*Original Article*

# IS THERE ANY RELATIONSHIP BETWEEN NEONATAL BABIES WEIGHT AND UNINTENDED PREGNANCY?

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**ABSTRACT**

***Objective:*** To determine the relationship between unintended pregnancy and neonatal weight of babies.

***Methodology:*** It was a case-control study which included 114 women who were admitted in the post partum of a Maternity hospital in Kermanshah city in Iran. A questionnaire was used to gather the data and determine the unintended and intended pregnancies as case and control groups. The questionnaire consisted of variables such as age, mothers' education level, parity, number of children and so on; also, an information form was utilized to collect the neonatal data such weight, height and sex. All the collected data was analyzed by Chi-Square, Fishers' Exact test and Odds Ratio.

***Results:*** The findings showed that all participants were housewives, 27.3% were illiterate, 46.4% had unintended pregnancies (case group). There were not significant differences between two groups in mothers' educational level and neonatal weights and heights.

***Conclusion:*** Among the study subjects approximately half had unintended pregnancies, but there was no relationship between neonatal/newborn weight and unintended pregnancy. It seems, the health services have some defects about counseling and instruction of emergency contraceptions, conversely they can detect the unintended pregnancies very well and present the perfect counseling and instruction during prenatal care. It is recommended to study complications of unwanted pregnancies in a large study to confirm our observations.

**KEYWORDS:** Unplanned pregnancies, Unintended pregnancy, Intended pregnancy, Unwanted pregnancy, Mistimed pregnancy, Neonatal weight, Neonatal height.

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## INTRODUCTION

Unintended pregnancy is a world wide problem that often leads to abortion, legal or illegal.[1] Unintended pregnancy is a complex concept.[2] The literature divides all pregnancies into two types: intended versus unintended. Intended pregnancies are those that are wanted at the time of conception. Unintended pregnancies are also divided into two categories: mistimed and unwanted. Mistimed pregnancies are those wherein women wanted another child after some time, but their pregnancies occurred sooner than they had planned. Unwanted pregnancies are those that are the result of conceptions that occurred among

women who either did not ever want to have children, or among those who had earlier children, did not want more.[3] The United States has experienced declines in unintended childbearing in the 1970's and early 1980's, but it has again increased recently.[4] According to the 1995 National Survey of Family Growth (NSFG), 49% of pregnancies in the United States (excluding miscarriages) and 31% of pregnancies resulting in a live birth are unintended. An unintended pregnancy is either mistimed or unwanted. One analysis of the NSFG data found that the numbers of unintended pregnancies and births had declined from 1987 to 1994; however, more recent data from PRAMS show that these rates may not be declining in all states. One of the goals of Healthy People *2010*, which establishes the nation's health goals for the coming decade, is to decrease unintended pregnancies from 49% (2001) to 30% by 2010.[5] The unintended pregnancy rate in Iran is reported from 10% to 40%.[6,7] Unintended pregnancy is associated with child complications such as low birth weight, and infant mortality as well as decreased life opportunities and heavier demands on public services.[8,9] Since, the results of researches which focused specifically on the relationship between unintended pregnancy and Neonatal weight are conflicting;[8,10-12] this study was carried out in Kermanshah city to find out whether there exist some relationship between neonatal weight and unintended pregnancy.

## METHODOLOGY

This case-control study was carried out on 144 women who were admitted in postpartum ward in the maternity hospital at Kermanshah city of Iran. A questionnaire was designed to determine the intended and unintended pregnancies. The questionnaire consisted of two parts: the demography questions such as age, educational level, number of children, and sex of children; and the second part consisted of the questions which determine the unintended (case) and intended pregnancies (control). These questions comprised the birth control method, birth control stopping time, planning for pregnancy and tendency to abortion. Besides neonatal sex, neonatal weight and height from mothers file were gathered by using an information form.

Exclusion criteria were Intra Uterine Death and Nullipara. In this study, pregnancies taking place in spite of using birth control methods by women, either unwanted or mistimed were considered as unintended pregnancies.

