IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 12 Ver. 10 (December. 2018), PP 43-51
www.iosrjournals.org

To assess the knowledge, attitude and practices (KAP) on screening for oral, cervical and breast cancer among private school teachers

Dr.Shilpa.G.R, BBMP, Bengaluru

EXECUTIVE SUMMARY
There is a significant increase in non-communicable diseases in the last decade. To address the increasing burden of the disease, Government of India, along with many international bodies such as World Health Organization (WHO) and others has come up with National Programme for prevention and control of cancer, diabetes, Cardio vascular diseases (CVD) and stroke (NPCDCS) and Non-communicable diseases (NCD) control programme with major focus on cervical, breast and oral cancers. While we talk of prevention, primordial prevention at a young age could be achieved. In this aspect, school teachers play a crucial role; their knowledge, attitude and practices (KAP) on certain health promotion habits could influence the children in the school going age effectively. Thus the School teacher's KAP was explored in this study to assess their understanding of oral, breast and cervical cancers and their screening methods.

Date of Submission: 13-12-2018 Date of acceptance: 28-12-2018

ABBREVIATIONS
CVD- Cardio Vascular Diseases
ICMR- Indian Council of Medical Research
IEC- Information, Education and Communication
KAP- Knowledge, attitude and practices
NCD- Non Communicable Diseases
NCDIR- National Centre for Disease Informatics and research
NIHFW- National Institute of Health and Family Welfare
NPCC- National Cancer Control Programme
NPCDCS- National Programme for prevention and control of cancer, diabetes, Cardio vascular diseases and stroke
PBCR- Population based cancer registry
SIHFW- State Institute of Health and Family Welfare
WHO- World Health Organization

I. Background

India is a developing country experiencing an epidemiological transition from communicable diseases to non-communicable diseases (NCD). According to the WHO, NCD – country profile, 2011, an estimated 53% of deaths off of the deaths due to all causes are by non-communicable diseases alone in India. Among 53%, 6% of the NCD deaths are due to cancers.

With technological advances and also better healthcare facilities than before life expectancy has increased, which is one of the causes for the increased incidence of NCD cases around the world. The National Cancer control Programme (NCCP) began in 1982 in the form of national cancer registry programme implemented and maintained by Indian Council of Medical Research (ICMR), Bengaluru in several regions of India. The programme estimated that about 40% of deaths due to cancer are because of tobacco use both smokeless and by smoking, this has led to the increase in oral and lung cancers in the south East Asian region (National Cancer Control Programme, 2016).

According to different population based cancer registries (PCBR) set up in different regions with higher incidence of cancers compared to the rest of the country, breast cancer and cervical cancers are more common among women than cancers due to other causes. PCBR set up in Bangalore region indicates that breast and cervical cancers are more common among women in and around Bangalore, and oral cancers among both men and women are common in this region.

Thus addressing these region specific cancers becomes important to achieve better health. Oral, breast and cervical cancers being the most common form of cancers in the Southern part of India, awareness among the common population affects how they adopt their habits and risky behaviors.

II. Literature Review

According to a three year population based cancer report by National center for Diseases Informatics and Research (NCDIR) the major sites of cancer among women are breast (27%) followed by cervix uteri (12%) in and around Bangalore registry area (Development of an Atlas of cancer in India, 2010). One fourth of the cancers in women are diagnosed to be breast cancers, according to a recent study women present themselves to a clinician at advanced stages of breast cancer which results in mortality and morbidity (Gupta, Shridhar & Dillon, 2015). In such a case we need to be aware of the early signs & symptoms, how to access regular screening, self-examination methods and the importance of early detection.

In the study conducted by Gupta, Shridhar and Dillon, 2015, which assesses the awareness levels among women in India, they found that irrespective of the socio-economic background and educational status women showed a lower awareness levels on breast cancer. Though the study sample knew about few risk factors, the sample could not correlate that as a cause of cancer. Onset of cervical and breast cancers have now been advanced with incidences seen among very young women. In such cases it is imperative to do an early detection, for which awareness during the initial educational life (higher primary, high school) is essential.

