Evaluation of Pregnant Women Health Promotive Behaviors Related to Perceived Severity

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ABSTRACT

Objective: **This study is carried out to to evaluate pregnant women Health Promotive Behaviors related to perceived severity at Primary Healthcare Centers at Al-Russafa Districts in Baghdad City.**

Methods: A descriptive design is carried out on a purposive "non-probability" sample of (100) pregnant women, who are attending the primary health care centers at Al-Russafa District in Baghdad City. A questionnaire has been developed for the purpose of the study. Content validity and internal consistency reliability for the study instrument are determined through a pilot study. Data are collected with the study instrument and the interview technique as means of data collection. Data are analyzed through the application of the descriptive and inferential statistical data analysis approaches.

Study Results: Finding show participants characteristics, the mean age is 22.89 (±3.83), the age 18 to 21 years old were recorded the highest percentage (41), Respect to the education level, most of pregnant women were middle school graduated (44%); and their husband's diploma & college graduated (32%), The results demonstrated that (64%) of pregnant women expressed a low health-promotive behaviours-based perceived severity as described by low average, which is equivalent to 49.88 (±8.86).

Conclusion: It can be inferred that there is a problem with the health-promoting behaviour of women considering that health-promoting behaviours like healthy diet, physical activity and stress management had a low score based perceived severity.

Keywords: Pregnancy, Health Promotive Behaviour, Perceived Severity

INTRODUCTION

Pregnant women's healthy behaviors have an effect on the outcome of their pregnancy, who are overweight obese or gain weight during pregnancy are more likely to have adverse birth effects, such as pregnancy, hypertension, preeclampsia, high birth weight, and emergency cesarean birth[1].World Health Organization reports that the pregnancy may be an optimal time for behavior change among pregnant women with a high prevalence of overweight and obesity, these effects may have some major problems on maternal and child health and engage in health-risky behaviors[2]. However, prenatal care is an effective health intervention care for reducing the risk of maternal morbidity and mortality, particularly in places where the general health status of women is poor, some studies indicate that the risk of maternal morbidity and mortality are significantly higher among women who do not receive prenatal health-care services and following the healthy behavior compared to women who do so[3]. In addition, pregnancy health care is the key entry point of a pregnant woman to receive broad range of health promotion and preventive services which provide the health of the mother and the baby[4]. However, encouraging people to engage in healthy behavior to increase pregnant women's quality of life and having a healthy lifestyle model is a multidimensional issue of self-care activities as well as an individual's perception that such behaviors are for the preservation and promotion of his or her health[5]. Active healthy behavior help pregnancy to maintain and enhance their health and well-being, as well as prevent illnesses[6] so that significant number of pregnant women die globally as a result of birth and pregnancy-related unhealthy behavior[7]. However, a few models and theories have been developed to explain health behaviors such as the HBM has six constructs that explain or predict why people will take action to prevent, to control, or to screen for a disease, these constructs include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action, and self-efficacy and was developed in response to the failure of a free tuberculosis (TB) health screening program. Since then, the Health Belief Model has been adapted to explore a variety of long-term and short-term health behaviors[8-10]. Therefore, Health belief model (HBM) is one of the models for explaining health-related behavior modification at pregnant women and holds that behavior is affected by knowledge, attitude and motivates these women for behavior modification during pregnancy period through promoting their perceived susceptibility and severity to high-risk behaviors and managing perceived barriers and benefits[11].

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Higher percentage of nurses, physicians suggested that collaboration with other health professionals especially trained nurses, dietitians and physiotherapist are very important. tools to care pregnant women to following healthy behavior, in fact, such a collection in trained staff is rarely available at any PHC center in Iraq[12,13].

