International Journal of Multidisciplinary Research and Growth Evaluation.

Evaluation of Risk Factors in Pregnant Women in Elway Maternity Hospital in Baghdad City

Entsar Khaleel Samen [1*], Asmaa Ibadi Salman [2], Shaymaa Hadi Najm [3], Israa M Ali Mohammed Hassan [4], Enass Razzaq Hamza [5]
Department of Community Health / Medical-Technical Institute, Baghdad, Iraq

* Corresponding Author: **Entsar Khaleel Samen**

Article Info

ISSN (online): 2582-7138
Volume: 05
Issue: 04
July-August 2024
Received: 02-07-2024
Accepted: 03-08-2024
Page No: 1153-1157

Abstract
Background: Pregnancy, or reproductive, age is one of a, significant stage of women's lives when, some changes and fluctuations occur on, physiological and psychological process and considered, as normal. It is correlated to clinical, mechanical, physiological and metabol ism changes, in vast majority of women, bodies in this stage.
Objectives: To evaluate, the factors, of risk, in pregnant, women and observe if there a correlation, between these risk factors in pregnant, women whom divided to groups that are subject to study with, certain variables, factors, such as (age, culture level, career, socio- economic status(SES), prenatal care visit).
Materials& procedures: "The study, design was, descriptive, study (cross sectional). Which included (150) women, collected from, Elweya Maternity Hospital during the period from, 10th, October 2018 till 10th March, 2019 during data collection, the, questionnaire, from each, woman, was, done".
Results: At the,, study end the results showed, that the pregnant, women were, have range of age between (<= 21years), they scored the highest percentage (30%), while the lowest percentage, was (13.3%) fore, their women in ages (34 - 39 years), this study accurately recorded, significant, association, between age, groups, of pregnant women, and bleeding, during pregnancy, (p=0.003). pregnancy,(28-34 years) had the higher, percentage, of risk factors, and the degree of relatives between, women, and their husbands was, (35.9%). Pregnancy, (28- 34years) had the higher percentage of anemia, hypertension and, bleeding, during, pregnancy).
Conclusions: in circumstances such as low socio-economic, conditions, among, tow thirds of women who were, subjected to this, study and prevalence of anemia, and high blood pressure. age pregnancy, (28-34 years) had the higher percentage of anemia, hypertension and bleeding during pregnancy. bleeding during pregnancy is significantly association with increase in age groups about one sixth of the deliveries was at home.

DOI: https://doi.org/10.54660/.IJMRGE.2024.5.4.1153-1157

Keywords: evaluation, risk, factors, pregnant, women, elway maternity hospital

Introduction

Although, most women, go normally in pregnancy, experience, but, sometimes pregnancy becomes, more complicated, due to antenatal, or intrapartum, conditions when the mother and, the developing, fetus, or even, the both, of them are exposed, to a higher, complication, risk for than pregnancies not exposed these conditions. Preexisting chronic conditions, as well, as conditions, that arise, during pregnancy, Can threaten the life, and health, of the fetus or the mother.

The most significant perinatal mortality (stillbirth or neonatal death) triggered due to restricted fetal growth because, of placental, insufficiency, and, morbidity (complications, of prematurity), internationally [1, 2].

Several factors, including, fattiness, increasing, blood pressure, diabetes, immobility, and, deficiency of growth, hormone level, these factors mentioned, above may significantly, contribute to increasing, the risk of, cardiovascular disease, and deficiency of growth hormone, level may increase, the index of body, mass, the ratio between waist and hip, arterial blood clotting, that resulted, due to the increasing of plasminogen, activity inhibitor, and [3, 4].

Teenager, pregnancy, mothers, exposed to many risks, include the difficulty of gaining weight, premature birth, blood high pressure during, pregnancy, weight loss after birth, the death, of the, newborn child [5, 6, 7].

Death, of newborns, happens. Due to several, reasons, such as lack of oxygen (hypoxia), which, happen because, of, placenta, abnormality sometimes because of the inability of a, newborn, baby to go into, labor, or even due, to the, physical or developmental, abnormalities [8].

