Identification of Healthy Lifestyle for Preconception Period among High School Females' at Al-Amara City

التعرف على نمط الحياة الصحي لفترة ما قبل الاخصاب مابين الإناث بالمدراس الإعدادية في مدينة العمارة

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الخلاصة

الهدف: تهدف الدراسة إلى تقييم نمط الحياة الصحي لفترة ما قبل الإخصاب بين طالبات المدارس الثانوية ولمعرفة العلاقة بين نمط الحياة الصحي والصفات الديموغرافية-الاجتماعية.

المنهجية:أجريت دراسة وصفية في مدينة العمارة خلال الفترة من (3) تشرين الثاني 2015 إلى (9) أيار 2016. وتم استخدام اسلوب العينة العشوائية البسيطة لتحديد 8 مدارس من أصل 17 مدرسة ثانوية. وقد تم استخدام عينة عشوائية منتظمة لجمع عينة مؤلفة من 214 من أصل 2192 طالبة. جمعت البيانات عن طريق أسلوب المقابلة بعد تصميم استمارة الاستبيان، والتي تتكون من جزأين: الجزء الأول يحتوى على الصفات الديموغرافية-الاجتماعية والجزء الثاني يتألف من (6) محاور هي: التغذية، النشاط البدني، التحكم في الوزن، أخذ اللقاحات، تجنب الإجهاد، والحذر من الإصابة بفيروس داء المقوسات. وتم وصف وتحليل البيانات باستخدام اساليب الإحصاء الوصفي(التكرارات والنسب المئوية والمتوسط الحسابي والانحراف المعياري) والاستنباطي (معامل الارتباط).

النتائج: أظهرت نتائج الدراسة ان الوسط الحسابي لنمط الحياة الصحي لفترة ما قبل الحمل بين الإناث كان بمعدل متوسط (2.25 ± 0.378) عموما فان غالبية العينة كانوا 131 (61.2٪) بمستوى متوسط. وعلاوة على ذلك، كان هنالك ارتباطات معنوية ذات دلالة إحصائية بين الصفات الديموغرافية-الاجتماعية وجوانب نمط الحياة الصحي (P <0.01)، باستثناء بعض المتغيرات التي أظهرت علاقة غير معنوية مع جوانب نمط الحياة الصحي (P > 0.05).

الاستنتاج: تعتبر الطالبات عادة في خطر متزايد لتطور السلوكيات الغير صحية حيث بينت النتائج أن أكثر من ثلثي العينة هم بمستوى متوسط من نمط الحياة الصحي. اضافة الى ذلك، فإن النتائج تشير إلى وجود علاقة ذات دلالة إحصائية بدرجة عالية بين بعض المتغيرات، باستثناء العمر، ونوع الأسرة، وبقاء الأب على قيد الحياة ووظيفة الام حيث كانت علاقة الارتباط غير معنوي.

التوصيات: توصي الدراسة بتعاون معلمي المدارس ومقدمي الخدمات الصحية لنشر السلوك الصحي بين الطالبات لكون هذه المرحلة مهمة لاعداد مايسمى بالامومة الامنة، من خلال وضع الملصقات العلمية، وعقد لقاءات دورية مع أولياء الامور من أجل توضيح اهمية نمط الحياة الصحي خلال فترة ما قبل الحمل مثل ممارسة التمارين الرياضية باستمرار, السيطرة على الوزن, تناول الغذاء الصحي الخالي من الدهون للحد من النتائج السلبية المهددة للأخصاب.

Abstract

Objective: To assess of healthy lifestyle and to find out the association between healthy lifestyle and socio-demographic characteristics among high school students.

Methodology: A descriptive study was conducted from (3) November 2015 to (9) May 2016 in the City of Al-Amara. A simple random sampling used to select 8 out of 17 high schools. A systematic random sampling was used to draw a sample (n =214) out of 2192 high schools females. The data was collected by interview method through the use of constructed questionnaires, which consist of two parts. Part one socio-demographic characteristic and part two which consist of 6 domains including: nutrition, physical activity, weight control, taking of vaccinations, stress management, and avoids infection with toxoplasmosis. The data analyzed through the use of the descriptive by Frequency, Percentage, Mean of Score and Standard deviation and inferential statistical analysis through Correlation Coefficient.

