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Effectiveness of Preventive Health Behaviors- Oriented Education Program on Pregnant Adolescents' Knowledge in Al-Diwanyiah City: Follow-up Study

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Abstract:

Objective(s): The aim of the study is to determine the effectiveness of preventive health behaviors - oriented education program on pregnant adolescents' knowledge about preventive health behaviors during pregnancy.

Methodology: A quasi-experimental, one group follow-up design, is carried out in order to achieve the objectives of the current study using the evaluation approach for the determination of pregnant adolescents' knowledge about preventive health behaviors during pregnancy in Al-Diwaniyah City and the implementation of the education program from the period 17th January 2020 to 1st June 2021 . Non-probability, purposive sample of (35) adolescent pregnant are selected from those who visit Al-Diwanyiah Maternity and Pediatric Teaching Hospital. Data are collected through the use of the study instruments (questionnaire) in a form of Google format and through video calls as means of data collection. Test-retest reliability of instrument was determined through the use of pearson correlation coefficient and content validity of the instrument determined through a panel of experts. Data were analyzed through the use of descriptive statistical data analysis approach and inferential statistical data analysis approach .

Results: Results indicate that most of the pregnant adolescents' are (16-19) year old (57.1%), (34.3%) of them are primary school graduates, (71.4%) of them are housewives, living in rural area (77.1%) and earning an income of (300-600) thousands of ID (80%). Also, the pregnant adolescents' knowledge about preventive health behaviors during pregnancy has been dramatically change post implementation of the education program.

Conclusions: The preventive health behaviors education Program has produced an excellent effect post its implementation. So, the study has inveterate that the program is an effective mean for improving the pregnant adolescents' knowledge about preventive health behaviors during pregnancy.

Recommendations: Improving pregnant adolescents' health literacy is the responsibility of healthcare systems and healthcare professionals through emphasis by the Ministry of Health role in obligate antenatal care units to take their significance role and dissemination of education about the preventive health behaviors among pregnant adolescents' especially primigravida, and particularly with each specific trimester.

Key word : Effectiveness , Pregnant Adolescents' ,Knowledge Preventive Health Behaviors

Introduction

Adolescent pregnancies are now a global concern as they are not only recognized as a risk for adolescent mothers and their newborns, but a vital development issue for any society. It is estimated that every year about 16 million girls aged between 15–19 years give birth in low

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income countries and 70,000 die of complications during pregnancy and childbirth [1](Shahabuddin A. etal.,2017).

According to the most recent civil society organization data, Iraq's population has increased by more than 50 percent in the last 25 years, to around 40 million in 2018. Iraq is one of ten Eastern Mediterranean countries with a total fertility rate of 3.6 and adolescent fertility rates of 70/1000 15-19 year old girls [2](WHO,2020).

A major problem for the pregnant teen relates to her own body, and degree of both physical and emotional development achieved during the pubertal process. The incomplete development of genital tract and the musculoskeletal system of pregnant adolescents predispose them to worse overall obstetrical outcomes [3](Papri F. etal.,2016).

Unhealthy behaviors and lifestyles are two major causes of death worldwide. The healthy behaviors of pregnant women affect their pregnancy outcomes [4](Omidvar S. etal.,2018).Thus, the current study aims to determine the effectiveness of preventive health behaviors - oriented education program on pregnant adolescents' knowledge about preventive health behaviors during pregnancy.

Methodology:

A quasi-experimental, one group follow-up design, is carried out in order to achieve the objectives of the current study using the evaluation approach for the determination of pregnant adolescents' knowledge about preventive behaviors during pregnancy in Al-Diwaniyah City and the implementation of the education program from the period 17th January 2020 to 1st June 2021. Due to the spread of covid-19 pandemic and its continuation to the present time, the educational program is implemented (online) and by using the Telegram. Non- probability, purposive sample of (35) adolescent pregnant are selected from those who visit Al-Diwanyiah Maternity and Pediatric Teaching Hospital. Data are collected through the use of the study instruments (questionnaire) in a form of Google format and through video calls as means of data collection.

The questionnaire is composed of two main parts as follows: Part I: Pregnant Adolescent Sociodemographic Characteristics : It is concerned with the identification of the socio demographic characteristics of the study group ,which include (age , education level for adolescent pregnant, occupation for adolescent pregnant, residency, and monthly family income). Part II: Pregnant Adolescent's Knowledge about preventive Health Behaviors during pregnancy: This part consists of three domains and they are responded by answering the multiple choice questions (MCQ) with correct answer that represent of four answers (one of them is correct answer, scored 2 and the three others answers are incorrect answer, scored 1) This part is comprised of (50) item that measure pregnant adolescent's knowledge about preventive health behaviors during pregnancy. It is measured as (50-66) = poor level of knowledge, (67-83) = fair level of knowledge and (84-100) = good level of knowledge. Content validity and Pearson correlation coefficient reliability are determined through a pilot study. The data of the present study are analyzed through the use of the Statistical Package of Social Sciences (SPSS) version 20.throughdescriptive statistics (frequency, percentage, mean, mean of scores, total of scores, range and standard deviation) and statistical inferential (T-test, multiple linear regressions, person correlation coefficient, Chi Square test and analysis of variance ANOVA). Results were determined as highly significant at ($P \leq 0.01$) significant at ($P \leq 0.05$) and non-significant at ($P > 0.05$)

Results: Table (1): Pregnant Adolescents' Demographic Characteristics

Characteristics	Frequency	Percent
1. Pregnant Age (Years)		

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13 - 15 Year	15	42.9
16 - 19 Year	20	57.1
Total	35	100.0
2. Pregnant Education		
Read and write	9	25.7
Primary	12	34.3
Intermediate	5	14.3
Secondary	3	8.6
Institute/ University	6	17.1
Total	35	100.0
3. Pregnant Occupation		
Student	9	25.7
House wife /unemployed	25	71.4
Other	1	2.9
Total	35	100.0
4. Residency		
Urban	8	22.9
Rural	27	77.1
Total	35	100.0
5. Monthly Income		
300.000 -600.000 ID	28	80.0
600.001 – 900.000 ID	5	14.3
900.001- 1200.000 ID	2	5.7
Total	35	100.0

Results out of this table indicate that most of the pregnant are (16-19) year old (57.1%), (34.3%) of them are primary school graduates, (71.4%) of them are housewives, living in rural area (77.1%) and earning an income of (300-600) thousands ID (80%).

