Medical Science

25(115), September, 2021

Knowledge, attitude and practice of cervical cancer among female staff in outpatient department at Prince Mansour Military Hospital in Taif city, Saudi Arabia

Eyman Omar Halabi[1], Sultan Abdullah Almalki[2]

To Cite:
Halabi EO, Almalki SA. Knowledge, attitude and practice of cervical cancer among female staff in outpatient department at Prince Mansour Military Hospital in Taif city, Saudi Arabia. Medical Science, 2021, 25(115), 2173-2180

Author Affiliation:
[1]M.B.B.S, R4, Joint Program of Saudi Board in Family Medicine, Taif, KSA
[2]Consultant family medicine, SBFM, ABFM, Chief of medical staff, PHC, MNGHA, Taif, KSA

Peer-Review History
Received: 04 July 2021
Reviewed & Revised: 06/July/2021 to 18/August/2021
Accepted: 20 August 2021
Published: August 2021

Peer-review Method
External peer-review was done through double-blind method.

ABSTRACT

Background: Cervical cancer (CC) is one of the serious diseases that affect women's lives. Fortunately, cervical cancer is a preventable and treatable disease; early detection has reduced its mortality and morbidity worldwide. *Objective:* To investigate the level of KAP of CC among female staff in outpatient department at Prince Mansour Military Hospital in Taif city, KSA. *Methods*: This study was a cross-sectional study. An English and Arabic based questionnaire was used for data collection. Data was collected through interviews with the female staff in the OPD by forms in iPad or smart phones. *Results*: The study included 303 participants, 90.76% have Bachelor degree and 2.97 had doctorate (PhD). 27.06% were physicians and 24.75% were nurses. Participants with good knowledge were 60.73% while who have poor knowledge were 39.27%. Concerning the opinion the studied population on cytological examination; 53.47% think that she should undergo cytological examination. Regarding the previous vaccination from the HPV; 5.61% only were vaccinated, 9.5% don't know and 84.82% reported that they were not vaccinated. There was a substantial relationship between the knowledge level groups and level of education, job title and whether the residence (inside or outside the Taif city) of the studied population ($P<0.05$). *Conclusion*: in the current KAP study, the overall knowledge, cervical cancer was moderate, the practice of the HPV vaccination was very low and there was a moderate attitude toward the cytological examination and Pap smear.

Keywords: cervical cancer, Taif city, Saudi Arabia, vaccination, HPV, cytological examination, Pap smear.

1. INTRODUCTION

Cervical cancer (CC) is one of the serious diseases that affect women's lives. Globally, CC is the fourth most frequent cancer in women with an estimated

570,000 new cases in 2018 representing 6.6% of all female cancers. Approximately 90% of deaths from cervical cancer occurred in poor nations (Arbyn et al., 2020). Saudi Arabia has a population of 9.29 million women ages 15 years and older who are at threat of getting CC. Existing approximations designate that each year 316 women are identified with CC and 158 die from the disease. Cervical cancer ranks as the ninth common tumor in women in Saudi Arabia. Data is not yet available on the Human Papilloma Virus (HPV) burden in the general population of Saudi Arabia. However, in Western Asia, the region Saudi Arabia belongs to, about 2.3% of women in the general population are estimated to harbor cervical HPV-16/18 infection at a given time, and 72.4% of invasive cervical cancers are attributed to HPVs 16 or 18 (Al Obaid et al., 2014).

Cervical cancer is a slow growing cancer that takes long period to develop and it is asymptomatic in early stages. *Human papilloma virus (HPV),* a sexually-transmitted infection, it is accompanying with the growth of cervical cancer, based on solid evidence from observational studies (Burd, 2003). Known risk factors include many sexual buddies, younger age of onset of sexual activity, increasing parity, early age of marriage and child birth, poor personal hygiene, low social class, hormonal contraceptives for 5 years or longer, current or previous sexually-transmitted infection and smoking (Kasa et al., 2018). Fortunately, CC is a avertible and treatable disease; early detection has reduced its mortality and morbidity worldwide. The strategies for prevention and control of cervical cancer include the modalities of primary prevention strategies (vaccination program), secondary prevention strategies (screening) (with Papanicolaou (Pap) smear is an efficient, affordable, and effective method of detecting cytological changes in the uterine cervix, or HPV DNA and tertiary prevention strategies (treatment methods) (Al Sairafi & Mohamed, 2009; Endarti et al., 2018).

