

## Assessment of the Effect of Pregnancy Age (40 Years and Older) on The Outcomes of Pregnancy among Women Who Were Attending The Obstetric Teaching Hospital in Sulaimani

تقييم تأثير عمر الحامل (٤٠) سنة فما فوق على نتائج الحمل بين النساء المراجعات بمستشفى الولادة التعليمية في محافظة السليمانية

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### الخلاصة:

**خلفية البحث:** ولا يزال عمر الأمهات المتقدمات مرتبطاً بمجموعة من نتائج الحمل السلبية.

**الهدف:** تهدف هذه الدراسة إلى تقييم تأثير عمر الأم ٤٠ سنة فما فوق على صحة الأم والجنين بين النساء اللواتي يرآجن مستشفى الولادة في محافظة السليمانية.

**المنهجية:** أجريت دراسة وصفية استخدم فيها أسلوب التقييم طبق على الأمهات في محافظة السليمانية للمدة من الخامس وعشرون من أيلول لسنة ٢٠١٤ ولغاية إحدى عشر من أيار ٢٠١٥. أختيرت عينة غرضية "غير احتمالية" مكونة من (٢٠٠) حامل بعمر ٤٠ سنة فما فوق من اللواتي رآجن مستشفى الولادة في محافظة السليمانية لمتابعة حالتهم الصحية. تم بناء إستمارة إستبائية خاصة لغرض الدراسة، تضمنت الإستمارة الإستبائية جزأين: جزء له علاقة بالخواص الديموغرافية للأمهات والجزء الآخر يتكون من مجموعة أسئلة متعلقة بصحة الأم والجنين. تم إجراء دراسة تجريبية للمدة من الحادي عشر إلى الخامس والعشرين من أيلول، ٢٠١٤ لتحديد ثبات الإستمارة الإستبائية بإستعمال طريقة (الإختبار وإعادة الإختبار). كما تم تحديد مصداقية الإستبانة من قبل (٨) خبراء. تم تحليل البيانات من خلال تطبيق أسلوب التحليل الإحصائي الوصفي للبيانات (التكرارات والنسب المئوية)، وتحليل البيانات تم إستخدام أسلوب التحليل الإحصائي الإستنتاجي (مربع كاي).

**النتائج:** أظهرت نتائج الدراسة أن النساء الحوامل بعمر أكبر من ٤٠ عاماً كن أكثر عرضة للأمراض المزمنة مثل إرتفاع ضغط الدم وداء السكري، لذلك فهن بحاجة إلى العلاج الطبي وبشكل مستمر، كذلك فإن وفيات الجنين كانت أكثر في النساء ٤٠ سنة من العمر، مقارنة مع الأمهات الأقل من ٣٥ عاماً، والعمليات القيصرية في النساء ٤٠ عاماً كان أكثر بمرتين، فإنها تتطلب فترة بقاء أطول في المستشفى لأخذ العلاج الطبي في حين أن انفصال المشيمة كانت حوالي أربع مرات أكثر في الأمهات الأصغر سناً مقارنة مع المتقدمات بالعمر. وكذلك حالة الإجهاض في النساء الأصغر سناً أكثر مقارنة للنساء أكبر سناً، فإن الإحالة بحاجة إلى المزيد من العلاج الطبي والفحوصات الطبية. **الإستنتاج:** أوضحت الدراسة إلى أن نسبة عالية من مضاعفات الحمل مثل إرتفاع ضغط الدم، وداء السكر، المشيمة المتقدمة، ولادة القيصرية، ولادة الجنين ميت، الولادة قبل الأوان لوحظت عند النساء الحوامل التي تزيد أعمارهن عن ٤٠ عاماً.

**التوصيات:** أوصت الدراسة أن تقلص مخاطر الحمل على الأمهات الأكبر سناً عن طريق التركيز على تقديم الخدمات والتوعية الصحية من قبل الممرضات والقابلات الكفوءات والمتدربات بخصوص إستمرار الحوامل بنمط حياتهن الصحية أثناء فترة الحمل، وكذلك ضرورة التزام الأمهات بمواعيد الزيارات والفحوصات خلال فترة الحمل.

