Extent and determinants of unintended pregnancy in Basrah

Narjis A.H. Ajeel[1], Wefak Hasan Abdul Rahem[2]

ABSTRACT

Background: **The problem of unintended pregnancy exists in all societies, regardless of degree of development. Unintended pregnancy is associated with adverse health outcomes for both mother and child and it is a risk factor for poor health of both of them.**

Objective: **To assess the extent of the problem of unintended pregnancy in Basrah, and to identify the main socio-demographic and reproductive factors associated with its occurrence.**

Methodology: **The study was a cross sectional study involving 260 women who gave birth within the 6 months preceding the time of the study. The studied women were selected from 10 primary health care centers. Data were collected by direct interviewing of the women using a special questionnaire form constructed for the purpose of the study. The questionnaire included questions that covered socio-demographic and reproductive aspects of the participants, as well as details about their last pregnancy.**

Results: **Sixty seven (25.8%) of the participants reported that their last pregnancy ending in a live birth was unintended at the time of conception. This included 33(12.7%) unwanted pregnancies and 34(13.1%) mistimed pregnancies. The study showed that old, illiterate and unemployed women were more likely to have an unintended pregnancy than young, educated and employed women. The prevalence of unintended pregnancy increased with the increase in the number of previous pregnancies. The study also showed that women who planned their last pregnancy, were more likely to attend the antenatal care clinic than those who did not.**

Conclusion: **Unintended pregnancy is not a rare event in Basrah despite the fact that unintended pregnancies ended in abortion were not included in the present study.**

ا.د.نرجس عبدالحسن عجيل[١] والطبيبة الاختصاص د.وفاق حسن عبدالرحيم[٢]

[١]فرع طب المجتمع/كلية الطب/جامعة البصرة

الهدف: **أجريت الدراسة لقياس مدى الحمل غير المخطط له في البصرة ولتحديد العوامل المرتبطة به.**

طريقة البحث: **الدراسة الحالية دراسة عرضية مقطعية شملت ٢٦٠ امرأة ممن جئن لزيارة عشرة مراكز صحية في مدينة البصرة وكان معيار الاختيار هو أن تكون المرأة قد ولدت طفلا حيا خلال الأشهر الستة السابقة لوقت الدراسة. تم جمع البيانات باستخدام استمارة استبيان خاصة بالدراسة وتضمنت معلومات شخصية للمرأة وتاريخ الإنجاب بالإضافة الى تفاصيل الحمل الأخير.**

النتائج: **أظهرت نتائج الدراسة ان ٢٥,٨% من الولادات الأخيرة بين النساء كانت غير مخطط لها أما بحصولها بوقت غير مخطط له (١٣,١%) أو غير مرغوب بها مطلقا (١٢,٧%). الأمهات الكبار في السن، ضعيفات التعليم وممن هن ربات بيوت كن أكثر عرضة لحصول الحمل غير المخطط له، كما ان مدى انتشار الحمل غير المخطط له ازداد بزيادة مرات الحمل السابقة. كما أظهرت نتائج الدراسة بان النساء اللواتي خططن للحمل الأخير كن أكثر استخداما لخدمات رعاية الحوامل من النساء اللواتي لم يخططن لذلك.**

الاستنتاجات: **الحمل غير المخطط له غير نادر الحدوث في البصرة على الرغم من عدم شمول الحمل المنتهي بالإجهاض في الدراسة الحالية**

INTRODUCTION

Unintended pregnancies are defined as pregnancies that are either unwanted (occurring when the woman did not want any more pregnancies) or mistimed (wanted by the woman sometime, but occurring sooner than desired).[1] The problem of unwanted pregnancy exists in all societies regardless of degree of development.[2] Globally every minute, 190 women face an unwanted or unplanned pregnancy,[3] and its prevalence in any society is partly determined by the availability of contraceptives and contraceptives' failure.[4] The low use of contraception is considered to be the main factor influencing the prevalence of unintended pregnancy, particularly in developing

[1]MBChB, Msc, PhD, Department of Community Medicine, College of Medicine, University of Basrah, Iraq
[2]MBChB, FICMS/FM, Basrah Directorate General of Health

countries.[5] Low contraception use, on the other hand, has been linked to poor access to reproductive health services, gender norms and sexual abuse.[6,7] Unintended pregnancy is associated with adverse health outcomes for both mother and child and it is a risk factor for poor health outcomes.[8] Many unintended pregnancies end in abortion; therefore, in countries where abortion is illegal and unsafe, unintended pregnancy is a major contribute to maternal morbidity and mortality. Unintended pregnancy also affects the utilization of antenatal care.[7] Therefore, accurate measurement of pregnancy intentions is considered important particularly in estimating unmet need for contraception. Up to our knowledge, no previous epidemiological study in Basrah addressed the problem of unintended pregnancy. Therefore, the present study was carried out to assess the extent of the problem in Basrah, and to identify the main socio-demographic and reproductive factors associated with its occurrence.