Regardless of what strategies would be implemented, education is important factor for an effective CC avoidance and control to achieve high target of the program, furthermore it is one of the prevention procedures that have been known to be useful for controlling cervical cancer at population level (Al Sairafi & Mohamed, 2009; Endarti et al., 2018). Evidence suggests that cervical screening awareness and early detection through screening had a major impact on deaths fromCC in developed nations like United States, Canada, United Kingdom, and Australia. In developing countries, cervical screening programs did not achieve the same results as with the developed countries in decreasing the occurrence and deaths of the disease due to the low uptake rate of screening (Devarapalli et al., 2018).

Moreover, thoughtful CC early detection package in KSA is not well recognized. Low screening coverage leads to the fact that most patients come to the hospital with advanced disease. Most Saudi women seek medical care in late stage of disease which requires extensive chemo-radiation therapy. Women with late-stage cancers require medical care that may extent for several months afterwards identification to confirm the delivery of comprehensive care. Thus, financial burden of late-stage cancer treatment will cost the country more than early stage cancer (Alzahrani et al., 2018). Higher incidence and mortality have been found in less educated women and in rural women. Improving awareness through education can enhance the response to preventative health services. Different studies have emphasized the effect of women's knowledge as an important determinant of attitude of risk and subsequent health seeking behavior accordingly (Alzahrani et al., 2018).

Increasing women knowledge by education will improve their attitude toward CC and its early detection methods and will enhance utilization of the screening. Consequently, this could diminish ill health and deaths consequential to CC (Vincerževskiene et al., 2017). Since most of healthcare facilities are available for free in Saudi Arabia, it's vital that these amenities are good consumed, that could benefit in refining the overall health of the populace. As medical staff plays an effective and central role in communication, motivation and education of females in the general public, consequently, their information desires to be evaluated and rationalized on a steady basis (Heena et al., 2019). This work is based on the hypothesis that the knowledge and attitude and practice of women toward cervical cancer influence the disease's presentation and expression, including distribution, determinants and impacts both upon the individual and the community. In KSA, while several KAP studies of CC screening in the general population, studies on healthcare staff have been few. This subject is not studied before in Taif city up to our knowledge.

Study objectives

This study will aim to investigate the level of knowledge, attitude and practice (KAP) among female staff in outpatient department at Prince Mansour Military Hospital in Taif city toward cervical cancer.

Specific objectives

To study the knowledge, practice of cervical cancer among female staff in outpatient department at Prince Mansour Military Hospital in Taif city.

To know the attitude of female healthcare staff working at Prince Mansour Military Hospital toward cervical cancer

To identify factors affecting the KAP of female staff working in OPD at Prince Mansour Military Hospital toward cervical cancer

2. METHODOLOGY

Study area

The study was conducted in Taif governorate, in the western region of Saudi Arabia. It is located in the Makkah Province. The study was implemented in Prince Mansour Military Hospital, (PMMH) which was opened in 1951 and has extensions and refurbishment initially to reach the required medical services where he became the hospital now has 210 beds. In Prince Mansour military hospital, there are 40 outpatient clinics, 1 outpatient pharmacy and outpatient laboratory operated five days a week and start at 7:30 am-12.00 in the morning and 1:00 am – 4:00 pm in the afternoon.

Study design

This study was a cross-sectional study to define the knowledgeequal, attitude and practice KAP of CC among female staff in outpatient department at Prince Mansour Military Hospital in Taif city, Saudi Arabia, during the period from 1 January – 31 April, 2021.

