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Effectiveness of an educational program on pregnant women's attitude about coronavirus prevention

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Abstract---Background: Increasing pregnant women's awareness, attitude, and practices around COVID19 is a critical component of ensuring their health and safety, attitude about COVID-19 influence pregnant women's adherence to control measures. Method: A pre-experimental design (one group pre-test – post-test design) the for period from (December 27th, 2021 to February 27th, 2022) on a non-probability (purposive) sample consisting of (40 pregnant women) who were recruited from primary health care centers in Najaf City. The study instrument includes a questionnaire that includes (45) items related to the prevention of the Coronavirus, the data were analyzed using descriptive statistics (frequency, percentages, arithmetic mean, standard deviation) and inferential statistical measure (t-test). Result: The study results revealed that the educational program intends to increase pregnant women's attitude of Coronavirus prevention, and that there are statistical differences in pregnant women's attitude of coronavirus prevention before and after the program, which is a good thing. Pregnant women have an acceptable level of attitude and about coronavirus protection, according to the findings, but they require training programs and sessions. Conclusion: The administered educational program positively influenced pregnant women's attitudes about prevention from Coronavirus.

Keywords---educational program, pregnant women's, attitude, coronavirus, prevention.

Introduction

It's a virus family that may cause everything from a simple cold to more catastrophic illnesses like Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS) in Wuhan, and has now expanded to a variety of other illnesses [1]. The disease symptoms of (COVID 19) contain fever, dry cough, tiredness, muscle pain, and hard breathing, as well as acute respiratory difficulty syndrome, hard- and-treat metabolic acidosis, septic shock, and stricken and curd blood disruption function [2]. The disease symptoms of (COVID 19) contain fever, dry cough, tiredness, muscle pain, and hard breathing, as well as acute respiratory difficulty syndrome, hard- and-treat metabolic acidosis, septic shock, and stricken and curd blood disruption function [3]. When Pregnant women may be at above risk of serious illness from COVID-19 than non-pregnant people, there may be a rise risk of negative pregnancy outcomes, like premature birth, among COVID-19-positive pregnant women [4].

Health education, efforts that were either stand-alone interventions or part of larger health promotion programs were eligible. WHO guidelines were used to define health education programs (1998) [5]. Pregnant women, the phase during which a baby develops inner a woman's womb or uterus is pointing to as the gestation period but, an immunocompromised condition, as pregnancy with its physiological alterations, could predispose a pregnant woman to a higher danger of SARSCOV2 infection [6]. Attitudes are defined as long-term collections of feelings, beliefs, and behaviour patterns directed at specific people, ideas, things, or groups. Byrne & Baron (1984).

Coronaviruses prevention (CoV) are a broad group of viruses that can cause everything from a typical cold to more serious illnesses. A novel coronavirus (nCoV) is a new strain of coronavirus that has never been seen in humans before. The novel virus was given the name "COVID-19 virus" after that. [8] Physical or social separation, quarantining, ventilation of indoor spaces, covering coughs and sneezes, hand washing, and keeping unwashed hands away from the face are all examples of preventive methods. In public places, the use of face masks or coverings has been advocated to reduce the risk of transmission. [9]

Method

This chapter covers the research concept and procedure of evaluating the effectiveness of health educational program on pregnant women's attitude toward coronavirus prevention. This section also covers the study's administrative, data collection, and the a pre experimental tool's validity and reliability, as well as data analysis, The use of a pre-experimental design study with the application of pre-test and post-test , The study method used a Non-Probability (Purposive sample) the sample size was included a 40 pregnant women who were recruited from primary health care centers in Najaf City to obtain representative and accurate data, where the post-study group was exposed to the education program while the preliminary study group was not exposed to the health education program.

The degree to which an instrument corresponds is concerned with validity. To make the instruments more valid, it was introduced to a panel of (10) experts

from various fields who assessed the clarity and adequacy of its items. who were faculty members from After a face-to-face discussion with each expert, the validity of the program content and the cognitive tests of the study tools were determined by experts with more than five years of experience in their field ,Six faculty members from the University of Baghdad's College of Nursing, an expert from the University of Karbala's College of Nursing, two experts from the University of Babylon's College of Nursing, an expert from the University of Karbala's College of Medicine, and an expert from the University of Kufa's to investigate the content of the educational program and an interventional knowledge questionnaire for pregnant women to prevent coronavirus.

The reliability of the instrument was determined through the computation of Alpha Cronbach's test (Alpha Correlation Coefficient); internal consistency method was used for determining the reliability. The Alpha Correlation Coefficient was applied to determine the reliability of the present study instrument by application of Statistical Package for Social Science Program (IBM SPSS) version 26.0.

