

## Health behavior evaluation in women with multiple pregnancies

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### Abstract

**Objective:** The main purpose of this study is to evaluate the impact of the health behavior in pregnant Iraqi women in multiple pregnancies, and which one had characteristic influence in examined Iraqi women.

**Patients and Methods:**The study was carried out in *Al-Yermook Hospital* for a period of one year from July 2019 to July 2020. It was included 40 pregnant women in multiple pregnancies, completed the 22 weeks gestational age, with taking their verbal consent for the participation in this investigation. Selected questioner used to collect data, as well as using Juczyński's Health Behavior Inventory questionnaire to evaluate the health behaviors of recruited women involved in this study.

**Results:**The heath behaviors rate was high particularly for Iraqi pregnant women in multiple pregnancies, as the health behaviors indicators were high among all the identified categories.

**Conclusion:** The higher health behavior rate of pregnant women in multiple pregnancies, as the preventative behaviors had the highest rate.

**Key words:** health behavior, multiple pregnancies, Iraqi women.

### *1.Introduction:*

One of the important subjects to bear in our mind the influencing effect of the health behavior on the lifestyle of the human being due to the dependence of the of the pregnancy course, fetal development, and the child development on the women's health throughout the duration of preconception and the pregnancy period.[1]

There is a significant proportion between the women health and other factors that leads to adverse pregnancy outcome such as; the lifestyle (smoking, drinking alcohol during pregnancy that lead to increase the risk of preterm delivery, lower birth weight), the physical environment, genetic role, maternal obesity, gestational hypertension, gestational diabetes, deficient folic acid supplementation, which can result in the increasing risk of pre-eclampsia development, cardiac defects, still birth, orofacial defect.[2, 3]

Actually, on the other hand there is a negative relation between the women health behavior and nutrition, such as lack of sleep, alcohol abuse, and psychoactive medicine abuse; so that the pregnancy is regarded as the perfect time for the correction of this negative relationship by changing the lifestyle of the pregnant women as well as the eating habit [4]. Multiple pregnancies are regarded as one of important subjects in obstetrics, as the pregnancy of the women with multiple pregnancy is considered as a high risk pregnancy, because it is associated with increased risk of obstetrical and neonatal complications. Thus, the aim of this investigation is to reduce complications especially the associated miscarriage, premature delivery, intrauterine growth retardation, higher incidence of nausea and vomiting, infant and neonatal mortality [5, 6].

Therefore, there is a need for preventive care particularly the women health behavior.[7] There are many causes and risk factors in multiple pregnancies, such as advanced maternal age, assisted reproductive technology, hereditary and environmental factors, it accounts around 3% of the birth in the world. As the multiple pregnancy incidence is of increasing over the past period [8, 9]. The pregnant women should be alert to these changes and problems that occur during this period, trying to prevent those complications by close observation as well as good health care [10].

## ***2. Patients and methods:***

This study included 40 pregnant women in multiple pregnancies; recruitment of women was done throughout the period from June 2019 to June 2020 at Al-Yarmouk hospital in Baghdad, Iraq, after taking a verbal and written consent from all women enrolled in this study. All of them completed their 22 weeks and that was our inclusion criteria for the study group, depending on the questionnaire survey including the physical activity of pregnant women, social habits such as alcohol and smoking, coffee drinking, and narcotics intake, as well as the taking hospitalization, reproductive histories, and the gestational age of their pregnancies. The Health related behavior inventory (HBI) was used to evaluate the indicator of the health behavior, and that's called Juczyński's questionnaire, which consists of 24 questions about health behavior according to these following factors; (1) Positive mental attitude [PMA]; ability of the women to control her emotions, tension, stress, and depressive states (2) preventive behaviors [PBs], (3) health practices [HPs]; sleep, fitness activities (4) proper nutritional habits (PNH); types of food that the pregnant women had taking like vegetables, fruit, whole wheat bread. Additionally, the benefit of HBI is covering the women behaviors: (1) those who need medical recommendation. (2) Those behaviors that increase or decrease the disease risk. (3) Those behaviors that maintain health, by using the 5

point scale as following; 1 means almost never, 2 means rare, 3 means from time to time, 4 means rottenly, 5 means almost always. The subjects in this study was asked to answer this questioners, the assessing the intensifier for each one of the health behavior indicator, then ranging the scores between 24-120, the higher augmentation of the health behavior then the scores classified depending on values, and converted to standardized scores from 1-10, as 1-4 means low HBI, 5-6 scores means average HBI, and 7-10 means high HBI. Questioner sheets were given for all enrolled women and the results recorded after reading and signing informed sheets.

