Assessment of Pregnant women's Knowledge and Health Behaviors Concerning Corona Virus Disease Precaution Measures at Primary Health Care Centers in Baghdad City-Iraq

تقييم ممارسات المرأة الحامل المتعلقة بالإجراءات الاحترازية من فيروس كورونا في مراكز الرعاية الصحية الأولية في مدينة بغداد

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الخلاصة:

خلفية البحث: يعد فيروس كورونا من أهم مسببات الأمراض التي تستهدف بشكل أساسي الجهاز التنفسي للإنسان. تعتبر النساء الحوامل فئة سكانية خاصة بسبب "تثبيط المناعة" الفريد الناجم عن الحمل. قد تجعل التغيرات المناعية والفسيولوجية النساء الحوامل أكثر عرضة لخطر الإصابة بأمراض خطيرة أو الوفاة بسبب مقارنة بعامة الناس.

الاهداف: تقييم معارف النساء الحوامل السلوكيات الصحية فيما يتعلق بإجراءات الوقاية من مرض فيروس كورونا في مراكز الرعاية الصحية الأولية في مدينة بغداد.

المنهجية: أجريت دراسة وصفية (مقطعية) على عينة غير احتمالية قوامها (150) من الحوامل اللاتي يترددن على خمسة مراكز رعاية صحية أولية. تم إجراء الدراسة في الفترة من 8 / شباط إلى 18 / آذار / 2020. وقد تم استخدام الاستبيان كأداة لجمع البيانات ويتكون من: المعلومات الديموغرافية، وتاريخ المرأة الحامل، ومعرفة المرأة الحامل والسلوكيات الصحية فيما يتعلق بالممارسات، والتدابير التي يجب أن تتخذها المرأة الحامل للوقاية فيروس كورونا. الدراسة الاستطلاعية أجريت على (15) امرأة حامل لتحديد مصداقية الدراسة، واستخدمت مناهج الإحصاء الوصفي والاستنتاجي لتحليل البيانات.

النتائج: تشير نتائج الدراسة الحالية إلى أن (33.3٪) من النساء الحوامل في الفئة العمرية (21-25) سنة، و (28٪) من الفئة العمرية (16-20)، و (27.3٪) من الفئة العمرية (26-30) سنة. (22.7٪) من عينة الدراسة تخرجوا من المرحلة المتوسطة، (76.7٪) من النساء الحوامل ربات بيوت، (76٪) من النساء الحوامل لديهن دخل شهري معتدل، (34.7٪ من النساء الحوامل تحملن الحمل لمدة (3) مرات، (81.4٪) أنجبن (1- 2) ولادة، (53.3٪) من النساء ولادتهن مهبلية، وفيما يتعلق بمعرفة النساء، تشير النتائج إلى أن المرأة الحامل لديها مستوى مقبول من المعرفة حول آلية انتشار فيروس كورونا في (52.7٪)، و (28.7٪) يظهرون مستوى جيداً من المعرفة، و (18.7٪) لديهم مستويات ضعيفة. فيما يتعلق بالسلوكيات الصحية، تظهر النساء الحوامل مستوى مقبول نحو الحد من انتشار فيروس كورونا في (53.3٪)، (28٪) بمستوى جيد، و (18.7٪) مستوى ضعيف.

الاستنتاج: خلصت الدراسة إلى أن أكثر من نصف النساء الحوامل لديهن مستوى مقبول من المعرفة حول آلية انتشار فيروس كورونا، والسلوكيات الصحية تجاه الحد من انتشار فيروس كورونا.

التوصيات: توصي الدراسة ببرامج تعليمية للمرأة الحامل ذات الممارسات السيئة لتحسين ممارساتها مع اخذ الإجراءات الاحترازية من فيروس كورونا.

الكلمات المفتاحية: التقييم، الحوامل، التدابير الوقائية، ممارسات.

ABSTRACT:

Background: Corona virus is one of the major pathogens that mainly target the respiratory system of humans. Pregnant women considered to be a special population group because of the unique 'immune suppression' caused by pregnancy. The immunologic and physiologic changes might make pregnant women at higher risk of severe illness or mortality with Covid-19, compared with the general public.

