Original Article

Factors Pertaining to Unintended Pregnancy Amongst Women Visiting Healthcare Centers of Yazd City

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Abstract

Introduction: Unintended pregnancy is associated with dangerous consequences for the mother's and baby's health as well as for the family and society. Hence, this study aimed to investigate the factors related to unintended gestation amongst pregnant women visiting healthcare centers in Yazd, Iran .

Materials & Methods: The present study was conducted using a questionnaire as the data collection tool via multi-phase sampling method during June-July 2014. The statistical population size was 5925 among which, a sample size of 220 was selected

Results: The current study results showed that the participants' mean age was 27 years old and 90.9% of them were housewives. Participants 'mean of marriage age was reported 20.01, while mean number of their children was 0.85. Out of 220 women, who participated in this study ,28.6 % were reported to have unintended pregnancy. Moreover, based on the logistic regression model, variables of woman's marriage age, type of contraception solution, and ideal number of children are three most effective factors on the unintended pregnancy. Existing variables in regression model justified 38.9% of the unintended pregnancies .

Conclusion: The study findings revealed that improving quality level of consultancy and family regulation programs seem to be essential ,specifically proper training in regard with usage methods of contraception devices.

Keywords: Unintended pregnancy, Contraception Devices, Family Regulation,

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Introduction

Although contraception methods are increasingly used all over the developing countries, reports have shown that a quarter of all births in developing world (not including China) in 1990s were unintended ones [1]. Unintended pregnancy is a worldwide problem associated with dangerous consequences and aftermaths which affect not only the mother and the child, but also the family and society [2].

Unintended pregnancy is a case of unplanned conception occurred despite using a contraception method. Every woman could be prone to unintended pregnancy and the situation would be associated with higher levels of risk for women in poor economic and social conditions and/or younger ages [3].

About a third of all pregnancies worldwide are not planned beforehand. which are categorized into two: 1) untimely pregnancies which occur unplanned despite parents; willingness to having children, and 2) unintended cases of pregnancy which are not planned within parents who do not want to have children. In this type of pregnancy, mothers often do not have adequate participation in the prenatal care, which often leads to abortion. [3].

Unintended pregnancies can be harmful both to mother and child. International studies have demonstrated that unintended pregnancy could have negative consequences. Women who are unintentionally pregnant are more likely to receive insufficient pregnancy time healthcare, which may lead to deterioration of health situation for both mother and child; Generally, the children who are born as a result of an unintended conception are more prone to danger in comparison, since they are usually underweighted or more likely to be deprived of their mothers' milk [4]. Moreover in some cases, there is a possibility that the infant would not receive attention and healthcare after birth which leaves him/her prone to diseases [5].

Unintended pregnancy is in some cases associated with unhealthy behavior of mothers which may lead to higher risk of pregnancy negative consequences; for instance, women who get pregnant without previous intention are likely to start healthcare measures late in time and so it can affect negatively their health and their children's health as well [6].

Unintended pregnancy is important in the sense that it lies among the most important healthcare issues worldwide, and imposes enormous anxiety and pressure on mothers, spouses, and in long term on the children as well [7].

Annually 400-500 thousands of unintended pregnancy cases are being reported in Iran; which literally equals to 40% of all pregnancy cases. There is a high chance of preventing social disorders and high economical costs

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through contraception and decrease the rate of unintended pregnancies [8].

Although some studies have been conducted in Iran (Abazari et al., 2002; Khoshe-mehri et al., 2007; Azizi et al., 2011; Yazdani 2012; etc.), a comprehensive understanding of causes and factors related to unintended conception has remained an open area to investigate. The current study intends to investigate the factors associated with unintended pregnancies in Yazd, Iran 1 in which a low fertility rate have been experienced in consistency with decreasing trend of fertility at the national level; and Fertility levels have been low, tries improve our perception in this area. As a matter of fact, the present study aimed to examine the factors which influence unintended pregnancy rates amongst the women who visited healthcare centers all over the Yazd. Such, Affecting factors on unintended pregnancies as the couples' age, usage of contraception means, number of previous pregnancies, couples' employment status, and their education level are addressed hereby. The relationships between personal and demographic characteristics of the statistical sample detect and examine unintended pregnancy rate in this study.

