

UNINTENDED PREGNANCY IN MOSUL CITY

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ABSTRACT

Background: Pregnancy could be intended or unintended (which further subdivided into: mistimed or unwanted) according to the time of occurrence and woman desire. A large no. of social, environmental and psychological factors put women at risk of getting unintended pregnancy and considered as a major health and socioeconomic problem. **Aim of the study:** The study aimed to assess the frequency of unintended pregnancies, and to find out the associated factors with this pregnancy. **Patients and Methods:** The present study was conducted in Mosul city that is located in Iraq. The Sample was taken from pregnant women who attended the obstetrical and gynecological department of the following hospitals: Al-Khansaa Teaching Hospital, Al-Salaam Teaching Hospital, Al-Batool Teaching Hospital, Al-Mosul General Hospital. Across-sectional study was conducted from the 1st of January 2020 to the last of June 2020. A (300) pregnant women were randomly collected during the study period. All the data were entered into a questionnaire. Statistical analysis were carried out using Minitab program (18th edition). P-value < 0.05 used as a significant association in the results. **Results:** The frequency of unintended pregnancy in Mosul city was (49%) [mistimed pregnancy (19%) and unwanted pregnancy (30%)]. Whenever the current pregnancy was unintended, you found that: level of woman's education decreased; delivery of FP methods decreased, marry before 18 yr., had no regular visits to antenatal care unit; future fertility preferences diminishes or disappears totally (as in unwanted pregnancy); their husbands' age more than 30 yr. In addition to all of the above, whenever the pregnancy is unwanted, you will find that: the woman live in rural areas more, older in age; have gravida 5 or more; had more percentage of previous unintended pregnancy; had more no. of both alive child or abortions than the woman with intended pregnancy. **Recommendations:** Encouraging marriage and childbearing after reaching the legal age of puberty, emphasizing birth control, increasing employment opportunities for women, educating wives and husbands about the use of safe and low failure rates contraception methods, assisting women in childbearing decision at the appropriate time.

KEYWORDS: Pregnancy, unintended, factor.

1. INTRODUCTION

1.1 Definitions

Pregnancy, also known as gestation, is the event during which one or more offspring develops inside a woman. Pregnancy could be intended or unintended according to the time of occurrence and woman desire as follows:^[1]

1. Intended pregnancy: is a pregnancy that occurring at the right time (as subjectively conceptualized by the woman) or later than desired time by the woman herself.
2. Unintended pregnancy: Pregnancy is usually defined as an unintended if it is either

- A. unwanted pregnancy: is a pregnancy that occurred when no children or no more children were desired; or:
- B. mistimed pregnancy: is a pregnancy that happened earlier than desired but would have been desired at a later time.

1.2 General considerations

Unintended pregnancy is an event that cannot be ignored. The International Conference on Population and Development (ICPD), held in Cairo in 1994 and the fourth world conference on women held in Beijing in 1995 have emphasized women empowerment as a basic tool for a country's overall development and improving the quality of life of the people.^[2]

The (ICPD) has indicated and clarified many points related to supporting women and their orientations in establishing the family and choosing the time of pregnancy, in order to promote the female gender and reduce violence against her in various forms, because all of this will lead to the strengthening of individual and population development programs.^[2]

Family planning refers to a woman's ability to choose if and when she becomes pregnant. It allows people to attain their desired number of children and determine the spacing of pregnancies through use of various contraceptive methods. Unintended pregnancy has been associated with uncontrollable growth of population which can be considered as a major health and socioeconomic problem.^[2]

The level of unintended pregnancy also can serve as an indicator of the state of women's reproductive health,^[3] and of the degree of independence a woman has in determining whether and when she will have children. It is important to identify the factors associated with unintended pregnancy, to enable decision-makers in government institutions and program planners to design legislation and laws for women who are most likely to face this problem and methods of treating and reducing it.^[4]

The problem of unwanted pregnancy exists in all societies regardless of degree of development with different incidence and prevalence values.^[5] Unintended pregnancy is an important public health concern in both the developing and the developed countries as mentioned previously, because of its association with adverse social and health outcomes, for both mothers and children, their families, and the society of course.^[6]