METHODOLOGY

This is a cross sectional study carried out on 260 women who gave birth within the 6 months preceding the time of the study. The studied women were selected from 10 primary health centers. These centers were selected by systematic randomization from a total of 29 centers in Basrah city center; they are distributed all over the city and serve populations of different socioeconomic levels. Data were collected by direct interviewing of the women by one of the authors using a special questionnaire form constructed for the purpose of the study. The women were interviewed from 8:30-11:00 am during 2 visits for each selected primary health center. In each working day, the first 11-15 women attending the primary health center and fulfilling the criteria of inclusion in the study, were interviewed. The study was carried out during the period extending from the first of Jan 2006 -31^{1s} Oct 2006. The questionnaire included questions that covered the following aspects: socio-demographic information (woman's age, education, occupation, and husband's educational level and occupation), the number of pregnancies each woman had experienced, number of living children, as well as details about contraceptive use and pregnancy intention (was the last pregnancy intended or unintended, if unintended whether mistimed or unwanted and why). Statistical Package for Social Science (SPSS) version 11 was used for analysis of data, chi-squared test (X^2) was used to determine the association between different variables, a P-value of <0.05 was considered to be significant. In addition binary logistic regression analysis was used to control for confounders. The dependent variable was the reported unintended pregnancy (both unwanted and mistimed pregnancies were included in this category). Unintended pregnancy was classified as a dichotomous variable (yes/no). Several variables were included as independent variables. The variables included were: age, education (years of schooling), employment, number of pregnancies, number of living children, current use of contraceptives (yes/no), and use of modern contraceptives (yes/no).

RESULTS

A total of 260 mothers were included in the study. The age of the study group ranged between 15 and 45 years with a mean of 26.2±6.3 years. Most of the women belonged to the age group 15-34(86.9%). The majority of the participants were housewives (89.2%), and 43.5% had primary education (≤6 years of schooling). Nearly one-third (34.2%) had only one previous pregnancy. More than one-third (34.2%) reported the use of contraceptives before last pregnancy, while 243 (93.5%) were currently using or planning to use a contraceptive method, with more than two thirds (68.7%) using or planning to use modern contraceptives (hormonal methods whether oral or injection, intrauterine devices, tubal ligation, and condoms). (Table-1), shows the distribution of individual characteristics.

Table 1. Characteristics of the study population

Variable	No.	%
Age(years)		
15-24	112	43.1
25-34	114	43.8
≥ 35	34	13.1
Education (years)		
Illiterate	35	13.5
≤6	113	43.5
7-12	68	26.1
≥13	44	16.9
Occupation		
Housewife	232	89.2
Employed	28	10.8
No. of pregnancies		
≤1	89	34.2
2-4	112	43.1
≥ 5	59	22.7
Previous use of contraceptives		
Yes	98	37.7
No	162	62.3
Planned use of contraceptives		
Yes	243	93.5
No	17	6.5
Total	260	100.0

Prevalence of unintended pregnancy

Overall, 67 (25.8%) of the participants reported that their last pregnancy ending in a live birth was unintended at the time of conception. This included 33 (12.7%) unwanted pregnancies and 34(13.1%) mistimed pregnancies (Table-2).

Table 2. Planning of the last pregnancy

Variable	No.	%
Intended	**193**	**74.2**
Unintended	**67**	**25.8**
Unwanted	33	12.7
Mistimed	34	13.1
Total	260	100.0

A very young preceding child was the reason given for 41.8% of the unintended pregnancies, other reasons included: economic reason (20.9%), large family size (11.9%), maternal health (10.4%), maternal age and maternal employment (4.5% each), and security reasons (3.0%). The remaining 3.0% were unwanted for other reasons like fears from having a handicapped or ill health child and fear from difficult labour, (Table-3).

Table 3. Reasons for unplanned pregnancy.

Reason	No.	%
Very young preceding child	28	41.8
Economic reason	14	20.9
Big family size	8	11.9
Maternal health	7	10.4
Maternal age	3	4.5
Maternal employment	3	4.5
Security reasons	2	3.0
Others	2	3.0
Total	**67**	**100.0**

The prevalence rates of unintended pregnancy according to selected variables are shown in (Table-4). Prevalence of unintended pregnancy varied significantly by age, with older women were significantly more likely to have an unintended pregnancy than younger women. Similarly, the prevalence was higher among women with lower education compared to those with high education (had ≥13 years of education). While the reverse was true for husband's education, the lowest prevalence of unintended pregnancy (10.0%) was for women whose husbands were Illiterate**.** These associations, however, were statistically not significant. Housewives showed a higher rate (27.2%) of unintended pregnancy than employed women (14.3%). The association, however, was statistically not significant. With respect to reproductive factors, women who had only one or no previous pregnancy showed the lowest prevalence of unintended pregnancy (4.8%). The prevalence increased as the number of previous pregnancies increases to reach 52.5% for those who had 5 or more previous pregnancies. Similarly, unintended pregnancy increased with the increase in the number of previous fetal losses. Among women who had no or one previous still birth/abortion, 22.4% of pregnancies were unintended, compared with 50% among women who had 2 or more fetal losses.

