ORIGINAL RESEARCH

Reproductive health and neonatal consequences of unintended childbearing among Saudi women

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Abstract

Background: The incidence of unintended pregnancy is among the most essential health status indicators in the field of reproductive health. Women who have an unintended pregnancy are also at risk for unintended childbearing, which is associated with a number of adverse maternal behaviors and child health outcomes, including inadequate or delayed initiation of prenatal care, smoking and drinking during pregnancy, premature birth, and lack of breastfeeding, as well as negative physical and mental health effects on children.

Aim of the study: The aim of the study is to identify the factors associated with unintended pregnancy and the neonatal outcomes of unintended pregnancy among Saudi women.

Method: A comparative study conducted at two hospitals in Riyadh city. A non-probability convenient sample of 99 Saudi post-partum women age between (17 - 37) years and above, planned & unplanned pregnant women. A Structured interviewing questionnaire developed to collect data related to: Socio-Demographic characteristics, Reproductive Health and Pregnancy outcomes.

Results: Unexpected result is that women with one child more frequently among women with unplanned pregnancies (10.1%) and less among women with planned pregnancies (5.1%), while women with two children more frequently among women with unplanned pregnancies (71%), and less for women with planned pregnancies (4.0%). There were no statistically significant differences between planned and unplanned pregnancies in the percentages of Number of antenatal care visits, live births and stillbirths, newborn birth weight or preterm births.

Conclusion & recommendations: Reproductive health behaviors are threatening for maternal, and newborn especially in regard to antenatal follow-up awareness.

Key Words: Reproductive rights, Intends, Mistimed/unintended

1 Introduction

The terms "planned" and "unplanned" pregnancy are commonly used in health policy, health services and health research as descriptors of pregnancy intention, yet previous research has highlighted that these terms are, in fact, extremely ambiguous. Some researchers concurs with this, and argues that intends is probably too complex concept even to be measure. However, others suggest that in spite of its complexity, there are important reasons for why researchers should continue their efforts to understand these terms.[1,2] Unplanned or unintended pregnancies are defined

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as pregnancies that, at the time of conception, are either mistimed or unwanted.[2] One of the important aspects in reproductive health is the ability for women to choose time to bear a child.[3] One half to two third of pregnancies in US and some eastern European countries are unwanted and enormous percentage resolved through abortion.[4,5] Current data suggest that 1 in 3 pregnancies in the Middle East and North Africa region (MENA) region is unintended. Women who have an unintended pregnancy is when they have already achieved their desires family size and do not desire to have more children or desire to have a child or another child later in their lives. Whether and when to have a child are basic human and reproductive rights acknowledged in different international documents. Unintended pregnancies occur for variety of reasons, such as not having an easy access to a contraceptive method of choice, failing to use the method correctly, or simply because a women having no power to exercise her reproductive rights that the international development community advocates.[6] Unwanted pregnancy is one of the problems that have adverse effect on the health of the mother and child in which it affect the health behavior of the mother and the birth outcome.[7] They may take care of themselves less than those who planned to get pregnant, try some ways toward abortion or result in increased physical violence.[8]

Aim of this study

Is to identify the maternal reproductive health pattern and neonatal outcomes of unintended pregnancy among Saudi women.

2 Method

This is a comparative study conducted at two hospitals in Riyadh city (King Saud medical hospital and Al-ymamah maternal & child hospital) both are government hospitals providing a free medical care to Saudi citizens. A non-probability convenient sample of 99 Saudi post-partum women age between (17-37) years and above, planned & unplanned pregnant women.

A Structured interviewing questionnaire developed after reviewing literatures to collect data related to: Socio-Demographic(age, Educational level, Occupation, monthly Income, No. of children). Reproductive Health: (Previous Terminated pregnancy, Family planning History, Birth order of the newborn, Knowledge about Ovulation cycle, Achieved & desired family size). Pregnancy outcomes: Number of antenatal visits, Newborn status, Birth weight, gestational age). The aim and the nature of the study were explained to subjects who agree to participate in the study and an oral approval was obtained. Tools utilized to collect the desired data were explained. Participants were assured that all their data are highly confidential, anonymity to protect their privacy. The women were interviewed individually in their rooms individually.