METHODS

A descriptive design is carried out using the evaluation approach for the period from November 17th, 2022 to March 28th, 2023 to identify pregnancy health-promotive behaviors –based perceived susceptibility domain, a purposive "non-probability" sample of (200) pregnant women who are attending the primary health care centers are selected for the purposes of data collection. The data collection process has been carried out from November 18th, 2022 to March 28th, 2023 Each subject takes about (10-15) minutes during the interview process. The study instrument is developed according to many previous studies relating to pregnancy health-promotive behaviors –based health belief model (perceived susceptibility).The questioner consists from two parts: Part I: Pregnant Women's Socio-Demographic Characteristics: This part includes participants' demographic characteristics consists of (10) items of women's age, education, occupation, spouse's education and occupation*, obstetric history and family monthly income to estimate pregnant women's socioeconomic status. Use spouse's education and occupation in pregnant women's socio-demographic characteristics for measurement women's socioeconomic status. Part II: Pregnancy Health-Promotive Behaviors-based based perceived severity Domain: This part deals with the pregnancy health promotive behavior –based perceived susceptibility domain questionnaire, which is developed and modified by supervision and panel of experts, this domain consists of health promotive profile scale (healthy diet, physical activity, health responsibility, stress management, social support). All items of health-promoting behaviors are scored on the basis of a 3-point Likert scale ranging from 1 to 3 (agree, uncertain, disagree).This sub domain contains many items that are measured on a 3-point Likert scale included: Healthy diet according to health belief model constructs consist of (10) items, Physical activity according to health belief model constructs consist of (4) items, Stress management according to health belief model constructs consist of (10) items, Health responsibility according to health belief model constructs consist of (4) items and Social support according to health belief model constructs consist of (2) items. This chapter includes the steps and procedures that took place in the field side of this study in terms of the methodology, the study population and its sample, the study tool, the application of the study tool to the sample members and the statistical processing that were used in data analysis to test the validity and reliability of the two study tools (psychosocial aspects questionnaire), and then the study procedures and data collection from the sample The actual results of the study were reached using the (*SPSS-26*) program through a number of statistical methods[14-20].

RESULTS

Table 1: Distribution of study sample by their Sociodemographic Variables (SDVs)

Socio-Demographic Variables	Classification	Freq.	%
Age/years	18 to 21	82	41.0
	22 to 25	68	34.0
	26 to 29	22	11.0
	30 to 33	28	14.0
	22.89 ± 3.83		
Wife Education	Reads & write	17	8.5
	Elementary school	59	29.5
	Middle school	88	44.0
	High school	16	8.0
	Diploma & college graduate	20	10.0
Husband Education	Reads and write	5	2.5
	Elementary school	35	17.5
	Middle school	35	17.5
	High school	61	30.5
	Diploma & college graduate	64	32.0
Wife Occupation	Housewife	91	45.5
	Self-employed	79	39.5
	Governmental employee	30	15.0
Husband Occupation	Retried	22	11.0
	Self-employed	153	76.5
	Governmental employee	25	12.5
Family income	300-600	36	18.0
	601-900	98	49.0
	>900	66	33.0
Gestational Age	10 wks	29	14.5
	11 wks	47	23.5
	12 wks	84	42.0
	13 wks	3	1.5
	14 wks	19	9.5
	15 wks	18	9.0
Number of Abortion	Not once	128	64.0
	Once	66	33.0
	More than once	6	3.0

F: Frequency, %: Percentage

Finding show participants characteristics, the mean age is 22.89 (±3.83), the age 18 to 21 years old were recorded the highest percentage (41), Respect to the education level, most of pregnant women were middle school graduated (44%); and their husband's diploma & college graduated (32%). In terms of occupation, more than one-third of pregnant women were housewife (45.5%), While, their husband, one-third were self-employed (76.5) (Table 1).

In regard with family monthly income, pregnant women expressed 601-900 thousand Iraqi dinars per month (49). Forty-two percent were at 12 weeks as a gestation age and no once aborted (64).

In terms of statistical mean, this table demonstrated that the pregnant women expressed a low response to perceived severity at all studied items except, the items number (4, 5, 6, 8, 10, 13, 14, 25, 26, 27 and 28) the responses were moderate and items number (29 and 30) the responses were high (Table 2).

