mother's life, secondly, the pregnancy is the result of rape which has occurred not more than 90 days before the pregnant woman has desired to have the abortion, thirdly, it is proved that the quick unborn child has died in the mother's womb.[22]
The contraceptive prevalence rate is very low in Sudan, and Sudan Household Health Survey (SHHS 2010) showed that it was at 9 %, and approximately 78 % of women of reproductive age in Khartoum

state do not use contraceptives[21]. A study by WHO found significant association between alcoholism and unsafe sex practices among developing countries which also included a high risk of HIV co – infection.[23] Furthermore, a recent study associated unmet need for family planning with low level of education among the females in Eastern Sudan and recommended increasing the educational level among the population indicating that literacy plays an important role in preventing unwanted pregnancy.[24] An international study showed that in Sudan the prevalence of effective contraception was 11.8% and the unmet need among the reproductive age group was 29.9% in 2010 suggesting that further efforts are needed to bridge the gap.[25] The prevailing view by national and international health agencies suggests that there is a lack of data on reproductive and sexual health including unsafe and illegal abortions that has prevented in developing proper guidelines on actions that need to be taken to fight unwanted/unplanned pregnancies.[26, 27]

Study objectives

The current study aimed to determine the prevalence of unintended pregnancy among married women in an urban and rural community in Khartoum state, and secondly, to determine the associated factors of unintended pregnancy, and thirdly, to verify the reasons behind unintended pregnancy as perceived by the married women in the study area

METHOODOLOGY

A community based cross sectional study was conducted for a period of four months(May-August 2011).Data was collected from mothers' of children aged 12-23 months residing in Peeranwadi village of Kinaye Primary Health Centre, which is one of the Rural Field Practice areas of Department of Community Medicine, J.N. Medical College, Belgaum. It consists of 780 households with a population of about 4,300.A house to house survey was conducted and all the mothers who had at least one child between 12-23 months of age and were residing in that area for more than one year were interviewed. The purpose of the study was explained to them in detail in the vernacular language and written informed consent was obtained. Every third house was visited using systematic random sampling and total of 260 houses were visited. Two more follow up visits were made to the same households, if the mothers were absent at first visit. Total of 94mothers with a child between 12-23 months of age were interviewed. Socio-demographic variables were the age & educational status of mother and age & gender of the child. The socioeconomic status was recorded as per modified B.G. Prasad's classification.[4]Approval was obtained from the Institutional Ethical Committee for Human Subjects' Research. Statistical analysis was done using percentages and chi square test.