Aims of the study: To assess pregnant women's knowledge and health behaviors concerning corona virus disease precaution measures at primary health care centers.

Methodology: A descriptive (longitudinal study) has been carried out on Non-probability sample of (150) of pregnant who attend five primary health care centers. Study has been conducted for the period of 8 / February to 18 / March / 2020. The questionnaire has been used as a tool of data collection and consists of; Scio-demographic information, pregnant women history, and pregnant women's knowledge and health behaviors concerning corona virus disease precaution measures. A pilot study conducted on (15) pregnant women to determine the study reliability, descriptive and inferential statistic approaches are used for data analysis.

Results: The results of the current study indicate that (33.3%) of pregnant women are with age group (21-25) year, (28%) with age group (16-20), and (27.3%) with age group (26 -30) years. (22.7%) of study sample are graduated from intermediate school, (76.7%) of pregnant women are housewives, and (76%) of pregnant women are moderate monthly income, (34.7%) of pregnant women are gravid for (3) times, (81.4%) have (1-2) births, (53.3%) of pregnant women reporting they have normal vaginal delivery, Regarding women's knowledge the results indicates that pregnant women have fair level of knowledge about mechanism of spread of corona virus in (52.7%), and (28.7%) are showing good level of knowledge, and (18.7%) have poor levels. Regarding health behaviors pregnant women are showing fair level toward reduction of corona virus spread in (53.3%), (28%) have good level, and (18.7%) poor level.

Conclusion: The study concludes that more than half of pregnant women have fair level of knowledge about mechanism of spread of corona virus, and health behaviors toward reduction of corona virus spread.

Recommendations: The study suggests Health education programs to improve pregnant women's knowledge concerning COVID-19 are helpful for encouraging an optimistic attitudes and maintaining safe practices.

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INTRODUCTION

Corona virus is a severe disorder that mainly affects the respiratory systems of individuals. Severe acute respiratory syndrome (SARS)-CoV and Middle East respiratory syndrome (MERS)-CoV have both been reported as Corona virus epidemics in the past [1]. The variations are in the genetic make-up, clinical manifestations, case mortality, and global spread rate. SARS-CoV2, also known as the coronavirus virus, is a virus that causes coronavirus disease 2019 (COVID-19), which has become the world's newest health threat [2]. The most common COVID-19 symptoms include fever, dry cough, dyspnea, headache, sore throat, rhinorrhea, and hemoptysis, which can range from mild (or no symptoms) to severe illness [3].

Pregnancy is a state of partial immune suppression which makes pregnant women more vulnerable to viral infections, and the morbidity is higher even with seasonal influenza. Therefore, the COVID-19 epidemic may have serious consequences for pregnant women. However, information on the effect of COVID-19 on the course and outcome of pregnancy in the first and second trimesters is not available yet. As COVID-19 still appears to be spreading, more infections in pregnant women are likely to be encountered in different regions, countries, and continents. Therefore, it is important that pregnant women and their families, as well as the general public and health- care providers, receive as accurate information as possible. During infectious disease outbreaks most frequently researched preventive behaviors and have proven to the spread of pandemics [4].

AIMS OF THE STUDY

To assess pregnant women's knowledge and health behaviors concerning corona virus disease precaution measures at primary health care centers.

METHODOLOGY

A descriptive (cross sectional) study has been carried out on Non-probability sample of (150) of pregnant women's Practices Concerning Corona Virus Disease Precaution Measures who attend five Primary health care centers. Study has been conducted for the period of February 8th to 18th March 2020. The questionnaire has been used as a tool of data collection and consists of three main parts; including Scio-Demographic Information, Pregnant Women History, and pregnant women's pregnant women's knowledge and health behaviors concerning corona virus disease precaution measures. A pilot study conducted on (15) pregnant women to determine the study reliability, descriptive and inferential statistic approaches are used for data analysis. Data are analyzed through the use of (SPSS) ver.24.

