

Effectiveness of Education Program on Secondary Schools Students Knowledge about Dysmenorrhea in Alnasiriya City Schools

فاعلية البرنامج التعليمي في معارف طالبات المدارس الثانوية حول عسر الطمث في مدارس مدينة الناصرية

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المستخلص:

الهدف: تهدف الدراسة إلى تقييم معرفة طالبات المدارس الثانوية فيما يتعلق بعسر الطمث و معرفة مدى فعالية البرنامج التعليمي وكذلك تحديد العلاقة بين تأثير البرنامج التعليمي وبعض المتغيرات الديموغرافية.

المنهجية: اجريت دراسة شبه تجريبية لعينة غير احتمالية (مقصودة) لمئة طالبة خمسون منهن في الفرع العلمي والآخرات في الفرع الادبي للفترة من ٤ اذار ولغاية ١٨ اذار ٢٠١٨ في مدرسة خولة بنت الازور الثانوية للبنات في مدينة الناصرية. تم جمع البيانات من خلال استخدام استبيان تم تصميمه من ثلاثة أجزاء ؛ الجزء الأول يشمل البيانات الديموغرافية لعينة الدراسة و الجزء الثاني يشمل التاريخ السابق للدورة الشهرية لدى الطالبات اما الجزء الثالث يشمل البرنامج التعليمي حول عسر الطمث ، تم ملئ الاستبيان بواسطة الطالبات انفسهن. اما طريقة جمع البيانات من خلال ثلاث مراحل، مرحلة الاختبار الاولي او القبلي ، مرحلة البرنامج التعليمي ومرحلة الاختبار البعدي. تم تحديد صلاحية الاستبيان من خلال (١٤) خبيراً ، وتم قياس الثبات من خلال دراسة استطلاعية لمجموعة مكونة من (١٥) طالبة تم اختيارهم عشوائياً وكانت نتيجة ثبات الاستبيان (0.86). على مقياس كرونباخ، وتم تحليل البيانات باستخدام التحليل الإحصائي الوصفي و الاستدلالي.

النتائج: بينت الدراسة الحالية إلى أن البرنامج التعليمي عمل على تحسين معارف الطالبات وزيادة الوعي بشأن عسر الطمث، وان هناك علاقة ذات دلالة إحصائية بين البرنامج التعليمي وبين عمر الطالبة والمستوى التعليمي للوالدين.

التوصيات: توصي الدراسة بضرورة أن تقوم وزارة الصحة بإعداد برنامج تعليمي يركز على الآباء ومعلمي المدارس لمعالجة اضطرابات الدورة الشهرية وكيفية مواجهتها كذلك ممرضة المدرسة تساعد الطالبات على التعامل مع عسر الطمث ومنع تأثيره السلبي على أداء الواجبات المدرسية. كما تحتاج وزارة التربية تغيير نمط حياة الطلبة من خلال دروس التمارين البدنية المنتظمة ، وزيادة وعي الطالبات المراهقات من خلال وسائل الإعلام فيما يخص اضطرابات الدورة الشهرية.

الكلمات مفتاحية: البرنامج التعليمي; عسر الطمث; طالبات المدارس الثانوية.

Abstract:

Objective: The study aim is to assess knowledge of secondary schools female students regarding dysmenorrhea; find out the effectiveness of education program on secondary schools students and also to identify relationship between education program and certain variables.

Methodology: The quasi-experimental design (pretest and posttest) on one hundred students 4th year in Khawla Bint Al-Azwar secondary school for females at morning shift in Al Nasiriya City, data collection started at 4th March to 18th March 2018. A non-probability (purposive) sample of (100) students (50) student from scientific branch and (50) students from literary branch. Data have been collected through using a questionnaire modeled and made up of three parts; the first part includes demographic data of study sample; the second part includes the previous history of students' menstrual cycle; and the third part includes the collection dysmenorrhea knowledge program, a study samples filled by the female students themselves concerning their dysmenorrhea knowledge program. Data were collected through three stages pretest stage; educational program stage and posttest stage. Validity is determined through a panel of 14 experts, and the reliability of the questionnaire is determined through pilot study of (15) students chosen randomly. Data ate analyzed through descriptive inferential procedure.

Results: The present study concludes that health education session can improve students' knowledge and raise their awareness regarding dysmenorrhea, in addition the statistical test shows that the student's age and the parents educational level have positive statistical association with educational program.

Recommendations: The study recommends that the Ministry of Health need to: design education program that focus on parents, school teachers and administrative board to address the menstrual disorders also, school nurse help the student to cope with dysmenorrhea since the condition can limit student school performance.

