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Awareness about Female Cancers among Healthcare Workers and School teachers in Tobruk City: A KAP study

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Abstract

Background: Female cancers, such as breast, ovarian, cervical, and endometrial cancers, are major global health issues due to their prevalence and the challenges in early detection and treatment, particularly in developing regions. This study investigates the awareness and attitudes towards female cancers among healthcare workers and schoolteachers in Tobruk City, Libya, with a focus on how literacy affects cervical cancer screening rates.

Methods: A cross-sectional KAP descriptive study was conducted among working women in Tobruk using a pretested close-ended self-administered questionnaire in January 2024.

Results: Significant differences in cancer knowledge, attitude, and practice were observed between healthcare workers and schoolteachers. Healthcare workers had a higher awareness that obesity increases breast cancer risk (71% vs. 45%). Both groups showed a good understanding of the hereditary nature and mortality risk of breast cancer. Positive attitudes towards cancer prevention were common, yet actual preventive practices, such as HPV vaccination and monthly breast self-examinations, were low across all groups.

Conclusion: The level of cancer awareness was fairly good among working women. which reflected their educational status. Attitude and practice varied among the different occupations which did not correlate to educational level.

Ethical Consideration: The others assert that all procedures contributing to this work comply with the ethical standards of the endorsement of the research center of the university.

Keywords

Knowledge, attitude, practice, cancer cervix, Breast Self-Examination (BSE).

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1. Introduction:

Female cancers, including breast, ovarian, cervical, and endometrial cancers, are significant global het concerns. These cancers are particularly problematic to their varying incidence rates and challenges in early detection and treatment.

Ovarian cancer is the fifth leading cause of death from cancer in women aged 35-74 Ovarian cancer is one of the most severe types of cancer. The primary issue of ovarian cancer is that it is considered a silent disease as early detection is viewed as a challenge [(1)].

In the United States, ovarian cancer accounts for 4% of all cancers in women and is the fifth most common cause of cancer death among women. The American Cancer Society estimates that about 23,300 new cases and 13,900 deaths from ovarian cancer occur in the United States each year [(2)], In Libya, the number of cancer cases increased from 12.7 in 2008 to 14.9 million in 2012.

The ovarian cancer is considered the most commonly diagnosed cancer among women worldwide, while in Libya it represents 4.6% of cancer affecting Libyan women according to the International Agency for Research on Cancer 2018. Cervical cancer is one of the most common types of cancer among women caused mainly by the Human Papilloma Virus (HPV) [(3)], In countries where there are no routine cervical cancer screening services, women seek health care after they develop the disease manifestations).

More than 80% of the cases in sub- Saharan Africa are detected at a late stage decreasing the chance of survival [(4)] Screening programs that have treatment for a positive diagnosis have proved to be a success [(5)], However, the uptake of cervical cancer screening is very low (19.8%) and the absence of disease symptoms was often mentioned for not seeking screening services early on (6.7), Libya has a population of 2.21 million women ages 15 years and older who are at risk of developing cervical cancer. Cervical cancer ranks as the third most frequent cancer among women in Libya and the seventh most frequent cancer among women between 15 and 44 years of age [(8)].

Data is not yet available on the HPV burden in the general population of Libya. However, in the northern Africa region 2.7% of women in the general population are estimated to harbor cervical HPV infection at a given time, and 78.9% of invasive cervical cancers are attributed to HPVs [(9)] Current estimates indicate that in Libya every year 241 women are diagnosed with cervical cancer and 95 die from the disease [(10)] Early detection and treatment of precancerous lesions in Libya would lead to a significant reduction of the burden of disease.

Breast cancer is the main health concern among women worldwide. In developed and developing countries it has been indicated that breast cancer is considered the second leading ciftise of cancer death, Studies have shown that its incident and mortality rate are on the increase globally [(12),] Cancer statistics showed that breast cancer incidence is rising at a faster rate in the population of developing countries [(13)].

A number of studies have shown that breast cancer is the most common malignancy and is the first killer diseases among women beyond the age of 45 years [14], In Arabc ountries, studies are not comprehensive. In Morocco, the most frequently occurring cancer in females is cervical uterine neoplasia (35%) followed by Breast cancer (22.3%) which is also diagnosed at advanced stages [15] In Egypt, approximately 35% of all female cancers are breast cancer [16].

Data collected over the past five years from the oncology department in Tobruk provides insights into the local incidence of these cancers. The department reported a total of 111 new female cancer cases in 2018, 106 in 2019, 85 in 2020, 110 in 2021. and 124 in 2022. The highest incidence was seen for Breast cancer, with 405 new cases recorded over the period of 5 years, followed by endometrial cancer (68 cases), ovarian cancer (47 cases), and cervical cancer (16 cases).