This table 3 shows the statistically distribution of health-promotive behaviors-based perceived severity main domains among pregnant women and include the following findings: Perceived severity in terms of healthy diet, (63.5%) were low level 16.22 (±4.83). Perceived severity in terms of physical activity, (61%) were low level 6.23 (±1.78). Perceived severity in terms of stress-management, (70.5%) were low level 14.29 (±4.92). Perceived severity in terms of health responsibility, (59.5%) were moderate level 8.37 (±2.03). Perceived severity in terms of social support, (57%) were high level 4.77 (±1.46) .

Table 2: Health-promotive behaviors-based perceived severity

List	Perceived Severity Items	Disagree No. (%)	Uncertain No. (%)	Agree No. (%)	M.s.	Ass.
Healthy Diet	1.Un healthy diet affects the pregnant women and her fetus health seriously	133(66.5)	4(2.0)	63(31.5)	1.65	L
	2.Do not having (3) meals a day can have health consequences on pregnant women and fetus health	127(63.5)	35(17.5)	38(19.0)	1.56	L
	3.Having breakfast every morning can have serious influence on pregnant women and her fetus	150(75.0)	46(23.0)	4(2.0)	1.27	L
	4.Lack of diversity in eating affects the health of the pregnant woman and her fetus	112(56.0)	25(12.5)	63(31.5)	1.76	M
	5. Having dairy products can lead to health problems for the pregnant women and her fetus	112(56.0)	27(13.5)	61(30.5)	1.75	M
	6.Having protein is critical on pregnancy health	108 (54.0)	43 (21.5)	49 (24.5)	1.71	M
	7.Snacking may create unexpected health problems for the pregnant women's health	122 (61.0)	41 (20.5)	37 (18.5)	1.58	L
	8. Caffeine is un safe during pregnancy	128(64.0)	9 (4.5)	63 (31.5)	1.68	M
	9.Food rich with sugar is harmful on pregnant women health	119 (59.5)	38 (19.0)	43 (21.5)	1.62	L
	10.Fast food is harmful during pregnancy	119 (59.5)	28 (14.0)	53 (26.5)	1.67	M
Physical Activity	11.Physical activity is dangerous on pregnant women health	133 (66.5)	66 (33.0)	1(.5)	1.34	L
	12.Aerobic activity, such as walking or swimming each week is risky	138 (69.0)	52 (26.0)	10 (5.0)	1.36	L
	13.Doing muscle-strengthening activities twice a week, such as lifting weights is critical on pregnant women health	120 (60.0)	22 (11.0)	58 (29.0)	1.69	M
	14.Strenuous physical activity is harmful for the pregnancy	103 (51.5)	27 (13.5)	70 (35.0)	1.84	M
Stress-management	15.Continuous stress and conflict is hurtful	145 (72.5)	18 (9.0)	37 (18.5)	1.46	L
	16.Conflict with family is considered usual occasion	158 (79.0)	40 (20.0)	2 (1.0)	1.22	L
	17.Time-management is energy wasting and confusing	126 (63.0)	55 (27.5)	19 (9.5)	1.47	L
	18.Managing stress is not beneficial	128 (64.0)	52 (26.0)	20 (10.0)	1.46	L
	19.Open, trusting relationship with others can be provoking	133 (66.5)	54 (27.0)	13 (6.5)	1.40	L
	20.Relaxation techniques and deep breathing is not worthy	127 (63.5)	58 (29.0)	15 (7.5)	1.44	L
	21. Maintain balance in life cannot be achieved	125 (62.5)	47 (23.5)	28 (14.0)	1.52	L
	22. Close relationship with others endure problems	135 (67.5)	43 (21.5)	22 (11.0)	1.44	L
	23.I effectively utilize others in accomplishing work assignments	130 (65.0)	56 (28.0)	14 (7.0)	1.42	L
	24.Generation recommended solution not just questions, something problematic	135 (67.5)	36(18.0)	29 (14.5)	1.47	L
Health Responsibility	25. Sharing in promoting healthy community is not my responsibility	32 (16.0)	133 (66.5)	35 (17.5)	2.02	M
	26. Preventing the spread of communicable disease is worthless	37 (18.5)	106 (53.0)	57 (28.5)	2.10	M
	27. Environmental sanitation is not a priority	41 (20.5)	99 (49.5)	60 (30.0)	2.10	M
	28. Health follow up is not necessary	27 (13.5)	115 (57.5)	58 (29.0)	2.16	M
Social support	29. Family member's presence is destructive on the pregnancy	38 (19.0)	45 (22.5)	117 (58.5)	2.40	H
	30. Family member, relatives and significant others support is vicious	42 (21.0)	42 (21.0)	116 (58.0)	2.37	H