Materials and methods

In this survey study, the statistical population entailed all the married pregnant women aged 15-49 years who visited healthcare in Yazd, Iran, among which the samples was collected via a multi-phas sampling method. Analysis unit was defined as a pregnant woman selected from those pregnant woman who visited the healthcare in Yazd. The study sample size was calculated using Cochran's formula based on value of p and q which yielded 220.

$$n = \frac{\frac{t^2 . p . q}{d^2}}{1 + \frac{1}{N}\left(\frac{t^2 . p . q}{d^2} - 1\right)}$$

t=1.96 p= 0.82 q= 0.18 d=0.05 N=592 n=220

The study data were gleaned through a questionnaire which included a number of open and close ended questions designed to measure the variables. At the description level, the statistical indices of median and mode, frequencies, frequency percent, standard deviation, minimum and maximum; and at the statement level, the significance level associated with relationship of dependent variable to each independent variable (age, birth place, education level, employment status, her age at marriage time, number of children born alive, abortion records, number of previous pregnancies, and the desired number of children) were calculated using Chi-square and t-tests. In order to analyze nominal and ordinal variables (birth place, employment status, education level, abortion records, type of contraception device), chi-square test was applied. Moreover, in order to analyze the distance variables (age, , marriage age, number of children born alive, the desired

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number of children and number of previous pregnancies) t-test was used.

The logistic recession method was then utilized in order to estimate the specific effect of each independent variable on the dependent variable (unintended pregnancy) as well as to measure the significance level of the relationships between the variables. The study data were analyzed applying SPSS software package.

Results

Table 1 shows the descriptive statistics for the qualitative variables used in the statistical analysis. 75% of respondents were born in the city while 25% came from the rural locations. The study results have revealed that about 28% of respondents were experiencing an unintended pregnancy, either not expecting for more children or intending to have children only in future, while the majority (70.5 %) reported their pregnancy as an intended case.

Table (1) – Summary of sample descriptive characteristics

characteristics	codes	number	percent
birth place	1-City	165	75
	2-Village	55	25
education level	1-primery school and lower	32	14.5
	2-Secondary school	50	22.7
	3-Diploma	83	37.7
	4-University education	55	25
employment status	1-Housewife	200	90.9
	2-Free	6	2.7
	3-Employee	9	4.1
	4-University student	5	2.3
Abortion records	1-Yes	33	15
	2-No	187	85
type of contraception device	1-Modern	189	85.9
	2-Traditional	31	14.1
type of pregnancy in woman's view point	1-Unintended	63	28.6
	2-Intended	155	70.5
	3-no response	2	0.9

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As the results of descriptive statistics are demonstrated in Table (2), respondents' mean age was 27 years; with a range of 15- 44 years. Furthermore, the mean marriage age was 20 and marriage age domain was reported between 12 and 32.

Bivariate tests were used in order to examine the relationship between independent and dependent variables. The results are summarized in Table (3) below.

Based on the information presented in Table (4), unintended pregnancy was not significantly related to the woman's age, however a significant relationship was observed in regard with women's marriage age, the desired number of children, Number of children born alive, and number of previous pregnancies.

The dependent variable in the present study was occurrence of unintended pregnancy which was categorized into two levels of "has unintended pregnancy" and "does not have unintended pregnancy". Which were codified as 0 and 1 respectively in the Logistic Regression analysis.

Table (2) - Summary of the study sample statistics.

variable	mean	median	mode	standard deviation	minimum	maximum
age	27.11	27	25	5.52	15	44
marriage age	20.01	19	18	3.82	12	32
number of children born alive	0.85	1	0	0.93	0	4
number of previous pregnancies	2.02	2	1	1.09	1	6
the desired number of children	3.06	3	4	0.98	0	4

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Table (3) - Results of Bivariate tests (qualitative variable)

	unintended pregnancy	intended		unintended		Sum frequency	
		frequency	Percent	frequency	Percent		
birth place	1- city	44	69.8	120	77.4	164	Sig: 0.158
	2- Village	19	30.2	35	22	54	Chi square: 1.380
employment status	1- housewife	58	92.1	140	90.3	198	Sig: 0.534
	2- free	2	3.2	4	2.6	6	
	3- employee	3	4.8	6	3.9	9	Chi square: 2.191
	4- university student	0	0.0	5	3.2	5	
education	1- primary school and lower	13	20.6	19	12.3	32	Sig: 0.027
	2- Secondary school	19	30.2	30	19.4	49	Chi square: 9.216
	3- Diploma	15	23.8	68	43.9	83	
	4- University education	16	23.8	38	24.5	54	Cramer's V: 0.206
type of contraception device	1- modern	48	76.2	139	89.7	187	Sig: 0/010
	2- traditional	15	23.8	16	10.3	31	Chi-square V: 6.68
							Phi: -0.175
abortion records	1- does have	10	15.9	22	14.2	32	Sig: 0.751
	2- does not have	53	84.1	133	85.8	186	Chi square: 0.101

Table (4) – Results of Bivariate tests (quantitative variable)

variable	unintended pregnancy		test value	significance level
	mean	standard error		
age	27.11	5.524	0.065-	0.949
marriage age	20.01	3.828	3.226-	0.001
number of children born alive	0.85	0.932	3.575	0.000
the desired number of children	3.063	0.981	2.725-	0.007
number of previous pregnancies	2.02	1.099	3.914	0.000

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Women's Demographic and individual variables of were entered into Logistic Regression model, so as their effects could be simultaneously evaluated. The simultaneous effects of women's education level, marriage age, number of children born alive, the type of contraception method, the desired number of children, and number of previous pregnancies (the variables which had shown a significant relationship with the outcome variable) on the unintended pregnancy were examined through the model.