1.3 Incidence and Prevalence

Every sexually active woman is at risk of the problem of unintended pregnancy. Globally every minute, 190 women face an unwanted or mistimed pregnancy.^[7] Rates of unintended pregnancies though declining worldwide are still high. Declined by 20% from 71 to 57 per 1000 from 1995 to 2008 in low- and middle-income countries,⁽⁸⁾ the worldwide rate of unintended pregnancy in 2012 was 53 per 1000 women aged 15–44. The highest rate was in Africa (80 per 1000), and the lowest rate were in Europe and Oceania (43 per 1000).^[9]

On the other hand, near half of all pregnancies in the United States are unintended.^[10] Of the estimated 210 million pregnancies that occur throughout the world each year, about 38% are unintended.^[11]

Many studies were conducted worldwide to estimate the prevalence of unintended pregnancy.^[12,13]

Aim and objectives of the study

This study aimed to assess the frequency of unintended pregnancy in pregnant mothers in Mosul.

Objectives

1. To assess the frequency of intended, unintended (mistimed, unwanted) pregnancies in pregnant mothers in Mosul city, Iraq.
2. To find out the associated factors that might affect the type of pregnancy.

PATIENTS AND METHODS

Study design

Across-sectional study was conducted in order to identify the different ratios of types of pregnancy (whether intended mistimed, unwanted) and to study the factors that may be the cause of this type of pregnancy in women.

Many factors have been studied which will see in detail later when presenting the results, including: social, demographic, environmental factors surrounding women, the level of education of the woman and her husband, the availability of work or employment, and the husband's influence on a woman's decisions and her desire to become pregnant or not, and so on.

Study period

The data was collected and analyzed during six months extended from the 1st of January 2020 to the end of June 2020.

Study sample

The present study included (300) pregnant women who attended the obstetrical and gynecological department at Al-Khansaa, Al-Salaam, Al-Batool or Al-Mosul general hospitals. Cases were randomly collected during the study period.

Data analysis

Computer feeding and statistical analysis were carried out using Acer computer with Minitab program (18th edition). A five (less or more) contingency tables were designed. P-value<0.05 used as a significant association in the results.

RESULTS

* Prevalence of different types of pregnancy by parity and abortion

Living children

Mean no. of living children for each woman was (2.4), ranging from (0-9), table 3.3 shows that the highest percentage of all women 40% were had (1-2) alive child.

The results also shows that more than two third of women with intended pregnancy and / or mistimed pregnancy had only two or less alive child in a percentage of 81.1%, 73.7% respectively.

On the other hand; 90% of women with unwanted pregnancy (81 case) had three or more alive child, the results were very highly significant with p-value equal to (0.000).

Dead children

The no. of dead children for each woman was ranging from (0-4), table 3.3 shows that 93.7 % of all women(281) were had no dead child. the result was non-significant with p-value equal to (0.309).

Abortions

The no. of Abortions for each woman was ranging from (0-7), table 3 shows that exactly 2/3 of all women(200)

were had no abortions ,and also it shows that 1/6 of women (50) had one abortion only, the same percentage of women having 2or more abortions.

It is clear also that near half of women with unwanted pregnancy (48.9%) having abortions, the results were very highly significant with p-value equal to (0.000).

Table (1): (Distribution of different types of pregnancy by parity and abortion).

	Intended pregnancy		Mistimed pregnancy		Unwanted pregnancy			P- VALUE
Living children	No.	%	No.	%	No.	%	Row Totals	0.000
0	52	34.0	2	3.5	1	1.1	55	
1-2	72	47.1	40	70.2	8	8.9	120	
3-4	25	16.3	12	21.1	46	51.1	83	
≥ 5	4	2.6	3	5.2	35	38.9	42	
Column Totals	153	100	57	100	90	100	300 (Grand Total)	
Dead children	No.	%	No.	%	No.	%	Row Totals	0.309
0	139	90.8	55	96.4	87	96.7	281	
1	11	7.2	1	1.8	2	2.2	14	
≥ 2	3	2.0	1	1.8	1	1.1	5	
Column Totals	153	100	57	100	90	100	300 (Grand Total)	
abortions	No.	%	No.	%	No.	%	Row Totals	0.000
0	117	76.5	37	65	46	51.1	200	
1	14	9.2	11	19.3	25	27.8	50	
≥ 2	22	14.3	9	15.7	19	21.1	50	
Column Totals	153	100	57	100	90	100	300 (Grand Total)	