Study population and selection criteria

The target population was female staff including nurses, physicians, technicians, pharmacists and receptionist working in outpatient department at Prince Mansour Military Hospital in Taif city and agreed to contribute in the study.

Inclusion criteria

Female staff including physicians, nurses, pharmacists, receptionists, technicians and others
Arabic or English speakers
Females who work in OPD at Prince Mansour Military Hospital in Taif city

Exclusion criteria

Females working in inpatient department at Prince Mansour Military Hospital
Females who have cervical cancer
Those refuse to participate or on vacation during study period

Sample size

The prevalence of awareness regarding CC as 78.6% according to a recent study carried out among women in Saudi Arabia (HodaJradi & Amen Bawazir, 2018) and estimated it to be within 5% of the true value, the margin of error, with 95% confidence.
By using the above stated information, the calculated sample size is 256 participants.

Formula used with 95% CI $n = (1.96)^2 * p (1-p) / d^2$
The researcher increased the sample size to 300 to compensate for possible on or incomplete response.

Sampling technique

Systematic random sampling procedure was adopted to select the study population from the hospital. An average of 300 female staff working in clinics, pharmacy and laboratory in outpatient department at Prince Mansour hospital during working days were reported daily (25/department/shift). One department was selected randomly every shift (one morning and one afternoon). Every 5^{th}female staff was selected, to select 10 female staff daily. Accordingly, approximately two months was needed to collect data. In case of illegible female staff, the next one was selected till the required number reached every working day. For the respondents, a self-administered Arabic or English questionnaire was distributed according to the favorability and the native language of the female worker. Any question or clarification was clarified by the researcher who was around all the time.

Data collection tool

It wasa pretested and structured English and Arabic based questionnaire. Data was collected through interviews with the female staff in the OPD by forms in iPad or smart phones. Questionnaires was distributed by trained females interviewers from Taif, those who have trouble reading or writing the questionnaire, was filled by the interviewer. Researchers and supervisors verified the completeness and consistency of the collected data. Various relevant documents were reviewed to develop tools to address the research goals. The questionnaire aims to obtain information about the respondents' sociodemographic, reproductive and professional characteristics, cervical cancer knowledge, attitudes towards cervical cancer, and cervical cancer screening. Use

knowledge questions about cervical cancer risk factors, symptoms, treatment, and outcomes to measure cervical cancer knowledge. A scoring technique was designed to obtain a score for every contributor by adding the scores of the correct answers. The average of these questions is considered a good knowledge; else a lower score will be considered a low level of knowledge. Trained interviewers will facilitate the data collection process. They will receive 1 day of training prior to the actual job, which includes research purposes, measures and data assembly procedures. The researchers distributed the questionnaire to consultants from three different careers (family medicine, community medicine, and obstetrics and gynecology) that had sufficient experience and interest in this topic, and made the corresponding modifications.

Data management analysis

Data was examined by means of IBM SPSS Statistics for Windows version 20. Quantitative data was expressed as means ± standard deviation, median and inter quartile range. Qualitative data was expressed as number and percentage. Chi-square ($\chi 2$) test was used for comparison of qualitative variables. A 5% level was chosen as a level of significance in all statistical tests used in the study.

Pilot study

Before commencing the main study, a pilot study was conducted on 30 female staff (~10% of sample size) in the OPD at Prince Mansour Military Hospital to test the feasibility of the study in particular sampling technique and clarity of the questionnaire and average time needed for its completion. Their results were excluded from the final research report.

3. RESULTS

The study included 303 participants, 64.69% were ≤ 30 years old. Regarding marital status; 44.22% were married, 50.5% Single. 90.76% have Bachelor degree, 1.98% had Diploma, 4.29% had master degree and 2.97 had doctorate (PhD). Concerning the job title, 27.06% were physicians, nurses were 24.75%, pharmacists were 11.88% and technicians were 7.59% (Table 1). Total knowledge score Mean± S.D. was 106.98 ± 38.27, Participants with good knowledge constituted the majority (60.73) of the participants while who have poor knowledge were 39.27% (Table 2). There was a statistically considerable relationship between the knowledge level groups and level of education, job title and whether the residence (inside or outside the Taif city) of the studied population ($P<0.05$). While there was a statistically insignificant relationship between the knowledge level groups and age group, marital status (Table 3).