Result

This chapter presents the descriptive analysis of the sample related to socio-demographic characteristics of pregnant women; and describes their level of attitude toward self-protective measures from corona virus, and determines the effectiveness of instructional program on pregnant women's attitude. This chapter also describes the relationship between attitude with socio-demographic variables among pregnant women. The statistical procedures were applied for the purpose of analyzing the results of the present study; the results were organized and interpreted. Those results are based on the sample responses to the study instrument

Table (1): Distribution of Pregnant Women according to their Socio-demographic Characteristics

Characteristics	Frequency	Percent
Age (Years)	< 20 year	5
	20 –less than 25	14
	25 –less than 30	11
	30 –less than 35	2
	35 – less than 40	3
	≥ 40	5
	<i>Total</i>	<i>40</i>
Residency	Urban	39
	Rural	1
	<i>Total</i>	<i>40</i>
Occupation	Employee	15
	Free works	24
	Housewife	1
	<i>Total</i>	<i>40</i>
Level of education	Primary school	14
	Middle school	4

Secondary school	9	22.5
Institute	6	15
College	2	5
Postgraduate	5	12.5
<i>Total</i>	<i>40</i>	<i>100</i>

Table (2): Distribution of Pregnant Women according to their Reproductive History

Variables		Frequency	Percent
Number of pregnancies	First time	16	40
	2 – 3	15	37.5
	3 <	9	22.5
	<i>Total</i>	<i>40</i>	<i>100</i>
Birth times	Nulliparous	15	37.5
	2 – 3	17	42.5
	3 <	8	20
	<i>Total</i>	<i>40</i>	<i>100</i>
Gestational age	20 – 30 week	31	77.5
	31 – 40 week	9	22.5
	<i>Total</i>	<i>40</i>	<i>100</i>

Table (3): Overall Assessment of Pregnant Women's Attitude about Self-protective Measures from Corona Virus

Levels of	Pre-test					Post-test				
Attitude	f	%	M	SD	Assess	f	%	M.S	SD	Assess
Low	0	0	34.55	2.351	Moderate	0	0	44.00	1.109	High
Moderate	34	85				0	0			
High	6	15				40	100			
<i>Total</i>	<i>40</i>	<i>100</i>				<i>40</i>	<i>100</i>			

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

Low= 15 - 25, Moderate= 25.1 – 35, High=35.1 – 45

This table displays that pregnant women hold moderate level of attitude during pre-test time ($M \pm SD = 36.55 \pm 2.351$) regarding self-protective measures from corona virus in which 85% of them are associated with moderate level. During the post-test time, all pregnant women (100%) show high level of attitude regarding self-protective measures from corona virus ($M \pm SD = 44.00 \pm 1.109$).

Table (4) Effectiveness of an Instructional Program on Pregnant Women's Attitude about Self-Protective Measures from Corona Virus (N=40)

Attitude	Mean	SD	t	df	p-value	Sig.
Pre-test	36.55	2.351	7.973	78	.001	H.S
Post-test	44.00	1.109				

SD: Standard deviation, t: t-test, df: Degree of freedom, p: Probability, Sig.: Significance, HS: High Significant, N.S: Not Significant

This table indicates that there is high significant difference in pregnant women's attitude with regard to post-test time at $p\text{-value} = .001$ that reveals the instructional program was highly effective.

Table (5): Analysis of Variance for Pregnant Women's Attitude with regard to their Age (N=40)

Variable	Age	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Attitude		Between Groups	93.790	5	18.758	1.853	.129
		Within Groups	344.110	34	10.121		
		Total	437.900	39			

df: Degree of freedom, F: F-statistic, Sig: Significance

The table depicts that there is no significant relationship is reported between pregnant women's attitudes with regard to their age as indicated by non-significant difference among overall score of attitudes.

Table (5): Independent Sample Test for Pregnant Women's Attitude regard to their Residency (N=40)

Variables	Residency	M	SD	t	Df	$p \leq 0.05$	Sig
Attitudes	Urban	39.62	3.369	.767	.448	.448	N.S
	Rural	37.00	.				

M: Mean, SD: Standard deviation, t: t-test, df: Degree of freedom, Sig: Significance, p: Probability value, N.S: Not significant, S: Significant, H.S: High significant

The table shows that there is no significant relationship has found between pregnant women's attitudes with regard to their residency as indicated by non-significant difference among overall score of attitudes.

Table (6): Analysis of Variance for Pregnant Women's Attitude with regard to their Occupation (N=40)

Occupation Variable	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	3.633	2	1.817	.155	.857
	Within Groups	434.267	37	11.737		
	Total	437.900	39			

df: Degree of freedom, F: F-statistic, Sig: Significance

The table reveals that there is no significant relationship between pregnant women's attitudes with regard to their occupation as indicated by non-significant difference among overall score of attitudes.

Table (7): Analysis of Variance for Pregnant Women's Attitude with regard to their Educational Level (N=40)

Education Variable	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	14.652	5	2.930	.235	.944
	Within Groups	423.248	34	12.448		
	Total	437.900	39			

df: Degree of freedom, F: F-statistic, Sig: Significance

The table shows that there is no significant relationship between pregnant women's attitudes with regard to their level of education as reflected by non-significant difference among overall score of attitudes.