This study explored the awareness and attitudes of healthcare workers and school teachers in Tobruk City towards these female cancers and examine the role of literacy status on cervical cancer screening uptake.

This research aimed to fill gaps in understanding local perceptions and experiences regarding female cancers, with implications for improving early detection, treatment, and support strategies in Tobruk City.

2. Methodology:

A descriptive cross-sectional study was conducted among healthcare workers and school teachers to compare baseline knowledge and attitudes toward female cancers, mainly, ovarian, breast, and cervical cancers. An 18-question pretested self-administered questionnaire was used. The questionnaire contained 10 questions pertaining to knowledge aspect about female cancers breast, cervix, and ovarian cancers, and attitude towards various female cancers was assessed based on answers to5 questions, answered as Yes No, or Don't Know. 3 questions were related to practice regarding female cancer prevention.

In all 100 medical personnel and 99 school teachers and employees answered the self-administered questionnaire in their workplace. Data was entered into SPSS software for data analysis. Results are presented as percentages, proportions, and Chi-square values.

3. Results:

The study revealed several key findings about the knowledge and attitudes towards female cancers among the participants.

I. Knowledge about Cancer:

Table 1. Correct Knowledge about various female cancers among working women

Knowledge about cancer	Medical centre N=99			School N=100			Chi square
	Yes	no	DK	Yes	no	DK	
Does obesity increase the incidence of breast cancer?	71	25	03	45	54	01	17.4*
Can breast cancer be hereditary?	87	11	01	79	21	00	4.5
Can breast cancer cause death?	92	07	00	79	21	00	7.9*
Can too many births lead to cervical cancer?	76	21	02	46	54	00	23.8
Is cervical cancer caused by a viral infection?	55	42	02	42	57	01	4.3
Is there a preventive vaccination for cervical cancer?	69	31	00	67	31	02	2.0
Do you think that ovarian cancer is widespread in Libya?	85	14	00	81	17	02	2.3
Can ovarian cancer lead to infertility?	71	25	03	68	29	03	0.3
Can ovarian cancer be treated with radiotherapy?	13	83	03	42	57	01	21.1*
Is there a preventive vaccination for ovarian cancer?	80	18	01	78	21	01	0.25

DK –don't know * denotes significant value

A significant proportion of healthcare workers (71%) were aware that obesity increases the incidence of breast cancer, compared to only 45% of school teachers. The chi-square value of 17,4 indicates a significant difference if knowledge between the two groups. Knowledge about the hereditary nature of breast cancer was relatively good among both groups, with 87% of healthcare workers and 79% of schoolteachers acknowledging this fact. There was a high awareness that breast cancer can cause death, with 92% of healthcare workers and 79% of schoolteachers affirming this.

Awareness that too many births can lead to cervical cancer was significantly better among healthcare workers (76%) than schoolteachers (46%). Knowledge about the viral cause of cervical cancer was average, with 55% of healthcare workers and 42% of schoolteachers being aware.

II. Attitudes towards Cancer Prevention:

Table 2. Participants having a positive attitude toward cancer prevention and screening

Positive Attitude	Doctors (%) N=61	Nurse (%) N=38	Teacher (%) N=95	Non-teaching staff (%) n=05	Total (%) N=199
Are you ready to lose weight to prevent disease?	59(97)	36(95)	90(95)	05	190(95)
Are you ready to have a mammogram breast exam?	55(90)	30(79)	77(81)	05	167(84)
willing for PAP smear	43(70)	26(68)	64(67)	03(60)	136(68)
Do you advise your family and friends to take a Pap smear	58(95)	32(84)	75(79)	04(80)	162(81)
Should obese women be examined periodically for cancer in women?	55(90)	25(66)	74(78)	04(80)	158(79)

A positive attitude towards losing weight to prevent disease was seen, with 97% of doctors, 95% of nurses, and 95% of school teachers being willing to take this step.

Willingness to undergo mammogram breast exams was good, with 90% of doctors, 79% of nurses, and 81% of school teachers agreeing to this screening method Approximately 70% of doctors and nurses and 67% of schoolteachers were willing to give vaginal samples as a periodic examination to prevent cervical cancer. Advising family and friends to take a vaginal sample for early detection of cervical cancer was agreed to by, 95% of lady doctors, 84% of nurses, and 79% of female schoolteachers supporting this idea.

The belief that obese women should be examined periodically for diseases and cancers was widely held, with 90% of doctors, 66% of nurses, and 78% of school teachers agreeing.