### ***Statistical analysis:***

The descriptive methods were used in the analysis of quantitative variables, including the mean, median, standard deviation, maximum, and minimum values. The existence of significant differences was at P value < 0.05. The Mann-whitney U test and IBM SPSS statistical software version 21 were used for statistical analysis.

### ***3.Results:***

The paramount cause of hospitalization in those women was the threatened premature contractions in about 48% and other causes include diabetes, hypertension, anemia, and one of enrolled women admitted due to twin-twin transfusion syndrome. Table 1 has showed that there was a high rate of women health behaviors as the values for each indicator had been illustrated in this table clearly, and the health behaviors indicators were; residence, level of education, marital status, successful pregnancy's number, that were illustrated in table 2, and those indicators were all high in women with multiple pregnancies in all categories, and the preventive behaviors had the highest rate.

The average age of the enrolled women in our study was ( $30.2 \pm 4.4$ ) as their age ranged from 24-45 years, and their gestational age, Majority of women were from urban areas, as the  $M \pm SD$  was ( $98.3 \pm 10.30$ ) and the remaining were from rural area ( $90.2 \pm 12.9$ ), with p value 0.09. As well as the majority of women were married, with the  $M \pm SD$  of ( $95.3 \pm 10.9$ ), while others were single ( $90.1 \pm 11.9$ ), with significant statistical difference as the P value was 0.038. Most of our participants were in their second pregnancy, more than first pregnancy, as the  $M \pm SD$  ( $99.4 \pm 7.6$ ,  $90.2 \pm 10.4$ ) respectively. More than half of pregnant participants were not having any physical activity before hospitalization, they got pregnant naturally, and few of them had undergone in vitro fertilization, for pregnant current pregnancy was not the first, were individualized by health behavior indicators for categories of health practices, and positive mental attitude, their statistical significance was on average, and only it was significant for the health practices.

### ***Discussion:***

The incidence of the multiple pregnancies increase over the last years especially for the developed countries, as a result of increasing the assisted reproductive techniques, with advanced age of women in her first pregnancy, ovulation induction without IVF, all can lead to dramatic increase in the rate of dizygotic twins [11]. Actually, most of the women in this study had got pregnancy naturally 32%, and around 3.2% got pregnant by IVF.

The multiple pregnancies are regarded as a high risk pregnancy for that the pregnant women needs frequent visits and the frequent leading cause for hospitalization of those women was the premature uterine contraction in half of women, and 11% as a result of co morbidities, such as anemia, diabetes, hypertension. [12, 13]

Many different reports mentioned that the powerful relation between the neonatal health and the lifestyle of pregnant women during her pregnancy, particularly the physical activity, and the eating habit, as they contributed in the reduction of back pain, which is common in pregnancy, beside the excessive weight gain prevention, and unfortunately the multiple pregnancies with its obstetric complications is considered as a contraindication to any excessive physical activity during pregnancy. In this study, our results had showed that there was a higher rate of health behavior among pregnant women, as well as the higher rate of the health behavior for the selected categories in those pregnant women in multiple pregnancies as all the values were greater than  $(3.22 \pm 0.45)$ .

Similar findings was reported by Juczyński et al., 1999 who found the same relation between the health behaviors and the high risk pregnancy in a 61 women, as the health behavior index was  $(90.18 \pm 12.78)$  which was greater than seen in healthy women, as well as there were a higher rates of positive mental attitudes, and preventive behaviors  $((3.94 \pm 0.6)(3.91 \pm 0.78))$  respectively [14]. In contrast, the results of Boguszewski et al., 2018 on 268 control group (healthy women), and 214 pregnant women, showed an average rate of women's health behaviors and they found an average rate of health behaviors, as the health practices, and the positive mental attitude  $((3.68 \pm 0.67)(3.69 \pm 0.68))$  respectively. [2]

#### **4. Conclusion:**

Our study found and highlighted about the health behaviors in Iraqi pregnant women in multiple pregnancies, beside the health behaviors indicators, as we found that they had a higher rate, particularly the preventive behaviors, but their values were not dependent on the variables in this study.