Ministry of Education needs to set education program that can change student life style through regular physical exercise classes and mass media.

Key words: Education program; Dysmenorrhea; Secondary School Students.

Introduction

Adolescence, one of the most crucial stages of life, is a period of transition from childhood to adulthood between ages 10 and 19 years. It is an important moment for young female because when they create their own identities, they develop healthy lifestyles and learn to balance their physical, mental and social lives. The beginning of the menstrual cycle is the most important changes that occur to females through puberty, the earliest menstrual cycle (menarche) occur at ages of 11 to 15 years⁽¹⁾.

Dysmenorrhea is defined as painful menstruation that experienced as uterine pain or cramps in the lower abdomen, occurring just before and/or during menstruation, with variations among different females, also it is referred as a rigorous, painful, cramp feeling in the abdomen and also having other manifestations such as diaphoresis, headache and vomiting, all taking place near or through the menstrual cycle. It is the most common gynecologic complaints in adolescence and young women. It has also been report that the rigorous the

dysmenorrhea is, the more a female suffers from negative felling and behavior, and from tension, that has negative impact on the student learning and study^(2,3).

The seriousness of dysmenorrhoea is altogether connected with length of menstrual stream, youthful normal menarche, smoking, obesity, and alcoholic. Abnormal level of stress can likewise incredibly increases the frequency of dysmenorrhoea, as can anxiety, depression, and disturbance of informal communities. Because of the negative impacts of dysmenorrhea on a person's mental status, wellbeing related personal satisfaction might be disturbed among young female⁽⁴⁾. Study conducted in Iraq revealed that the frequency of dysmenorrhea was estimated to be (85.31%). Study carried among adolescent students at age (18 – 27) years in Isfahan University of Iran, showed that the prevalence of dysmenorrhea was (89.1%), and (78.8%) among technical secondary schools girls in Mansoura university- Egypt^(5,6).

Objectives of the study

1. Assess of secondary schools students knowledge regarding dysmenorrhea.

2. Find out the effectiveness of education program on secondary schools students knowledge.
3. Identify relationship between education program and certain variables.

Methodology of the study

The quasi-experimental design (pretest and posttest) is conducted to measure the effectiveness of education program of dysmenorrhea in order to accomplish the objectives.

A non-probability (purposive) sample of (100) students (50) student from scientific branch and (50) students from literary branch. The educational program implemented at Khawla Bint Al-Azwar secondary school for females in school 4th year classroom at morning shift in Al Nasiriya City.

The instrument tool consists of three parts the first part is concerned with the collection of basic socio-demographic data of study sample which include (age, education level of parent, marital status, parent's occupation and socio-economic level); second part previous history of students' menstrual cycle, this part includes (age of menarche, family history with dysmenorrhea, duration of menses, interval between menstrual and another, amount of blood, medication consuming during the menses, history of doctor visit for dysmenorrhea and signs& symptoms for students during menstrual cycle) and third part is

dysmenorrhea knowledge program: it was composed of many items distributed as follows: anatomy of female reproductive system (5 items), benefit of menstrual cycle (4 items), signs and symptoms of dysmenorrhea(10 items), risks factors of dysmenorrhea(7 items), pain relief techniques of dysmenorrhea(16 items) and effects of dysmenorrhea on student(6 items). These items were rated to two levels of Likert scale and scored as follows: yes (2), no (1). Samples' knowledge toward dysmenorrhea was calculated as two level and scored as follows: Pass = (1.50-2.00) and Fail = (0.00-1.49) with cutoff point (1.5).

The validity has been determined for the evaluation of the tool through a panel of fourteen experts, (one) obstetrician and gynecologist physician from College of Nursing Faculty/ University of Baghdad; (two) maternal and neonatal faculty from College of Nursing/ University of Baghdad; (one) community nursing faculty from College of Nursing/ University of Baghdad; (one) maternity and neonatal nursing specialty from Baghdad Health Office; (one) maternity and neonatal nursing specialty from Misan Health Office; (two) obstetric and gynecologist physician faculty from Thi-Qar Health Office; (four) obstetric and gynecologist physician faculty from College of Medicine/ University of Thi Qar; (one) obstetric and gynecologist physician faculty from College of

Nursing/ National University of Science and Technology and (one) maternity and neonatal nursing faculty from Baghdad Medical Technical Institute who have necessary experience that qualify them to exam the content of the education program and questionnaire. Those experts were request to review the instruments and the education program for content, clarity, relevancy, and competence; some items were accepted and others were added after a face-to-face discussion with each expert and subsequently the instrument was represent valid after getting all the comments and recommendations in consideration.