RESULTS:

Table (1): Distribution of Pregnant Women According to their Socio-demographic Characteristics (N= 150)

L.	Characteristics		f	%
1	**Age (M±SD=24±5)**	16 – 20 year	42	28
		21 – 25 year	50	33.3
		26 – 30 year	41	27.3
		31 – 35 year	13	8.7

		36 ≤ year	4	2.7
2	**Level of education**	Doesn't read & write	9	6
		Read & write	16	10.7
		Primary school	32	21.3
		Intermediate school	34	22.7
		Secondary school	31	20.6
		Institute/college +	28	18.7
3	**Occupation**	Housewife	115	76.7
		Employee	35	23.3
4	**Monthly income**	Low	35	23.3
		Moderate	114	76
		High	1	0.7

F: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table shows that the highest percentage (33.3%) of pregnant women are with age group (21-25) year, (28%) with age group (16-20), and (27.3%) with age group (26 -30) year, with mean ± SD (24±5) years. The level of education refers that the highest percentage among pregnant women are graduated from intermediate school (22.7%) and (21.3%) are graduated from primary school, while (20.6%) are graduated from secondary school. The occupational status indicates that (76.7%) of pregnant women are housewives, while (23.3%) of them are working as governmental employee. Regarding monthly income, (76%) of pregnant women is perceived moderate monthly income.

Table (2): Distribution of Pregnant Women according to their Reproductive Health Characteristics (N=150)

L.	Characteristics		f	%
1	**Gravidity**	1	7	11
		2	32	21.3
		3	52	34.7
		4	41	27.3
		5+	18	12
2	**Parity**	None	6	4
		1 – 2	122	81.4
		3 – 4	22	14.6
3	**Mode of delivery**	Normal vaginal	80	53.3
		Cesarean section	70	46.7
4	**Delivery place**	House	58	38.7
		Hospital	92	61.3

F: Frequency, %: Percentage, M: Mean, SD: Standard deviation

This table reveals that pregnant women are gravid for (3) times as referred by high percentage (34.7%), the parity is shows that (81.4%) of pregnant women have (1-2) births, while (14.6%) of them have (3-4) birth. Regarding delivery, (53.3%) of pregnant women reporting they have normal vaginal delivery and (46.7%) having cesarean section, (61.3%) have delivered in hospital and only (38.7%) are delivered at home.

Table (3): Mean Scores for Assessment the Pregnant' Knowledge about the Mechanism of the Spread of Corona Virus (N=150)

L.	Items	Response	f (%)	M.S	Assess.
1	Air borne droplets from coughing and sneezing	No	22 (14.7)	0.85	Good
		Yes	128 (85.3)		

2	Close personal contact, including touching and shaking hands	No	29 (19.3)	0.81	Good
		Yes	121 (80.7)		
3	Touching one's nose ,mouth ,or eyes Before washing contaminated hands	No	36 (24)	0.76	Good
		Yes	114 (76)		
4	Can be spread through semen or sexual intercourse	No	125 (83.3)	0.17	Poor
		Yes	25 (16.7)		
5	COVID 19 may be spread by people who are not showing symptoms	No	82 (54.7)	0.45	Fair
		Yes	68 (45.3)		
6	Person can get COVID 19 by touching a surface or object that has the virus on it	No	39 (26)	0.74	Good
		Yes	111 (74)		

F: Frequency, %: Percentage, M.S: Mean of score, Poor= 0 – 0.33; Fair= 0.34 – 0.67; Good= 0.68 –1

This table shows the mean scores of knowledge items among pregnant women; the mean scores indicate fair to good level of knowledge among pregnant women, in which they show good among all items except item (4) that shows poor which related to "Can be spread through semen or sexual intercourse" and item (5) that shows fair level.

Table (4): Overall Assessment of Pregnant' Knowledge about the Mechanism of the Spread of Corona Virus

Levels	F	%	M	SD
Poor	28	18.7		
Fair	79	52.7	3.78	1.192
Good	43	28.7		
Total	150	100		

F: Frequency, %: Percentage, M: Mean for total score, SD: Standard Deviation, Poor= 0 – 2; Fair= 3 – 4; Good= 5 – 6.

This table indicates that pregnant women have fair level of knowledge about mechanism of spread of corona virus (52.7%) and (28.7%) are showing good level of knowledge, and (18.7%) have poor levels.

