Study of the Factors Leading to Unintended Pregnancy in Women in Kumasi, Ghana

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Authors' contributions

This work was carried out in collaboration between all authors. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Background: There are high levels of unintended pregnancy in low income countries. The aim of this research was to determine the immediate factors associated with unintended pregnancies in Kumasi, Ghana.
Methodology: A facility-based cross-sectional study was carried out on four hundred and forty-two (442) women in selected health facilities (Maternal and Child Health Hospital (MCHH) and Marie Stopes International, Ghana (MSIG)) in the Kumasi business district from January to April, 2014. Data were collected using a pre-tested structured questionnaire. The data were analysed using SPSS version 20. The following statistical analyses were conducted: frequencies, percentages, mean, standard deviation and bivariate analysis.
Results: The mean age was 25.4 years, 67% earned income but only 1/3 earned above the national minimum wage; 60% were unmarried and 55% had below high school education. The mean gestational age at presentation was 16 weeks (±10.7). A statistical association was observed

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between the use of contraceptives (*p*-value = 0.037), marital status (*p*-value= 0.048) and pregnancy.

Conclusion: There are still high levels of unintended pregnancy mainly caused by the non-use of contraceptives. More education is therefore needed on the benefits of contraceptives and the dangers of unintended pregnancy. Further studies are also required to confirm the high contraceptive failure rate and thus innovative ways of improving contraceptives uptake instituted.

1. INTRODUCTION

Unintended pregnancy is an unplanned pregnancy at the time of conception [1]. Out of about 210 million global pregnancies annually, about forty (40) percent are not planned and twenty-two (22) percent are aborted [2]. Ninety-five percent (95.0%) are terminated in an unsafe manner in developing countries [2]. This rate has been higher in Africa but similar in Ghana [3]. Unsafe abortion has been shown to account for 15% to 30% of all maternal deaths in Ghana [4,5]. Knowledge on the immediate factors leading to the occurrences of unintended pregnancies could help in putting in preventive measures in order to reduce morbidity and mortality associated with unsafe abortion. These factors include contraceptive failure, non-use of contraception, using contraception inconsistently or incorrectly, rape/incest and sex for a favour [6–8]. Hatcher and colleagues associated a relatively small fraction of unintended pregnancies to contraceptive failure when modern highly effective contraceptives are used [7]. Incorrect or non-use of contraceptive might be as a result of coercion, rape or involuntary sex in the context of domestic violence [9]. Unintended pregnancies are more likely to be associated with abuse than intended pregnancies [9].

Some factors associated with unintended pregnancies include birth control sabotage; lack of knowledge about sex and reproduction; erroneous beliefs; lack of knowledge or experience with the contraceptive or lack of motivation to use it correctly; lack of planning or ambivalence about whether to have a child; religious or other cultural beliefs that discourage or prohibit contraceptive use; lack of over-the-counter availability of contraceptives and finally, inability or unwillingness to attend healthcare appointments to obtain contraceptives [10]. Even though unwanted pregnancies and induced abortion are prevalent, identifying factors that led to unwanted pregnancies are important in enhancing reproductive health service to women [1]. The sub-Saharan Africa (SSA) region has thirty-nine percent (39%) of the world's unintended pregnancies [10]. There is also an association between low income earners and more previous births and unintended pregnancies [11]. The study sought to determine the immediate factors associated with unintended pregnancies in Kumasi, Ghana.

2. METHODS

2.1 Study Setting

The study was conducted at two purposively selected health facilities within the Kumasi Metropolis. The two health facilities were selected because they offer routine services aimed at preventing unintended pregnancies. Kumasi is Ghana's second biggest city situated about 300km from the national capital, Accra. It has a busy business district which attracts people of varied social backgrounds from all parts of Ghana and neighbouring West African states. The health facilities selected are situated within the business district and they offer a wide range of services including antenatal care, comprehensive abortion care (CAC) and other sexual and reproductive services. The Maternal and Child Health Hospital (MCHH) is more known for antenatal services while the Marie Stopes International, Ghana (MSIG) facilities are more for sexual and reproductive health, including CAC.

2.2 Study Design and Data Collection

A cross-sectional design was employed in this study from 1st January-30th April, 2014. All participants who registered for antenatal services in the selected facilities (MCHH and MSIG) were sampled. Participants who met the inclusion criteria (i.e. first-time attendants at the antenatal clinic) were included in the study. Open and close-ended questions were used for interviews and they were carried out in privacy and confidentiality was assured. Informed oral consent was obtained from each individual upon

enrolment to the study. Participation was voluntary. In all 227 were recruited from MCHH and 215 from MSIG centres. Four clients did not complete the interview at the MCHH while 16 clients at MSIG also could not complete the interview. Participants were asked whether their current pregnancy was unintended, or if they had ever had an unintended pregnancy before. Data were also collected on the non-use of contraception, inconsistent or incorrect use of contraceptives, method failure, sexual assault and sex for a favour.