As Table (5) shows, among the set of predictors entered into regression model, the number of previous pregnancies did not significantly relate to the likelihood of unintended pregnancy occurrence. However the variables of marriage age, type of contraception method, and the desired number of children significantly affected the likelihood of unintended pregnancy.

Table (5) –Effects of each predictor (independent) variable

—	variables	B	S.E.	Wald	df	Sig.	Exp(B)
education	primery school and lower(reference)			7.026	3	0.071	
	secondary school	0.661-	0.592	1.245	1	0.264	0.516
	diploma	0.224	0.581	0.149	1	0.700	1.251
	university education	-0.918	0.637	2.078	1	0.149	0.339
marriage age	—	0.144	0.058	6.131	1	0.013	1.151
number of children born alive	—	-0.442	0.310	2.027	1	0.155	0.643
type of contraception device	Modern(reference)	-1.172	0.445	6.928	1	0.008	0.310
	traditional						
the desired number of children	—	0.614	0.189	10.495	1	0.001	1.847
number of previous pregnancies	—	-0.309	0.241	1.467	1	0.199	0.734

Nagel kerke R square: 0.389 cox & snall R square:0.272 -2log like lihoon:189.594

Discussion

In the light of descriptive results, the mean age of women was 27.11 years at the time of survey, while the mean marriage age was 20.01 years. The highest percent of educational level was recorded for high school and diploma level group (37.7%). Mean number of children born

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alive was 0.85, and mean the desired number of children was 3.06 children among the respondents.

Regarding the use of contraception means, 85.9% of respondents reported use of modern methods of contraception while 14.1% applied the traditional methods. The study sample consisted of 90.9% housewives, amongst whom 85% did not experience any miscarriages. Moreover, 75% of respondents were born in the city. The results of the present study showed that 28% of mothers in this survey have considered their case of pregnancy as an unintended one. Where as Khoshe-mehri et al [5], ireported 31% unintended pregnancies in Tehran and Abazari et al [22] reported the level of 34.9% in Kerman.

Conclusion

It could be concluded that a significant relationship exists between the educational level of women under study and the likelihood of unintended pregnancies. In other words, as the educational level increases, the percent of unintended pregnancies would decrease which is in concordance with finding of Khoshe-mehri et al [5], Asadi et al [10], and Rezaeepour et al[12] as well. Khoshe-mehri et al proposed that 49.1% and 37.5% of pregnancies were unintended amongst jiliterate women as well as within those with primary school education level respectively. In addition, Only 20.5% of women with high school diploma or higher education experienced unintended pregnancies.

As the number of previous pregnancies for women increases, the percent of unintended pregnancies rise as well. The finding of the present study approved this relation which is in concordance with those of Khoshe-mehri et al[5]. Which proposed that the likelihood of unintended pregnancy increases as more women cases pregnancy. According to their research, 84.6% of pregnancy cases if women who were experiencing their forth pregnancy were unintended; while only 16% of women reported their first pregnancy as an unintended case.

A significant relationship was detected between woman's marriage age and likelihood of unintended pregnancy; which is in line with results obtained by Mansouri et al [11]. They found that about 19% of pregnancies occurred at ages lower than 20 or higher than 35. As a matter of fact, Very young age and so high pregnancy and low marriage age also causes unintended pregnancy.

A significant relationship was also observerd between the desired number of children and unintended pregnancy which supported the finding of Yazdani [7]. Yazdani demonstrated's that the variables "the desired number of children" in two groups of "intended" and "unintended" pregnancies were statistically different from each other. As a matter of fact most mothers intended to have two children without having any gender preferences; while such factors as economic level, levels of life expectations of life amongst people, and

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religious belief could affect the the desired number of children.

The relationship between using contraception means and unintended pregnancy was observed to be significant as well, which is confirmed by Khoshe-mehri [5], Yazdani [7], and Rezaeepour et al[12]. The findings of Rezaeepour et al. demonstrated that units under study either were not using any contraception means, or were not properly executing the contraception method. Moreover, the main reasons cited by women with unintended pregnancy who visited the healthcare centers included fear of counter effects, spouse disagreement, and not utilizing contraception methods beforehand.

Considering the statistics and obtained results, many of which are confirmed by other studies, a few predictive measures against unintended pregnancy could be mentioned as educating mothers in regard with appropriate timing for pregnancy. Proper methods of using contraception means, as well as proper contraception mean types at different ages.

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