Table (5): Assessment Pregnant Women Health Behavior for Reduction COVID 19 Spreading (N=150)

L.	Behaviors	Response	f (%)	MS	Ass.
1	Regularly and thoroughly clean hands to kills viruses that may be on your hands with an alcohol-based rub or wash them with soap and water.	Never	31 (20.7)	1.09	Fair
		Sometimes	75 (50)		
		Always	44 (29.3)		
2	Maintain at least 1 meter distance between yourself and other because when someone coughs, sneezes ,or speak they spray small liquid droplets from their nose or mouth which may contain virus .if you too close ,you can breathe in droplet ,including the COVID 19 virus if the person have disease	Never	30 (20)	0.98	Fair
		Sometimes	93 (62)		
		Always	27 (18)		
3	Avoid go to crowed places :where people come together in crowds ,you are more likely to come into close contact with someone that has COVID 19 and it is more difficult to maintain physical distance of 1 mater.	Never	7 (4.7)	1.15	Fair
		Sometimes	113 (75.3)		
		Always	30 (20)		

4	Avoid touching eyes, nose and mouth: hands touch many surfaces and can pick up viruses. Once contaminated, hands can transfer the virus to eyes, nose and mouth .from there, the virus can enter the body and infected.	**Never**	14 (9.3)	1.19	Fair
		Sometimes	93 (62)		
		Always	43 (28.7)		
5	make sure you ,and the people around you , follow good respiratory hygiene :this means covering your mouth and nose with your bent elbow or tissue when you cough or sneeze .then disposed of the used tissue immediately and wash your hands	**Never**	17 (11.3)	1.23	Fair
		Sometimes	82 (54.7)		
		Always	51 (34)		
6	Stay home and self-isolate with minor symptoms such as cough ,headache mild fever ,until you recover :if you need to leave your house ,wear a mask to avoid infecting other	**Never**	68 (45.3)	155	Good
		Sometimes	82 (54.7)		
		Always	0 (0)		

F: Frequency, %: Percentage, M.S: Mean of score, Poor= 0 – 0.66; Fair= 0.67 – 1.33; Good= 1.34 – 2

This table reveals that pregnant women are showing fair level of health behavior among all items except item 6 that show good which is related to "Stay home and self-isolate with minor symptoms such as cough, headache mild fever, until you recover: if you need to leave your house, wear a mask to avoid infecting other" as indicated by the mean scores.

Table (6): Overall Assessment of Pregnant Women Health Behavior for Reduction COVID 19 Spreading

Levels	f	%	M	SD
Poor	28	18.7	7.19	2.691
Fair	80	53.3		
Good	42	28		
Total	**150**	**100**		

f: Frequency, %: Percentage, M: Mean for total score, SD: Standard Deviation, Poor= 0 – 4; Fair= 5 – 8; Good= 9 – 12

This table exhibits that pregnant women are showing fair level of health behaviors toward reduction of corona virus spread (53.3%), (28%) have good level, and (18.7%) poor level.

DISCUSSION

The present study has reported that the highest percentage (33.3) of the study sample is at age group range (21 – 25) years old. This finding is consistent with, Abdulla, Akram, et al., (2021) in Iraqi study which indicated that the highest percentage of the participants in the study was between the ages of 20 and 29, accounting for 50.5 percent of the total. And the study found that the age group range (36) years old has the lowest percentage (2.7) of the study sample than any other age group [5].

Regarding the education level refers that the highest percentage among pregnant women are graduated from intermediate school (22.7%), (21.3%) are graduated from primary school, while (20.6%) are graduated from secondary school, and (18.7%) are Institute/college graduate. This finding is consistent with, Ferdous, et al., (2020) which indicates that the level of education for study sample was primary in (35%), secondary in (50%), and tertiary (15%) [6].