Table (8): Analysis of Variance for Pregnant Women's Attitude with regard to their Number of Pregnancies (N=40)

Pregnancies Variable	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	17.661	2	8.831	.777	.467
	Within Groups	420.239	37	11.358		
	Total	437.900	39			

df: Degree of freedom, F: F-statistic, Sig: Significance

The table reveals that there is no significant relationship has found between pregnant women's attitudes with regard to their number of pregnancies as indicated by non-significant difference among overall score of attitudes.

Table (9): Analysis of Variance for Pregnant Women's Attitude with regard to their Births Times (N=40)

Births Variable	Source of variance	Sum of Squares	df	Mean Square	F	Sig.
Attitude	Between Groups	21.202	2	10.601	.941	.399
	Within Groups	416.698	37	11.262		
	Total	437.900	39			

df: Degree of freedom, F: F-statistic, Sig: Significance

The table depicts that there is no significant relationship is seen between pregnant women's attitudes with regard to their birth times as revealed by non-significant difference among overall score of attitudes.

Table (10): Independent Sample Test for Pregnant Women's Attitude regard to their Residency (N=40)

Variables	G. Age	M	SD	t	df	p≤ 0.05	Sig
Attitudes	20 – 30 wks	39.48	3.315	.229	38	.820	N.S
	31 – 40 wks	39.78	3.667				

G: Gestational, M: Mean, SD: Standard deviation, t: t-test, df: Degree of freedom, Sig: Significance, p: Probability value, N.S: Not significant, S: Significant, H.S: High significant

The table reveals that there is no significant relationship has found between pregnant women's attitudes with regard to their gestational age as reflected by non-significant difference among overall score of attitudes.

Discussion

This a pre-experimental study aimed mainly to examine the effectiveness of a nursing education program in the protection of pregnant women from the Coronavirus.

Discussion the Demographic Variables

Table (1) the descriptive analysis of Scio-demographic characteristics of pregnant women reveals that the highest percentage regarding their age is referring to age group 20 – less than 25 years (35%) and age group of 25- less than 30 years (27.5%). Regarding residency, the majority of pregnant women report they are resident in urban as seen among 97.5% of them. The occupational status indicates that 60% of pregnant women are working free works and 37.5% of them are working as governmental employee. Concerning level of education, the highest percentage among pregnant women is referring to 35% of primary school graduation followed by 22.5% who graduated from secondary school, Because the study was done in health institutions in the city center, the majority of the participants were from the city, not the countryside, and they had a good level of education, with the majority of pregnant women working. the study subjects demonstrated a moderate level of attitude during pre- test time regarding self-protective measures from coronavirus. During the post-test time, all pregnant women reflected high level of attitude toward self-protective measures from coronavirus.

Discussion overall assessment of pregnant women's attitude toward self-protective measures from coronavirus

The administered educational program positively influenced pregnant women's attitudes toward self-protective measures related to coronavirus. This finding is consistent with that of Mohamed, et al (2020) who concluded that there was a statistically significant difference in attitude between the two groups after influence of educational intervention on pregnant women's attitude toward COVID 19. This could effective in reshaping pregnant women's attitudes, as improved knowledge and practice are strongly linked to positive change in their attitudes. This table (4-6) presents the mean scores for assessing the items related to pregnant women's attitude; the findings during the pre-test time revealed that they have moderate level of attitude in the items 1, 3, 4, 5, 7, 9, 10, and 13, while they have high level in the items 2, 6, 8, 11, 12, 14, and 15. The mean scores during post-test time indicate high level of attitude in all items which reflects an improvement in their attitudes toward self-protective measures.

According to the findings, women with a viable near-term pregnancy have positive attitudes toward the COVID-19 outbreak and the healthcare workers fighting it; (ii) increased anxiety and concern for the pregnancy and the baby as a result of the pandemic; and (iii) insufficient counseling and limited knowledge about the relationship between pregnancy and the pandemic. (2020, Chua et al.) Little is known, however, about the pregnant women's attitudes, ideas, beliefs, suffering, and knowledge about a novel, dramatic epidemic on the other side of the border (Capanna et al., 2020).

Pregnant women were shown to be particularly concerned about the current COVID 19 epidemic in this study, with half of the participants believing that their pregnancy puts them at risk. The Edinburgh Postnatal Depression Scale was recently used in China to investigate the role of prenatal depression in pregnant women in the present pandemic (Wu et al., 2020). They discovered an increase in the prevalence of prenatal depression on their own. The researchers expected that panic, which is easily transferred, would have a greater impact on pregnant women, who are more vulnerable. In this survey, more than half of the pregnant women reported they felt vulnerable and were generally apprehensive (80 percent). Despite the fact that initial worry does not guarantee the implementation of preventative measures (Jin Z et al., 2020).

Conclusion

The administered educational program positively influenced pregnant women's attitudes about prevention from Coronavirus.

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