3 Results

The majority of the studied sample (45.5%) was aged 28 to 37 years, 36.4% were aged of 18 to 27 years, while 14.1% of the study sample their age was over 37 years aged and only 4.0% were younger than 17 years old. With regard to the educational level of the women, 27.3% had a high level of education, 29.3% were secondary school level, 29.3% were intermediate and primary school and 14.1% were illiterate .The majority of the study sample (72.7%) were housewives, 26.3% were workers. As regard to number of children of the study sample, it was found that 27.3% have more than four children, 52.5% had between one to three children, while 20.2% had no children (see Table 1).

Table 1: Frequency distribution of the study sample according to Socio-demographic data.

Items	No = 99	%
Age group:		
Less than 17 yrs	4	4.0
18-27	36	36.4
28-37	45	45.5
Above 37 yrs	14	14.1
Education level:		
Illiterate	14	14.1
Primary school	19	19.2
Intermediate school	10	10.1
Secondary school	29	29.3
High level education	27	27.3
Occupation:		
Housewife	72	72.7
Worker	26	26.3
Retired	1	1.0

Regarding reproductive health, the results revealed that the majority of the study sample does not terminated pregnancies before, while 18.2% were terminated. Most of the study sample (44.4%) used contraceptive methods (OCP, IUD, injections), while 34.3% never used a contraceptive method, 21.2% of the study sample were using a contraceptive method before the last pregnancy. As regard to birth order of the current newborn, 25.3% was the first, while 33.3% was the second or third and 41.4% was the fourth and more. The majority of the study sample (52.5%) had knowledge about ovulation cycle, whereas 47.5% of them hadn't. 57.6% were satisfied about their family size, but 31.3% weren't satisfied about their family size, while 11.1% reported that they had large number of children (see Table 2). Most of the study sample (61.6%) visited the antenatal clinic regularly, while 38.3% had visited the antenatal clinic 4 times and less. Regarding planned and unplanned pregnancy, 53.5% of the women had unplanned pregnancy and 46.5% were planning their pregnancy. In regard to the

outcomes of pregnancy, the majority of the studied sample (90.9%) has live newborn, while 9.1% had died newborn. The majority of the newborn (84.8%) with normal birth weight (2.500- 4.000 kg), only 15.2% Low birth weight< (2.500 kg) (see Table 3).

Table 2: Frequency distribution of the study sample according to reproductive health history.

Items	No = 99	%
No. of children:		
None	20	20.2
1-3	52	52.2
4-6	18	18.4
More than 6	9	9.2
Achieved & desired family size:		
Satisfactory	57	57.6
Large number	11	11.1
Unsatisfactory	31	31.3
Previous terminated pregnancy:		
Yes	18	18.2
No	81	81.8
birth order of the newborn:		
1^{st}	25	25.3
2^{nd}	14	14.1
3^{rd}	19	19.2
4^{th} or more	41	41.4
family planning history:		
Never used contraceptive method	34	34.3
Always used contraceptive method (OCP, IUD, injections)	44	44.4
Used before the last pregnancy	21	21.3
knowledge about ovulatory cycle:		
Woman knows	52	52.5
Woman doesn't know	47	47.5
Planned/unplanned pregnancy:		
Planned	46	46.5
Unplanned	53	53.5

Regarding gestational age 84.8% term and 15.2% less than 37 weeks. Table 4 shows the correlation between socio-demographic variables of women and planning status. The only statistically significant correlation was between the numbers of children and planning status, where the results of Chi-square showed that the lack of children more frequently among women with planned pregnancies (16.2%) compared to women with unplanned pregnancies. (4.0%), while the unexpected result is that women with one child more frequently among women with unplanned pregnancies (10.1%) and less among women with planned pregnancies (5.1%), while women with two children more frequently among women with unplanned pregnancies (71%), and less for women with planned pregnancies (4.0%). Furthermore, women with three children more frequently among women with planned pregnancies (15.2%) and lower among women with unplanned pregnancies (11.1%) even as the women who have more than 4 children significantly their percentages increases among women with unplanned pregnancies (21.2%) and lower among women with planned pregnancies (6.1%) which was an expected results. For the other socio-demographic variables such as (age, educational level, occupation and monthly income) there was no indication of significant differentials.