Level of Assessment (Low [L]=1-1.66; Moderate [M]=1.67-2.33; High [H]=2.34-3)

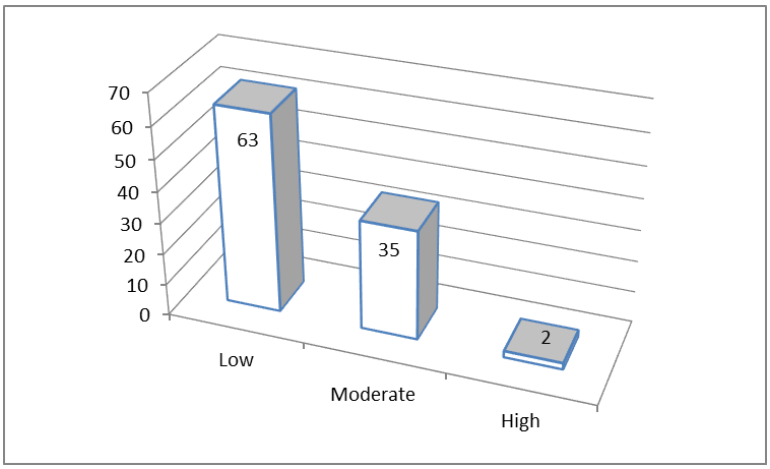

Figure 1: Health-promotive behaviors-based perceived severity

Table 3: Health-promotive behaviors-based perceived severity by overall domains

Perceived Severity	Levels	No.	%	M (±SD)
Perceived Severity related to Healthy Diet	Low (M=10-16.66)	127	63.5	16.22 ± 4.83
	Moderate (M=16.67-23.33)	50	25.0	
	High (M=23.34-30)	23	11.5	
	Total	200	100.0	
Perceived Severity related to Physical Activity	Low (M=4-6.66)	122	61.0	6.23 ± 1.78
	Moderate (M=6.67-9.33)	69	34.5	
	High (M=9.34-12)	9	4.5	
	Total	200	100.0	
Perceived Severity related to Stress-management	Low (M=10-16.66)	141	70.5	14.29 ± 4.92
	Moderate (M=16.67-23.33)	46	23.0	
	High (M=23.34-30)	13	6.5	
	Total	200	100.0	
Perceived Severity related to Health Responsibility	Low (M=4-6.66)	26	13.0	8.37 ± 2.03
	Moderate (M=6.67-9.33)	119	59.5	
	High (M=9.34-12)	55	27.5	
	Total	200	100.0	
Perceived Severity related to Social Support	Low (M=2-3.33)	34	17.0	4.77 ± 1.46
	Moderate (M=3.34-4-66)	52	26.0	
	High (M=4.67-6)	114	57.0	
	Total	200	100.0	

M: Mean for total score, SD=Standard Deviation for total score

Table 4: Overall health-promotive behaviors-based perceived severity

Perceived Severity	*No.*	*%*	*M (±SD)*
Low (M=30-50)	*126*	*63.0*	*49.88 ± 8.86*
Moderate (M=50.1-70)	*70*	*35.0*	
High (M=70.1-90)	*4*	*2.0*	
Total	*200*	*100.0*	

M: Mean for total score, SD=Standard Deviation for total score

The results demonstrated that (64%) of pregnant women expressed a low health-promotive behaviors-based perceived severity as described by low average (Figure 1), which is equivalent to 49.88 (±8.86) (Table 4).

