Knowledge on Breast Cancer and its Associated Factors among Female Adolescents of Secondary Level Schools of a Rural Municipality in Kaski, Nepal

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ABSTRACT

Introduction: Breast cancer, one of the most common cancers among female is in growing trend worldwide. Breast cancer is easily treatable if detected at early stage. This study aims to assess knowledge on breast cancer and its associated factors among female adolescents attending secondary level schools of a rural municipality in Kaski.

Methods: A cross-sectional study was conducted on 227 female students of six secondary schools. Self-administered questionnaire was used. Data was entered in Epi Data software and transferred into SPSS for analysis. Data were analysed using descriptive and inferential statistics

Results: Majority of respondents had heard (81.5%) about the breast cancer. Teachers were the major sources of information. Almost half (48.9%) of the respondents had inadequate knowledge on breast cancer. There was no association between sociodemographic variables and knowledge level of the respondents.

Conclusion: The study concludes that considerable proportion of female adolescents has inadequate knowledge of breast cancer. This study recommends that awareness programs regarding breast cancer and its preventive measure to be implemented in secondary schools targeting female adolescents.

Keywords: Breast cancer, Knowledge, Risk factors, Students

INTRODUCTION

Cancer is the uncontrolled growth of abnormal cells in the body. Globally, it is the second leading cause of death and breast cancer (BC) is the most common cancer among females.[1] Due to lack of awareness, breast cancer is often neglected and has become a major public health concern in developed and developing countries.[2] Compared to lung cancer, incidence of breast cancer is higher at young ages and the incidence increases with an age of approximately twice every 10 years until menopause.[3] It is the second leading cause of cancer related death in Asia. Breast cancer accounts for 5.6% of all invasive cancer in female and it is the most common cancer of adolescents and young adult women aged 15 to 39 years.[4]

Breast cancer is one of the major public health concerns in developing countries. As a developing country, Nepal is facing various difficulties and challenges to provide treatment to the patients suffering from breast cancer. The information concerning the number of women living with breast cancer is not well recorded. However, it places a major burden in Nepalese healthcare system.[5] In a Study, it was found that girls believe breast cancer might occur in teens and high-risk ones think themselves to be at risk of breast cancer.[6] Healthy behaviours and practices in early adolescents helps in preventing breast cancer as some of the behaviours are developed at this stage of life. Major proportion of population is constituted by adolescents, thus targeting adolescents is crucial for the success of any preventive efforts. Studies has shown that there is poor knowledge of breast cancer and its risk factors among secondary level school students.[7] The general objective of the study is to assess knowledge on breast cancer and its associated factors among secondary level female adolescents of Machhapuchhre Rural Municipality, Kaski district.

METHODS

A cross-sectional design was used to study the knowledge on breast cancer and its associated factors among secondary level female students of Machhapuchhre Rural Municipality, Kaski district located in the Gandaki Province of Nepal. Six schools from among 10 schools were selected randomly using lottery method. The total enumeration of secondary level (Class 9, 10, 11 and 12) female students was done who were present at data collection. The total number of female students was 227. Self-administered questionnaire was developed through review of literature.

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Pretesting of the questionnaire was done among 10 % sample in similar setting (Gaurishankhar Secondary School, Pokhara-25). Permission for data collection was obtained from the Principals of the selected schools. Informed consent was taken from each respondent before including them in the study. Data was collected using self-administered questionnaire in classroom setting. Following data collection, the respondents were compensated by a short information session for 30 minutes regarding the breast cancer. Collected data were entered in Epi-data and analyzed by using SPSS. The knowledge items were scored and those scoring equal to or above the median score of 5 were considered adequate knowledge and less than five as inadequate knowledge. Results are presented in tables in terms of frequency, percentage, mean and SD. Chi square test was used to assess the association of knowledge with socio demographic variables. P-values lower than 0.05 were considered statistically significant.

RESULTS

Out of 227 respondents, majority (72.2%) of them were between the age group of late adolescence of 15-19 years and remaining 27.8% belonged to young adolescence age group. The mean age± SD of respondents was 15.24±1.27. Majority (63.9) of the respondents belonged to disadvantaged ethnic group (i.e. Janajati, Dalit and Thakuri) and remaining (36.1%) belonged to advantaged ethnic group (i.e. Brahmin and Chettri). In regards to the educational status of the respondents' mothers, most (79.7%) of them were literate and remaining 20.3 were illiterate. Almost all (98.7%) of the respondents had no family history breast cancer. Almost all (98.7%) of the respondents had no family history of breast cancer.

Table 1 show that tobacco consumption among the respondents was negligible (1.8%) and alcohol consumption was zero. Most (77.5%) of the respondents were physically active.

Table 1: Lifestyle and Behavioral Variables of Respondents
n =227

Variables	Yes	No
	No. (%)	No. (%)
Tobacco consumption	4 (1.8)	223 (98.2)
Alcohol consumption	-	227 (100.0)
Physical activity	- 176 (77.5)	51 (22.5)
Family history of BC	3 (1.3)	224 (98.7)

Table 2 shows that most (81.5%) of the respondents had heard about breast cancer (BC) and among the respondents who had heard, majority (65.2%) received information from teachers followed by radio/television (39.2%) and so on.