Table 4. Prevalence of unintended pregnancy according to selected variables

Variable	No. of women	Unintended Pregnancy		P-value
		No.	%	
Age (years)				
15-24	112	21	18.7	<0.05
25-34	114	31	27.2	
≥35	34	15	44.1	
Education (years)				
Illiterate	35	11	31.4	
≤ 6	113	29	25.7	>0.05
7-12	68	19	27.9	
≥13	44	8	18.2	
Husband Education				
Illiterate	10	1	10.0	
≤ 6	30	10	33.3	> 0.05
7-12	159	39	24.5	
≥ 13	61	17	27.9	
Occupation				
Housewife	232	63	27.2	> 0.05
Employed	28	4	14.3	
No. of pregnancies				
≤1	89	4	4.8	
2-4	112	32	28.6	<0.01
≥5	59	31	52.5	
Pregnancy wastage				
≤1	228	51	22.4	<0.05
≥2	32	16	50.0	
Total	260	67	25.8	

The results of the present study also showed that pregnant women were more likely to attend ANC clinic when they have planned their pregnancy than if they have not; (Table-5). On the other hand, contrary to expectations, women with unintended pregnancies were more likely to have some knowledge about family planning compared to women with intended pregnancy (40.3% vs. 20.2%; (P<0.001). Logistic regression analysis revealed that, knowledge about family planning was the only independent variable affected planning of pregnancy.

Table 5. The relationship between unplanned pregnancy and attendance of ANC

ANC Visit	Last pregnancy					
	Planned		Unplanned		Total	
	No.	%	No.	%	No.	%
Yes	175	90.7	54	80.6	229	88.1
No	18	9.3	13	19.4	31	11.9
Total	**193**	**100.0**	**67**	**100.0**	**260**	**100.0**

X^2=4.809 df=1 P<0.05

DISCUSSION

This study examined the extent and factors associated with unintended pregnancy among women in Basrah city. The study showed that the majority (74.2%) of the studied women reported that their last pregnancy ending in live birth was intended, which means that only 25.8% of pregnancies were unintended. This rate is similar to that reported in a study carried out in Jordan which found that 77.8% of the most recent births were intended.[9] The prevalence of intended pregnancy in our study, however, was higher than those reported in several other studies; in developing and developed countries; in Iran 65.4%,[10] in Ecuador 37.3%,[11] and in USA in 2006, nearly half (49%) of pregnancies were unintended.[12] The relatively high prevalence rate of intended pregnancy in the present study, may be partly due to the fact that, the intention status was measured only for the most recent pregnancy that resulted in a live birth; i.e. it did not include pregnancies that ended with abortion, which are generally considered unintended.[7] In addition, a possible source of bias could also have been introduced because some women could have changed their perception of the pregnancy over time i.e. pregnancies that were labeled as unintended could be perceived retrospectively as wanted.[11] Furthermore, a high proportion of the studied women in the present study had no or only one previous pregnancy, these are expected to desire more children. Older women (≥35 years), illiterate and housewives showed the highest prevalence of unintended pregnancy. These results are similar to those found in studies carried out in Iran and Jordan where the highest prevalence rates of unintended pregnancy were found among illiterate and older women, but no difference between housewives and employed women was reported.[9,10] The high prevalence of unintended pregnancy among older women is mainly attributed to the fact that the majority of these women have already completed their families with the desired number of children. However, in countries where extramarital pregnancies are common, the prevalence of unintended pregnancy is higher among younger women. This is because in such countries, teenage pregnancies which are almost all for single women are common.[8,12,13] On the other hand, the association of low level of education and unemployment with unintended pregnancy, may be partly attributed to the greater risk for contraceptive nonuse and for contraceptive failure among women of low socioeconomic level.[13] Studies have also shown that the proportion of pregnancies reported as unwanted rises steeply with ascending birth order.[10,14] In the present study, the prevalence of unintended pregnancy increased with the increase in the number of previous pregnancies. Similarly, a health survey in Bangladesh (1999-2000), found that unintended pregnancy was significantly associated with higher numbers of living children and, higher women's age. [15] In Philippines, a survey on fertility and contraception showed that married couples, who have large families, were more likely to have unwanted children.[16] Furthermore, a community-based cross sectional study of 1,002 women between 15 and 44 years carried out in Ecuador in 2006 found that the number of existing children was a significant risk factor for unintended pregnancies.[11] With respect to the association between unintended pregnancy and the utilization of health care services, several studies reported that pregnant women may be