*** Prevalence of different types of pregnancy by some husband factors**

Husband age

The age of husbands ranged from 15 yr. to 75 yr.(out of range), with mean age of 32.8 yr.

The results shows that near half (51.7%) of husbands (155) were older than 30yr. while near 2/3 (61.4%) of women having intended pregnancy their husband were younger or equal to thirty yr., If we move between the columns of table 4 from the left to right , from the side of intended pregnancy to unintended one, will see that the image will be the opposite ; more than 3/4 (76.7%) of women with unwanted pregnancy ,their husbands were older than thirty yr., which confirm this trend also, about half of women with mistimed pregnancy (47.4%),their husbands were older than thirty yr. too. the results were very highly significant with p-value equal to (0.000).

Husband occupation

The results shows that near half (49.3%) of husbands (148) were had free work .

As well Table 4 clarify that approximately quarter (24%) of husbands (72) were employed., likewise, almost quarter (26.7%) of husbands (80) were had no work, the results is non-significant with pvalue (0.538).

Husband education

The results shows that the largest group of husbands (73)were graduated from (Institute or college or above) ,forming about quarter of all cases (24.3%), while the lowest group (26) were finished the secondary school(8.7%), the results were non-significant with p-value = (0.561) as shown in table 3.4.

Table (2): (Distribution of different types of pregnancy by some husband factors).

	Intended pregnancy		Mistimed pregnancy		Unwanted pregnancy			P- VALUE
age group in yr.	No.	%	No.	%	No.	%	Row Totals	0.000
≤ 30	94	61.4	30	52.6	21	23.3	145	
> 30	59	38.6	27	47.4	69	76.7	155	
Column Totals	153	100	57	100	90	100	300 (Grand Total)	
Husband occupation	No.	%	No.	%	No.	%	Row Totals	0.538
Employed	37	24.2	15	26.4	20	22.2	72	
Free work	80	52.3	28	49.1	40	44.5	148	

No work	36	23.5	14	24.5	30	33.3	80	0.561
Column Totals	153	100	57	100	90	100	300 (Grand Total)	
Husband education	No.	%	No.	%	No.	%	Row Totals	
Illiterate	29	18.9	11	19.3	24	26.7	64	
Read & write	29	18.9	14	24.5	23	25.6	66	
Primary school	39	25.5	12	21.1	20	22.2	71	
Secondary school	14	9.2	7	12.3	5	5.5	26	
Institute, college and Above	42	27.5	13	22.8	18	20.0	73	
Column Totals	153	100	57	100	90	100	300 (Grand Total)	

Table (3): (Distribution of different types of pregnancy by some family planning factors).

	Intended pregnancy		Mistimed pregnancy		Unwanted pregnancy		P- VALUE
	No.	%	No.	%	No.	%	
Fertility preference	No.	%	No.	%	No.	%	Row Totals
Wants more	83	54.2	16	28.1	0	0	0.000
Undecided	6	3.9	5	8.8	0	0	
Wants no more	64	41.9	36	63.1	90	100	
Column Totals	153	100	57	100	90	100	
Ever heard of any family planning methods	No.	%	No.	%	No.	%	Row Totals
Yes	63	41.2	18	31.6	31	34.4	0.351
No	90	58.8	39	68.4	59	65.6	
Column Totals	153	100	57	100	90	100	

***Types of contraceptive methods used before current conception and causes of no use of FP methods**

Contraception method

The results shows that more than quarter of women with unintended pregnancy (26.5%) did not use any type of contraception (39 case). Also more than quarter of women with unintended pregnancy (27.9%) use withdrawal method (41case); which is the most used method, while just one woman was used suppositories,

As such, it is the least used method as shown in table 3.6 with significant p-value (0.033).

