



## Assessment of High School Females' Cancer-preventive Behaviors to the Perceived Barriers

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ABSTRACT	
<b>CORRESPONDING AUTHOR:</b> Ghufran Awda Sajet, Department of Community Health Nursing, College of Nursing, University of Baghdad, Baghdad City, Iraq. Email: <a href="mailto:lghufranaw@gmail.com">lghufranaw@gmail.com</a> .	<p><b>Objectives:</b> To evaluate the high school females' cancer-preventive behavior-based Health Beliefs Model relative to its components of perceived barriers in Nasiriya City.</p> <p><b>Methodology:</b> A descriptive design was used to guide this study. The research was conducted at a high school in Nasiriya City. The study included a probability simple random sample of 300 female students.</p> <p><b>Results:</b> The results demonstrated that (59.7%) of the high school female students exhibited a moderate cancer-preventive behavior in terms of perceived barriers. This result is supported by psychological factor is perceived barriers, which points out the person's perception of intrinsic and extrinsic obstacles in performing a behavior.</p> <p><b>Conclusions:</b> Cancer-preventive behaviors based Health Beliefs Model is not satisfactory among high school female students.</p> <p><b>Recommendations:</b> These results highlight the importance of educating female students in schools and including an educational curriculum related to aspects of health prevention.</p>
<b>Keywords:</b> Evaluation, Cancer-preventive behaviors, perceived barriers.	

### الخلاصة

**أهداف الدراسة:** تقييم السلوكيات الوقائية من السرطان لدى طالبات المدارس الإعدادية الحواجز المتصورة في محافظة ذي قار.

**منهجية البحث:** تم استخدام تصميم وصفي لتوجيه هذه الدراسة، وشملت الدراسة عينة عشوائية بسيطة احتمالية من 300 من الطالبات الإناث. تم إنشاء أداة الدراسة وفقاً للعديد من الدراسات السابقة المتعلقة بالسلوكيات الوقائية من السرطان - نموذج المعتقدات الصحية.

**نتائج الدراسة:** أظهرت النتائج أن (59.7%) من طالبات المدارس الثانوية أظهرن سلوكاً وقائياً متوسطاً للسرطان من حيث المعوقات المتصورة. ويدعم هذه النتيجة عامل نفسي وهو العوائق المدركة، والتي تشير إلى إدراك الشخص للعوائق الجوهرية والخارجية في أداء السلوك.

**الاستنتاج:** تقييم السلوكيات الوقائية من السرطان لدى طالبات المدارس الإعدادية استناداً على نموذج المعتقدات الصحية غير مستقر.

**التوصيات:** تسلط هذه النتائج الضوء على أهمية تعليم الطالبات في المدارس وإدراج منهج تعليمي يتعلق بجوانب الوقاية الصحية.

**الكلمات المفتاحية:** التقييم، السلوكيات الوقائية من السرطان، القابلية المتصورة.

## INTRODUCTION

Cancer in children is usually rare and represents a small proportion of all cancers. According to Globocan 2012 estimates, it represents about 1% of all cancers. However, one out of two children with cancer will die. In Iraq, childhood cancer constitutes about 6.7% of all cancers <sup>(1)</sup>. Cancer during adolescence and young adulthood represents a substantial disease burden, with an estimated 1.2 million cancer cases and 400 000 cancer-related deaths occurring among 15- to 39-year olds in 2018.

In Iraq, cervical cancer is the twelfth malignant growth among ladies and the tenth among ladies somewhere in the range of 15 and 44 years old <sup>(2)</sup>.

Cancer during adolescence and young adulthood represents a substantial disease burden, with an estimated 1.2 million cancer cases and 400 000 cancer-related deaths occurring among 15- to 39-year olds in 2018 <sup>(3)</sup>.

Cancer is a non-communicable disease causing various ailments. Like any other chronic diseases, it occurs in any person, age group, and race. The current concern introducing cancer as a global health problem and placing it at the top of the health and treatment agenda is the growing number of people affected by it globally, as well as in our count <sup>(4)</sup>. In each hospital, nurses play the most significant function among health care workers <sup>(5)</sup>.

Despite the implementation of national cancer registries and control programs since 1974 in Iraq, the rise of cancer incidence and death are alarming. <sup>(6)</sup> Breast cancer is first of the top ten malignancies in Iraq, accounting more than one-quarter of female cancers in the Iraqi <sup>(7)</sup>. Being diagnosed with breast cancer and going through cancer treatment can be quite stressful <sup>(8)</sup>.