RESULTS

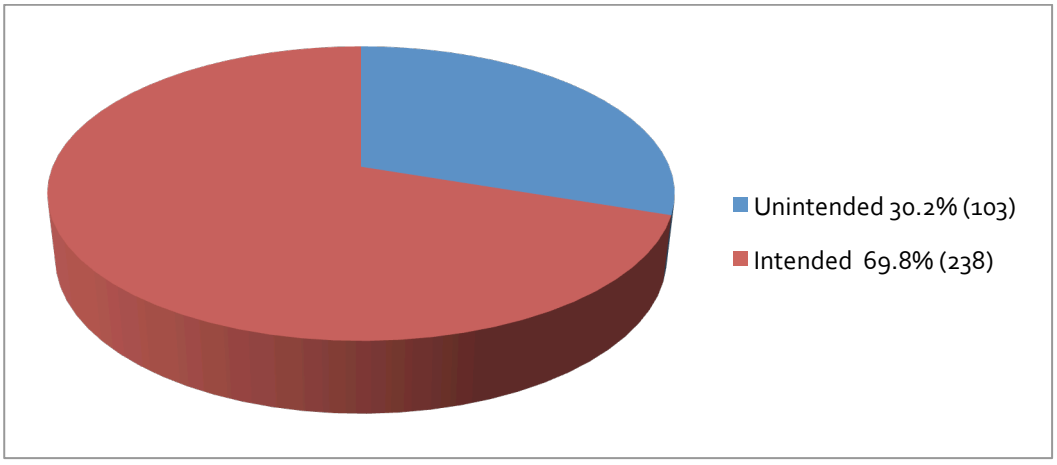

Figure 1 Proportion of Unintended Pregnancy among the respondents n=341

Table 1 Relation between Unintended Pregnancy and social factors

Socio demographic factors		*Unintended pregnancy*		*Total*	*P*
		Yes	***No***		
Age / Year:	Less than 20	4 (23%)	13 (77%)	17	
	20- 34	52 (28%)	131 (72%)	183	
	35- 49	47 (33%)	94 (67%)	141	
	Total	**103 (30%)**	**238 (70%)**	**341**	0.289
Education:	Illiterate	4 (18%)	18 (82%)	22	
Basic		25 (26%)	72 (74%)	97	
Secondary		35 (30%)	80 (70%)	115	
University		39 (36%)	68 (64%)	107	
Total		**103 (30%)**	**238 (70%)**	**341**	0.035
Residence:	Urban	46 (34%)	91(66%)	137	
Rural		57 (28%)	147(72%)	204	
Total		**103 (30%)**	**238(70%)**	**341**	0.359
Family Size:	1-2	2(5%)	37(95%)	39	
3-5		51(28%)	128(72%)	179	
Six and more		50(41%)	73(59%)	123	
Total		**103(30%)**	**238(70%)**	**341**	0.001
Employment:	Yes	83(29%)	205(71%)	288	
No		20(38%)	33(62%)	53	
Total		**103(30%)**	**238(70%)**	**341**	0.178
Parity:	Zero	1(4%)	21(96%	22	
1-2		27(24%)	85(76%)	112	
3-5		34(33%)	70(67%)	104	
6 and more		41(40%)	62(60%)	103	
Total		**103(30%)**	**238 (70%)**	**341**	0.001

Table 2 Association between Unintended pregnancy and Modern contraceptive use among the respondents

Contraceptive use	Unintended pregnancy		Total	*P. value*
	Yes	No		
YES	71 (42.3%)	97 (57.7%)	168 (49.3%)	
NO	32 (18.5%)	141 (81.5%)	173 (50.7%)	0.0003
Total	103 (30.2%)	238 (69.8%)	341 (100%)	

Table 3 Reasons for their unintended Pregnancy as perceived by the respondents

Reason	No.	per cent
Too soon after last pregnancy	85	82.5%
Health reasons	6	5.8%
Education would be interrupted	5	4.9%
Too young	4	3.9%
Economic	3	2.9%
Total	103	100%

DISCUSSION

The prevalence of exclusive breastfeeding in Peeranwadi area was 65.95% which was higher compared to the national level of 46% (NFHS 3), but far shorter than the 11th five year plan target of 80%.[11] but similar to a study conducted in rural Wardha - 61.6%[6] and also similar to the Tamil Nadu study - 68.4%.[9] Another study conducted in a slum in New Delhi, India showed that exclusive breast feeding rates at six months is about 46%.[6] Our findings are higher compared to a study conducted in Bankura district of West Bengal of 57%.[2]

35.94% (33) of mothers initiated breastfeeding within an hour after birth, which was higher than the study conducted in rural Wardha - 22.2%[7] and also higher than the national average of 23%. These findings are also similar to an earlier study at New Delhi, where 35% of rural mothers initiated breastfeeding one hour after birth[7] as well as the West Bengal study - 13.6%.[2]

In our present study, 51.6% mothers reported giving pre-lacteal feeds to their children due to lack of knowledge and their belief that feeding colostrums was harmful for their children. These findings were much higher than the study from West Bengal 26.7%,[2] but similar as compared to NFHS-3 of 57.2.[3]

65.95% of infants were started weaning at six months of age. Out of these, 72.5% were given more than one type of solid or semi solid food. This was found to be higher than that reported at the National level(NFHS-3) data 44.2%,[3] but similar to the West Bengal study which reported that 55.7% of infants were given solid or semi-solid food[2]. Bottle feeding was given to 3.79% of the infants. Due to the risk of exposure to infectious agents, current WHO guidelines do not recommend the use of bottle feeding.[1]

CONCLUSION

In our study, half of the participants had given prelacteal feeds to their newborns. Almost two thirds

of them practiced exclusive breastfeeding for six months. Three out of five participants initiated weaning at six months of age. Half of the participants gave weaning foods like instant formula to their children. Henceforth we need to focus on educating the mothers with regard to proper weaning practices, one of the methods by which this can be achieved is through peer education. The Baby Friendly Hospital Initiative can also help to promote better weaning practices. Mothers can be counseled about proper weaning practices at the time of delivery and told about the hazards of delayed weaning and faulty weaning practices. Strengthening of MCH services can further help to achieve this goal.

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