Regarding the occupational status indicates that (76.7%) of pregnant women are housewives and only 23.3% of them are working as governmental employee. This result supported by Maharlouei et al., (2020) who reported in the study that the majority of the

sample (House wives) account for approximately 488 (90.4%) of the total sample, and the lowest percentage of the group, 52 (9.6%), was employed [7], and Lee et, al. (2020) reported in the study that the majority of the sample are (House wives), accounting for approximately 116 (69.5%) of the total sample, while the lowest level, 51 (30.5%), are employed [8].

Regarding monthly income, (76 %) of pregnant women is perceived moderate monthly income. This study agree with yassa et al., (2020) who reported that (52.9%) of pregnant women are perceived moderate monthly income [9]. This study disagree with Maharlouei et al., (2020) also observed that majority of study are high socioeconomic status [7].

Regarding reproductive history the results of present study reveals that pregnant women are gravid for (3) times as referred by high percentage (34.7%), the parity is shows that (81.4%) of pregnant women have (1-2) births, while (14.6%) of them have (3-4) births. Regarding mode of delivery, (53.3%) of pregnant women reporting they have normal vaginal delivery and (46.7%) having cesarean section, (61.3%) have delivered in hospital and only (38.7%) are delivered at home. This result agree with: Nie ,et, al. (2020) who found that the majority of the participants in the study are pregnant for (1) time, as evidenced by a high number of 1 13 (39.4%), while the most of the participants have (1-2) parity, accounting for 66.7 percent of the total (3.0 percent) [10].

Regarding the mode of delivery and delivery place, this study disagree with: Nie et, al. (2020) who found that of the Twenty-two (81.5%) women delivered via cesarean section, and 5(18.5%) had vaginal deliveries, (74%) of women were worried about being infected with COVID-19; (53%) of women would choose having a caesarean section over a vaginal delivery [10].

Regarding Pregnant women's Knowledge about the Mechanism of the Spread of Corona Virus, the mean scores indicate fair to good level of knowledge among pregnant women, in which they show good among all items except item (4) that shows poor assessment which related to "Can be spread through semen or sexual intercourse" and item (5) that shows fair level. The overall assessment of study result shows fair level of knowledge about mechanism of spread of corona virus (52.7%) and (28.7%) are showing good level of knowledge, and (18.7%) have poor levels. This study supported by Metwall, et, al. (2020) who have reported that there is more than half of women (57.6%) had satisfactory level of total knowledge about the preventive measure of COVID-19 infection, all of the women (100%) were aware of ongoing COVID-19 infection, and the majority of women (89.2%) reported that the COVID-19 virus spreads via respiratory droplets of infected individuals [11].

Also supported by Anikwe et al., (2020), who have reported that there, is more than four-fifths (82%) of the women believed that COVID-19 is real and their main source of information was mass media. The majority had adequate knowledge of COVID-19. More than half of the respondents said COVID-19 is a curable disease [12]. Aghababaei et al., (2020), have reported that there is (93.8%) of pregnant women had a high level of knowledge (13). While Abdulla, Akram, et al., (2021) showed that the knowledge score level were found Inadequate in (72%) of the participant and adequate in (28%) [5].

The current study results also reveals that pregnant women are showing fair level of health behavior among all items except item (6) that show good which is related to "Stay home and self-isolate with minor symptoms such as cough, headache mild fever, until you recover: if you need to leave your house, wear a mask to avoid infecting other" as indicated by the mean scores. Overall assessment exhibits that pregnant women are showing (53.3%) fair level of health behaviors toward reduction of corona virus spread, (28%) good level of health behaviors, and (18.7%) poor level of health behaviors.

The result of the study supported by Abdulla, et, al. (2021) that reported the majority of study 123 (30.75%) wearing mask was the common way to prevent the infection, and 78 (19.5%) mentioned staying home was the way to prevent infection with the disease [5].

Aghababaei et al., (2020) reported that about (97.3%) of the participants had high performance in preventive behaviors [13].

CONCLUSION

The result of study indicates more than half of pregnant women have fair level of knowledge about mechanism of spread of corona virus, also more than half of pregnant women are showing fair level of health behaviors toward reduction of corona virus spread.

RECOMMENDATIONS

The study suggests Health education programs to improve pregnant women's knowledge concerning COVID-19 are helpful for encouraging an optimistic attitudes and maintaining safe practices.

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