Reliability is concerned with the consistency and dependability of the

research instrument. Determination of reliability of the questionnaire is based on coefficient alpha (Cronbach's Alpha) reliability. The results of the pilot study were (0.86) which indicate that the instrument is significant and positive.

The data is analyzed using SPSS (Statistical Package for Social Sciences) version 20. Application of statistical analysis system and the application of Excel. Data analysis was employee through the application of descriptive and inferential statistical approaches, which were performed through the computation of the following: frequencies, percentage, and means of scores, standard deviation, alpha correlation coefficient and Pearson correlation coefficient

Results

Table (1): Distribution of the (100) Study Sample According to the Demographic Characteristics

No.	Variables	F	%
1.1	Age of Student/ years		
	16	79	79
	17	16	16
	18	5	5
	$\bar{x} = 16.26 \pm 0.543$		
1.2	Student Order in Family		
	1 st	29	29
	2 nd	21	21

Continue table (1)

	3 rd	17	17			
	4 th	11	11			
	5 th or more	22	22			
1.3	Level of Education					
	Mother	F	%	Father	F	%
	Illiterate			Illiterate	6	6

	Read and write			Read and write	19	19
	Primary school			Primary school	6	6
	Secondary school			Secondary school	21	21
	Institute and Colleague Graduation or Higher	31	31	Institute and Colleague Graduation or Higher	48	48
1.4	Occupation					
	Government Employee	19	19	Government Employee	45	45
	Free Works	3	3	Free Works	35	35
	Retired	0	0	Retired	10	10
	House Wife	78	78	Un Employed	9	9
	Dead			Dead	1	1

F = frequency, % = percentage, SESS = Socio-economic Status Score

Table (1) indicates that (79%) of the study sample are within age of (16) years and the mean age of them was 16.26 ± 0.543 years. Concerning the order of the student in the family, the highest percentage (29%) of study sample is the first. Regarding the parents level of education, the highest percentage (31%), (48%) for both study sample mother and father are graduated from institute and college or higher study level respectively. Related to the parent's occupation status, the results indicated that the highest percentage (78%) of study sample mother's occupation is housewife while (45%) of the study sample father is government employee.

Table (2): The Effectiveness of Total Dysmenorrhea Knowledge program of (100) Study Sample

Total knowledge of Study Sample regarding Dysmenorrhea	Study group
	Mean \pm S.D.
Pretest	1.1355 \pm 0.13199
Posttest	1.7530 \pm 0.11418
Pearson correlation	.422(**)
t-test (2 tailed)	.007

**Correlation is significant at the 0.01 level (2-tailed), Mean =Arithmetic Mean, S.D= Standard, N= Number of sample.

This table shows that the mean of pretest is lower than the mean of posttest and probability (P. value) which is a significant result. These result shows that the program is effective and contributes in improving the study sample of dysmenorrhea knowledge and achieving the hypothesis of the study.

Table (3): Relationship between (Age, Mother and Mother Level of Education, and Socio-economical Status) and Effectiveness of Education Program.

Variables	Posttest	Sig
Age of Students	.047	S
Mother Level of Education	.049	S
Father Level of Education	.034	S
Socio-economical Status	.362	NS

*Significant at $p \leq 0.05$ level of significance. S= Significant, NS= No Significant.

This table reveals that there is significant relationship between demographic characteristics (age of student and mother and father level of education and education program (posttest), while there is no relationship between socio-economical status and education program regarding dysmenorrhea for study group in both pre and posttest, level of study

Discussion

Part I: Socio-Demographic

Characteristics of Study Sample:

The results of the study had shown that (79%) of the study sample are within age of (16) years with a mean of (16.26 \pm 0.543) years. Regarding the parents level of education, one third (31%) and (48%) for both study sample mother and father are graduated from institute and college or higher respectively as shown in table ⁽¹⁾, this result agree with study carried out in Saudi Arabia by Tork and Al hosis (2015) who reported that most of the study sample were at mean age (15.4) years and more than half of study sample parents were graduated from university and institute ⁽⁷⁾.

Regarding to socio-economical status of the study sample family the result

shows that (66%) of study sample considered their income barely sufficient from the study sample point of view, these finding support by the Arora et al, (2013) who present that the (54%) of adolescent school girls of rural part of district Ambala in India who suffer from dysmenorrhea were from middle rank of socioeconomic status ⁽⁸⁾.