Table 1 Socio-demographic characteristicsof the studied population (N=303).

	Characteristics	Summary statistics
Age group	≤ 30	196 (64.69%)
	> 30	107 (35.31%)
Marital status	Divorced	15 (4.95%)
	Married	134 (44.22%)
	Single	153 (50.5%)
	Widowed	1 (0.33%)
Education	Bachelor degree	275 (90.76%)
	Doctorate (PhD)	9 (2.97%)
	Diploma	6 (1.98%)
	Master degree	13 (4.29%)
Job title	Dietitian	8 (2.64%)
	Nurse	75 (24.75%)
	Pharmacist	36 (11.88%)
	Physician	82 (27.06%)
	Receptionist	33 (10.89%)
	Social worker	6 (1.98%)
	Student	4 (1.32%)
	Technician	23 (7.59%)
	Trainee	36 (11.88%)

Residence	Outside Taif city	40 (13.2%)
	Taif city	263 (86.8%)

Table 2 Distribution of the studied population according to knowledge level groups (N=303).

Knowledge	No. (%)
Poor knowledge	119 (39.27%)
Good knowledge	184 (60.73%)
Total knowledge score Mean± S.D. Median (Range)	106.98 ± 38.27 116 (18– 159)

Table 3 relationship between the knowledge level groups and socio-demographic characteristics of the studied population

Characteristics	Responses	Knowledge level groups		P-value
		Poor 119 (39.27%)	Good 184 (60.73%)	
Age group	≤ 30	83 (69.75%)	113 (61.41%)	0.138
	> 30	36 (30.25%)	71 (38.59%)	
Marital status	Divorced	2 (1.68 %)	13 (7.07%)	0.116
	Married	51 (42.86%)	83 (45.11%)	
	Single	66 (55.46%)	87 (47.28%)	
	Widowed	0 (0.0%)	1 (0.54 %)	
Education	Bachelor degree	111 (93.28%)	164 (89.13%)	0.041
	Doctorate (PhD)	0 (0.0%)	9 (4.89 %)	
	Diploma	4 (3.36 %)	2 (1.09 %)	
	Master degree	4 (3.36 %)	9 (4.89 %)	
Job title	Dietitian	4 (3.36 %)	4 (2.17 %)	<0.001
	Nurse	26 (21.85%)	49 (26.63%)	
	Pharmacist	4 (3.36 %)	32 (17.39%)	
	Physician	18 (15.13%)	64 (34.78%)	
	Receptionist	28 (23.53%)	5 (2.72 %)	
	Social worker	6 (5.04%)	0 (0.0%)	
	Student	4 (3.36 %)	0 (0.0%)	
	Technician	15 (12.61%)	8 (4.35 %)	
	Trainee	14 (11.76%)	22 (11.96%)	
Residence	Outside Taif city	24 (20.17%)	16 (8.70%)	0.004
	Taif city	95 (79.83%)	168 (91.30%)	

P- Value was calculated by Chi-square test; P- value <0.05 is statistically significant

Table 4 shows the distribution of the studied population according to source of knowledge. Internet was the most common source (49.8%) followed by studying curriculums (39.2%) then doctors and nurses (24.7%). According to the opinion the studied population on cytological examination; 53.47% think that she should undergo cytological examination (Table 5 and figure 1). Regarding the previous vaccination from the HPV; 5.61% only were vaccinated, 9.5% don't know and 84.82% reported that they were not vaccinated (Table 6 and figure 2).

Table 4 Distribution of the studied population according to source of knowledge (N=303).

Source of knowledge	No. (%)
Internet	171 (49.83%)
Doctors and nurses	75 (24.75%)
Study	119 (39.27%)
Family	27 (8.91%)

Friends	17 (6.62%)
Leaflets	13 (4.29%)
Television	25 (9.26%)
Work	13 (4.29%)

Table 5 Distribution of the studied population according to their opinion on cytological examination (N=303).