A study conducted by Columbia University's Public Health department , 2007 shows that teachers play a very critical role in the life of adolescents, as they are the most important influencers in the life of school going children. During their interaction inside and outside the class, teachers facilitate the adolescent health promotion efforts. They have access to more sensitive information related to adolescent health and the issues adolescents face around the adolescent age. Most teachers according to another study do not receive any formal training in dealing with counseling or health promoting skills. The schools that were studied did not include the teacher's training as a part of school promotion programme. Hence to influence children from a younger age to pick healthy habits and lifestyle, teachers need to be sure of what is scientifically correct and what is not. Their KAP provides us a better understanding of how this could provide a primary prevention (Alsina, Molina, Díaz, & Torres, 2014).

This in turn is connected to the level of awareness among the school teachers, as there are no specific chapters or sessions taken on health or health related issues. Though few women know about the screening methods to a greater extent, cancers and screening are seen as stressors (Parsa, Kandiah, Zulkefli, & Abdul, 2008)

In a technological era such as ours, there is lot of information afloat in the internet via computers, smart phones, television, radio and other forums. Advantage as it seems, if women are still not aware of the know-how of cancers (oral/breast/cervical) then we need to investigate the distal or background determinants for this behavior. Various studies have been conducted trying to understand the knowledge attitude and practices of women, but only few are directed towards understanding the teachers KAP and their role in health promotion in younger women (Columbia University, 2007). While we could argue that teachers spend less time with each class on an average, school is a place where children spend most of their time during the crucial age which marks certain behavioral traits in adolescents and growing children. In a study to assess the knowledge on reproductive health among adolescent school girls, it was found that adolescent girls (10 years to 16 years, as defined by WHO) were not aware of personal hygiene or menstrual hygiene (Padhy, Pattanayak & Jena, 2013). Thus it is important to provide some alternative source of valid information through trained teachers.

Through the literature review we have established the importance of the teacher's role in the life of school going children and adolescents. And also the role of teachers in promoting health behaviors among adolescents and school children cannot be stressed enough, to inculcate from a very young age the lifestyle modifications (tobacco's ill effects, healthy sexual behavior, personal hygiene) which ensure primordial prevention. As they play a critical role in promoting health and wellbeing of the students through the course of education this study was designed to assess the level of School teacher's awareness, their attitudes and personal practices.

Research question/ title

To assess the knowledge, attitude and practices (KAP) on the importance of screening for oral, cervical and breast cancer among private school teachers

a) Objective of the study

To assess the knowledge, attitude and practices (KAP) on screening for oral, cervical and breast cancer among private school teachers

b) Specific objectives /rationale behind the study

- To assess the knowledge about screening for oral, cervical and breast cancer among male teachers and female teachers of the private school
- To assess the knowledge about the cancer of oral cavity, cervix and breast
- To assess their attitude towards importance of screening for oral, breast and cervical cancer.
- To assess the personal practices on screening for breast, oral and cervical cancers.
- Provide IEC on breast cancer screening, cervical cancer screening and oral cancer screening

Inclusion criteria: Male and female teachers, working full time, healthy during the time of the study
Exclusion Criteria: Non-teaching staff were excluded from the study
Anyone with the history of any form of cancer tumor were excluded

III. Methodology

A descriptive cross sectional study was conducted using a structured, self-administered questionnaire (appended in annexure). Primary data collection was completed through responses to the structured, self-administered questionnaire from male and female teaching staff of two private schools. A convenience sampling method was used to choose the schools. Few sections of the questionnaire were developed using the WHO tool to develop questionnaire for communicable diseases and applied to this study. The questionnaire once developed was approved by experts and pre tested on eight teachers. Based on their feedback few changes were made to the questionnaire. The questionnaire administration was done before the intervention and after the intervention with a gap of one week time. The health professional's trainer's manual for cancer prevention from National Cancer Control Programme 2005 was used to provide the intervention, which is also appended at the end of this report. Few changes were made to the initial synopsis based on recommendations from the guide and experts in the field.

Sample size included in the study is 41. Teachers teaching 5^{th} grade to 10^{th} grade were included in the study to get the desired sample size.