Results: The mean score of health lifestyle for preconception period among of the females it was moderate (2.25 ± 0.378) with the majority sample 131 (61.2%) in moderate level. Moreover, highly a significant associations were found between socio-demographic characteristics and aspects of preconception healthy lifestyle at (P< 0.01), except the some variables which showed non-significant association with aspects of preconception healthy lifestyle at (P > 0.05).

Conclusion: Female students considered at higher risk of developing unhealthy behaviors. Findings of the study showed more than two thirds of sample with in moderate level of health lifestyle. Furthermore, the results indicate that there was highly a significant association between some variables, except the age, type of family, father survival and job of father showed were non-significant association.

Recommendation: Schoolteachers and health service providers must be cooperation for spreading health behavior among students that these phase is important and called safe motherhood, by lay scientific posters, and holding parents meeting in order to illustrate the importance healthy lifestyle during the period of preconception Such as exercise constantly, weight control, eating fat-free healthy food to reduce life-threatening adverse outcomes of preconception.

Key words: Preconception; Health Lifestyle; Females.

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INTRODUCTION

Preconception period is one of the most important stages in a female's life before reproductive years. Health of females during these years' leads to desirable outcomes for both mother and infant also can be decreased pregnancy related problems, fetal death, low birth weight, and preterm **(1).**

The health promotion for preconception is a prophylactic strategy. This strategy includes increasing females' knowledge, skills, motivation, and access to health care services. Also supports the provision of a healthy behaviors and supportive environment before pregnancy, based on preconception health guidelines. These guidelines include a healthy diet, physical activity, consulting physicians about the consumption of prescribed medications, use a folic acid and multivitamins supplements, updating vaccination, controlling diseases such as toxoplasmosis, and finding the family history of diseases**(2).** Therefore, it's necessary to target young females' information about health indicators of preconception and encourage them to play a more encouraging role before getting pregnant **(3).**

Actually, Iraq is among the group of 68 countries that account for 97% of all child and maternal deaths globally **(4).** United Nations Children's Emergency Fund appeared in Iraq, there is an increase in the rates of early marriage and one in five women 21% in high school age between 15-19 is married now, leading to 37 under 5 children die out of every 1000 live births and 32 of those die before reaching his/her 1 birthday and nearly 35.000 infants die every year **(5).** All efforts have been made to reduce risky behaviors and increase their access to health care, and change provider practice to improve maternal and infant health. Early educational and behavioral intervention regarding preconception care can be efficient in reducing risk factors **(6) .**

World Health Organization showed that preconception care has a positive impact on maternal and child health outcomes **(7).**

Limited awareness of adolescents in preconception health may be addressed through school education. Promoting preconception health is an important healthy people 2020 strategy for preventing adverse pregnancy outcomes and improving women's health overall**(8).**

A healthy lifestyle depends on several interventions and modifications, encompassing almost all aspects of life. It is related to patterns in daily life such as good nutrition and dietary habits, physical activity, taking of vaccination and use of health care services **(9).**

OBJECTIVE

To assess healthy lifestyle for preconception period and to find out the association between socio-demographic characteristics such as age of students, type of family, job of mother, level of education for mother and mother survival, also, job of father, level of education for father and father survival, and monthly income for family with the preconception healthy lifestyle of high school females.

METHODOLOGY

The study design: A descriptive design was conducted among secondary school students in Al-amara city from (3) November 2015 to (9) May 2016. Permission for conducting this study was obtained from ethical committee and Missan Directorate of Education. Oral consent also obtained from each female involving in the study. A simple random sampling was used to select 8 secondary schools out of 17 secondary schools in Al-amara city center. A systematic random sampling was used to draw a sample of 214 out of 2192 high schools females enrolled in 8 high schools. The data was collected through the use of constructed questionnaires, which consist of two parts. Part one socio-demographic characteristic. Part two which consist of (39) items that include (6) sections including: nutritional lifestyle, physical activity, weight control, taking of vaccinations, stress management, and avoids infection with toxoplasmosis. The healthy lifestyle for preconception parts were applied by using mean of score, through intervals (1-1.67) low, (1.68-2.33) moderate, and (2.34-3) high. These items were rated according to the liker scale (as (3) for Always, (2) for Sometime and (1) for Never)).