DISCUSSION

The mean age of study participants in current study is 22.89 (±3.83), the age (18 to 21) years old were recorded the highest percentage among pregnant women. This age group is the best for pregnancy and childbearing, this results are supported by[21-24], studies with a mean age of (28.3 ± 9.8 years, 26.72 ± 4.45 and 25.05 ± 7.13) respectively. This age groups may be a predictive factor in health-promoting behavior, as confirmed by studies above. Respect to the education level, most of pregnant women were middle school graduated; and their husband's diploma and college graduated. These findings come in the same line with studies[25-27] that show that most of studied pregnant women has middle school graduation, since they are accounted (18%), pregnant women are less educated than their husbands may be related to belief and culture of their family. Of note, the educational level expressed by the (pregnant) participants may predispose them to the perception of perceived health-promoting behaviors. In terms of occupation, more than one-third of pregnant women were housewife. While, their husband, one-third were self-employed. This finding is supported by studies[28,29] that show housewives form the majority of the study sample, and they are accounted for (88%), most of the participants had a profession that did not qualify them for a sufficient monthly income. So, we find them make (601-900) thousand Iraqi dinars per month. Health-related behaviors in pregnant women is due to the perception of the health risks of the child and the existence of such an emotion increases the incentive to make positive changes in everyday behaviors which are in the form of increasing the attention to and practice of actions in the field of physical and metal self-care, such as improving nutritional behaviors, performing health behaviors, changing sleep and waking patterns, paying attention to pregnancy changes and needs and adopting stress control methods, including trying to avoid stressors, having social interactions and seeking social support. The ultimate goal of doing such behaviors is the birth of a healthy baby. From current study findings, the health-promotive behaviors-based perceived severity main domains among pregnant women and include the following findings: The pregnant women scored highest in social support 4.77 (±1.46); and lowest in health responsibility 8.37 (±2.03), physical activity 6.23 (±1.78) and stress-management 14.29 (±4.92). The overall results demonstrated that (64%) of pregnant women expressed a negative health-promotive behaviors-based perceived severity (table 4-3-4). These results were consistent with those reported by study[30] However, a lower perceived severity during pregnancy has been reported in Iranian literature from Asia (96.9%), Singapore (95.1%) and Turkey (84.1%)[31]. These discrepancies may be due to the socio-demographic characteristics of the participants or cultural differences and health education services provided in different countries. Study noted that in many societies, the culture of pregnancy is accustomed to the risks of pregnancy[32,33]. So, the health-promoting behaviour based perceived severity are prediction of birth type and health production based on the health belief model[34,35]. The practice of these perceived severity behaviors is due to the perception of the threat and a sense of control over the threat, linked to their health status, especially the health of the foetuses. Some of these actions and behaviors are based on life background, in other words they can be influenced by habits, past learning, and environmental culture. Studies have also reported that in different cultures, pregnant women act differently on health behaviors related to perceived severity, also in another study, health literacy, education, and income levels were reported to be effective in addressing health behaviors related to perceived severity[36,37]. By the low perceived severity, study mentioned that after intervention the

perceived severity of the experimental group significantly increased compared to the control group, showed no significant increase after the intervention[38-40]. We can say that conducting educational programs about perceived severity among pregnant women contributes to the health-promoting behaviour.

CONCLUSIONS

This study concludes that they can be inferred that there is a problem with the health-promoting behaviour of women considering that health-promoting behaviours like healthy diet, physical activity and stress management had a low score based perceived severity.