The secondary data collection methodology of the Cochrane Handbook for Systematic Reviews (Cochrane Collaboration, 2008) was followed through a search of several electronic databases including PUBMED, Google Scholar and other open access journal databases. Searches were restricted to research published in the English language peer-reviewed journals, as well as grey literature, from 2005. Search terms such as [Teachers OR educators] AND [awareness OR knowledge OR KAP] AND [oral OR breast OR cervical] AND [cancers OR tumours OR neoplasms] AND [screening OR pre-test] were used. From these publications, the bibliographic lists were also hand-searched for additional papers. No qualitative study was found on breast cancer awareness among women in India. Studies that focused on awareness, practices and attitudes on screening, for breast cancer, oral cancer and cervical cancer were included in this report.

A) Background information of respondents

In this section information on respondents' age, educational background, as both male and female teachers were included sex also was included. But this information sought was completely voluntary, those who did not want to reveal any of the personal information were asked to only fill the questionnaire.

LIMITATIONS

- Female teachers were more in number than male teachers
- All the responses could not be included in the study due to incompleteness
- Not much time was permitted to conduct the study in one of the schools due to ongoing examinations.

IV. Findings

Table 1 PRE and Post Intervention

	PRE			**POST**		
Variable	**At least one causein percentile (n) (Moderate)**	**All of them (High)**	**Don't know (Low)**	**At least one cause (Moderate)**	**All of them (High)**	**Don't know (Low)**
KnowledgeCancer is-Q1	39% (n= 16)	58.5% (n=24)	2.4% (n=1)	39% (n= 16)	53.71% (n=22)	7.3% (n=3)
Source Q2	Internet =9.8 (4)	Doctor =31.7 (13)	School = 22 (9)	Television 4.9 (2)	Relatives= 29.3 (12)	Others =2.4 (1)
CA Awareness-Q3	63.4 (24)	29.3 (12)	7.3 (3)	22 (9)	70.7 (29)	7.2(3)
Oral Cancer-Q4	84 (35)	0	14.4 (6)	93.6(39)	0	4.8(2)
Breast cancer-Q5	62.4 (26)	2.4 (1)	33.6 (14)	45.6 (19)	48.8(20)	4.8(2)
Cervical Cancer-	38.4(16)	24.4(10)	36.6 (15)	43.9 (19)	53.7 (22)	0

Q6						
Self-examination-Q7	65.9(29)	2.4(1)	26.8(11)	53.6(22)	36.6(15)	9.8(4)
Screening Breast-Q8	57.6(24)	4.9(2)	36.6 (15)	68.3(28)	29.3 (12)	2.4(1)
Screening CervicalQ9	41.5(18)	2.4 (1)	53.6 (22)	75.6(31)	17.1(7)	7.3(3)
Screening Oral-Q10	43.9(18)	0	56.1(23)	87.8(36)	0	12.2(5)
Risky period-Q11	39 (16)	39 (16)	22 (9)	46.4 (19)	53.6(22)	0
Attitude Q12	Yes= 61 (25)	NO= 31.7(13)	May be= 7.2 (3)	Yes=63.4(26)	NO=36.6 (15)	May be= 0
Screening times-Q13	40.8 (17)	26.8 (11)	31.2(13)	68.3(28)	26.8(11)	4.9(2)
Screening importance-Q14	34.2 (14)	39(16)	26.8(11)	46.4 (19)	51.2(21)	2.4(1)
Practices	**At least one examination**			**No tests undergone**		
Q15- screened so far	53.6 (22)			46.4 (19)		
Q16- times	At least once= 22 %(9)			Twice= 19.5% (8)		More than 2 times= 4.8% (2)
Q17-	At least one site 65.9% (29)			None 34.1% (14)		

Analysis was done using descriptive statistical methods

FINDINGS

The questions were divided into knowledge, attitude and practices sections as mentioned earlier. Those who ticked 'at least one' correct option were included in the 'moderate knowledge' group, those who ticked 'all of the above' or all the right options were included in the 'high knowledge' and awareness group, those who ticked 'do not know' or 'none of the above' options were grouped as low level of knowledge . This was repeated for all the 11 questions under knowledge category. The same questionnaire was administered with a few changes after the IEC intervention. A comparison of the pre and post intervention results was made to see any notable changes in KAP of the participants. To assess change in attitude and practice may take time. Hence knowledge level comparisons are made in this study.