One in 1500 women, dies every, day from, pregnancy, and childbirth, complications [9]. The death average for, pregnant, mothers is, close to 450 deaths per 100000 in developing countries, compared with 9 deaths per 100000 in developed countries, because, they have, more parity, than women, in developing countries [10].

Materials and Research Methods

A research, in description, "(cross sectional) "Each woman, was asked a, questionnaire, that included, (150) women, collected during, the time of data, collection from, the Elweya, Maternity, Hospital, from 10 October, 2018 until 10, March 2019. Every, questionnaire has, been included, the following:

A "Pregnant women's demographic details including"

"Weight, height, residence and husband, consanguinity, to the wife, woman, and her husband age, gestational age, blood group and RH

B- Every individual's socio-economic, status has, been defined by occupation, level of education, crowd index and household properties.) The size is, categorized by: the following levels:- from 81 to 100, moderate levels:- from 60 to 80, and' (low, levels:- 59 and lower.)'.

C-Prior, pregnancy, and obstetric history.

D-Current, pregnancy, medical and, obstetrical, complications.

Data analysis

"The information regarding each case was transferred into code sheets and data entry was done using laptop and statistical analysis was done using the SPSS (statistical package of social science) version 19, and the approach to data consisted of two steps (descriptive and analytic statistic)".

A. Descriptive data analysis

"This approach included the measurement of frequencies and percentage.

$$\% = \frac{\text{Frequency}}{\text{Sample size}} \times 100$$

B-Inferential data analysis

"Simple distribution of the study, variables and, the cross, tabulation, were applied. Chi-square, ($\chi 2$) was used to identify the significance of the relations, associations, and interactions among various, variables. Yates's, continuity correction test $\chi \mathbf{2}$ (corrected), was used, when more than 20% of, the cells had an expected frequency of less than, five and when, the expected, numbers were, small. Range as minimum, and maximum, values was used. The, results in all above mentioned procedures were accepted as, statistical, significant, when the p-value was less than 5% ($p<0.05$)."

Results

Table 1: Demographic characteristics of the study sample

Variables	Groups	Frequency	Percentage
Age of pregnant women (years)	<= 21	45	30
	22 – 27	30	20
	28 – 33	25	16.6
	34 – 39	20	13.3
	40 and over	30	20
	Total	150	100
Age of Gestational	First Trimesters	60	40
	Second Trimesters	40	26.6
	Third Trimesters	50	33.3
	Total	150	100
Consanguinity level	Relative	90	60
	Not relative	60	40
	Total	150	100

Table (1): shows that the, higher percentage, of pregnant, women (30%) was in age groups (<= 21) years, and the lowest, percentage (13.3%) was in, (34 - 39) years, pregnant women in first trimester comprise the m highest m percentage (40%) and women, who were relative to their husband, composed, (60%) of the sample.

Table 2: Distribution of study sample according to BMI

BMI Score (kg/m²)" ″	Frequency	Percentage
<18.5 (Underweight)" ″	20	13.3
18.5 - 24.9 (Normal)" ″	81	54
25 - 29.9 (Overweight)" ″	25	16,6
=> 30 (Obese)	24	16
Total	150	100

Tables (2) shows that the, highest percentage, was (54%) of pregnant women, within normal BMI score, & the lowest percentage was (13.3%) with in underweight score.

