



ASSESSMENT OF THE KNOWLEDGE , ATTITUDE AND PRACTICE OF THE PARAMEDICAL HEALTH CARE STAFFS TOWARDS CERVICAL CANCER AND ITS SCREENING OF MATERNITY AND CHILD HEALTH CARE HOSPITAL (MCH) OF AL AHSA REGION OF SAUDI ARABIA

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ABSTRACT

Background: Cervical cancer which usually happens in the middle aged women is a preventable condition if appropriate screening and prophylactic strategies are employed properly. The cervical cancer (CC) is the 13th most frequent cancer and the 6th most frequent cancer between 15 and 44 years of age among the Saudi women, the incidence of which can be effectively reduced further by creating more awareness among the general population regarding this condition. The paramedics are the front liner in propagating the knowledge and creating awareness among the general population. The present study was to assess the knowledge, attitude and practices of cervical cancer and its screening among the female paramedics of Maternity and Child Hospital (MCH) of Al Ahsa region of Saudi Arabia.

Material and methods: We conducted a cross-sectional survey on female paramedics at MCH, Al Ahsa. The data were collected using predesigned, tested and self-administered questionnaires on knowledge, attitude and Practices of cervical cancer. All the data were entered in the SPSS 21 and analyzed. The data were described using descriptive statistics including percentage, frequencies, mean and standard deviation.

Results: Of the total 130 questionnaires distributed to all the Para medics, 115 were returned making a response rate of 88%. The mean age (SD) of the participants was 38.20 (\pm 7.91) years with range (20 to 53 years). Most of them (84.3%) were married. The result showed that only 20% of the participants had good knowledge of prevalence, causes, risks, symptoms treatment and prevention of the cervical cancer while around twenty five percent had fair knowledge about cervical cancer and its screening. The mean score of participants' attitude was 7.15 \pm 1.74(SD) out of total score of 10 with a range of (2-10). More than ninety percent of the participants were found to be having positive attitude towards cervical cancer prevention. More than ninety six percent of the participants in our study believed that they should go for cervical screening since it helps in the prevention of cervical cancer. More than fifty percent of our study participants were not aware of the fact that HPV vaccination is helpful in preventing the cervical cancer. As far as practice towards cervical cancer and its screening is concerned our study showed that only 3.4 percent of the participant was vaccinated against HPV. Likewise only 6.1% of the participants were screened for cervical cancer. Low number of vaccination and deficient screening for cervical cancer among the participants are a matter of concern in our study. The majority of participants in our study had not attended any seminar and conferences on cervical cancer nor were they involved in cervical awareness programme. This necessitates arranging such programme to enhance their knowledge of cervical cancer.

Conclusion: Though our study showed poor knowledge of cervical cancer among the participants but their attitude towards this condition was found to be positive. In spite of the fact that most of the participants were aware of the importance of Pap smear test, but less than ten percent of them were screened for Pap smear test. This study highlights the need for seminars, symposium and awareness programme for comprehensive education on cervical cancer and its screening for the health care staffs of MCH hospital Al Ahsa.

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INTRODUCTION

Cervical carcinoma is considered as the fourth most common cancer among the women population worldwide.^[1] With a combined worldwide incidence of one million cases annually , this cancer is only second to breast cancer posing a major public health problem. WHO statistics (2012) showed worldwide incidence of cervical cancer to be 7.5% with a mortality rate of 7.5% and a 5 year cervical cancer prevalence rate of 9%.^[1] Though the prevalence of cervical cancer has reduced significantly in many developed countries due to

better preventive measures and vaccination .However it's not a major public health problem in Saudi Arabia since it accounts only 2.5% of all new cases of detected cancer, but it's still imperative to prevent it further by very effective available preventive measures.^[2,3] The statistics (2007) shows that Cervical cancer (CC) is the 13th most frequent cancer and the 6th most frequent cancer between 15 and 44 years of age among the Saudi women.^[3] More or less the same situation is prevalent in the neighboring gulf country Oman which was placed second after Qatar with an incidence of 7.8 per population of 100,000 women.^[4] The cervical cancer which