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Competing Interest: None

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REFERENCES

1. Khleel H, Mohammed W. Evaluation of Pregnancy-related Health Behaviors' Change during Pregnancy for Pregnant Women Attending Abo Ghareeb Primary Health Care Sector. INJNS 2021;34(1):59-68.
2. World Health Organization (WHO). WHO recommendations on antenatal care for a positive pregnancy experience: summary: highlights and key messages from the World Health Organization's 2016 global recommendations for routine antenatal care. 2018.
3. Shalash I, Mohammed F. Assessment of pregnant women's knowledge and practices concerning prenatal care who attend primary health care centers in Baghdad City. Iraqi Nat J Nurs Specialties 2012;25(3).
4. Alkhazrajy L, khazaal A. Satisfaction of Iraqi Women regarding Antenatal Care Services applied at Primary Health Care Centers in Baghdad City. Int J Curr Med Pharm Res 2016;2(3):235-43.
5. Baktash M, Naji A. Efficacy of the Health Belief Model in Enhancing Weight Loss Behaviors to Prevent Stroke among Overweight and Obese Geriatrics Homes Residents in Baghdad City. Kufa J Nurs Sci 2019;9(2).
6. Niama A, Naji A. Using the Health Belief Model to Predict the Self-Efficacy of Physical Activity among Older Adults at Geriatric Care Home. Teikyo Med J 2022;45(1).
7. Abed H, Abd Ali I. Assessment of Associated Risk Factors with the Incidence Rate of Abortion Cases among Women at Maternity and Pediatric Hospital in Al-Diwaniyah City. Iraqi Nat J Nurs Specialties 2021;34(2).
8. Karim N, Naji A. Health Belief Model and its Relation to Age and Body Mass Index Considering Colorectal Examinations among Graduate Students. Iraqi Nat J Nurs Specialties 2018;31(2).
9. Younis NM. Efficacy of Health Beliefs Model-Based Intervention in Changing Substance Use Beliefs among Mosul University Students: A Randomized Controlled Trial. Revis Bionatura 2022;7(2):35.
10. Abbas AS, Younis NM. Efficacy of Pender's Health Promotion-based Model on Intervention for Enhancing University of Mosul Hypertensive Employees' Eating Behaviors: A randomized Controlled Trial. Revis Bionatura 2022;7(3):35.
11. Abbaspour M, Mazloomy SS, Sharifzadeh G, et al. The effectiveness of an educational intervention based on the health belief model in preventing high-risk behaviors among pregnant women. Modern Care J 2016;13(4).
12. Tawfeeq A, Rasheed T, Rasheed B. Knowledge, attitude and practice regarding osteoarthritis management among physicians of primary health care centers; Al-rusafa/ Baghdad/2017, Al-Kindy College Med J 2019;15(1):1.
13. Taher AK, Younis NM. Assessment the Effect of a Trans theoretical Model in Improving Behaviors Health Care workers related Electronic Hookah in Mosul City /Iraq. Rawal Med J 2023;48(1):228.
14. Bura'a LN, Younis NM. Assessment of nurses knowledge regarding to phototherapy at neonatal care units in Mosul City / Iraq. Rawal Med J 2023;48(2):1.
15. Ali HA, Abbas FF, Younis NM. Early Mothers' Knowledge and Attitudes Towards Breastfeeding in Thi-Qar City/Iraq. Rawal Med J 2023;48(2):1.
16. Abud AA, Raheem W. Neonate Screening Test among Childbearing Mother Knowledge and Attitude. Bahrain Med Bull 2022;44(4).
17. Ali FH. Indications Associated with Primary Cesarean Section among Women in Al-Diwaniyah City, Iraq. Bahrain Med Bull 2022;44(3):1.
18. Younis NM, Ahmed MM, Abdulsalam RR. Assessing quality of life in palliative care. Int J Med Toxicol Legal Med 2021;24(3-4):115-8.
19. Basharat V, Alshahrani AA, Haifa'Hisham AA, et al. Knowledge, Attitude and Practice of Health Workers Concerning the Occupational Risks of Hepatitis B Virus in Asser Region. Bahrain Med Bull 2022;44(2):937-40.
20. Mohammad FH, Noori LK, Younis NM. Assessment of Nutritional habits among Mosul University Students regarding breakfast. 2023;48(1):96.
21. Basharpoor S, Heidarirad H, Soleimani E, et al. The role of health-promoting behaviors in predicting the quality of life of pregnant women. J Res Dev Nurs Midwifery 2017;14(1):36-43.
22. Nasir N, Amir H. Knowledge and attitude of pregnant women towards modes of delivery in an antenatal care clinic in Baghdad City. J Fac Med Baghdad 2017;59(1).
23. Bahabadi FJ, Estebsari F, Rohani C, et al. Predictors of health-promoting lifestyle in pregnant women based on Pender's health promotion model. Int J Women's Health 2020;2(4):71-7.
24. Ahmed MM, Younis NM, Abdulsalam RR. Assessment of changes in sleep habits in elementary students during covid_19 lockdown. Int J Med Toxicol Legal Med 2022;25(1-2):76-80.
25. Hassoon S, Zeidan M. Effects of Nutrition Education on Pregnancy Nutrition Knowledge and Practice among Pregnant Women in Baghdad City. Medico-legal Upd 2020;20(4):807.
26. Fathnezhad-Kazemi A, Hajian S. Factors influencing the adoption of health promoting behaviors in overweight pregnant women: a qualitative study. BMC Preg Childbirth 2019;19(1):1.
27. Ibrahim RM, Idrees NH, Younis NM. Epidemiology of leukemia among children in Nineveh Province, Iraq. Rawal Med J 2023;48(1):137.
28. Britton LE, Judge-Golden CP, Wolgemuth TE, et al. Associations between perceived susceptibility to pregnancy and contraceptive use in a national sample of women veterans. Pers Sexual Reprod Health 2019;51(4):211-8.
29. Younis NM, Ibrahim RM, Idrees NH.Prevalence of snake bite among children in Nineveh Governorate/Iraq: A retrospective study. Int J Med Toxicol Legal Med 2022;25(3-4):169-72.