Do you think you should undergo cytological examination	No. (%)
No	141 (46.53%)
Yes	162 (53.47%)

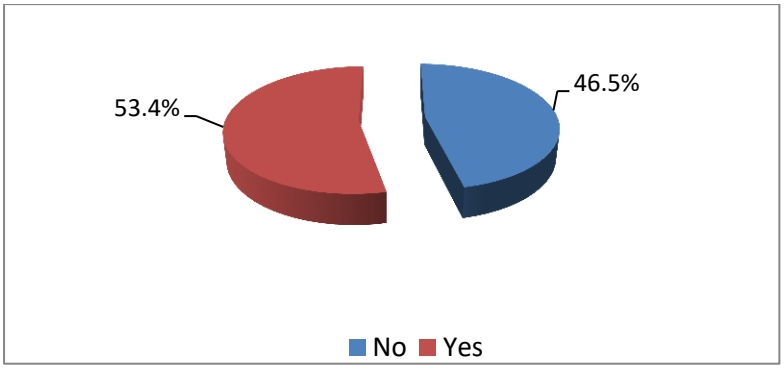

Figure 1 Distribution of the studied population according to their opinion on cytological examination

Table 6 Distribution of the studied population according to previous vaccination (N=303).

Previous vaccination	No. (%)
I don't know	29 (9.57%)
No	257 (84.82%)
Yes	17 (5.61%)

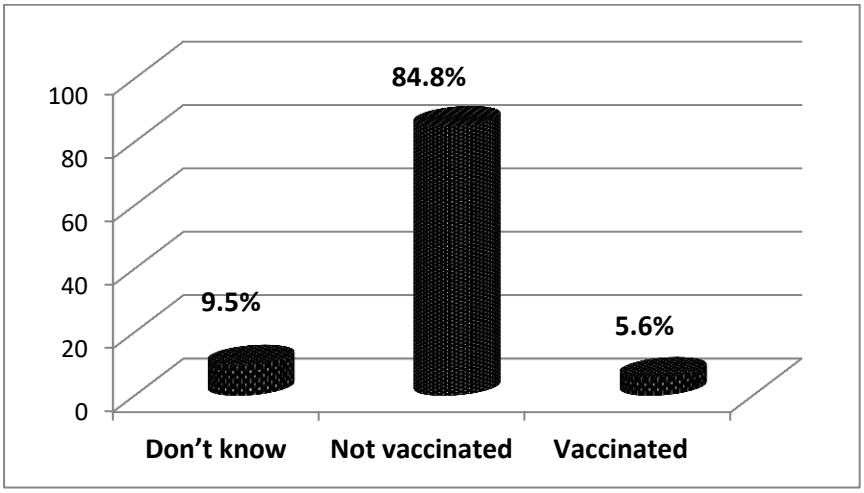

Figure 2 Distribution of the studied population according to previous vaccination

4. DISCUSSION

This study was a cross sectional study, conducted to explore the level of awareness, knowledge, practice and attitude among female staff in outpatient department at Prince Mansour Military Hospital in Taif city toward cervical cancer. Participants with good knowledge constituted the majority (60.73) of the participants while who have poor knowledge were 39.27%. Total knowledge scoreMean± S.D. was 106.98 ± 38.27. Ramathuba et al., (2016) conducted a Cross-Sectional KAP study on CC and Screening in