Table 3: Frequency distribution of the study sample according to Pregnancy outcome.

Items	No = 99	%
Number of antenatal care visits:		
Less than 4 visits	15	15.2
4 visits	23	23.2
More than 4 visits	61	61.6
Newborn status:		
Alive	90	90.9
Died	9	9.1
Birth weight:		
Normal birth weight (2.500-4.000 kg)	84	84.8
Low birth weight< (2.500 kg)	15	15.2
Gestational age:		
Term	84	84.8
Less than 37 weeks	15	15.2

Table 5 shows that there were no significant relation between reproductive health variables such as (previous terminated pregnancy, knowledge about ovulatory pregnancy and achieved and desired family size) among women with planned and unplanned pregnancies. But when we examined the use of contraceptives method across women with planned and unplanned pregnancies we found that rates of method use varied significantly by planning status, that women with planned pregnancies more unlikely to use contraceptive method, while women with unplanned pregnancy always using contraceptive method (OCP, IUD, injection). Furthermore, contraceptive method more frequently used before the last pregnancy among women with unplanned pregnancy. In addition birth order of the newborn was found to significantly correlated with planning status, that first newborn significantly more frequently reported by women with planned pregnancies (18.2%) against 7.1% among women with unplanned pregnancies, while second newborn more frequently reported by women with unplanned pregnancies 10% in contrast to 4.0% among women with planned pregnancies but third and fourth newborn were more frequently reported by women with planned pregnancies ($P < .05$). Regardless of a few differences in the socio-demographic characteristics and reproductive health of women with planned and unplanned pregnancy, there were no statistically significant differences between planned and unplanned pregnancies in the percentages of Number of antenatal care visits, live births and stillbirths, birth weight or preterm births (see Table 6).

Table 4: Relation between socio-demographic characteristics of women with planned and unplanned pregnancy.

Variables	Planned pregnancy		Unplanned pregnancy		Chi-square
	No = 46	%	No = 53	%	
Age					
<17	4	4.0	0	0	
from18-27	19	19.2	17	17.2	6.592 ns
28-37	18	18..2	27	27.3	
>37	5	5.1	9	9.1	
Educational level					
Illiterate	7	7.1	7	7.1	
Primary school	6	6.1	13	13.1	5.187 ns
Intermediate school	4	4.0	6	6.1	
Secondary school	12	12.1	17	17.2	
High level education	17	17.2	10	10.1	
Occupation					
Housewife	34	34.3	38	38.4	0.886 ns
Worker	12	12.1	14	14.1	
Retired	0	0	1	1.0	
Monthly income					
<2500 SR	8	8.1	5	5.1	
2500 – 5000 SR	18	18.2	21	21.2	1.853 ns
5000-10000	15	15.2	18	18.2	
>1000	5	5.1	9	9.1	
No. of children					
None	16	16.2	4	4.0	
One	5	5.1	10	10.1	18.230 **
Two	4	4.0	7	7.1	
Three	15	15.2	11	11.1	
More than 4	6	6.1	21	21.2	

** H. Significance

Table 5: Pregnancy outcome of women with planned and unplanned pregnancy.

Variables	Planned pregnancy		Unplanned pregnancy		Chi-square
	No	%	No	%	
Previous terminated pregnancy					
Yes	7	7.1	11	11.1	0.508 ns
No	39	39.4	42	42.4	
Family planning history					
Never used contraceptive method	22	22.2	12	12.1	7.366 *
Always using contraceptive Method (OCP, IUD, injection)	15	15.2	29	29.3	Significant
Used before the last pregnancy	9	9.1	12	12.1	
Birth order of the newborn					
First	18	18.2	7	7.1	
Second	4	4.0	10	10.0	11.147 *
Third	10	10.1	9	9.1	Significant
Fourth or more	14	14.1	27	27.3	
Knowledge about ovulatory cycle					
Woman knows	25	25.3	27	27.3	0.114 ns
Woman doesn't know	21	21.2	26	26.3	
Achieved desired family size					
Have ideal number	24	24.2	33	33.3	
Have more than ideal number	3	3.0	8	8.1	4.803 ns
Have less than ideal number	19	19.2	12	12.1	

* H. Significance

Table 6: Pregnancy outcome of women with planned and unplanned pregnancy.