Leukemic patients, like children with chronic illnesses, encounter several hurdles that obstruct their academic success and social activities <sup>(9)</sup>. When people find themselves at risk for the disease

(Perceived Susceptibility), realize that the disease has serious potential consequences (Perceived Seriousness), believe that prevention would have positive results (Perceived Benefits), barriers of that behavior is fewer than obtained benefits (Perceived Barriers), and believe that they have the ability to perform health behavior activities (Self-Efficacy), it would be more probable for them to accomplish this behavior <sup>(10)</sup>. Cancer is a considerable health concern in the United States with nearly 600,000 deaths in 2016 <sup>(11)</sup>.

Healthy behaviors of high school students aims at improving health, protecting and enhancing physical, cognitive, mental and social wealth of the individual to the utmost degree <sup>(12)</sup>.

Higher percentage of nurses, physicians suggested that collaboration with other health professionals especially trained nurses, dietitians and physiotherapist are very important <sup>(13)</sup>.

Having a healthy lifestyle model is a multidimensional issue of self-care activities as well as an individual's perception that such behaviors are for the preservation and promotion of his or her health <sup>(14)</sup>.

To evaluate the high school females' cancer-preventive behavior-based Health Beliefs Model relative to its components of perceived susceptibility, perceived severity, perceived barriers, perceived benefits, self-efficacy, and cues-to-action in Nasiriya City.

The increase in cancer diagnoses will result in an increase in the demand for chemotherapy and other cancer treatments <sup>(15)</sup>. Leukemic patients, like children with chronic illnesses, encounter several hurdles that obstruct their academic success and social activities <sup>(16)</sup>.

For students and researchers in the field of psychological sciences, adolescence is one of the most intriguing stages of development <sup>(17)</sup>.

Adolescence is a vital period in being because of established most of the behaviors that will affects health through adulthood (18).

### **AIMS OF THE STUDY**

To evaluate the high school females' cancer-preventive behavior-based Health Beliefs Model relative to its components of perceived barriers in Nasiriya City.

### **METHODOLOGY:**

#### **Study Design:**

A descriptive cross-sectional design was carried out using the evaluation approach to evaluate high schools females students' perception toward behaviors related to the prevention of cancer diseases based on the Healthy Belief Model's components, for the period from October 19th ,2022-to March 3rd ,2023.

#### **The Study Instruments:**

The study instrument is constructed according to extensive review of literatures and studies related to the study. The final study instrument consisted of two parts.

#### **Part I: Modifying Variables:**

This part composed of student's demographic characteristics consists of age, grade and family monthly income.

#### **Part II: Part II:**

Evaluation of High School Females' Cancer-preventive behavior-based Health Beliefs Model Domain. Perceived Barriers scale, it is consists of (7) items.

**Ethical Considerations:** After getting the approval of the council of the College of Nursing regarding the study, the researcher submitted description including the objectives and project of the study to the Central Statistical Organization in the Ministry of Planning as well as to general directorate of educational in Thi-Qar.

**Data Collection:** The collection of data is performed through the utilization of constructed self-report questionnaire. The data collection process has been carried out from October 19th ,2022 to March 3rd ,2023 each subject takes about (10-15) minutes during the interview with female students.

#### **Statistical Data Analysis Approach:**

##### **A. Descriptive Statistical Analysis approach**

1. Statistical tables "Frequencies and percentage"
2. Average of the scores M.s. and the overall average score (M±).
3. Standard Deviation test ±SD.
4. It uses a correlational coefficient "Cronbach alpha" used in estimating the internal consistency of the study tool.

##### **B. Inferential Statistical Analysis approach**

1. Analysis of Variance (ANOVA).
2. Post Hoc Testes.

**RESULT:****Table (1):** Evaluation of High School Females Students' Perception toward Cancer Prevention Behaviors related to related to Perceived Barriers.