At least 39% (n=16) could identify one of the progression mode, expense and morbidity of cancer.

The next question on various sources of information related to cancers, 29.3 % (n-=12) of them said they got the related information from their relatives or friends. Second most common source 31.7% (n=13) was from a physician during their visit for other purpose. When asked about which one of the cancers were they aware of among the three cancers (oral, breast and cervical), 55.2 % (n=23) said breast and only 29.3% (n= 12) said they were aware of all the three types of cancer, followed by only cervical cancer 2.4% (n=1). General awareness on the causes of oral, cervical and breast cancer, 84% (n= 35) knew that tobacco was the major risk factor/cause for oral cancers, 17.1% (n= 7) knew that not breast feeding and family history 24.4 % (n= 10) could cause breast cancer, 24.4% (n=10) said that STIs, RTIs and multiple sexual partners can cause cervical cancer.61% (n= 25) said they knew self-examination method for breast, for any lumps. 57.6% (n=24) ticked at least one screening methods for breast examination for tumor/cancer, among mammography, self-examination and examination by a physician. 43.9% (n=18) said screening method for cancer of the oral cavity was examination by a dentist. Though 43.9% (n=18) identified one of the cervical cancer screening methods, 56.1% (n=23) said they do not know any method of cervical cancer screening. 39% (n=16) could identify the risky period or window to develop breast or cervical cancer.

Attitude:

61% (n= 25), 31.7% (n=13) and 7.1% (n=3) said it was, essential to get screening, not essential and not sure, respectively. The section which asked about frequency of these tests felt 31.7% (n= 13) and 9.8%(n=4) and 26.8% (n=11) said it was essential once in 3 years till middle age (40 – 45 years) , once in 5 years from middle age to old age (45 years to 65 years of age). When asked about the reasons why it is essential to get screened , 34.2% (n= 14) felt either it was easy to treat if diagnosed early through screening methods or it is to prevent onset of cancer and in presence of any signs then it is easy to make changes to one's lifestyle. 39% (n=16) mentioned it's all the above reasons.

Practices:

57.6% (n= 22) had undergone at least one form of screening test (Pap smear or mammography or examination by a physician), 46.4 % (n=19) have not undergone any kind of screening test so far. Among those who had tests done 22%, 19.5% and 4.8% (n=9, n=8 and n=2) had undergone tests once, twice and more than

twice respectively. On being asked about how regularly they self-examine for any one site for any kind of changes or signs and symptoms (oral, breast and cervical), 65.9% (n-29) said they check themselves for at least one of the sites regularly and 34.1% (n=14) said they have not checked for any site.

The arithmetic means of the frequency under three groups under moderate, high and low knowledge and awareness levels were computed. 54.14% of the participants fell in the moderate knowledge category, 16.01% fell in the high knowledge category and 29.26% fell in the low level knowledge category. Post the intervention the means were computed similarly and we found that 58.04% fell under moderate knowledge category, 36.09% fell under high level knowledge category and 5.85% fell under low level knowledge category

INTERPRETATION:

Before the intervention when the questionnaire was administered though the participants knew the nature of cancer, most of them could identify only one of the aspects of cancer. Most of the participants (63.4%) said they were aware of the three types of cancer, breast cancer being the most aware, then oral and then cervical. Though most participants (84%) identified tobacco as the major cause for oral cancers, they were not sure which form of tobacco was causative agent/risk factor, smokeless or through smoking. Similarly for breast and cervical cancer, most participants knew at least one cause or risk factor to develop them. Most of them (24.4%) identified not breast feeding as an important cause for breast cancer. Most of the participants also identified that they were aware of self-examination methods for mostly breast site and very few were aware of cervical site examination. For screening methods for the breast cancer, mammography was identified most times. Cervical Cancer knowledge was relatively low compared to oral and breast cancer among the participants.