30. Yousefzadeh S, Darmiyan ME, Younesi MA, et al. The effect of a training program during pregnancy on the attitude and intention of nulliparous women to choose the delivery mode. J Midwifery Reprod Health 2016;4(3):704-11.
31. Buyukbayrak EE, Kaymaz O, Kars B, et al. Caesarean delivery or vaginal birth: preference of Turkish pregnant women and influencing factors. J Obs Gynaecol 2010;30(2):155-8.
32. Mukhlif HH, Younis NM. Evaluation of the association between internet addiction and fatigue among undergraduate students at universities in Mosul city, Iraq: A cross-sectional study. Rawal Med J 2022;47(4):829.
33. Kobau R, Seligman ME, Peterson C, et al. Health-Related Quality of Life (HRQOL). Public Health 2011;101(8):e1-9.
34. Adea MK, Lefta RM, Younis NM. Impact of psychosocial aspect parameters on psoriasis patients' quality of life at outpatient clinic in Al-Dewania City, Iraq. Rawal Med J 2022;47(4):892.
35. Dadipoor S, Mehraban M, Aghamolaei T, et al. Prediction of birth type based on the health belief model. J Fam Reprod Health 2017;11(3):159.
36. Onat G, Aba Y. Health-promoting lifestyles and related factors among pregnant women. Turkish J Public Health 2014;12(2):69-79.
37. Al-Ghurairi SA, Younis NM, Ahmed MM. Prevalence of weight gain among students of Mosul University, Iraq during quarantine 2020. Rawal Med J 2022;47(3).
38. Saad WI, Hussein DA, Qader HH. Performance and Attitudes of Emergency Care Nurses regarding Errors related to Intravenous Injection of Medication. Bahrain Med Bull 2022;44(1):1.
39. Kazemi AF, Hajian S. Experiences related to health promotion behaviors in overweight pregnant women: a qualitative study. Reprod Health 2018;15(1):1-1.
40. Hidarnia A, Kashfi SM, Ghasemi A, et al. A Health Promotion Program based on the Health Belief Model regarding Women's Osteoporosis. Int J Musculoskeletal Pain Prev 2016;1(1):7-16.