Statistical Analysis: The data of present study were analyzed through the application of two statistical approaches. (1) Descriptive statistical approach that includes Frequency, Percentage, Mean of Score and Stander deviation. (2) Inferential statistical approach that includes Correlation Coefficient. Results were determined as significant at (P<0.05) and not significant at (P<0.05).

RESULTS:

Table (1): Distribution of the students' socio-demographic characteristics

Variables	(n=214)	F	%
Age (year)	15-17	127	59.3
	18-20	66	30.8
	21-23	21	9.8
	Total	214	100.0
	Total	**70**	**100.0**
Type of family	Nuclear	169	79.0
	Complex	45	21.0
	Total	**214**	**100.0**
Job of mother	Employment	91	42.5
	Housewife	98	45.8
	Retirement	25	11.7
	Total	**214**	**100.0**
Level of education for mother	Illiterate	17	7.9
	Read and write	33	15.4
	Primary	31	14.5
	Mediate	22	10.3
	Secondary	29	13.6
	Institute	40	18.7
	College	42	19.6
	Total	**214**	**100.0**
Mother survival	Death and divorced	18	8.4
	Live	196	91.6
	Total	**214**	**100.0**
Job of father	Employment	77	36.0
	Unemployment	92	43.0
	Retirement	45	21.0
	Total	**214**	**100.0**
Level of education for father	Illiterate	8	3.7
	Read and write	34	15.9
	Primary	27	12.6
	Mediate	37	17.3
	Secondary	30	14.0
	Institute	43	20.1

	College	35	16.4
	Total	**214**	**100.0**
Father survival	Death and divorced	21	9.8
	Live	193	90.2
	Total	**214**	**100.0**
Monthly income	Not Enough	31	14.5
	Simple enough	77	36.0
	Enough	106	49.5
	Total	**214**	**100.0**

n = number of sample, F=frequencies, %= Percentages.

Table (1) revealed more than half of the females were (15-17) years old (59.3 %), so, the majority of sample was lived in nuclear family 169 (79%). In regarding for job of mother for students' the majority was housewife (45.8%) and level of education was (18.7%) institute, the most of the females were living with their mothers (91.6%). Concerning of job of father of participants was (43%) unemployment, while level of education for father was institute (diploma) (20.1%).Concerning of job of father was (43%) unemployment, in addition, as the overall female under study she had been living with her father at home (90.2%). Finally, with respect to the monthly income showed the participants considering to insufficient funds with (49.5%).

Table (2): Level of healthy lifestyle for preconception period among high school females'

No.	Level of healthy lifestyle	Frequency	Percent
1.	**Low**	2	.9
2.	**Moderate**	131	61.2
3.	**High**	81	37.9
	Total	**214**	**100%**

No. = number of level, Cut-off-point (2), Cut-off-point interval (1-1.67) Low-1; (1.68-2.33) Moderate-2; (2.34-3.00) High-3.

Table (2) reveals that the more than two thirds of participants have moderate level of healthy lifestyle behaviors (n=131 with 61.2%), followed by some of them who have high level (n=81 with 37.9%).

Table (3): Mean scores of females' regarding different aspects of healthy lifestyle for preconception period among high school females'

Healthy lifestyle aspects	n=214 Mean ± S.D
Nutritional	2.24 ± 0.286
Physical activity	2.17 ± 0.373
Weight control	2.12 ± 0.483
Taking vaccinations	2.26 ± 0.389
Stress management	2.40 ± 0.350
Avoid infection Toxoplasmosis	2.30 ± 0.385
Average	**2.25 ± 0.378**

n = number of sample. Cut-off-point interval (1-1.67) Low-1; (1.68-2.33) Moderate-2; (2.34-3.00) High-3; S.D = Stander Deviation.

Statistical analysis revealed that among six aspects of lifestyle, the highest mean was related to avoid stress (2.40 ± 0.350), and the lowest mean was related to weight control (2.12 ± 0.483). But generally, average healthy lifestyle aspects for all domains it was moderate (2.25 ± 0.378) as shown in the above table.