Concerning the order of the student in the family, the highest percentage (29%) of study sample is the first in family order, and highest percentage (78%) of study sample mother, were housewife, this result in line with El-Lassy and Madian, who declared that dysmenorrhea sample was in highest percentage (39.2%) who were the first kid in their family and the majority of sample mother were housewife ⁽⁹⁾.

Part II: Discussion of Effectiveness of Outcome of Educational program

The result of the study indicates that there is highly relationship between posttest for study group and total students knowledge at, as shown in table (2) that means the education program improve the information of secondary school students regarding dysmenorrhea.

The result agree with Aburshaid et al, who concluded that there was a significant improvement ($p < 0.001$) of secondary school students knowledge in Saudi Arabia after exposure to education program of menstrual cycle knowledge ⁽¹⁰⁾, also Haque, et al, stated that the program produced significant positive P value (0.001) changes in knowledge, beliefs, menstrual hygiene practices, experience of disorders, and limitations on menstruating of secondary schools in rural Bangladesh ⁽¹¹⁾.

El-Mowafy et al, support the present study result by conducted study which was done on secondary schools students who concluded that after implementation of the program a considerable improvement were noticed in adolescents' knowledge and practice. Therefore the educational program was successful in attaining its aims of positively changing the knowledge and practice of menstruation among adolescent girls at orphanage home in Damietta ⁽¹²⁾. A community-based interventional study was conducted by Nemade et al, who reported that among (217) adolescents of Kalamboli, NaviMumbai, Maharashtra, India. The result indicated that there was a significant difference in the level of knowledge

($P < 0.01$) of posttest which explain that health education program was improving the knowledge and practice of adolescence girls ⁽¹³⁾.

Shokry et al, showed in the study result that there were highly statistically significant differences in total knowledge and practice score of the studied sample after implementation of educational program and considerable improvements were noticed in adolescent's knowledge and practice ⁽¹⁴⁾.

Premila et al, support present finding that showed there is significant difference between the pre-test and post-test level of knowledge regarding menstrual disorder and at ($P < 0.001$) level of significance which implies that planned health education was effective to improve the knowledge level of adolescents regarding menstrual hygiene ⁽¹⁵⁾, also Hassanen et al, accept and support this finding brings out the impact of health education in improving secondary schools students knowledge and practices. Menstrual practices among them was found to be fair before the program, while in the post-test, there were a significant differences in student's level of knowledge and practices ⁽¹⁶⁾.

Arora et al, also support our study finding by the study done of the total 200 girls included in the study: in the pre-test, menstrual perceptions amongst them were found to be poor and practices incorrect while in the post-test, there was a significant difference in the level of

knowledge ($P < 0.05$)⁽⁸⁾, also study done by Tork and Al hosis, support and present study that declared a significant increase for the total sample in knowledge regarding puberty and menstruation was observed ($P < 0.001$) post intervention. Differences in all knowledge concerning pregnancy and antenatal care were statistically significant. This study clearly showed that the reproductive health education program improve knowledge among adolescent girls as regards reproductive health⁽⁷⁾.

Part III: Relationship between educational program Knowledge and Age, Level of Education of Parent and Family Income:

Table (3) shows that there is significant relationship between student's age and educational program this result agree with Koh and Lim, who found that there is a significant correlation considering age of student and responses to education program or any educational patterns⁽¹⁷⁾.

Regarding the income of family with education program table (3) show (no significant) relationship between family income and education program regarding dysmenorrhea for Pre and Posttest, this findings disagree with the result done by El-Lassy and Madian, who reported that there is significant correlation between effectiveness of an education program and family income⁽⁹⁾.

Also the table (3), it revealed (significant) positive correlation P.value

(0.049) and (0.034) between parent level of education factor and student's knowledge about dysmenorrhea in posttest for study group. This findings is in line with Aburshaid et al, who reported that it is an opportunity for both parent exactly mother and girls to discuss about this topic, due to it could strengthen the mother daughter relationship so that there is significant correlation between students' socio demographic characteristics for parents' level of education and total students' knowledge⁽¹⁰⁾.

Recommendations:

It is recommended that the Ministry of Health should:

1. Design education program that focus on parents, school teachers and administrative board to address the menstrual disorders needs and how to meet it.
2. Set appropriate counseling and practice covered by school nurse to help female student to cope with dysmenorrhea since the condition can have negative impact on the student school performance.
3. Design health education related to reproductive health should be incorporated with school curriculum to prepare adolescent girls for menstruation and treatment.

It is recommended that the ministry of education should:

4. Design education program that can promote students' health life style like regular physical exercises.

5. Prepare booklet, lessons and any other mass media program that can help to improve and promote adolescent girls awareness of menstruation disorder.

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