Table 3: Distribution of pregnant according to their obstetrical previous history

Variables	Total number (150)	
'Interval between previous and current pregnancy	Frequency	Percent
Primgravida	80	53
<12 months	25	16.6
12-24 months	25	16.6
> 24 months	20	13.3

Premature birth	Frequency	Percent
No	125	83
Yes	25	16.6
Attendance of prenatal care (P.H.C)	Frequency	Percent
Adequate attending	60	40
inadequate attending	90	60
Vaccination	Frequency	Percent
First dose	30	20
The second dose	20	13.3
Third Dosage	20	13.3
The fourth dose	10	6.6
Fifth Dose	70	46.6
Place of delivery	Frequency	Percent
Hospital	100	66.6
Home	50	33.3
Type of delivery	Frequency	Percent
Normal	100	66.6
Cesarean	30	20
Forceps	20	13.3

"Table (3): shows that (16.6%) of the sample had interval of 12-24 months from their previous, pregnancy. Premature births constitute (16.6%) only. Regarding the attendance, to prenatal care (60%) of pregnant women had inadequate attendance to prenatal care unit. Regarding vaccination (46.6%) of women were complete, (5 dose.) Hospital deliveries, comprise (66.6%) of all delivery, of which (20%), were done by cesarean section. No positive smoking, history was, detected for all pregnant women in the sample".

Table 4: Distribution of risk factor in the studied pregnant women

Variables		N (150)	%
Delivery of Cesarean section		23	15.3
Anemia		8	5.3
Multipar of pregnant women		10	6.6
Hypertension		10	6.6
Rh Factor	Rh incompatibility	9	6
'Bleeding, during pregnancy		10	6.6
Transfusion of blood		6	4
Diabetes mellitus		9	6
Pregnant women under 16 years of age		8	5.3
Heart and artery disease		10	6.6
Sensitivity to medicine		7	4.6
Urinary tract infection		11	7.3
Epilepsy" ″		9	6
Liver sickness		7	4.6
Thyroid illness		8	5.3
Asthma Attacks		5	3.3

Table (4): Shows the most frequent risk factor was cesarean section delivery (15.3%), anemia (5.3%), multipara of pregnant women (6.6 %) simple hypertension (6.6 %), and the Rh incompatibility between pregnant women and husbands was (6%), and bleeding during current pregnancy was (6.6%). There is no cases for other risks factor for pregnant women were detected like rubella, tuberculosis and thalassemia.

Table 5: Distribution the pregnant women according their risk and the number of risk factors

Variables		**<= 21**		**22 – 27**		**28 - 34**		**35+**		**Total**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Hypertension	Yes	5	4	3	8	2	5	1	20	50	33.3
	N0	15	13	5	8	14	15	10	20	100	66.6
	Total	20	17	7	16	21	20	15	31	150	100
Chi-Square Tests						X^2		df		P value	
						2.528		3		0.492	
		<= 21		**22 – 27**		**28 - 34**		**35+**		**Total**	
		N	**%**	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Anemia	Yes	4	5	19	16	18	15	12	18	107	71.4
	N0	2	6	8	3	4	5	6	13	43	28.6
	Total	6	11	27	19	22	20	16	33	150	100
Chi-Square Tests						X^2		df		P value	
						3.439		3		.3350	
Bleeding during pregnancy		**<= 21**		**22 - 27**		**28 - 34**		**35+**		**Total**	

		N	%	N	%	N	%	N	%	N	%
	Yes	6	2.2	11	3	13	6.9	10	8.6	40	267
	N0	10	15	20	25	16	14	14	10	110	73.3
	Total	16	17.5	31	28	29	20.9	24	18.6	150	100
Chi-Square Tests						X^2		df		P value	
						13.353		3		.0030	

Table (5) shows that pregnant women without risk (normal pregnancy)were (40%), and pregnant women with risk were (60%), one risk factors comprises (38.8%) out of all pregnant women with risk, two risk factors (21.1 %) three risk factor, and 19% and four risk factor (16%).