Womanly Healthcare providers in Saudi Arabia. Findings presented that there was a poor knowledge of cervical cancer. Also, Jradi & Bawazir (2018) carried out a study in Riyadh, Saudi Arabia, among women aged between ages 18 and 45 years to examine women's cervical cancer and HPV awareness, barriers, acceptance, beliefs, and attitudes toward HPV vaccines. The results showed that the participants lacked knowledge and understanding of cervical cancer. Similar to our results, Yuanyue et al., (2018) carried out a study was designed to determine the Knowledge's level and understanding of cervical cancer, HPV, and HPV vaccines in Chinese women. The results showed 52.6% of the respondents were aware of CC, the overall, awareness and knowledge of CC was moderate, knowledge and awareness of HPV and the HPV vaccine was very low. Ramathuba et al., (2016) conducted a study to assess the KAP regarding CC prevention. Findings revealed the lack of knowledge about CC and the prevention method due to the limited awareness of cervical cancer. In Johnson et al., (2014) study, to assess KAP of HPV, CC and HPV vaccine, in women from two subgroups of populations in Nepal – Khokana and Sanphebagar. The results revealed that Knowledge of HPV, CC, and the HPV vaccine left overs stumpy in females in Khokana and Sanphebagar and the acceptance for HPV vaccine was high for their children. Touch et al., (2018) conducted study to assess the KAP toward cervical cancer prevention among women in Cambodia. The study found that 34% of women had perceived about CC, which is less than our figure. Regarding the previous vaccination from the HPV, in the current study, 5.61% only were vaccinated, 9.5% don't know and 84.82% reported that they were not vaccinated.

Fishman et al., (2012) carried out a study to examine the relationship between knowledge of adolescents and their parent's previous knowledge about human papillomavirus which is an important risk factor for CC. It shows that the knowledge of parents and adolescents has nothing to do with adolescent vaccination, nor is it a predictive factor and people with higher levels of knowledge are less likely to be vaccinated for themselves or their daughters. In Johnson et al., (2014) to assess the knowledge of women in two subgroups of Nepal (Khokana and Sanphebagar) on HPV, CC, and HPV immunization. The results showed that Khokana and Sanphebagar women's knowledge of HPV, CC and HPV vaccines are still very low. Touch et al., (2018) they concluded that women in Cambodia willing to get HPV vaccination is high. While inYuanyue et al., (2018) a small group of women were more willing to allow their children to be vaccinated before they become sexually active.

In the present study, concerning the opinion the studied population on cytological examination; 53.47% stated that she should undergo cytological examination. In Heena et al., (2019) the contributors had a reasonable knowledge of Pap smear, nonetheless only a quarter of the studied group had go through testing themselves by the Pap smear. Also, in Jradi & Bawazir, (2018) the majority of women believed thatthey not threatened for evolving cancer cervix, and that there was no reason for a screening test or visit the clinic if there is no presentation of any signs and symptoms. In Touch et al., (2018) they concluded that women in Cambodia seldom experienced CC screening. Nonetheless, they were highly willing to get Pap test.

5. CONCLUSION

On the bases of the current study, the overall, cervical cancer among female staff in outpatient department at prince Mansour military hospital in Taif city, Saudi Arabia was moderate; the practice of vaccination from the HPV was very low and there was a moderate toward the cytological examination and Pap smear. So, we recommend larg scale health education campaigns to increase the awareness of the public and female healthcare workers about this important and dangerous subject especially for the high risk females.

Study limitation

This study discusses an issue that holds some embarrassment and background beliefs that can lead to avoiding participation in the research. We have come across circumstances in which some participants may be reluctant to give a comprehensive response to the items of the questionnaire, thus compromising the response rate of the research and thus affecting the universality of the results. We first explain to the participants the importance of the research and clarify the specific purpose and content of the questionnaire to eliminate their concerns and ensure their privacy. Such actions have greatly improved your responses to the questions contained in the questionnaire. Short time and limited resources, both were considerable limitations.

Ethical considerations

Approval of the regional Research and Ethics committee at Prince Mansour Armed Forces hospital, Taif Region was obtained with Ethical Approval No (H-02-T-078).

Author's contribution

All the authors contributed in the selection of the idea, proposal writing, data collection, data entry and analysis, results and discussion writing and final revision of the article.

Conflicts of interest

The authors declare that they have no conflict of interest.

Funding

This study has not received any external funding.

Data and materials availability

All data associated with this study are present in the paper.