**الكلمات المفتاحية:** الحمل، عمر الأم المتقدمة، وارتفاع ضغط الدم، العمليات القيصرية.

### ABSTRACT

**Background:** The age of advanced mothers is still associated with a range of adverse pregnancy outcomes

**Objective:** To assess pregnancy outcome at 40 years and older among women attending to obstetric teaching hospital of Suleiman

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**Methodology:** A descriptive study was applied on mothers in sulaimani governorate from September 25<sup>th</sup> 2014 to May 11<sup>th</sup>, 2015. Non-probability sampling of (200) pregnant women 40 years and older who were attended to obstetric teaching hospital of sulaimani for following up their health. A questionnaire was developed for the purpose of the study. It was comprised of two parts; the first part includes the demographic characteristics of women and the second part consists of questions related to maternal health and fetus. A pilot study was carried out for the period from September 11th to 25th, 2014 to determine the questionnaire reliability through the use of (Test – Retest). A panel of (8) experts was involved in the determination of the questionnaire content validity. Data were analyzed through the application of descriptive statistical data analysis approach (frequency and percentage), and inferential data analysis approach (chi-square).

**Results:** The results of the study revealed that pregnant women more seasoned than 40 years had more chronic diseases, for example, such as hypertension, diabetes mellitus, so they require visit medical and dietetically treatment, likewise mal presentation, fetal demise happened more in women  $\geq 40$  years old, contrasted with women more youthful than 35 years, cesarean section in women  $\geq 40$  years had a more than two times, they required longer remaining in hospital. While placenta abroptia were about four times more in younger mothers compared to old age. Also abortion in younger women occurred more and needed more medical treatment continues check-ups.

**Conclusion:** The study conclude that high incidence of complications such as hypertension, diabetes mellitus ,malpresentation, placenta praevia, cesarean section, low birth weight, preterm delivery and fetal death delivery were seen in pregnant women age 40 years & older.

**Recommendations:** The risks of pregnancy may be further lowered by promotion excessive health education regarding a healthy lifestyle during pregnancy and interventions with excellent well trained health care giver are important.

**Key words:** Assessment, women over 40 years, pregnancy, fetal death, hypertension, cesarean section.

## Introduction

The age of advanced mothers is generally defined as pregnancy in women aged 35 or older. As mother's age increases, fertility decreases and the rate of spontaneous abortion increases<sup>(1)</sup>. Women over the age of thirty five represent a large proportion of pregnancies in high-income countries<sup>(2)</sup>.

Age of advanced mothers is considered to be a risk factor for prenatal complications like preterm labor, pre eclampsia hypertension which may or may not be associated with IUGR, Gestational Diabetes, Ante partum hemorrhage & increased rate of Caesarean section. Many of them are willingly pregnant because of the neglect of contraception<sup>(3)</sup>.

The last three decades have shown an increasing tendency to delay procreation beyond the age of forty. The reasons for this development may be the increased use of reproductive techniques<sup>(4)</sup>. The massive, changes in work and society, which include higher levels of female employment and educational attainment, and higher numbers of women employed in senior positions. Late financial autonomy, fixed-term employment contracts for incoming entrants, low per capita income of young families, limited number of part-time jobs and the lack of flexible working hours make it difficult to reconcile work and family life<sup>(5)</sup>.

Lack of affordable childcare can be another problem for young working parents,<sup>(6)</sup> These social trends combined with the effectiveness of birth control and a larger range of infertility treatments have led to a steady increase in the number of pregnant women after the age of thirty five<sup>(7)</sup>.

In recent years, older women who become pregnant are often more primiparous and have better socio-economic status, whereas in the past they are often primiparous and of low socio-economic status<sup>(8,9)</sup>. Moreover, a few contemporary studies control

socioeconomic status and other variables, such as body mass index (BMI) and parity which may also affect pregnancy outcomes.

**Objective:**

To assess pregnancy outcome at 40 years and older among women attending to obstetric teaching hospital in Suleiman.