Variables	Planned pregnancy		Unplanned pregnancy		Chi-square
	No	%	No	%	
Number of antenatal care visits					
less than 4	7	7.1	8	8.1	0.678 ns
4 visits	9	9.1	14	14.1	
more than 4 visits	30	30.3	31	31.3	
Newborn status					
Alive	42	42.2	48	48.5	0.016 ns
Died	4	4.0	5	5.1	
Birth weight					
Normal birth weight (2500kg 4.000kg)	42	42.4	42	42.4	2.786 ns
Low birth weight <2.500kg	4	4.0	11	11.1	
Gestational age					
Term	42	42.4	42	42.4	2.786 ns
Less than 37 weeks	4	4.0	11	11.1	

4 Discussion

Unintended pregnancy is a pregnancy that is mistimed, unplanned, or unwanted at the time of conception. It is a core concept to better understand the fertility of populations and the unmet need for contraception (birth control) and family planning.[9] Nearly 75% of pregnancies occur among women ages 20 – 34. In 2008 – 2010, there were nearly 40,600 unintended pregnancies among women in this age group compared to 8,600 for women under age 20.[10] The highest occurrence of unintended pregnancies occurred to women aged 25 - 29 years of old and the odds of unintended pregnancy seemed to be increasing with age due to hormonal disturbances of premenopausal period. There is a mixed pattern across the MENA countries in regard to the relationship between pregnant women's employment status and whether their pregnancies were reported as wanted or not at all. Working women are more likely to report on their pregnancy as intended.[11] In the present study (53.4%) reported their current pregnancies were unintended (that is, mistimed and unplanned pregnancy) rather than unwanted. The results also showed that 50% of the women with unplanned pregnancies were between 28 - 37 years old with no significant statistical difference between planned and unplanned pregnancies groups. Also, other socio- demographic variables as educational level, occupation and monthly income showed no indication of significant differentials which contradict with other researches which reported a relation between low-income and lower educational status women and highest rates of unintended pregnancy.[11–13] Pregnant women with higher number of children ever-born tend to report their pregnancy as unintended at a higher rate. Unintended pregnancy mainly results from the lack of, inconsistent, or incorrect use of effective contraceptive methods. One major factor contributing to unintended pregnancy is the misuse or inconsistent use of contraception. Roughly 12,000 births from mistimed pregnancies and 4,000 births from unwanted pregnancies each year were to women who said they had been using contraception.[14] This coincide with the results of the present study as those who had four children or more and were using a contraceptive method reported unplanned pregnancies with a statistical significant difference with those of planned pregnancies, while other reproductive health aspects as previously terminated pregnancy, knowledge about ovulatory cycle and achieved desired family size showed no significant difference among women with planned or unplanned pregnancies.

A relatively large body of researches examined the association between pregnancy intentions and a range of prenatal and perinatal outcomes, including both maternal behaviors during pregnancy and outcomes for the child at the time of the birth. Receiving the correct number of prenatal care visits and beginning prenatal care early in the pregnancy is important for infant health. Women with unwanted or mistimed pregnancies are less likely to use any maternal and child health services than women with intended pregnancies.[15] the present study results showed no statistical significant difference in maternal health behaviors among planned and unplanned pregnancy regarding the frequency of antenatal visits.

Researches exploring the relationship between pregnancy intentions and infant health outcomes shows only weak support for a relationship, although some studies note an association between unintended pregnancy and a higher risk of prematurity or low birth weight.[16–18] The present study results showed no relation between pregnancy intention and newborn health outcomes.

5 Conclusion & recommendations

The results of the current study showed that Saudi women considered their unintended pregnancy as mistimed or un-

planned pregnancy rather than unwanted and referred it to inappropriate use of the contraceptives and lack of knowledge about ovulation cycle. Pregnancy outcomes didn't affect by the socio-demographic of Saudi women but it is rather affected by the women's reproductive health behaviors. Future researches are recommended to investigate the reproductive health behaviors (especially contraceptives use &initiation of antenatal care). It is also recommended to focus health education on raising awareness toward reproductive health among Saudi women of different age groups.

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Conflicts of Interest Disclosure

The author declares that there is no conflict of interest statement.

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