REFERENCES AND NOTES

1. Al Sairafi M, Mohamed FA. Knowledge, Attitudes, and Practice Related to Cervical Cancer Screening among Kuwaiti Women. Med Princ Pract 2009; 18:35–42.
2. Al Obaid A, Al-Badawi IA, Al-Kadri H, Gopala K, Kandeil W, Quint W, Al-Aker M, DeAntonio R. Human papillomavirus prevalence and type distribution among women attending routine gynecological examinations in Saudi Arabia. BMC Infect Dis 2014; 14:643.
3. Alzahrani HH, Thabet HA, Al Zahrani A. Knowledge, Attitudes and Practices in Relation to Cervical Cancer Screening among Female Employees at King Abdulaziz University. Int J Nurs Educ 2018; 8(03):1-10.
4. Arbyn M, Weiderpass E, Bruni L, de Sanjosé S, Saraiya M, Ferlay J, Bray F. Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis. Lancet Glob Health. 2020; 8(2):e191-e203.
5. Burd EM. Human papillomavirus and cervical cancer. Clin Microbiol Rev. 2003; 16(1):1-17.
6. Devarapalli P, Labani S, Nagarjuna N, Panchal P, Asthana S. Barriers affecting uptake of cervical cancer screening in low and middle income countries: A systematic review. Indian J Cancer 2018; 55(4):318-326.
7. Endarti D, Satibi S, Kristina SA, Farida MA, Rahmawanti Y, Andriani T. Knowledge, Perception, and Acceptance of HPV Vaccination and Screening for Cervical Cancer among Women in Yogyakarta Province, Indonesia. Asian Pac J Cancer Prev 2018; 19(4):1105-1111.
8. Fishman J, Taylor L, Kooker P, Frank I. Parent and adolescent knowledge of HPV and subsequent vaccination. Pediatrics 2014; 134(4):e1049-56.
9. Heena H, Durrani S, AlFayyad I, Riaz M, Tabasim R, Parvez G, Abu-Shaheen A. Knowledge, Attitudes, and Practices towards Cervical Cancer and Screening amongst Female Healthcare Professionals: A Cross-Sectional Study. J Oncol 2019; 2019:5423130.
10. Johnson DC, Bhatta MP, Gurung S, Aryal S, Lhaki P, Shrestha S. Knowledge and awareness of human papillomavirus (HPV), cervical cancer and HPV vaccine among women in two distinct Nepali communities. Asian Pac J Cancer Prev 2014; 15(19):8287-93.
11. Jradi H, Bawazir A. Knowledge, attitudes, and practices among Saudi women regarding cervical cancer, human papillomavirus (HPV) and corresponding vaccine. Vaccine 2019; 37(3):530-537.
12. Kasa AS, Tesfaye TD, Temesgen WA. Knowledge, attitude and practice towards cervical cancer among women in FinoteSelam city administration, West Gojjam Zone, Amhara Region, North West Ethiopia, 2017. Afr Health Sci 2018; 18(3):623-636.
13. Ramathuba DU, Ngambi D, Khoza LB, Ramakuela NJ. Knowledge, attitudes and practices regarding cervical cancer prevention at Thulamela Municipality of Vhembe District in Limpopo Province. Afr J Prim Health Care Fam Med 2016; 8(2):e1-7.
14. Touch S, Oh JK. Knowledge, attitudes, and practices toward cervical cancer prevention among women in Kampong Speu Province, Cambodia. BMC Cancer 2018; 18(1):294.
15. Vincerževskiene I, Jasilionis D, Austys D, Stukas R, Kaceniene A, Smailyte G. Education predicts cervical cancer survival: a Lithuanian cohort study. Eur J Public Health 2017; 27(3):421-424.
16. Yuanyue L, Baloch Z, Shanshan L, Yasmeen N, Xiaomei W, Khan JM, Xueshan X. Cervical Cancer, Human Papillomavirus Infection, and Vaccine-Related Knowledge: Awareness in Chinese Women. Cancer Control 2018; 25(1):1073274818799306.