**Methodology:**

The present study was carried out through the application of quantitative design of a descriptive study which uses the assessment approach, and it was conducted on mothers in Sulaimani governorate from September 25<sup>th</sup> 2014 to May 11th 2015. Non-probability sampling a convenience sample of (200) mothers who attending obstetric teaching hospital in Sulaimani governorate, was selected for the purpose of the study. Of (210) mothers, of them were not included in the study because (5) did not reply the questionnaires and (5) mothers did not complete all items of the questionnaires, so that they excluded. The study was conducted with the remaining (200) women. A questionnaire was developed for the purpose of the study. It was comprised of two parts; the first part includes the demographic characteristics of women and the second part consists of questions related to maternal health and fetus. Official approval was taken from the Director of Obstetrics Teaching Hospital and assuring them that all information collected would be kept strictly confidential and would not be used for purposes other than research. A pilot study was carried out from September 11th to 25th, 2014 to determine the questionnaire reliability through the use of (Test – Retest). A panel of (8) experts was involved in the determination of the questionnaire content validity. The data analyzed was preformed through SPSS 18. The approaches, which are: descriptive statistical data analysis approach such as (frequency and percentage), and inferential data analysis approach such as chi-square

**Results:**

**Table (1) Distribution of (200 women) by their Socio-demographic attributes**

Sociodemographical variables		Frequency	Percent
1- Maternal age at the time of delivery	20-35	100	50.0
	40->40	100	50.0
2- Gestational age by weeks	30-32	4	2.0
	33-35	22	11.0
	36-38	10	5.0
	39-40	164	82.0
3- Parity	Primiparity	69	34.5
	Multiparity	131	65.5
4- Residential area	Urban	139	69.5
	Rural	61	30.5
5- Level Education	Illiterate	40	20.0
	Primary school	49	24.5
	Secondary school	76	38.0
	University school	35	17.5
6- Occupation	House wife	155	77.5
	Employed	45	22.5

Table 1 revealed that half (50.0%) of mothers were old, (82.0%) of them had completed gestational age (39-40) weeks, more than two-third (77.5%) of them were housewife mothers, (69.5%) of them have lived inside Sulaimani city, also (65.5%) of mothers have more than one children, (38.0%) of them had completed secondary school, and only (69.5%) of them have received Health education regarding effect of age on the health of older and younger pregnant

**Table (2) Distribution of (200 women) regarding risk factor during pregnancy and complication during labour Mother's age at delivery time**

Risk factors	women age at delivery time				P-Value
	20-35		>40		
	Frequency	Percent	Frequency	Percent	
Pregnancy induced hypertension	16	84.2%	3	15.8%	.002
Diabetes Mellitus	3	16.7%	15	83.3%	.003
Chronic hypertension	4	15.4%	22	84.6%	.000
Obstetric Complications	women age at delivery time				P-Value
	20-35		>40		
	Frequency	Percent	Frequency	Percent	
Malpresentation	10	28.6%	25	71.4%	.005
Placenta praevia	11	42.3%	15	57.7%	.400
Placenta abroptia	14	93.3%	1	6.7%	.000
Cesarean section	37	38.54%	59	61.45%	0.003
Multiple pregnancies	15	83.3%	3	16.7%	.003
Premature rupture of the membranes	16	55.2%	13	44.8%	.547
Fetal distress	19	55.9%	15	44.1%	.451
Abortion	14	100.0%	0	0.0%	.000
Stillbirth	47	64.4%	26	35.6%	.002
Congenital anomalies	38	64.4%	21	35.6%	.008
Low birth weight	50	43.10%	66	56.87%	.131
Preterm delivery	11	47.8%	12	52.2%	.825
Fetal death	3	37.5%	5	62.5%	0.03

Table 2 revealed that chronic hypertension, diabetes mellitus was risk factors of advanced pregnant for the complication of delivery. Also malpresentation, Placenta praevia , Cesarean delivery, low birth weight, Fetal death and Preterm delivery were more complication for older women.