Table (2): Overall Evaluation of Pregnant Adolescents' Knowledge About Preventive Health Behaviors during Pregnancy

Episodes of Repeated Measures	**Poor (50-66)**	**Fair (67-83)**	**Good (84-100)**
Pre-test	31 (88.57%)	4 (11.43%)	0 (0%)
1st Trimester Post-test	0 (0%)	3 (8.57%)	32(91.43 %)
2nd Trimester Post-test	0 (0%)	4 (11.43%)	31 (88.57%)
3rd Trimester Post-test	0 (0%)	5 (14.29%)	30(85.71%)

Results out of this table depict that the pregnant adolescents' knowledge about preventive health behaviors during pregnancy has been dramatically change post implementation of the education program.

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Table (3): Effectiveness of the Educational Program on Pregnant Adolescents' Knowledge

Model	N	Mean	Standard Deviation	Sum of Squares	Df	Mean Square	F-Statistics	Significance
First Trimester	35	99.94	0.236	39614.879	3	13204.960	3099.695	0.000
Second Trimester	35	99.97	0.169	579.371	136	4.260		
Third Trimester	35	99.97	0.169					
Pre-test	35	61.11	4.114					
Total	140	90.25	17.005	40194.250	139			

N: Group Size, Df: Degree of Freedom

Result out of this table approves that the education program has enforced significant effect upon the pregnant adolescents' knowledge about preventive health behaviors during pregnancy.

Discussion:

The distribution of the pregnant adolescents' sociodemographic characteristics revealed that most of them are within the age of (16-19) years old (57.1%) that age represent a between middle and late adolescence and consider a common age for marriage according to our culture in Al-Diwanyiah city. In general, age is a biological variable which indicates individuals' changes over time. It affects individuals' levels of behaviors. Experience, learning, and training come with age, and age indicates individuals' maturity which makes individuals express behaviors differently [5](Schwartz, Vieira & Geib, 2011). Regarding the education level of the participants, the study revealed that most of them either primary school graduates or read and write only, which indicating that early marriage considering the main reason for leaving the school early. A study done in Baghdad City conducted by [6](Al-Bassam ,2015) found that teenage mothers had significantly lower levels of education than adult mothers; this is in agreement with the current study. Regarding the occupation of the pregnant adolescents, the study revealed that most of them are housewives. This finding due to low education level of participants that leading to minimums their employment possibilities. Support evidence for these findings is available in [7](Qasim and Bahaaldeen) study (2014), they stated that the majority of the study sample were

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housewives, Teenage mothers more likely to be housewives may be related to their low education which limits the chance for employment . Regarding to the pregnant adolescents' residential area the findings revealed that the majority of them are living in rural area, which reflects the social and cultural factors of being early married. What is common to every region, however, is that girls who are poor, live in rural or remote areas and who are illiterate or have low education are more likely to become pregnant than their wealthier, urban, educated counterparts [8](UNFPA, 2013). Regarding the sample's family monthly income, the study revealed that the majority of them is within considering insufficient monthly income as their earning is (300-600) thousands ID. This finding related to most of participants are housewives, that effect on their monthly income. Iraq as other countries in the region was affected by the global economic weakness, which in turn impacts the living conditions of the families [9](Al-Abedi G.& Fleah H.,2016). Analysis of data related the pregnant adolescents' knowledge about preventive health behaviors during pregnancy reveals that at the time of pre-test, the majority of them have poor level of knowledge. The majority of the pregnant adolescents did go to school; they could not reach beyond the secondary level of education. This is may be as a result of the early pregnancy, which forced them to terminate their education and can undesirably affect their knowledge [10](Appiah P., 2021). The effectiveness of the education program that has been presented to the study's sample about preventive health behaviors during pregnancy can be revealed the significant effect on pregnant adolescents' knowledge between the four test periods; pre-test, 1st trimester post-test , 2nd trimester post-test and 3rd trimester post-test. Pregnant adolescents have poor knowledge before the program implementation, and their knowledge has been improved after the program implementation and accomplishment. A lack of pregnancy related knowledge among pregnant adolescent girls can adversely affect their lives as well as those of their unborn children [11](Teng et al., 2015). A Research conducted by Dewi shows that adolescents have good knowledge but do not consistently show good attitudes towards pregnancy in their teens [12](Ayu et al., 2020). All efforts have been made to reduce risky behaviors and increase their access to health care, and to improve maternal and infant health. Early educational and behavioral intervention can be efficient in reducing risk factors [13](Finer and Zolna, 2011). Education of the female adolescent can play a significant role in delaying marriage and hence delaying childbearing, thus protecting the girl from being exposed to the various complications of teenage pregnancy [14](Yasmin, et al.,2014).

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Conclusions:

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Recommendations:

1. Improving pregnant adolescents' health literacy is the responsibility of healthcare systems and healthcare professionals through emphasis by the Ministry of Health role in obligate antenatal care units to take their significance role and dissemination of education about the preventive health behaviors among pregnant adolescents' especially primigravida, and particularly with each specific trimester.
2. Further prospective studies on a larger population about this problem at different Iraqi governorates are needed.

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