Reasons of unintended pregnancy

The results shows that about 3/4 of women with unintended pregnancy (73.5%) had probably failure of contraception method (108 case), The second reason is in order (21.8%) according to the table 3.6 readings was husband influence (32 case), these results were significant with p-value (0.017).

Table (4): Types of contraceptive methods used before current conception and causes of no use of FP methods.

	Mistimed Pregnancy		Unwanted Pregnancy		P- VALUE
	No.	%	No.	%	
Contraception method	No.	%	No.	%	Row Totals
Withdrawal	18	31.6	23	25.6	0.033
IUCD	3	5.3	3	3.3	
Pills	11	19.3	13	14.4	
Condom	2	3.5	4	4.4	
Injections	3	5.3	8	8.9	
Safe period	2	3.5	0	0	
Breast feeding	10	17.5	7	7.8	
Suppositories	1	1.7	0	0	
No use	7	12.3	32	35.6	
Column Totals	57	100	90	100	
Reasons of unintended pregnancy	No.	%	No.	%	Row Totals
Contraception failure	50	87.8	58	64.5	108
Husband influence	5	8.8	27	30.0	

Having no information about contraception	1	1.7	3	3.3	4	0.017
Religious issue	1	1.7	2	2.2	3	
Column Totals	57	100	90	100	147(Grand Total)	

DISCUSSION

*Distribution of different types of pregnancy by parity and abortion

Living children

Mean no. of living children for each woman was (2.4), ranging from (0-9) the largest percentage of all women 40% were had (1-2) alive child.

The result shows that 81.7% of women had at least one alive child, while it is more in Gulengul KoKEN et al^[20] (98.7%), and less in Mariza Miranda et al^[15] (58.5 %).

On the other hand; as the intention of pregnancy goes toward unwanted one ,the no. of alive children increase, as shown also in Nazan Savaşa et al^[22] in this study 90% of women with unwanted pregnancy had three or more alive child, (38.9%) had 5 or more alive child, while Eman Abd-El Baset Mohamed et al⁽¹⁸⁾ found that (61.4%) had 5 or more alive child.

Dead children

The no. of dead children for each woman was ranging from (0-4), 6.3 % of all women had dead child, while in Mariza Miranda et al.^[15] it was (3.4%).

Abortions

The no. of abortions for each woman was ranging from (0-7), exactly 1/3 of all women (33.4%) were had abortions less percentages were found in other studies: Mariza Miranda et al^[15] (4.4 %), Muhammad Atif Habib et al^[19] (17.4%), Ahmad Almotairi et al^[14] (29.9%).

Again, the more intendedness of a woman to an unintended pregnancy, the greater the percentage of abortions, like results of Narjis A.H. Ajeel et al^[16] near half of women in this study with unwanted pregnancy (48.9%) having abortions, the results were very highly significant, this might be due to effect of not using of FP methods and other influencing factors that were studied in the research or others.

Husband factors

Husband age

The mean age of husbands was 32.8 yr., and near half (51.7%) of husbands were older than 30yr., near Nazan Savaşa et al^[22] results in which the mean age was 32.2 yr.

In this study, the more pregnancy was unintended , the husband was older , the same as results of Eman Abd-El Baset Mohamed et al^[18] Nazan Savaşa et al.^[22]

Husband occupation

The results show that near half (49.3%) of husbands were had free work, this study shows no association between the occupation of husband and the intention of

pregnancy, the reason may be lack of jobs in general for all people, unlike Nazan Savaşa et al.^[22] in which unemployment is more associated with unintended pregnancy.

Husband education

The result shows that there is no significant association between the husband education level and intention of pregnancy, the largest group of husbands were graduated from (Institute or college or above) forming about quarter of all cases (24.3%). Moreover, the lower the husband's education level, the greater the percentage of unintended pregnancy like results of Nazan Savaşa et al^[22] and opposite to results of Narjis A.H.Ajeel et al.^[16]

Fertility preference

The results show that more than half of women with intended pregnancy (54.2%) wants more conceptions in the future, on the contrary, more than half of women with mistimed pregnancy (63.1%) want no more.