Discussion

"In this study the proportion of pregnant women who were <= 21 years was 30%, and this result matches greatly with (Senbeto *et al*) 2005 result that found 33% of pregnant women were under the age of 20 [10]. In addition, this study shown that more than half of studied women about (54%) of them were in normal range of BMI, and about (13.3 %)were less than normal of it, but these results were not match with (Jang *et al*)in Korea (2011) study that registered (19.3%) of pregnant women were have BMI (18.5) kg/m2,(66%) of them with a BMI of (18.5– 22.9) kg/m2, (10.5%) pregnant women with a BMI (23–27. 4) kg/m2 and (4.2%)of them with a BMI (27.5) kg/m2 [11]. (Declercq, *et al*) 2013 found a result which matching with our study results, they reported 48% of pregnant women were normal weight, and 20% were obese [12] 60% of the sample were at Middle level in the socio-economic status, 23% of them at a higher socio-economic level, and 16.6% of pregnant women were at low socio-economic level, this is agreement with (Al Alfa in Irbil)2010 reported result were 65% of the studied women were Middle level [13]. But it is disagreed with (Bödecs *et al*) in Hungaria 2013 result which registered that 40.22% of women were in low socio-economic level, 37.58% of them in the middle level of socio-economic, and 36% of them were in high level [14]. The women with Anemia was about 5.3%, it's less than study done by Ahmed, 2013 in Baquba city, he found about 55.5% of women been registered with Anemia [15].The life style in making and consuming food or other factor may be behind this difference, WHO registered mild cases in Anemia between studying women in Egypt and Jordan with 76%, 64.9% respectively [16]. Study done in Nepal reported that the Animea percentage was 41% and the women with mild Anemia was about 67.14. the Hypertension in this study was about 6.6% of pregnant women while it was reported about 3% of the studied women as study done by Husein A 2014 in Diyala [15], but in Erbil the number was much more than these results, it was about 15% of cases which have been studied by Alaf *et al* in 2010 [13] The most studies which close with our study was for Martin J 2011, which reported 6% of pregnant women were registered as hypertension cases during pregnancy [19].

The incidence of diabetes in our study was about 6% of pregnant women. And its higher than the study, which done by Dabbagh *et al* 2006 in Mosul, which was about 1% of women [20]. Pregnant women with cardiovascular disease were about 6.6 %, in contrast to a study in Hong Kong done by Li C, *et al* 1997, he reported very small percentage about 0.7% of cases with cardiovascular disease [20]. A statistically non-significant association has been found between age groups of pregnant women and hypertension (p=0.64), which agreed with the result that reported by Owiredu W K B A *et al* 2012 in Ghana, women aged (36 -39)years did not have a significantly increased risk of developing hypertension compared to women between (5–39) years of age (p=0.8) [22] A statistically non-significant association has been found between age groups of pregnant women and anemia (p=0.487), which is in agreement with the result that reported by Singh. 2013 in Nepal (p=0.55) [22].

The pregnant, women whom registered as bleeding case were about (8.6%), most of them around 35 years and a statistically significant, association has been detected the pregnant women whom registered as bleeding case were about (8.6%), most of them around 35 years and a statistically significant association has been detected between age groups of pregnant, women and bleeding, during pregnancy (p=0.01), these result differ from Yang *et al* 2004 results, they reported (75.7%) of women within the ages (20-34) years have highest percentage bleeding during pregnancy period [23]".

Ethical clearance: Taken from committee faculty of Technical Medical Institute of Middle Technical University Iraq (MTU) No:7/27/52/date 25/9/2018.
Source of funding- Self.
Conflict of Interest: nil

Reference

1. Lalor JG, Fawole B, Alfirevic Z, Devane D. Biophysical profile for fetal assessment in high risk pregnancies. About the Cochrane Database of Systematic Reviews; 2008:CD000038.
2. Colao A, DiSomma C, Spiezia S, Savastano S, Rota F. Growth hormone treatment on atherosclerosis: results of a 5-year open, prospective, controlled study in male patients with severe growth hormone deficiency. The Journal of Clinical Endocrinology and Metabolism. 2008;93:3416-3424.
3. Bulow B, Hangmar L, Eskilsson J, Erfurth EM. Hypopituitary females have a high incidence of cardiovascular morbidity and increased prevalence of cardiovascular risk factors. The Journal of Clinical Endocrinology and Metabolism. 2000;85:574-584.
4. Klein JD. Adolescent pregnancy: Current trends and issues. Pediatrics. 2005;116(1):281-286.
5. Fraser AM, Brockert JE, Ward RH. Association of young maternal age with adverse reproductive outcomes. New England Journal of Medicine. 1995;332(17):1113-1117
6. Joyce T, Kaestner R, Korenman S. The stability of pregnancy intentions and pregnancy-related maternal behaviors. Maternal and Child Health Journal. 2000;4:171-178.
7. Alfirevic Z, Devane D, Gyte GM. Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour. Cochrane Database of Systematic Reviews. 2006;3:CD006066.
8. Patschger C, Uwe L, Ekkehard S, Klinikum SRH. Archives of Gynecology and Obstetrics Management,