No.	Items	Class	No.	%	M.s	Eva.
1	Quitting smoking is overwhelming	Agree	152	50.7	2.35	High
		Uncertain	102	34.0		
		Disagree	49	15.3		
2	Sun-block products are expensive and unaffordable	Agree	90	30.0	1.99	Moderate
		Uncertain	123	41.0		
		Disagree	87	29.0		
3	Radiation is unavoidable	Agree	64	21.3	2.14	Moderate
		Uncertain	131	43.7		
		Disagree	105	35.0		
4	Cultural-oriented factors are obstacles to healthy-lifestyle	Agree	167	55.7	1.64	Low
		Uncertain	73	24.3		
		Disagree	60	20.0		
5	Female-perception is a constrain to control weight	Agree	59	19.7	1.59	Low
		Uncertain	60	20.0		
		Disagree	181	60.3		
6	Female-lifestyle patterns influence on normal sleep	Agree	99	33.0	1.91	Moderate
		Uncertain	76	25.3		
		Disagree	125	41.7		
7	Female health-related awareness has an impact upon health-related decisions	Agree	180	60.0	2.41	High
		Uncertain	63	21.0		
		Disagree	57	19.0		

"Level of Evaluation (Low=1-1.66, Moderate=1.67-2.33, High=2.34-3)".

In terms of statistical mean, this table demonstrated that the high school female students expressed a moderate responses to perceived barriers of cancer-preventive behavior at all items of the scale ( $M=1.67-2.33$ ) except, the items number (1 and 7) the responses were high ( $M \geq 2.34$ ); and the items number (4, 5) the responses were low ( $M \leq 1.66$ ).

**Table (2):** Overall Evaluation of High School Females Students' Perception toward Cancer Prevention Behaviors related to Perceived Barriers

Perceived Barriers	No.	%	M ( $\pm$ SD)	Eva.
Low ( $M=8-13.33$ )	67	22.3	15.67 $\pm$ 3.06	Moderate
Moderate ( $M=13.34-18.66$ )	179	59.7		
High ( $M=18.67-24$ )	54	18.0		
<b>Total</b>	300	100.0		

M: Mean for total score, SD=Standard Deviation for total score

The results demonstrated that (59.7%) of the high school female students exhibited a moderate cancer-preventive behavior in terms of perceived barriers as described by moderate total mean scores, which is equal to 15.67.

## DISCUSSION

It is believed that the difference in the impact of sociodemographic characteristics among the Arab countries could reflect economic variations in the implementation of the relevant health policies for cancer control. In general, the priority cancers in the region could be controlled provisionally through preventive and screening strategies; thus recommending effective interventions to tackle lifestyle risk factors (19).

Data analytic regarded that, the average age was 17.16 ( $\pm 1.64$ ), with the age of 16 years having the highest percentage (23.7%). In terms of grade, most of them were in sixth grade (36%). With regard to the monthly income of the family, most of the female students expressed less than 300 thousand dinars (35%). Finally, that most families are of the nuclear type (49%).

This finding is supported by many previous studies with same line of current findings (20, 21, 22, and 23). Demographic characteristics play an important role in preventing cancer and may be influential, especially with those who are young and with limited income.

A comparative analysis with other demographic groups or regions could provide valuable insights into potential disparities in cancer-preventive behavior among high school female students. The scores of perceived barriers after among those who are diagnosed with cancer, which was in line with the results of a study conducted in the United States (US) (24).

The results of the quantitative analysis indicated that cancer patients were not more likely to have greater knowledge of cancer signs and symptoms than women without cancer. Analysis of the qualitative data revealed several psychological barriers to cancer screening including, common myths about cancer, misconceptions about cancer screening, the lack of spousal support for screening, cultural taboos regarding the gender of healthcare

providers, and the stigmatization of women with cancer (25).

The study shows that despite the high cancer incidence in Iraq, public awareness of cancer is still very poor and preventive behaviors are not satisfactory, which requires further attention in this field. Since perceived susceptibility, severity, benefits, cues to action and self-efficacy components were predictors of breast cancer preventive behaviors, designing and implementing prevention measures with an emphasis on high school female students increased sensitivity and promoting their skills to improve preventive behaviors is recommended.

## CONCLUSION

Cancer-preventive behaviours based Health Beliefs Model is not satisfactory among high school female students due to public awareness of breast cancer is still very poor. The use of an educational intervention based on a health belief model has a positive effect on cancer prevention behaviors among high school female students.

## RECOMMENDATION

Female students are a large and important group of community that could provide a great opportunity for health intervention strategies at the first line of prevention. Furthermore, they are better able to transfer and disseminate received information effectively to all the women at the community level.

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