

Evaluation of High School Females' Cancer-Preventive Behaviors Related to Perceived Severity

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ABSTRACT

Objectives: 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 Dhi-Qar Governorate.

Methodology: A descriptive correlational design was used to guide this study. The study included a probability simple random sample of 300 students.

Results: Finding show participants characteristics, the mean age is 17.16 (± 1.64), the age 16 years old were recorded the highest percentage (23.7%). In regards with the grade, most of participants were sixth grade (36%). Concerning family monthly income, female students expressed <300 thousand Dinars (35%). In the end with the type of family, from the findings that the most of families from nuclear type (49%).

Conclusions: 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.

Keywords: Evaluation, Cancer-preventive behaviors, Perceived susceptibility

INTRODUCTION

Cancer is a considerable health concern in the United States with nearly 600,000 deaths in 2016. Worldwide, cancer is a major health problem in terms of morbidity and mortality but is more in developing countries. In 2015, 8.8 million people died from cancer (about 16% of annual deaths worldwide) and 70% of these cancer-related deaths occur in developing countries^{1,2}. Health systems whether in developed or in developing countries like Iraq are burdened with different programs to control cancer. Breast cancer is first of the top ten malignancies in Iraq, accounting more than one-quarter of female cancers in the Iraqi³. The Health Belief Model (HBM) is psychological health behaviors change model developed in 1950 by some of United States (US) public health researchers with the purpose of improving human lifestyle toward healthy behaviors⁴⁻⁸. 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^{9,10}.

The HBM addresses the individuals perceptions of the threat posed by a health problem (susceptibility, severity), the benefits of avoiding the threat, and factors influencing the decision to act (barriers, cues to action, and self-efficacy). HBM was one of the first theories of health behavior, and remains one of the most widely recognized in the field¹¹⁻¹⁴. Cancer is a non-communicable disease-causing various ailment. 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 country¹⁵.

Around one-third of cancer deaths are due to the five leading behavioral and dietary risks: high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco use, and alcohol use. Some 30–50% of cancers can be prevented by avoiding risk factors and implementing existing evidence-based prevention strategies. Even after the appearance of cancer, adverse health effects can be alleviated by early diagnosis and timely treatment. In this respect, knowledge of cancer-related health information, including its consequences, risk factors, preventive strategies, and treatments is important, as such knowledge

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can improve disease management skills, including the ability to make informed medical decisions, adopt healthy lifestyles, and better adjust to the extremely stressful situations that follow on from diagnosis of the condition¹⁶⁻¹⁸.

METHOD

A descriptive design is carried out using the evaluation approach for the period from November 1st, 2022 to March 30th, 2023 to identify pregnancy health-promotive behaviors –based perceived susceptibility domain, a purposive “non-probability” sample of (300) students women who are selected for the purposes of data collection. The data collection process has been carried out from November 18th, 2022 to March 28th, 2023 Each subject takes about (10-15) minutes during the interview process. The study instrument is developed according to many previous studies relating to cancer-preventive behaviors –based health belief model (perceived susceptibility). Validity is concerned with the extent to which an instrument corresponds. Content validity: was presented to (10) arbitrators, including professors specialized in nursing and community. Arbitrators were requested to provide their views and suggestions on each of the items of the study questionnaire in term of its linguistic appropriateness, its association with the dimension of study variables it was assigned to and its suitability for the study population context. The accepted coefficients reliability of the used study questionnaire regarding internal consistency (Alpha Cronbach) is 0.70 (as shows in table 3-1) by findings calculation in which the instrument was effective, significant, and valid to the research topic. The statistical software for social science (SPSS) version 26 will be used to examine the data¹⁹⁻²⁵. The ethical approval was obtained from the Scientific Research Ethical Committee at College of Nursing-University of Baghdad, and written consent form for the participant consent before data collection.

RESULT

Table 1: Distribution of study sample by their Sociodemographic Variables (SDVs)

Socio-Demographic Variables	Classification	No.	%
Age (years)	15 years old	45	15.0
	16 years old	87	29.0
	17 years old	71	23.7
	18 years old	51	17.0
	>18 years old	46	15.3
	Total	300	100.0
Grade	17.16 ± 1.64		
	Fourth	85	28.3
	Fifth	107	35.7
	Sixth	108	36.0
Family Monthly Income	Total	300	100.0
	<300 thousand Dinars	105	35.0
	300-600 Thousand Dinars	83	27.7
	601-900 Thousand Dinars	67	22.3
	>900 thousand Dinars	45	15.0
Type of Family	Total	300	100.0
	Nuclear Family	147	49.0
	Extended Family	64	21.3
	Single Parent Family	47	15.7
	Blended Family	42	14.0