Table (4): Correlation between different aspects of preconception healthy lifestyle and socio-demographic characteristics

Variables		Healthy lifestyle aspects					
		Nutritional	Physical Activity	Wight Control	Taking Vaccinations	Stress management	Toxoplasmosis
Age	Correlation Coefficient	0.087	.036	.012	.082	0.068	0.029
	P-value	0.207	.604	.858	.235	0.324	0.678
Type of family	Correlation Coefficient	-.069-	-.062-	-.103-	-.157-*	-0.073-	-0.078-
	P-value	.314	.365	.134	.022	0.290	.253
Mother survival	Correlation Coefficient	.264**	.310**	.182**	.241**	0.224**	.245**
	P-value	.000	.000	.008	.000	0.001	.000
Job of mother	Correlation Coefficient	-.567-**	-.530-**	-.375-**	-.335-**	-.477-**	-.389-**
	P-value	.000	.000	.000	.000	.000	.000
Level education mother	Correlation Coefficient	.617**	.378**	.460**	.435**	.523**	.537**
	P-value	.000	.000	.000	.000	.000	.000
Father survival	Correlation Coefficient	.210**	.040	.176**	.319**	.295**	.187**
	P-value	.002	.557	.010	.000	.000	.006
Job of father	Correlation Coefficient	-.216-**	-.201-**	-.068-	-.098-	.025	-.094-
	P-value	.001	.003	.323	.152	.713	.170
Level education father	Correlation Coefficient	.497**	.248**	.410**	.365**	.387**	.399**
	P-value	.000	.000	.000	.000	.000	.000
Monthly income	Correlation Coefficient	-.591-**	-.439-**	-.432-**	-.382-**	-.509-**	-.400-**
	P-value	.000	.000	.000	.000	.000	.000

= Significant at (p < 0.05), *= High Significant at (p < 0.01).**

The findings in table (4) indicate that there was highly a significant relationship between socio-demographic characteristics and aspects of preconception healthy lifestyle at ($P < 0.01$) except the variables (age, type of family, father survival and job of father) show were non a

significant relationship with some of aspects of preconception healthy lifestyle at ($P > 0.05$), while age variable was not present association with any aspects of healthy lifestyle.

DISCUSSION

This study describes a healthy lifestyle for preconception period was one of the most important stages in a female's life. The findings of the present study indicated that the more than half of the sample (15−17) years old 59.3 %, this result was agreement with Charafeddine et al., shows in the study which conducted in Lebanon about improving awareness of preconception health among adolescents with aged between (14 and 18) years 75 % [3]. Regarding type of family the study showed that more than half of the sample was nuclear 79%, this result was supported by You et al., show more than half of the families 56.2% had a nuclear structure with 65.5% one child [10]. In light of the foregoing, generally considered the concept that a nuclear family was central to stability in modern society and also promote of health for females. Concerning the job of the mothers and fathers were less than half of the sample housewife 45.8%, while her unemployment 43%, in regarding the level of education they were the majority had graduated from the Institute for their mothers and fathers 18.7% − 20.1% respectively, regarding of the parents survival, the vast majority of the students live with their mothers and fathers 91.6% − 90.2% respectively. Finally, with regard to monthly income was almost half of the study participants had shown enough monthly income 49.5% in (table 1). A recent systematic review found that the majority of studies demonstrated positive effects for parents in enhance healthy lifestyle for females in the event of availability of material income and good educational level [11].

Regarding the aim of the study's regarding assessment of healthy lifestyle for preconception period among high school females' our study showed, the majority of participants have moderate level of healthy lifestyle behaviors n=131 with 61.2% in (table 2). This result was consisted with a research results done in Iran by Bayrami et al., data indicated that not appropriate of health-related behaviors for women [1]. Also, this result was supported by study conducted in Lebanon who say the preconception health knowledge among high school students can be increased by campaigns awareness in schools to reduce non-life-threatening adverse outcomes (prematurity, low birth weight, birth defects) [3].