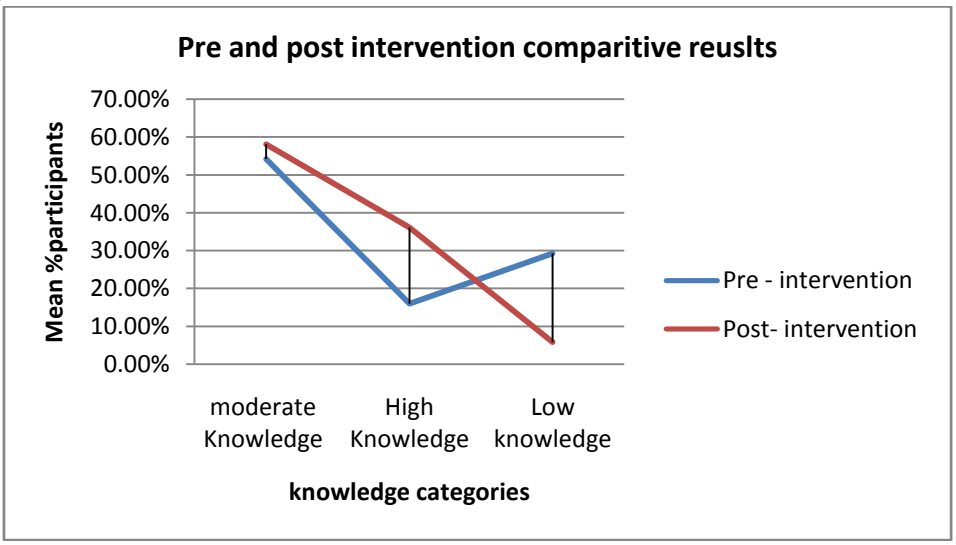
Though most of them (61%) said it was important to get the screening done, most of them have not undergone any screening tests for any single site (breast, cervix or oral cavity) so far. The most common source of information related to the breast, oral or cervical cancer as given by the participants was relatives/ friends.

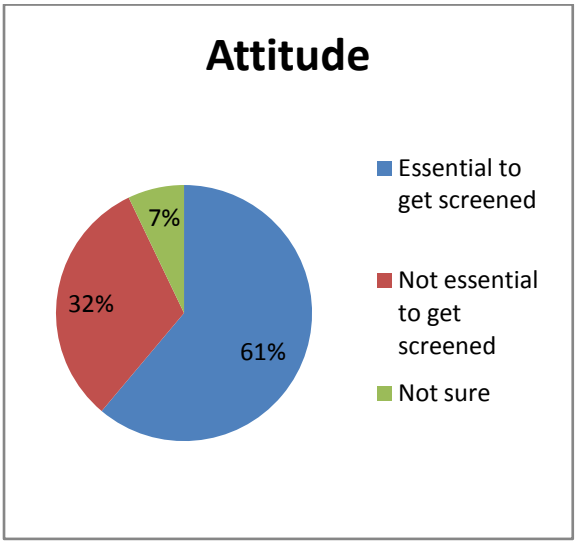
V. Conclusions

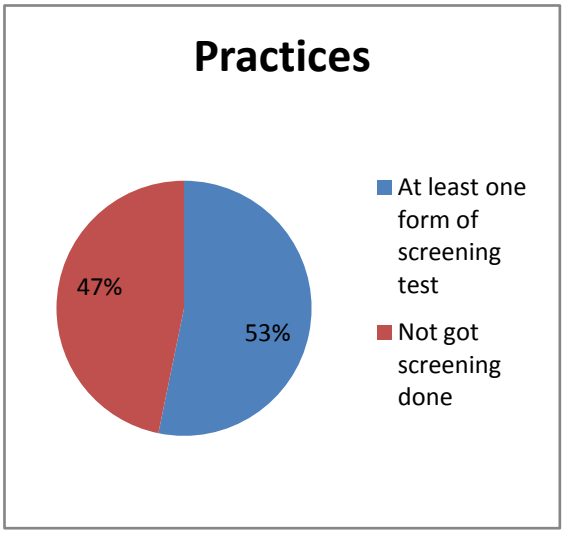
Though the teachers were teaching all different grades, more than half the proportion (54.24%) fell in moderate knowledge group. And teachers had no training in any form on cancers or other non-communicable diseases or any health promotion activities as per the school policy. The percentage of those who fell under moderate, low and high knowledge level groups increased after intervention. Post the intervention we found that 58.04% fell under moderate knowledge category, 36.09% fell under high level knowledge category and 5.85% fell under low level knowledge category, with a notable difference in the moderate and low level knowledge groups.