Gera, Germany, 2Jena University Hospital, Friedrich-Schiller-University, Department of Obstetrics, Jena, Germany; c2010
9. World Health Organization. Impact of Human Reproduction research in maternal and perinatal care: a case study; 2008:2.
10. Senbeto E, Alene GD, Abesno N, Yeneneh H. Prevalence and associated risk factors of induced abortion in northwest Ethiopia, The Ethiopian Journal of Health Development. 2005;19(1):37-44.
11. Jang DG, Jo YS, Ra Lee GS. Effect of pre-pregnancy body mass index and weight gain during pregnancy on the risk of emergency cesarean section in nullipara. Archives of Gynecology and Obstetrics College of Medicine of Korea. 2011;284:1389-1397.
12. Declercq ER, Sakala C, Corry MP, Applebaum S, Herrlich A. Listening to Mothers S M III Pregnancy and Birth. New York, NY; c2013.
13. Al Alaf SK, Omer DI. Prevalence and clinical observations of Gestational Trophoblastic Diseases in Maternity Teaching Hospital in Erbil City. Wseas transactions on biology and biomedicine. 2010;7:190-199.
14. Bödecs B, Szilágyi E, Cholnoky P, Sándor J, Gonda X, Rihmer Z, *et al*. Prevalence and psychosocial background of anxiety and depression emerging during the first trimester of pregnancy: data from a Hungarian population – based sample. Psychiatria Danubina Medicinska naklada - Zagreb, Croatia. 2013;25(4):352-358.
15. Ahmed AF. Early detection of hypertension and diabetes program in Baquba city first student conference in college of medicine university of Diyala; c2014:57.
16. Brabin B, Hakimi M, Pelletier D. An analysis of anemia and pregnancy-related maternal mortality. Journal of Nutrition. 2001;131:604S-615S.
17. Singh P, Khan S, Mittal RK. Anemia during pregnancy in the women of western Nepal. Bali Medical Journal. 2013;2(1):14-16.
18. Husein AA. Incidence of hypertension among pregnant females visiting the obstetric clinic in Al-Batool teaching hospital in Baaquba first student conference in college of medicine university of Diyala; c2014:38.
19. Martin JA, Hamilton BE, Sutton PD, Ventura SJ, Menacker F Munson ML. Births: final data for 2002. ational Vital Statistics System Homepage. 2003;52:1-113.
20. Al-Dabbagh SA, Al-Taee WY. Risk factors for pre-term birth in Iraq. BMC Pregnancy and Childbirth. 2006;6(13):2-7.
21. Li CY, Sanderson JE. Cardiac disease in pregnancy Hong Kong. Prince of Wales Hospital, The Chinese University of Hong Kong, Shatin, Hong Kon. 1997;3:391-399.
22. Owiredu W K B A, Ahenkorah L, Turpin C A, Amidu N and Laing E. F. Putative risk factors of pregnancy-induced hypertension among Ghanaian pregnant women. Journal of Medical and Biomedical Sciences. 2012;1(3): 62-76.
23. Singh P, Khan S, Mittal R K. Anemia during pregnancy in the women of western Nepal. Bali Medical Journal. 2013;2(1):14-16.
24. Yang J, Hartmann KE, Savitz DA, Herring AH, Dole N, Olshan AF, *et al*. Vaginal Bleeding during Pregnancy and Preterm Birth. American Journal of Epidemiology. 2004;160:118-125.