2.3 Statistical Analysis

The double entry technique was employed in order to improve the accuracy of the data entry. Completed questionnaires were coded and entered into Statistical Package for Social Scientist (SPSS) software, cleaned and analysed at 95% confidence interval. Frequencies of variables were generated; percentages were used to explain study findings. Data were summarised by using mean, standard deviation and range. Bivariate correlation analysis was used to analyse the association between two variables. A p-value < 0.05 was considered statistically significant.

2.4 Ethical Approval

Approval for the study was given by the Committee of Human Research, Publications and Ethics, Kwame Nkrumah University of Science and Technology. Written permissions were sought from the management of MSIG and MCHH before being allowed to undertake the study in their facilities.

3. RESULTS

3.1 Socio-Demographic Characteristics

A total of four hundred and forty-two (442) pregnant women responded to the questionnaire. All the participants gave their ages which ranged from thirteen (13) to forty-six (46) years. The mean age was 25.4 years with a standard deviation of 5.52. From the analysis, 12% (n=53) were under the age of 20 years and 88.0% (n=389) were 20 years and above (see Table 1).

With respect to occupation, 385 (87.6%) of the respondents were employed and 57 (12.4%) were unemployed. The majority of the respondents had never been married (59.8%, n=262). Those who were currently married,

separated or divorced accounted for 40.2% (n=176).

Regarding the educational level of the respondents, two hundred and forty-four (244) (55.2%) had up to basic education (i.e. up to Junior High/Junior Secondary/Middle Schools) and the rest had at least secondary/technical/vocational education (n=198; 44.8%).

The majority of the respondents were Christians (89.3%, n=392) and the rest were Muslims (10.7%, n=47). There was none belonging to the African traditional faith and the other well-known religions. Three hundred and fifty-five (80.3%) responded to the average monthly income levels and about two-thirds were making either the national minimum wage [12] or below (n=239; 67.3%). The rest were earning above the national minimum wage (n=116; 32.7%).

3.2 Characteristics of Women Experiencing Mistimed and Unwanted Pregnancies

Regarding the obstetric history, 52.5% were non-parous, 57.5% had more than one pregnancy, and 28.1% have had a previous abortion. From the analysis, 85.3% were reported mistimed pregnancies whereas 10.0% were unwanted. Table 2 presents the reproductive profile of the participants.

3.3 Contraceptive Use, Knowledge and Attitude of Unintended Pregnancies

From the results, 68.42% of the pregnancies resulted from not using any form of contraception while 31 (7.09%) were using contraceptives either inconsistently or incorrectly or both. According to the results, 18.76% of the pregnancies were attributed to the contraceptive failure (Table 3). From the analysis, 4.58% resulted from sex for favour with no contraception and 5 (1.14%) were from rape/incest. Table 3 presents the frequency of the factors associated with unintended pregnancy.

3.4 Demographic Characteristics Relative to Unwanted and Mistimed Pregnancy

Bivariate analysis indicated that there was a significant relationship between marital status

and unintended pregnancy (p < 0.048). There was no significant relationship between educational level and mistimed pregnancy. There was no significant relationship between age and mistimed pregnancy.

Table 1. Socio-demographic characteristics of respondents

Variables	Frequency	Percentage (%)	Mean	Standard deviation	Range
Age			25.4	5.52	13-46
13-19	53	12.0			
20-26	215	48.6			
27-33	128	29.0			
34-40	38	8.6			
41>	5	1.1			
Occupation					
Employed	385	87.6			
Unemployed	55	12.4			
Educational Level					
No School	24	5.4			
Primary	44	10.0			
Junior High School (JHS)	169	38.2			
Senior High School (SHS)/Middle School	110	24.9			
Tertiary	89	20.1			
Marital Status					
Currently or ever married	176	40.2			
Never Married	262	59.8			
Religion					
Christian	392	89.3			
Muslim	47	10.7			
Average Monthly Income					
National minimum wage and below	239	67.3			
Above national minimum wage	116	32.7			

Table 2. Reproductive profile of respondents

Variable	Frequency	Percentage
Gravidity		
1	188	42.5
≥2	254	57.5
Parity		
0 (non-parous)	232	52.5
≥1(parous)	210	47.5
Gestational Age (in weeks)		
≤13	178	50.4
>13	175	49.6
Previous induced Abortions		
Yes	125	28.3
No	317	71.7
Pregnancy Intention at Conception		
Unwanted	44	10.0
Mistimed	377	85.3