In the present study, the majority of students' has highest mean of score in avoid of stress, this result may be related to the majority of participants was enough monthly income 49.5%, also, this result was consistent with a survey conducted in Australia that show reading and watching movies or TV, and spending time with family or friends, listening to music which considered most frequently used for managing stress by females in many cultures [12]. Concerning for weight control that demonstrated lowest mean of score (2.12 ± 0.483) this result was agree with study which conducted in Lebanese between adolescent females, the prevalence of obesity was reported as 28% in 1997 and 31.5% with (64.17±12.69) in 2009 respectively [13], this result was still lower than estimates reported from several Eastern Mediterranean countries such as Kuwait 39.8% [14], Syria 38.2% [15], and Saudi Arabia 43.8% [16] as a result of unhealthy lifestyle such as non compliance the practice of sports and eating non-healthy food. Mean scores of females' regarding different aspects of healthy lifestyle for preconception period among high school females' in Al-Amara city was moderate with average (2.25 ± 0.378) in (table 3). This result disagrees with studies conducted in Turkey that is showed the average score for the healthy lifestyle behavior was lower [17], [18].

As a result of the data analysis, there was found association between the socio-demographic characteristics (mother survival, job of mother, level education mother, father survival, level education father and monthly income) of the study sample with aspects of preconception healthy

lifestyle, in addition to found a significant correlation between type of family with taking vaccinations and job of father with nutritional and physical activity.

Results of the study conducted in Al–Amara City showed non-significant correlation between ages and type of family and job of father with healthy lifestyle aspects; as well as showed non-significant correlation between the father survival and physical activity. Although we note age variable was not present association with any aspects of healthy lifestyle, this result may be related to the majority of the sample were ages convergent. This result was consistent with study conducted in Jordan a significant negative correlation between students' age and health promotion life-style profile that younger students tended to practice healthier life style than older students [24]. However, our results does not agree with a cross-sectional study which conducted in Iraq to assess of prevalence of obesity among the students 500 students 64.4% male and 35.6% female, found a positive correlation was obtained between body mass index and age groups [19]. With respect to the survival of the parents, the study results showed significant correlation with healthy lifestyle for females, revealed the study conducted at the University of Texas the well social-relationships between parents have positive effect on adolescent females and may foster a greater sense of responsibility to stay healthy, thus promoting aspects of healthy lifestyles preconception [20]. Concerning the job of parents this result was agree with studies which mentions the parental employment status are an important factor and that have strongly association with good health for adolescent girls such as continue the practicing sport, eating more fresh fruits and vegetables [21], [24]. Based on our results, the level of education for parents showed higher correlation between variables. This result was agree with report submitted by institute of public health in Ireland mentioned educational level of parents can influence on females healthy lifestyle by encourage them on physical activity and weight control [22]. Furthermore, studies have shown that the level of education for mothers is likely to have a greater impact than that of fathers such as healthy food consumption and follow the vaccination schedule but adolescents in families with low level of maternal education may also be more likely to use illegal drugs.

Finally, in regarded of monthly income the results of the study reflected a significant positive correlation between family monthly income and healthy lifestyle aspects. This result was consistent with the study conducted in Japanese which found a significant correlation between university students' monthly income and interpersonal relations sub domain [23]. Also in similar study conducted in university of Jordan was found positive correlated between healthy lifestyle for students with family income [24]. Today, Iraq as other countries in the region was affected by the global economic weakness, which in turn impacts the living conditions of the families. In light of this, the female students from middle and poor level cannot interest for practicing sport in recreational places and intake nourishing food where this has a negative effect in the future during pregnancy.

CONCLUSION

Findings of the study had demonstrated that majority of the participants had moderate level of health lifestyle for preconception students. Also, showed there were non-significant correlations between (age, type of family, father survival and job of father) with healthy lifestyle aspects. But, there were high significant correlation between mother's survival, job of mother's, level of education for parent's and monthly income.

RECOMMENDATION

In the line of the study results, schoolteachers, and healthcare providers must pay more attention to these females by lay scientific posters, holding parents meeting with scientific seminars

preferred in order to illustrate the importance of physical activity, weight control and eating healthy nutrition during the period of preconception Such as exercise constantly, weight control, eating fat-free healthy food to reduce non-life-threatening adverse outcomes of preconception.

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