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usually happens in the middle aged women and the risk increases with age. The most important risk factor for developing cervical carcinoma is Human papilloma virus (HPV) infection. Other risk factors include female sexually active at younger age, having many sexual partners, having one partner who is considered high risk (someone infected HPV or who has multiple sex partners, smokers, chlamydia infection, long term use of contraceptives, having multiple full term pregnancies, younger age (less than 20 years) first full term pregnancy, certain drugs such as DES (Diethylstilbestrol) and Family history of cervical cancer.^[5]

In the early stage the cervical cancer usually does not cause any symptom and is diagnosed only by screening test but in its later stage symptoms may vary from vaginal bleeding between periods, after sex and after menopause. Other symptoms may be watery, bloody discharge that may be heavy and have foul smell. There may be pelvic pain during intercourse.^[6]

Treatment of cervical cancer depends on the stage of cancer. The early stage of cervical cancer can be treated by surgical removal of either cervical part or whole of uterus. However in the late stage when there is metastasis the options left are either radiation therapy or chemotherapy.^[7] Early diagnosis and prompt treatment can drastically reduce the maternal mortality due to cervical cancer. But it's a matter of concern that most of the cases in Saudi Arabia have been diagnosed at its advanced stages with adverse prognosis. A simple screening by Pap smear test or visual inspection with acetic acid (VIA) have been very effective screening programme globally which helped in reducing the incidence of cervical cancer incidence and mortality rate by 70%.^[8] Cervical cancer can well be prevented by HPV vaccination, regular pap smear test, practicing safe sex and by cessation of smoking.^[9]

The nursing staffs and paramedics are the front liner in providing the health care to the patients. They have been utilized for creating awareness about the diseases among the patients attending the hospital clinics and the ward where patients spend some time for their treatment. However it is important to know the knowledge attitude and practice towards the disease among the nursing staffs and paramedics themselves and to correct any misinformation about the disease by proper training and seminar. This will help in the correct propagation of the disease information among Saudi females since WHO survey (2008/2009) has found that only 7.6% of Saudi women in the 25 to 49 year age group had a Pap smear test done.^[10] To our best of our knowledge, no such study has been done in Al Ahsa of Saudi Arabia and this was the first study in this regard

MATERIALS AND METHODS

This was a cross sectional survey conducted in Maternity and Child Hospital (MCH) of Al Ahsa region of Saudi Arabia during the month January and February month of the year 2020. All the female paramedics were the study population. The questionnaires for this study was developed based on previous studies of the same nature and a pilot study on 5 participants was done before starting the study to test the validity and reliability. The questionnaires consisted of four sections. Section 1 was meant to record the demographic information about the participant. The demographic information consisted of age, marital status, age of marriage (if married), education level, occupation, pregnancy and history of any family member suffering from cervical cancer. Section

2 tested the knowledge of cervical cancer. Participants' knowledge of cervical cancer was assessed by listing ten questions related to prevalence of cervical cancer in Saudi Arabia, source of information regarding cervical cancer, risk factors of cervical cancer, signs and symptoms of cervical cancer, prevention, treatment and ways of screening of cervical cancer. In few questions the participants were asked to choose one of the three options 'yes' 'No' or 'don't know' while other questions were provided one or more correct answers to tick. For every correct answer or affirmative knowledge question was awarded '2' partially correct with '1' while wrong answer was awarded '0'. A total knowledge score for all the items of knowledge section was computed by adding up (maximum score of 20). The total score was then categorized as poor knowledge (score of 0-9), fair knowledge (score of 10-15), and good knowledge (16-20). Participants' attitude was assessed by mixtures of questions which consisted of few in 'Yes' and 'No' while few were to select the correct answer and rest were to rate the statements on a 5-point Likert scale. The participants' attitude was tested with 5 questions. Such as who should get tested for cervical cancer, Cervical cancer is not transmitted from one person to other, Screening helps in the prevention of cervical cancer, HPV vaccination can prevent cervical cancer and do you ever discuss with your partner and with your parents about the cervical cancer. The answer with positive attitude was awarded '2' points while with negative attitude was awarded '0' point. Participants' practices were assessed by asking specific questions regarding cervical cancer and its screening. Participants were asked whether they were vaccinated and screened for cervical cancer, whether they are willing for Pap smear test and if not what were the reasons. They were also asked about their participation in the cervical cancer awareness programme and attending the lectures and seminar on cervical cancer. Consent was taken from the participating in this survey before distributing the questionnaires. This study was approved by the ethical committee at MCH hospital, Al Ahsa, Saudi Arabia.