Table 3. Factors leading to unintended pregnancy

Circumstances leading to the pregnancy	Frequency	Percent
Contraceptive failure	82	18.76
Non-use of contraception	299	68.42
Rape/incest	5	1.14
Sex for favour without contraception	20	4.58
Using contraception inconsistently or incorrectly	31	7.09

Table 4. Some variables relative to unwanted and mistimed pregnancy

Variables	Unwanted n (%)	Mistimed n (%)	p-value
Age			0.101
13-19	7 (13.2)	43 (81.1)	
20-26	23(10.7)	182(84.7)	
27-33	11(8.6)	112(87.5)	
34-40	3(7.9)	33(86.8)	
41>	0(0.0)	5(100.0)	
Educational level			0.469
Primary	6(13.6)	35(79.5)	
Junior High School (JHS)/Middle School	14(8.3)	148(87.6)	
Senior High School (SHS)	17(15.5)	86(78.2)	
Tertiary	3(3.4)	83(93.3)	
No School	4(16.7)	19(79.2)	
Marital status			0.048
Currently or ever married	11(6.3)	153(87.9)	
Never Married	23(10.2)	195(86.3)	
Contraceptive use			0.037
Non-use of contraceptives	38(11.2)	285(84.1)	
Contraceptive failure	5(5.2)	88(91.7)	

4. DISCUSSION

The study sought to determine the immediate factors associated with unintended pregnancies in Kumasi, Ghana. The majority of the respondents (85.3%) had their pregnancies mistimed, and only ten percent (10%) indicated they did not want the pregnancy. There was a significant relationship between unintended pregnancy and marital status. From the study, single women were more predisposed to having unintended pregnancies than married women. This agrees with the study conducted in KwaZulu-Natal, South Africa, where single women were more likely to have unintended pregnancies compared with those who are married [13]. There was no relationship between unintended pregnancy and educational level. This finding is averse to the study conducted in Addis Ababa, Ethiopia, where unintended pregnancy reduced as educational level increased [14].

Despite the challenges that come with unintended pregnancies, many single and married couples still fail to use contraceptives to prevent these pregnancies. Knowledge of what led to unintended pregnancy is vital when it comes to the strategies for prevention. There was a significant relationship between unintended pregnancy and the use or non-use of contraceptives. The majority of the participants did not use contraceptives and that led to unintended pregnancies. A study in the Oromiya Region, East Ethiopia, confirms that those who thought they were not fertile failed to use any contraceptives [15]. The causes of unintended pregnancies among the women studied were not different from those found in other studies [6,7,16–18] and these include non-use of contraception, inconsistent or incorrect use of contraceptives, method failure, sexual assault and sex for a favour. Two out of three of respondents did not use any form of contraception and this may be attributed to the fact that women often feel they are 'safe' and thus do not require any form of contraception and results in pregnancy [19]. The 4.7% who became

pregnant from being assaulted sexually was consistent with estimates found in the US [20]. The figure attributable to non-use of contraception was higher than a study by Frost and colleagues which assigned 52% of unintended pregnancies in the USA to non-use of contraception. The 1 out of 5 respondents who were using a form of contraception consistently and correctly but still got pregnant was also higher than the 5% found by Frost et al, 2008 [21]. This is not to suggest that contraceptives have high failure rates in the Ghanaian population than the US but as found by a 2008 Alan Guttmacher Institute, a greater percentage of contraceptive failure was due to reliance on methods with high failure rates under typical use [22]. This result should therefore be interpreted cautiously since this was per the assertion of the respondents without subjecting it to the strict assessment by experts to verify whether they were indeed using the methods perfectly and still got pregnant. This is so important because other works also found smaller figures of failure for perfect use of contraception [7,23]. There is also the need to find out which method they used and how they typically used them. This will inform policy and educational drives. However, about 7% registered inconsistent or incorrect method use as the cause of the pregnancy which was far lower than the 43% figure published by Frost and colleagues, 2008. This finding is also difficult to ascertain since the study did not include the methods and how they were used typically. The majority of the respondents had their unintended pregnancies resulting from non-use of contraceptives although method failure accounted for almost a fifth.

5. CONCLUSION

In conclusion, unintended pregnancy is a major challenge in developing countries including Ghana, where the use of contraceptives is still a challenge. There is therefore the need to improve on the campaign on the use of contraceptives among the single and married to prevent unintended pregnancy.

6. LIMITATIONS

The study has a limitation with respect the sample been a true representation of the population. The sample was taken from just two health facilities. The study also captured data on unintended pregnancies, thus, recall bias is likely to occur with multi-gravida women who might have lost track of certain events, thereby influencing the data reported on unintended pregnancies.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard, written approval of Ethics committee has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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