Firstly, the objectives of the study were explained to women who were admitted in the postpartum ward. Secondly, they were requested to participate in the study. There was no obligation to be one of participants and all the participants took part in the study voluntarily. They were assured that the researchers would maintain complete confidentiality. This study was approved by ethic committee of Kermanshah University. The descriptive (Frequency, Percent and Mean) and analytical (Chi- square and OR) statistics were applied. The S.P.S.S Version 15.5 was used to analyze the data. In this study the significant level was considered at 0.05.

## RESULTS

The findings showed that among all participants, 100% were housewives, 27.3% were illiterate, 54.3% had more than two children, and 54.2% used oral contraception pills. About 46.6% participants had unintended pregnancy. Ages in the unintended and intended pregnancies (case and control groups) were 28.8± 5.7 and 27.4 ±4.7 respectively; but there was no significant differences between two groups. The case groups had 1.64±1.25 girls versus 1.59 ±1.02 in the control group; again there were no significant differences between two groups. 34.3% versus 23.5% were illiterate in the case and control groups which was not statistical significant differences (0.16) as well as the OR=1.7 with CI (0.8-3.16) were achieved (Table-I). About 74.3% of case group were using hormonal method of birth control such as pills and injection. Neonatal heights were 49.5±2.75 versus 50±3.19 centimeter and neonatal weights were 3220±400 versus 3210±400 gram in two groups. There were no significant differences between case and control groups and OR=1.5 with CI (0.74-3.5) were acquired (Table-II).

Table-I: Distribution of educational level in case and control groups

| *Groups Mothers' educational level* | *Unintended pregnancy (case) N(P)* | *Intended pregnancy (control) N(P)* |
|---|---|---|
| Illiterate | 23(34.3) | 16(23.5) |
| Literate | 44(65.7) | 52(76.5) |
| Total | 67(100) | 68(100) |
| Statistic test | $X^2$= 1.92 | P=0.16 (NS) |

Table-II: Distribution of neonatal weight in case and control groups

| *Groups Neonatal weight(gr)* | *Unintended pregnancy (case) N(P)* | *Intended pregnancy (control) N(P)* |
|---|---|---|
| Less than 3000 | 25(35.7) | 20(27) |
| 3001-3500 | 32(45.7) | 37(50) |
| More than 3501 | 13(18.6) | 17(23) |
| Total | 70(100) | 74(100) |
| Statistic test | $X^2$= 1.34 | P=0.51 (NS) |

## DISCUSSION

This study showed that there were not significant differences between case and control groups in neonatal weight. Joyce et al proved this result in their research[12] but Mohllajee et al, Eggteston et al and Shaheen et al, declared that there is relationship between neonatal weight and unintended pregnancy.[8,10,11] They concluded that women with unintended pregnancy have harmful behavior such as: beginning prenatal care later, smoking and drinking during their pregnancies, as well as unintended pregnancies where women may have economic and psycho social concerns and all of these factors turn them anxious. The differences between our findings are likely due to definition of unintended pregnancy in this study which included mistimed and unwanted pregnancy as well. Consequences for children born as the result of mistimed pregnancies are less severe than the consequences for children born as a result of unwanted pregnancies.[3]

The findings of the study showed that there were not significant differences between two groups in mothers' educational level. Moor et al in their study declared that unintended pregnancy can occur in all women apart from age, socio- economic status,[13] but Fawcus et al showed that unwanted pregnancies are related to mothers' educational level.[14] In our study 54.2% of case group had used hormonal methods as contraceptive, this problem may be, due to lack of knowledge about correct use of hormonal methods. It is necessary that all family planning centers do counseling and provide comprehensive knowledge and monitor their clients based on the appropriate schedule. Moreover family planning workers should pursue the clients so that they adopt birth control method accurately in the best way. Emergency methods can be useful for those women who faced problems such as non-use or discontinuing and so on. One way of reducing unintended pregnancies is to increase the knowledge of emergency contraception and facilitate its availability.

*Limitations of the study:* It included lack of appropriate information; which might be due to the mothers' feeling of affection for their babies during pregnancies and they were made to believe to have plan for pregnancies. As a whole, in this study, there was no relationship between the unintended pregnancy and neonatal weight and height. It is recommended to study the relationship between neonatal weight and unplanned pregnancies among unwanted and mistimed separately.

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