As mentioned earlier teachers play a crucial role in influencing the adolescent health promotion habits (as studied by the Columbia University's public health department, 2007).

Knowledge







VI. Recommendations

- Health promotion training to teachers of all grades must be made mandatory so that there is a positive reinforcement on the healthy habits at a younger age.
- Since the sample was not representative of the sample universe, the results may not be generalizable, further studies need to be conducted to validate the results.
- More research on the influence of teachers on the health promotion habits of adolescents and school going children needs to be conducted, to study the correlation and significance
- RBSK teams can create awareness among the teachers and students during their visit to the schools for screening of children.

References

[1]. (2010). *Development of an Atlas of cancer in India*. National Centre for Disease Informatics and Research . Bengaluru: National Cancer Registry Programme. Retrieved from http://www.canceratlasindia.org/chapter3_2.aspx

[2]. *World Health Organization - NCD Country Profiles.* (2011). Retrieved from World Health Organisation : http://www.who.int/nmh/countries/ind_en.pdf?ua=1

[3]. *Department of Health and faily welfare*. (2016). Retrieved 2018, from Ministry of Health and family welfare: https://mohfw.gov.in/about-us/departments/departments-health-and-family-welfare/national-cancer-control-programme

[4]. Alsina, A., Molina, M., Díaz, Z., & Torres, D. (2014). Influence of school health promotion on the life habits of schoolchildren. *analesdepediatria journal*.

[5]. Padhy, G. K., Pattanayak, A., & Jena, D. (2013). Effectiveness of Planned Teaching Programme on reproductive health among adolescent girls. *Indian Medical Gazzete*.

[6]. Parsa, P., Kandiah, M., Zulkefli, N. A., & Abdul, H. (2008). Knowledge and Behavior Regarding Breast Cancer Screening. *ASian Pacific Journal of Cancer Prevention, 9*. Retrieved November 21,2017,from https://www.researchgate.net/profile/Hejar_Rahman/publication/23180248_Knowledge_and_Behavior_Regarding_Breast_Cancer_Screening_among_Female_Teachers_in_Selangor_Malaysia/links/543bad790cf24a6ddb97839d.pdf

[7]. Dandash, K. F., & Al-Mohaimeed, A. (2007). Knowledge, Attitudes, and Practices Surrounding Breast Cancer and Screening in Female Teachers of Buraidah, Saudi Arabia. *International Journal of Health Sciences*, *1*(1), 61–71.

[8]. Sharma, K., Costas, A., Shulman, L. N., & Meara, J. G. (2012). A Systematic Review of Barriers to Breast Cancer Care in Developing Countries Resulting in Delayed Patient Presentation. *Journal of Oncology*, *2012*, 121873. http://doi.org/10.1155/2012/121873

[9]. Columbia University's Mailman School of Public Health. (2007, December 18). Teachers Play Critical Role in Adolescent Health Promotion Efforts. *ScienceDaily*. Retrieved April 16, 2018 from www.sciencedaily.com/releases/2007/12/071217141431.htm

[10]. Gupta, A., Shridhar, K., & Dhillon, P. K. (2015). A review of breast cancer awareness among women in India: Cancer literate or awareness deficit? *European Journal of Cancer*, *51*(14), 2058–2066. http://doi.org/10.1016/j.ejca.2015.07.008

[11]. Cochrane Collaboration. (2008). *Cochrane handbook for systematic reviews of interventions*. Cochrane Collaboration

[12]. *National Programme for prevention and control of cancer, diabetes, cardiovascular diseases and stroke.* (2016). Retrieved from National Health Mission, Health and Family Welfare Services, Karnataka : http://www.karnataka.gov.in/hfw/nhm/pages/ndcp_ncd_npcdcs.aspx

[13]. *National Cancer Conrol Programme*. (2016). Retrieved from Ministry of Health and Family Welfare, Department of Health and Family Welfare, GOI: https://mohfw.gov.in/about-us/departments/departments-health-and-family-welfare/national-cancer-control-programme