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**Table 1: Characteristics of Iraqi pregnant health behaviors for each pregnancy**

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Behavior categories	M	<u>MS</u>
Proper nutritional habits (PNH)	3.93	0.5
Preventive behaviors (PBs)	3.99	0.6
Positive mental attitude (PMA)	3.7	0.5
Health practices (HPs)	3.22	0.45

**Table 2: Characteristics of Iraqi health behaviors according to selected variables**

Variables	*M ± SD	Statistical analysis
<b><u>Education</u></b>		
Secondary	92.3 ± 9.4	Z = -0.49; p = 0.62
Higher	94.2 ± 11.5	
<b><u>Place of residence</u></b>		
City	98.3 ± 10.3	P= 0.09
Rural	(90.2 ± 12.9)	
<b><u>Marital state</u></b>		
Married	99.3 ± 10.9	P = 0.038
Single	90.1 ± 11.9	
<b><u>Pregnancy</u></b>		
First	90.2 ± 10.4	P= 0.95
Another one	99.4 ± 7.6	

\* Data are expressed as the mean

**References:**

- [1] Alkaabi MS, Alsenaidi LK, Mirghani H. 2015. Women's knowledge and attitude towards pregnancy in a high-income developing country. *J Perinat Med.*; 43(4): 445–448.
- [2] Boguszewski D, Adamczyk JG, Tomaszewski W, Sałata D, Skowera E, Patalon M, Obszyńska-Litwiniec A, Białoszewski D. 2018. Evaluation of the Health-related Behaviour of Pregnant Women from Warsaw, Poland. *Iran J Public Health.* Jan;47(1):57-63.
- [3] Esposito G, Ambrosio R, Napolitano F, Di Giuseppe G. 2015. Women's Knowledge, Attitudes and Behavior about Maternal Risk Factors in Pregnancy. *PLoS One.* Dec 29;10(12).
- [4] Allen BD, Adashi EY, Jones HW. 2014. On the cost and prevention of iatrogenic multiple pregnancies. *Reprod Biomed Online.*; 29(3): 281–285.
- [5] Patrick chien. 2020. Multiple pregnancy and assisted conception treatment. In *BJOG.* April 2020;127(5):P:525-526.
- [6] Boiko VI, Nikitina IM, Babar TV, Boiko AV. 2018. The problem of miscarriage in multiple pregnancy. *Wiad Lek.*;71(7):1195-1199.
- [7] Filipecka-Tyczka D. 2016. Medical care for a pregnant woman with a multiplepregnancy. *Post Nauk Med.*; 29(7): 475–482.
- [8] Wei, J., Wu, Q. J., Zhang, T. N., Shen, Z. Q., Liu, H., Zheng, D. M., Cui, H., Collaborative Group on Twin Birth and Fetal Abnormality in China, & Liu, C. X. 2016. Complications in multiple gestation pregnancy: A cross-sectional study of ten maternal-fetal medicine centers in China. *Oncotarget*, 7(21), 30797–30803..
- [9] Hazekamp, J., C. Bergh, U.-B. Wennerholm, O. Hovatta, P.O. Karlström, A. Selbing, 2000. Avoiding multiple pregnancies in ART: Consideration of new strategies, *Human Reproduction*, Volume 15, Issue 6, June 2000, Pages 1217–1219.
- [10] Lazarov, S., L. Lazarov, N. Lazarov. 2016. COMPLICATIONS OF MULTIPLE PREGNANCIES. OVERVIEW. *Trakia Journal of Sciences*, No 1, pp.108-111, 2016.
- [11] Małeczka-Włoch A. 2015. Women's health awareness in the preconceptive period and during pregnancy]. *Przeegl Lek.*, 72(2): 49–52, PubMed.
- [12] Grzelak T, Suliga K, Sperling M, Pelczyńska, M, Czyżewska, K. 2016. Evaluation of dietary supplements use among pregnant women or planning pregnancy. *Forum Zaburzeń Metabolicznych.*; 7(1): 8–15.
- [13] Baranowska AS. 2016. Fetal alcohol syndrom (FAS) as threat to a child's development. *J Educ Health Sport.*; 6(3): 148–158.
- [14] Juczyński Z. 1999. Narzędzia pomiaru w psychologii i zdrowia. *Przeegląd Psychologiczny*, 42, NR 4, 43-56