On the other hand, (100%) of women with unwanted pregnancy want no more conceptions in the future, certainly this answer is logical, otherwise the definition of pregnancy and division of species would be imprecise, it mimics the result of Palamuleni, Martin et al.^[23]

Hearing about family planning methods

Although it was statistically N.S., The results showed that (62.7%) of all women did not hear ever about FP ,neither in Visible and invisible media (like: TV, Radio,.....); nor in social communicating programs (like: Facebook, Twitter,....), like Nazan Savaşa et al^[22] Hajir H. Al- Ridhwany et al^[21] in which (59.2%), (50%), never received any information respectively.

Contraception method

The results show that more than quarter of women with unintended pregnancy (26.5%) did not use any type of contraception, near result of Metwally AM et al^[24] (31%), and inconsistent with Lara Samuel Oshana et al^[17] (10%), Bagheri, M et al^[26] (10.1%) Nazan Savaşa et al^[22] (45.8%), CDC.^[27] (53%), did not use.

Also more than quarter of women with unintended pregnancy (27.9%) use withdrawal method ; which is the most used method, same in Lara Samuel Oshana et al,^[17] Nazan Savaşa et al,^[22] in which also withdrawal is the most used method (53.1%) (42.0%) respectively.

Unlike Coombe J et al^[25] (39.1%), Eman Abd-El Baset Mohamed et al^[18] (31.3%), in which pills is the most used method.

Reasons of unintended pregnancy

The results show about 3/4 of women with unintended pregnancy (73.5%) had probably failure of contraception method, unlike Eman Abd-El Baset Mohamed *et al*^[18] in which, although it is the highest reason (35.9%) only are due to contraception failure.

The second reason in order (21.8%) was husband influence, like Eman Abd-El Baset Mohamed *et al*^[18] in which (27%) are due to husband influence and it is the second cause in order also, inconsistent with a study in Iran, in which husband influence is the main cause for non-use of FP methods followed by religious issues^[26] husband influence forming different percentages in other studie, (4.4%^[17] 12% (24).

This may be due to the weak role of the woman in making decisions related to marital life in partnership with the husband in these countries.

Conclusions and Recommendations

CONCLUSIONS

The following points were concluded from the present study:

1. The prevalence of unintended pregnancy in Mosul city was (49%) [mistimed pregnancy (19 %) and unwanted pregnancy (30%)].
2. Most of women with unintended pregnancy use the withdrawal method for contraception followed by pills, although contraception failure is blamed as a major reason for unintended pregnancy in this study, 26.5% of them use no method at all ;in those husband influence on reproduction decisions is the main cause, with just significant association.
3. Whenever the current pregnancy was unintended, you found that : - The level of woman's education decreased; delivery of FP methods decreased(non-significant association). - They marry before 18 yr. (just significant).- Had no regular visits to A.N.C.; future fertility preferences diminishes or disappears totally(as in unwanted pregnancy); their husbands' age more than 30 yr.(very highly significant).
4. In addition to all of the above, whenever the pregnancy is unwanted, you will find that
 - The woman live in rural areas more (highly associated).
 - Older in age ;have gravida 5 or more; had more percentage of previous unintended pregnancy; had more no. of both alive child or abortions than the woman with intended pregnancy (very high association).

Recommendations

1. Encouraging marriage and childbearing after reaching the legal age of puberty, and emphasizing birth control.
2. We recommend increasing employment opportunities for women to reduce unintended pregnancy.

3. Educating wives and husbands about the use of safe and low failure rates contraception methods.
4. Promoting and assisting women by all possible means in order to have an important role and an audible opinion on the issue of childbearing decision at the appropriate time for her and her family.
5. Ensure that women have easily access to FP programs by all sorts of media and encouraging them to do regular A.N.C. visit, especially in rural areas.

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