Awareness of the preventive vaccination for cervical cancer was similar between the groups, with 69% of healthcare workers and 67% of schoolteachers acknowledging its existence. Most respondents believed that ovarian cancer is widespread in Libya, with 85% of healthcare workers and 81% of schoolteachers agreeing.

Knowledge about radiotherapy as a treatment option for ovarian cancer was significantly higher among schoolteachers (42%) compared to healthcare workers (13%). On the contrary, the majority of respondents in both groups said ovarian cancer was vaccine preventable.

III. Practices of Cancer Prevention:

Table 3. The practice of cancer prevention by working women:

Practices for cancer prevention	Doctors (%) N=61	Nurse (%) N=38	Teacher (%) N=95	Non-teaching staff (%) N=05	Total (%) 199
Have you ever taken a vaccine against the virus that causes cervical cancer?	18(30)	04(11)	06(6)	01(20)	29(15)
Have you ever had any screening for gynecological cancers (breast, cervix, etc?) During the previous five years?	11(18)	09(24)	19(20)	00	39(20)
Do you perform BSE every month?	23(38)	08(22)	19(20)	02(40)	52(26)

Only 30% of doctors, 11% of nurses, and 6% of schoolteachers had taken a vaccine against the virus causing cervical cancer. Screening for gynecological cancers during the previous five years was low, with only 18% of doctors, 24% of nurses, and 20% of schoolteachers having undergone any screening. Monthly breast self-examinations were performed by 38% of doctors, 22% of nurses, and 20% of schoolteachers (table 3).

4. Discussion:

The findings underscore considerable disparities in understanding and practices related to female cancer prevention among healthcare providers and schoolteachers in Tobruk, prompting essential inquiries into the underlying systemic factors that contribute to these discrepancies. Notably, there is a significant awareness gap, especially between employees in medical centers and those in educational settings. For example, staff at medical centers showed a much higher comprehension of the link between obesity and the elevated risk of breast cancer compared to schoolteachers, while the latter group was more aware of the treatments available for ovarian cancer through radiotherapy. A study by Sachdeva et al. revealed statistically significant differences in knowledge, attitudes, practices, and overall knowledge, attitude, and practice (KAP) scores among different occupational categories, indicating that healthcare professionals generally possess superior knowledge than their peers in other fields. This current study reflects a favorable attitude toward cancer prevention, with a substantial proportion of participants across all categories expressing a desire to lose weight, obtain mammograms, and promote regular vaginal examinations for cancer screening. However, it is crucial to investigate why this positive attitude has not been consistently realized in practice. Prior research suggests that both post-graduate and undergraduate participants displayed similar high scores in attitude assessments, which surpassed those of individuals without formal education. Consequently, while a higher level of education seems to correlate with greater knowledge and more positive attitudes toward

screening, it is important to acknowledge that knowledge by itself does not ensure action. The findings reveal that actual practices, including HPV vaccination and routine breast self-examinations (BSE), were rarely undertaken among all professional female groups, which is alarming. Sachdeva et al. reported no statistically significant differences in practice scores across various educational levels, which points to a systemic rather than an individual issue. This situation calls for informed policy development to address the economic and social repercussions of female cancers. Additionally, the increasing focus on mental health policy development by governments, due to the significant societal effects of mental disorders, suggests that a comprehensive approach that incorporates mental health considerations could greatly enhance cancer awareness and educational initiatives in Tobruk (18). Overall, the findings highlight the pressing need for targeted educational interventions that not only close the existing knowledge gaps but also promote the adoption of preventive measures, tackling the concerning disconnect between positive attitudes and actual engagement in initiatives such as HPV vaccination and BSE (18), (19).

5. Conclusion:

To conclude, the awareness about cervical cancer, its risk factors and the methods of prevention is average among working women in Tobruk. Even among the women who are aware of some of these factors, there is a gap between the knowledge and actual practices. One of the crucial reasons for the low level of awareness is the fact that there is no national cancer screening program in the country. Since there is no program there is no concerted effort to make the women aware of the disease or its prevention. This is in spite of the fact that the exposure of women to the risk factors of cervical and breast cancer is high and the disease is prevalent in the country

This study highlights the urgent need for targeted educational campaigns and interventions to improve knowledge and practices regarding female cancer prevention among both healthcare workers and schoolteachers in Tobruk. Enhanced awareness and proactive health behaviors could significantly reduce the burden of female cancers in the region.

6. Recommendations:

✓ Conduct female cancer awareness campaigns routinely among all female age groups.
✓ A repeat study should be conducted two months after a planned health education program.
✓ Further studies are needed with targeting groups of the population.
✓ The vaccination coverage for HPV needs to be improved.

Conflict of interest:

None declared

Limitations:

This study was conducted over a small period of time and hence a larger sample could not be obtained.

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