All the data were entered in the SPSS 21 and analyzed. The data were described using descriptive statistics including percentage, frequencies, mean and standard deviation.

RESULTS

Sociodemographic Characteristics

Of the total 130 questionnaires distributed to all the Paramedics, 115 were returned making a response rate of 88%. The mean age (SD) of the participants was 38.20 (\pm 7.91) years with range (20 to 53 years). Most of them (84.3%) were married while 12.2% were divorced and only 3.5% were unmarried. More than half of the participants were having tertiary education (61.7%) while 21.7% were having technical education and only 16.5% were secondary educated. Mean age of marriage 23.63 (\pm 6.63) years. Seventeen percent of the participants reported family history of cervical cancer. The details of the socio demographic character of the participants are shown in table 1.

Table 1 Showing the demographic characteristics of the participants

| variable | Number(N) | Percentage (%) |
|----------------------------------|--------------------------|----------------|
| Age | | |
| Mean | 36.20 yrs. | |
| SD± | 7.91 (Range 20-53 years) | |
| Marital status | | |
| Unmarried | 4 | 3.5 |
| Married | 97 | 84.3 |
| Divorced | 14 | 12.2 |
| Total | 115 | 100 |
| Educational qualification | | |
| Primary | 0 | 0 |
| Secondary | 19 | 16.5 |
| Tertiary | 71 | 61.7 |
| Technical | 25 | 21.8 |
| Total | 115 | 100 |
| Occupation | | |
| Nurse | 28 | 24.4 |
| Midwife | 50 | 43.5 |
| IT sector | 7 | 6.1 |
| Pharmacist | 9 | 7.8 |
| Lab Technician | 12 | 10.4 |
| OR Technician | 9 | 7.8 |
| Total | 115 | 100 |
| Age at marriage | | |
| Mean age | 22.63SD(± 6.63) yrs. | |
| Family member affected by corona | | |
| Yes | 20 | 17.4 |
| No | 95 | 82.6 |
| Total | 115 | 100 |

Knowledge about the cervical cancer

Eighty six percent of the participants confirmed that they heard about the cervical cancer. The source of information among them had been print media 20 %,(N=20) seminar 40 % (N=40), TV 20 % (N=20), Journal 10 % (N=10) and family and relative 10 % (N=10). More than fifty percent (58.3%) of the participants had wrong information that cervical cancer is the most common female reproductive cancer worldwide. Only 7.8% of the participant knew the correct prevalence rate of cervical cancer in Saudi Arabia. More than 72% of the participant answered that all the women are at risk of developing cervical cancer. Fifty three percent of the participants correctly answered the symptom of cervical cancer. However, only 30.4% of the participants gave correct answer on the risk factors of cervical cancer. Only 28.7% of the participant correctly answered that both Pap smear test and VIA are the screening test for detecting Cervical cancer while 33% answered Pap smear test and 27.8% answered VIA test as the screening test for detecting cervical cancer. More than forty eight percent of the participants correctly answered the treatment of cervical cancer which is surgery. The details of the knowledge response are shown in table 2.