[14]. R. Sacchetti, L. Dallolio, M. A. Musti, E. Guberti, A. Garulli, P. Beltrami, F. Castellazzi, E. Centis, C. Zenesini, C. Coppini,(2015).Effects of a school based intervention to promote healthy habits in children 8-11 years old, living in the lowland area of Bologna Local Health Unit.; 27(2): 432–446.retrievedhttps://www.ncbi.nlm.nih.gov/pubmed/26051142

APPENDIX 1
Questionnaire tool

Questionnaire

Name…… Age…… Sex……
Highest degree obtained degree/ masters / PhD/ others …….
(The above information will be kept confidential, still you may choose not to mention your personal details if you feel so)
We need your help to understand how to prevent breast, cervical and oral cancers through screening procedures. However, your participation in this study is voluntary and the information you give us will be confidential, which means that your name will not be mentioned anywhere and the information provided by you will be presented only in a summarized form. It is very important that you respond honestly. Please, carefully read each question and the possible responses. Choose and tick mark (✓) **one** response option that best represents your opinion about the question asked.

KNOWLEDGE:
1 Cancer is
I. slow in onset
II. Long duration
III. Debilitating
IV. Treatment is expensive
V. All of the above
VI. Don't know

2 From which source did you learn about cancers?
I. Internet
II. Learnt in School/College
III. From family members/ relatives
IV. From doctor
V. Television
VI. Others …….

3 Which of the following are you aware of?
I. Breast cancer
II. Cervical cancer
III. Oral Cancer
IV. None of the above
V. All of the above

4 What causes Oral cancer?
I. Tobacco - Chewing
II. Tobacco -Smoking
III. Eating street food
IV. Not brushing properly
V. Don't know

5 What causes breast cancer?
I. Family history
II. Drinking alcohol
III. Oral contraceptive pills
IV. Who has not breast fed
V. Don't know

6 What causes cervical cancer?
I. Multiple sexual partners
II. Reproductive tract infection
III. Sexually transmitted infections

IV. HIV/AIDS
V. All the above
VI. I , ii & iii
VII. Don't Know

7 Do you know methods of self-examination for any one cancer site (Tick those which you know)
I. Oral cavity
II. Breast
III. Cervical

8 What are the screening tests available?
I. For breast Cancer
a) Mammography
b) Self-Examination through palpation
c) Physical examination by a doctor
d) Don't know
II. For Cervical Cancer
a) Pap Smear
b) HPV testing
c) Visual Examination
d) Palpation for lumps
e) Biopsy
f) Don't Know
III. For oral Cancer
a) Swab test
b) Oral Examination by a dentist
c) Don't Know

9 What is the risky period in women to develop breast cancer /cervical cancer?
I. Birth- 15 years
II. 25-45 years
III. 21-65 years
IV. Don't Know

ATTITUDE:
10 In your opinion is it essential to go for screening for cancer during the high risk period?
I. Yes
II. no

11 How many times during the high risk period should women get screening done
I. Once in three years till middle age
II. Once in five years from middle age to old age
III. No screening once menopause sets in
IV. I & ii
V. None of the above

12 Why is screening for any tumors/cancers essential?
I. it is easy to treat if diagnosed early
II. it is to prevent onset of the cancer
III. make changes in lifestyle if the danger signs are present
IV. all of the above

PRACTICES:

13 Have you undergone any of the tests so far?

I. Pap smear
II. Mammography
III. Oral examination
IV. breast examination by a physician

14 If you have ticked any option above then, how many times you have been tested

Pap smear…….. Mammography……. Oral examination……. breast examination by a physician…….

15 Do you check yourself regularly for? (Tick whichever applicable)

I. Breast lumps
II. Inside oral cavity
III. Cervical lumps
IV. None

16 Will you get yourself tested now after the IEC session?

I. Yes
II. No

Any other comments ……

Date:
Signature:

Dr.Shilpa.G.R. "To assess the knowledge, attitude and practices (KAP) on screening for oral, cervical and breast cancer among private school teachers."." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 12, 2018, pp 43-51.