less likely to seek prenatal care (they have both delayed care and a lower than recommended number of visits) or obtain skilled help in childbirth for an unwanted child.[14,17] In the present study, however, only 19.4% of women who had unintended pregnancies didn't seek ANC. Furthermore, although a relatively recent review[18] of forty one RCTs that enrolled 95,662 adolescents found that combination of educational and contraceptive interventions lowered the rate of unintended pregnancy among adolescents, the reported use of modern contraceptives did not reduce the risk of experiencing unintended pregnancy in the Ecuador study.[11] This finding could be a reflection of incorrect use of contraceptive methods which leads to their failure.[11] This may partly explain the association between knowledge about family planning and unintended pregnancy which was found in the present study.

In conclusion, unintended pregnancy is not a rare event in Basrah despite the fact that unintended pregnancies ended in abortion, were not included in the present study.

REFERENCES

1. **Sloane PD, Slatt LM, Ebell MH, Jacques LB. Essential of Family Medicine. 4th ed. Philadelphia: Lippincott Williams and Wilkins, 2002.**
2. **Paydarfar AA, Malekafzali H. Sociodemographic attributes of Iranian wives who reported unwanted pregnancies. Social Biology, spring 2001. Available at www.findarticles.com/p/articles/mi-qa3998/is200104/ai-n8943692, P1. Accessed in June, 2012.**
3. **UNFPA. Making Motherhood Safer. WHO publication 2006; available at: www.unfpa.org/mothers/contraceptive.htm. Accessed in March, 2002.**
4. **Evan I, Huezo C. Family Planning Handbook for Health Professionals. London: IPPF international office, 1997:229-231.**
5. **Wang S, An L, Cochran S. Woman, In: Detels R, Mc Ewen J, Beaglehole R, Tanka H, (editors). Oxford Textbook of Public Health. 4th ed. Oxford: Oxford University Press; 2004: 1595.**
6. **Al-Zubaidi FH, Al-Asadi KM, Salih HALM, The Effect of socio-economic factors on the process of family planning, using the contraceptive methods. Kufa Medical Journal 2003; 3(1): 81-84.**
7. **Santelli J, Rochat R, Hatfield-Timajchy K, Colley Gilbert B, Curtis K, Cabral R, et al. The measurement and meaning of unintended pregnancy. Perspectives on Sexual and Reproductive Health 2003; 35(2):95-101.**
8. **Pulley L, Klerman LV, Tang H, Baker BA. The Extent of Pregnancy Mistiming and Its Association With Maternal Characteristics and Behaviors And Pregnancy Outcomes. Perspectives on Sexual and Reproductive Health 2002; 34(4):206-211.**
9. **Johnson K, al Zoubi O, Wulfe M. Mistimed and Unwanted Pregnancies in Jordan. Amman: Department of Statistics and ORC Macro; 2004.**
10. **Jalal M, Sharazi A, Charoshi MH. Unintended Pregnancies in the Islamic Republic of Iran, Level and Correlates, Asia-Pacific Population Journal 2004; 19(1): 27-38.**
11. **Goicolea I, San Sebastian M. Unintended pregnancy in the Amazon basin of Ecuador: a multilevel analysis. Int J Equity Health. 2010; 9: 14.**
12. **Finer LB, Zolna MR. Unintended pregnancy in the United States: Incidence and disparities, 2006. Contraception 2011; 84(5): 478-485.**
13. **Forrest JD. Epidemiology of unintended pregnancy and contraceptive use. Am J Obstet Gynecol. 1994; 170(5 Pt 2):1485-9.**
14. **WHO. Progress in Reproductive Health Research. Geneva: WHO; 2003.**
15. **Khan MMH, Kabir M, Mori M. Unintended Pregnancy in Bangladesh. World Health & Population 2006; 8(1): 47-57.**
16. **MacLean R. Filipino Couples' Traits Are Tied to Spousal Agreement on pregnancy wantedness. International Family Planning Perspectives 2004; 30(1): 49.**
17. **Eggleston E: Unintended pregnancy and women's use of prenatal care in Ecuador. Soc Sci Med 2000; 51(7):1011-1018.**
18. **Oringanje C, Meremikwu MM, Eko H, Esu E, Meremikwu A, Ehiri JE. Interventions for preventing unintended pregnancies among adolescents. Cochrane Database Syst Rev. 2009; 7(4): CD005215.**