Table 2 Showing the response on knowledge questions

| Knowledge questions | Response | Number | Percentage |
|---|----------------------|--------|------------|
| Did you hear about Cervical Cancer? | Yes | 100 | 86 |
| | No | 15 | 14 |
| | 1.Print Media | 20 | 20 |
| If Yes | 2.Seminar | 40 | 40 |
| | 3.Tv | 20 | 20 |
| | 4.Journals | 10 | 10 |
| What was the source of information? | 5.Family and friends | 10 | 10 |
| | Yes | 67 | 58.3 |
| Cervical Cancer is the most common female reproductive cancer worldwide | No | 48 | 41.7 |
| | 2.5% | 9 | 7.8 |
| Prevalence of Cervical cancer in Saudi Arabia | 5% | 20 | 17.4 |
| | 8% | 42 | 36.5 |

| | | | |
|---|---------------------------------------|----|-------|
| | 9% | 14 | 12.2 |
| | I don't know | 30 | 26.1 |
| All women are at risk of developing cervical cancer | Yes | 67 | 58.3 |
| | No | 48 | 41.7 |
| Symptoms of cervical cancer includes | Abnormal vaginal bleeding | 21 | 18.26 |
| | Bleeding after sexual intercourse | 16 | 13.91 |
| Which are the risk factors of cervical cancer? | Bleeding after menopause | 17 | 14.78 |
| | Any of the above | 61 | 53.05 |
| How can we prevent cervical cancer | HPV infection STD | 17 | 14.5 |
| | Multiple sex partners | 21 | 18.3 |
| Screening test for cervical cancer | Early age of coitus | 14 | 12 |
| | Prolonged use of contraceptive pills | 12 | 10.3 |
| Treatment available for cervical cancer | Multiple pregnancies | 8 | 6.8 |
| | All of the above | 5 | 4.7 |
| Did not answer | None of the above | 35 | 30.4 |
| | By Pap smear and other screening test | 3 | 3 |
| Pap smear | Both Pap smear and VIA | 35 | 30.43 |
| | VIA | 80 | 69.57 |
| Both Pap smear and VIA | Other | 38 | 33 |
| | Drug therapy | 35 | 30.4 |
| Surgery and radiotherapy | Radiotherapy | 33 | 28.7 |
| | Surgery | 9 | 7.8 |
| Strongly disagree | Surgery and radiotherapy | 45 | 39.13 |
| | Disagree | 6 | 5.22 |
| Strongly disagree | Disagree | 56 | 48.69 |
| | Strongly disagree | 8 | 6.95 |

Response on attitude questions

Regarding screening guideline more than eighty six percent of the participants (N=99) answered that all women should be screened for cervical cancer. When asked whether cervical cancer is not transmitted from person to person more than eighty eight percent (N=102) of the participant agreed while 4.3% of the participants strongly agreed with this statement. Similarly ninety three percent (N=107) of the participants agreed with the statement that screening helps in the prevention of cervical cancer. More than fifty two percent of the participants disagreed with the statement that HPV vaccination can prevent cervical cancer. As far as communication with partner and family members are concerned, more than seventy percent of the participants never discussed with their partner or family member about the cervical cancer. The details of the response on attitude questions are shown in table 3.

Table 3 Showing the response on attitude questions

| Question variable | Answer | Number | Percentage |
|---|-----------------------|--------|------------|
| Whom among us should get tested for cervical cancer | Married | 7 | 6.1 |
| | Unmarried | 9 | 7.8 |
| Cervical cancer is not transmitted from one | Any female(age 25-64) | 89 | 86.1 |
| | Disagree | 4 | 3.5 |
| Strongly disagree | Strongly disagree | 4 | 3.5 |

| | | | |
|--|-------------------|-----|------|
| person to other | Neutral | 0 | 0 |
| | Agree | 102 | 88.7 |
| | Strongly agree | 5 | 4.3 |
| We all should go for cervical screening since screening helps in the prevention of cervical cancer | Disagree | 3 | 2.6 |
| | Strongly disagree | 1 | 0.9 |
| | Neutral | 0 | 0 |
| | Agree | 107 | 93 |
| | Strongly agree | 4 | 3.5 |
| HPV vaccination can prevent cervical cancer | Disagree | 54 | 47 |
| | Strongly disagree | 6 | 5.2 |
| | Neutral | 0 | 0 |
| | Agree | 52 | 45.2 |
| | Strongly agree | 3 | 2.6 |
| Did you ever discuss with your partner and with family member about the cervical cancer | Yes | 31 | 27 |
| | No | 84 | 73 |