No.= Number: %= Percentage

Table 2: Cancer-preventive behavior related perceived severity

List	Perceived Severity Items	Class	No.	%	M.s	Eva.
1	Continues smoking can lead to acquire ovarian cancer	Disagree	101	33.7	1.96	Moderate
		Uncertain	110	36.7		
		Agree	89	29.7		
2	Continues exposure to carcinogen products can lead to acquire ovarian cancer	Disagree	47	15.7	2.42	High
		Uncertain	79	26.3		
		Agree	174	58.0		
3	Continues exposure to sun light (ultraviolet (UV) rays) can lead to acquire skin cancer	Disagree	76	25.3	1.98	Moderate
		Uncertain	153	51.0		
		Agree	71	23.7		
4	Continues exposure to radiation (e.g. x-rays and CT scans) can lead to acquire skin cancer	Disagree	81	27.0	1.97	Moderate
		Uncertain	147	49.0		
		Agree	72	24.0		
5	Not following healthy lifestyle can lead to acquire ovarian cancer ...	Disagree	67	22.3	2.24	Moderate
		Uncertain	93	31.0		
		Agree	140	46.7		
6	Un controlled body weight (overweight and obesity) can lead to acquire ovarian cancer	Disagree	189	63.0	1.56	Low
		Uncertain	53	17.7		
		Agree	58	19.3		
7	Continues disrupted sleep can lead to acquire brain cancer	Disagree	183	61.0	1.58	Low
		Uncertain	59	19.7		
		Agree	58	19.3		
8	Untreated infection and continues exposure to inflammation can lead to acquire cancer (ovarian cancer,.....)	Disagree	118	39.3	1.93	Moderate
		Uncertain	85	28.3		
		Agree	97	32.3		

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

Finding show participants characteristics, the mean age is 17.16 (± 1.64), the age 16 years old were recorded the highest percentage (23.7%). In regards with the grade, most of participants were sixth grade (36%). Concerning family monthly income, female students expressed <300 Thousand Dinars (35%). In the end with the type of family, from the findings that the most of families from nuclear type (49%) (Table 1).

In terms of statistical mean, this table demonstrated that the high school female students expressed a moderate response regards perceived severity of cancer-preventive behaviour at all items of the scale ($M=1.67-2.33$) except, the items number (2) the responses were high ($M\geq 2.34$); and the items number (6 and 7) the responses were low ($M\leq 1.66$) (Table 2).

Table 3: Overall cancer-preventive behavior related perceived severity

Perceived Severity	No.	%	M (\pm SD)
Low ($M=8-13.33$)	66	22.0	15.64 \pm 3.32
Moderate ($M=13.34-18.66$)	177	59.0	
High ($M=18.67-24$)	57	19.0	
Total	300	100.0	

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

The results demonstrated that (59%) of the high school female students exhibited a moderate cancer-preventive behavior in terms of perceived severity as described by moderate total mean scores, which is equal to 15.64 (Table 3).

DISCUSSION

By searching for the characteristics of the participants, the average age was 17.16 (± 1.64), with the age of 16 years having the highest percentage (23.7%). In terms of grade, most of the participants were in sixth grade (36%). With regard to the monthly income of the family, the female students expressed less than 300 thousand dinars (35%). Finally with the type of family, one of the results is that most families are of the nuclear type (49%). These results are expected because the study includes only one group (high school female students). This finding is supported by many previous studies with same line of current findings²⁶. Demographic characteristics play an important role in preventing cancer and may be influential, especially with those who are young and with limited income. The results demonstrated that (59%) of the high school female students exhibited a moderate cancer-preventive behavior in terms of perceived severity (table 4-24). These results come because the female students may not have the knowledge and awareness of the risks of cancer. This finding is supported by²⁷, demonstrated in their findings that the women with poor to moderate perceived severity of cancer screening and indicates a crucial need for formal educational programs to sensitize women regarding the importance of breast cancer screening. These educational programs should consider factors affecting breast cancer screening behaviors. Awareness of cancer plays an important role in motivating people to adopt healthy behaviour. The severity of chronic disease is affected by modifiable risk factors such as lack of physical activity, unhealthy diet, smoking and drinking alcohol. Hence, understanding the perceived severity of cancer depends on adequate knowledge of the risks and consequences of cancer²⁸. Based on above, the level of awareness and attitude of high school girls regarding breast cancer and screening methods is not acceptable. Therefore, it is recommended that educational programs be implemented to increase the awareness of students in schools, so that the number of screenings increases with the institutionalization of this information. Likewise, by transferring information through students to their families, the level of awareness in the whole society will hopefully increase as well²⁹. By the negative

results, respondents who perceived a high severity of breast cancer were more likely to be deals with cancer prevention behaviours. The perceived seriousness of breast cancer was also found to be a strong predictor of breast cancer screening among women in Turkey³⁰. In Northwest Iran showed that high perceived severity was a predictor of breast cancer screening behaviour³¹.

CONCLUSIONS

This study concluded that the 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.

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Competing Interest: None.

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