Table 2: Hearing about BC and Source of Information among the Respondents   n=227

Variables	Number	Percent
Heard about breast cancer		
Yes	185	81.5
No	42	18.5
Source of information		
Relatives	36	15.9
Family members	48	21.1
Teachers	148	65.2
Radio/television	89	39.2
Newspaper	39	17.2
Books	87	38.3
Social media	54	23.8

*Multiple responses

Table 3 shows that most (80.6%) of the respondents knew that the constant irritation of a tight bra does not cause BC. Likewise majority (60.8%) of the respondents knew that the person with known risk factors for BC can get BC.

Table 3: Knowledge of Respondents on Risk Factors of BC   n=227

Statements	"True" Responses	
	No.	Percent
Early menarche increases the risk of BC	22	9.7
Delayed menopause has greater risk of BC	36	15.9
Person with family history of BC are at a higher risk for BC	57	25.1
Use of oral contraceptive increases risk of BC	93	41.0
The constant irritation of a tight bra does not cause BC	183	80.6
Being overweight increase the risk of BC	56	24.7
Person who has a known risk factors for BC can get BC	138	60.8
Some types of non-cancerous breast lumps increase risk of BC	112	49.3

[a]False statement changed to true form

Table 4 shows majority (63.4% and 57.7%) of respondents respectively knew that monthly check-up of breast and eating green vegetables and fruits helps in prevention of breast cancer whereas almost half (48.9%) of the respondents stated physical activity and avoiding tobacco and alcohol prevents breast cancer.

Table 4: Knowledge of the Respondents on Preventive Measures of BC   n =227

Statements	"True" Responses	
	Number	Percent
Breast feeding reduces the risk of BC	89	39.2
Physical activity reduces the risk of BC	102	44.9
Eating green vegetables and fruits reduce BC	131	57.7
Avoiding tobacco and alcohol reduces risk of BC	111	48.9
Check-up of breast once a month reduces risk of BC	144	63.4

Table 5: Knowledge of the Respondents on Symptoms of BC   n =227

Symptoms	Frequency	Percent
Painless lump in breast	64	28.2
Change in breast size	139	61.2
Weight loss	67	29.5
Discharge of puss from breast	132	58.1

*Multiple responses

Table 5 shows that the majority (61.2%) of the respondents had knowledge that change in breast size is the symptom of breast cancer followed by discharge of pus from breast (58.1%), weight loss (29.5%), and painless lump in breast (28.2).

Table 6 shows no significant association of the socio-demographic variables with knowledge level of respondents at 0.05 level of significance.

Table 6: Association of Socio-demographic Variables with Level of Knowledge of the Respondents

Socio-demographic variables	Knowledge level[a]		χ2 value	p value
	Adequate No. (%)	Inadequate No. (%)		
Age group				
Early adolescents	30 (47.6)	33 (52.4)	0.423	0.515
Late adolescents	86 (52.4)	78 (47.6)		
Ethnicity				
Advantaged	41 (50.0)	41 (50.0)	0.62	0.803
Disadvantaged	75 (51.7)	70 (48.3)		
Mothers' education status				
Literate	20 (43.5)	26 (56.5)	1.342	0.247
Illiterate	96 (53.0)	85 (47.0)		
Family history of BC				
Yes	3 (100.0)	-	0.247	0.088
No	113 (50.4)	111 (49.6)		

Percent calculated in row total; *Fisher exact test

DISCUSSION

This study showed that all of the respondents were found to be non-consumer of alcohol and 1.8% were current tobacco users whereas the study conducted by Koirala B et.al. in Kaski, Nepal has the finding of 70.4% of female consuming alcohol and 30.4% current tobacco user.[9]

This study showed that, most (81.5%) of respondents had heard about breast cancer whereas a study conducted among female senior school students in the Nigeria showed that all the respondents had heard about breast cancer.[8] This result implies that students have at least heard about the breast cancer, which is understandable due to the rising awareness and globalization brought across by various source of communication. In this study, most (80.6%) of respondents correctly reported that tight bra does not lead to breast cancer. Likewise, 60.8% stated that person with known risk factor can develop breast cancer and 49.3% of the respondents correctly answered that increased risk of breast cancer is associated with non-cancerous breast lump. This finding is somewhat similar to a study conducted in Western Nepal by Bhandari et.al.[7] in which 42.8 % knew about it.

At the same time 28.2% of the respondents knew that breast mass (lump) is one of the symptoms of breast cancer and 58.1% knew about the discharge. These findings are supported by a study conducted by Akhtari-Zavare et.al, which stated that 75.5% of the respondents knew breast lump as a symptom and 47.6% correctly answered the question about the discharge from breast.[9] The results may

slightly different because this study was focused on the limited number secondary level female students whereas the study conducted by Akhtari-Zavare et al. has focus on wide number of undergraduate female students[9.]

This study found no statistically significant association of any of socio-demographic variables with level of knowledge of the respondents regarding BC. Whereas, a study conducted in a group of 600 healthy women (aged 18 to 88 years) in Poland in a private gynaecological practice showed significant difference between knowledge on BC and family history of BC. This difference may be due to small sample size or due to the lack of comprehensive breast health awareness among the adolescents in the current study.

CONCLUSION
The findings of the current study conclude that half of the respondents have the adequate knowledge of breast cancer. The knowledge level on risk factors and clinical features were found to be poor whereas there was adequate knowledge on preventive measures. Organizing school health program based on breast cancer can enhance the knowledge of breast cancer among the students and further intervention studies could be helpful.

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