Response on the practice questions

Only 3.4 percent of the participant was vaccinated against HPV and the same was true with the screening for cervical cancer. Only 6.1% of the participant answered that they were screened for cervical cancer. When asked whether they will go for Pap smear test ,more than fifty eight percent(N=67) of the participants showed their will to go for it .while those who refused were due to fear of procedure (9.6%,N=11) , fear of bad result(N=25), participant did not believe that they are sick(N=6) No time to go for this test(N=6).When asked about their involvement in the cervical cancer awareness programme eighty nine percent of the participant answered in negative. Likewise more than eighty eight percent of the participants replied 'No'. The details of the practice response are shown in table 4.

Table 4 Showing the responses on practice questions

| Question | Answer | Percentage | Number |
|--|-------------------------------------|------------|--------|
| Are you vaccinated against cervical cancer | Yes | 4 | 3.5 |
| | No | 111 | 96.5 |
| Have you ever screened for cervical cancer | Yes | 7 | 6.1 |
| | No | 93.9 | 108 |
| | Yes | 67 | 58.3 |
| | No | 48 | 41.7 |
| Are you willing to go for pap smear test | Fear of Procedure | 18 | 37.5 |
| | Fear of bad result | 15 | 31.25 |
| Cause of not willing to go for Pap smear test | I don't believe that I am sick | 4 | 8.33 |
| | Discouraged by parents and relative | 3 | 6.26 |
| | No time | 8 | 16.66 |
| Were you ever involved in cervical cancer awareness programme among the patients attending your hospital | Yes | 12 | 10.5 |
| | No | 103 | 89.5 |
| Have you ever attended the lecture and seminar on cervical cancer | Yes | 40 | 34.78 |
| | No | 75 | 65.22 |

The mean score of knowledge was 10.35±3.82 (SD) with a range (4 to 18).Twenty percent of the participants (N=23) had good score in knowledge section while twenty four percent (N=28) had fair knowledge. Almost fifty six percent of the participant (N=64) had poor knowledge score about the cervical cancer. The mean score in the attitude section was 7.15±1.74(SD) out of total score of 10 with a range of (2-10).More than ninety percent of the participants were found to be having positive attitude towards cervical cancer prevention. The details of the scores are listed in table 5.

Table 5 Showing the score of knowledge and attitude towards cervical cancer

| Variable | Percentage | Number |
|-------------------------------|--------------|--------|
| Knowledge | | |
| Maximum score | 20 | |
| Mean(SD) | 10.35(±3.82) | |
| Poor Knowledge (0-9) | 55.65 | 64 |
| Fair Knowledge (10-15) | 24.35 | 28 |
| Good Knowledge (15-20) | 20.00 | 23 |
| Attitude | | |
| Maximum Score | 10 | |
| Mean(SD) | 7.15(±1.74) | |
| Unsatisfactory attitude (0-5) | 9.56 | 11 |
| Positive attitude (6-10) | 90.44 | 104 |