## Discussion:

The results revealed that half (50.0%) of mothers were  $\geq 40$  years, (82.0%) of them had completed gestational age by weeks, more than two-third (77.5%) of them were housewife mothers, (69.5%) of them have lived inside Sulaimani city, also (65.5%) of mothers have more than one children, (38.0%) of them had completed Secondary school and only (69.5%) of them have received health education. Effect of age on the health pregnant women. The current lifestyle of women has changed. They are highly educated and work outside their homes rather than staying at home, delaying marriage and giving birth until they complete their education. The study revealed that the incidence of hypertension and diabetes mellitus (83.3%, 84.6%) respectively among pregnant women aged forty and older, the same result has been reported in the other study <sup>(11)</sup>.

It is clearly shows that the prevalence of diabetes and hypertension are increasing with age.

In regard of cesarean section in current study, (61.45%) of the sample are with advanced age had delivered by cesarean section. This rate was contrary to the literature, <sup>(11,12)</sup>. The cesarean section was higher in the older mothers aged forty and older. (6.7%) of aged women have placental abruption in the present study.

Regarding aged women with low birth baby's weight rate (56.87%) weighing less than 2,500 grams 5 pounds). In the other studies, the average newborn weight about 8 pounds, <sup>(13, 14)</sup>. While another study shows that over 8 percent of all newborn babies in the United States have low birth weight <sup>(15)</sup>.

Income is strongly correlated with quality of antenatal care, <sup>(16)</sup>, health-care facilities and access to transport have major implications for whether or not women receive antenatal care.

Regarding rate of preterm delivery, the study revealed that more than a half advanced women complains from premature delivery, this is associated with urinary tract infection, is a greater risk of prenatal mortality. 35.6% of women ends in stillbirth in current study, baby dies in uterus at 20 weeks of pregnancy or later. About 1 in 160 pregnancies ends in stillbirth in the United States. Most stillbirths happen before labor begins, but a small number occur during labor and delivery. Antenatal screening contributed to the decreased rate of still birth <sup>(17)</sup>. According to the fetal death (62.5%) of aged women's was seen in the study, increase in women with previous infertility <sup>(18)</sup>.

Abortion is an induced ending of pregnancy after the 20th week of gestation, (100.0%) of younger women had abortion <sup>(19)</sup>. While no abortion for advanced women had showed in our study <sup>(20)</sup>. Present study had showed high significant in advanced women. The rate of complication increases 38 percent for each additional week of gestation beyond eight weeks <sup>(21)</sup>. The risk of death with a surgical abortion is about one per one million through 63 days' gestation <sup>(22)</sup>.

In the present study, placenta praevia (57.7%) was more frequently seen in older age group which could be related to the higher incidence of hypertension in these women, <sup>(23)</sup>. It is a leading cause of antepartum hemorrhage (vaginal bleeding). It affects approximately 0.4-0.5% of all labors <sup>(24)</sup>. In another study the results shows that no significant difference has

shown advanced pregnant for premature rupture of membranes which refers to a patient who is beyond 37 weeks <sup>(25)</sup> so it is important for the physician to be familiar with potential complications and needs possible interventions to minimize risks and maximize the probability of the desired outcome. In the current study, (16.7%) of advanced mother have been related to multiple births <sup>(26)</sup> which refers to the delivery of twins and higher-order multiples. Pregnancies complicated by multiple births are associated with a higher rate of neonatal mortality.

The study findings had depicted there were no statistically significant of advanced mother with placenta praevia, premature rupture of the membranes, fetal distress, low birth weight, and preterm delivery, respectively. While highly statistically significant of advanced mother with pregnancy induced hypertension diabetes mellitus, chronic hypertension malpresentation placenta abruption cesarean section multiple pregnancies abortion stillbirth congenital anomalies fetal death (table 2).

### Conclusion

The study findings demonstrate that majority of pregnant women aged 40 years and older was complain from diabetes mellitus and chronic hypertension and more than a half of advanced pregnant has delivery complications' such as malpresentation, placenta praevia, cesarean section, low birth weight, preterm delivery and fetal death. It is attributed to inadequate prenatal health education regarding issues.

### Recommendation

The study recommended that the risk outcomes of pregnancy and childbirth to women  $\geq 40$  years were controlled by treating pre-existing chronic diseases , promote give birth in hospital , advise women's to regular visits during pregnancy period and continues prenatal check-ups for women's .

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