DISCUSSION

Cervical cancer is not a major public health problem in Saudi Arabia. However the knowledge and awareness among the population about this cancer is important since the global mortality remains high due to late diagnosis and absence of a functioning screening process. Early diagnosis by cervical screening of the susceptible women and early treatment is the key to prevent the mortality from this condition. The major challenge in controlling this cancer has been the low knowledge, unfavorable attitude and bad practice towards it among the general population as well as among the health care providers. This was a cross sectional descriptive study to determine the knowledge, attitudes and practice of the paramedics towards cervical cancer in a tertiary maternity and Child health care hospital in Al Ahsa district of Saudi Arabia. The result showed that only 20% of the participants had good knowledge of prevalence, causes, risks, symptoms treatment and prevention of the cervical cancer. Similar studies done in Bahrain^[11], India^[12], Riyadh(Saudi Arabia)^[13], Cambodia^[14], Ethiopia^[15], Turkey^[16] and Tanzania^[17] have found a lack of knowledge among the participant while the study done in Dominica^[18] and USA^[19] have found a good knowledge among the healthcare workers about Cervical cancer.

In our study overall attitude on cervical cancer and its screening was positive among the 84.6 % of the participants. More than eighty six percent of the participants in our study agreed that any female between ages 25-64 should get their cervical cancer screening. Likewise almost ninety three percent of the participants agreed that cervical cancer does not spread from one person to other. More than ninety six percent of the participants in our study believe that they should go for cervical screening since it helps in the prevention of cervical cancer. HPV infection is one of the important causative factors in developing cervical cancer. Prevention of cervical cancer is provided by HPV vaccination .WHO recommends that the girls in the age group of 9-13 should be vaccinated with two doses of HPV vaccine to prevent HPV infection and so the cervical cancer caused by HPV. ^[20] In England the girls aged 12-13 are routinely offered the first HPV vaccination dose and the second dose after 8-12 months of the first dose.^[21] Prophylactic HPV vaccines became available in the Kingdom of Saudi Arabia in 2010 and were approved for females between the ages of 11 and 26 years^[22]. More than fifty percent of our study participants were not aware of the fact that HPV vaccination is helpful in preventing the cervical cancer. The same result was published by similar studies done in Saudi Arabia ^[22] and Turkey ^[16] (20.7%) where the researchers have found a low level of awareness (34.5%) about the HPV vaccination among the medical staffs attending

university hospitals. However studies have found a very high level of awareness of HPV vaccination among the healthcare staffs of Cyprus^[23], Cameroon^[24] and China^[25].

As far as practice towards cervical cancer and its screening is concerned our study showed that only 3.4 percent of the participant was vaccinated against HPV. Likewise only 6.1% of the participants were screened for cervical cancer. Low number of vaccination and deficient screening for cervical cancer among the participants are a matter of concern in our study. The studies done in Turkey^[26], India^[27], Bahrain^[11] and African countries^[28] have found the same result. Pap smear test is one of the best screening methods in detecting abnormal cervical changes that may suggest that cancer is likely to develop or that c cancer has already developed. In our study, more than fifty eight percent (N=67) of the participants showed their willingness to go for Pap smear test. The same result was found in Iranian study^[29] where more than fifty percent participants (50.4%) had consented for Pap smear test. The same was not true in an Indian^[30], an African^[28] and Ghana^[31] study where only 24.6%, 19% and 0.8% of the participants went for Pap smear test respectively. Fear of bad result and fear of procedure were the main barriers for the participants to go for Pap smear screening test in our study. In an African study^[28], the major barriers cited were negligence and fear of discovering a serious disease and so in Iran and Ghana Study^[31]. Attending the seminars and symposium on cervical cancer and involvement in the cervical awareness programme are crucial activities in acquiring the knowledge on cervical cancer and propagating the knowledge to the general population. The majority of participants in our study had not attended any seminar and conferences on cervical cancer nor were they involved in cervical awareness programme. This necessitates arranging such programme to enhance their knowledge of cervical cancer.

CONCLUSION

Though our study showed poor knowledge of cervical cancer among the participants but their attitude towards this condition was found to be positive. In spite of the fact that most of the participants were aware of the importance of Pap smear test, but less than ten percent of them were screened for Pap smear test. This study highlights the need for seminars, symposium and awareness programme for comprehensive education on cervical cancer and its screening for the health care staffs of MCH hospital Al Ahsa.

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