Oral Healthcare Information Seeking Behaviour of Pondicherry University Students: A Survey

Haritha K.#, Chennupati K. Ramiah^{\$,*}, Gulla Surya Prakash[^] and Chennupati Deepti[^]

*Hira Model School, Chennai-600017, India

Spondicherry University, Puducherry - 605 014, India

CARE Hospitals, Hyderabad - 500 034, India

*E-mail: chennupati kramaiah@yahoo.com

ABSTRACT

Oral health information provides knowledge about oral diseases and develops awareness among the public to implement preventive measures for oral related diseases. Oral health information (OHI) also needs support in terms of public health policy, education, the provision of professional monitoring and therapeutic interventions as and when necessary. In this context, a survey was conducted with the help of questionnaire to know the oral health information seeking behaviour of Pondicherry University students and those results are presented here. The study also assessed the various channels through which these students receive oral health information, identified their oral health information needs, awareness on oral health and preferred modes of delivering oral health information. The purpose of this study is to understand the importance of oral health to students and also to find out the role of Libraries and Information Centres (LICs) in providing the oral health information in Pondicherry. LICs should act as promoting agencies to deliver information to all the needy students. Dissemination of oral healthcare information can be made available in written, spoken or electronic form. The information could be available in the form of books, pamphlets, audio-visual or web-based forms and should be easily accessible to students and the general public.

Keywords: Oral health; Oral healthcare education; Information seeking behaviour; Pondicherry university students; Dental healthcare.

1. INTRODUCTION

"Oral health is a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and cleft palate, periodontal (gum) disease, tooth decay and loss, and other diseases and disorders that affect the oral cavity". Like many areas in the body, the mouth is teeming with bacteria, most of them harmless. Normally, the body has a natural defense, because of good oral healthcare, including brushing the teeth and flossing daily, so that we can keep these bacteria under control. When proper oral hygiene is not maintained, bacteria can reach levels that might lead to oral infections like tooth decay and gum diseases. Generally, oral health knowledge of parents in India is poor because their teachers never taught them about oral health in their school days. Many parents now recognised the importance of brushing teeth in general and try to prevent tooth decay and gum diseases in their children, and also the role of fluorides in preventing dental decay. The general awareness and use of information in gaining knowledge among students has led to an increase in the knowledge seeking behavior in them. The mass media, library,

Received: 30 June 2020, Revised: 23 October 2020

Accepted: 28 October 2020, Online published: 03 December 2020

internet, etc. are readily providing the required information to young adults.

1.1 Background

According to WHO², 60-90 per cent of children and nearly 100 per cent of adults, of which about 30 per cent are aged 65-70 years, had lost their natural teeth to periodontal diseases accounted for15-20 per cent of them are due to prevalence of dental caries, which was the major cause of premature tooth loss, especially in the permanent dentition. Poor oral hygiene practices are the major cause of dental caries. This is due to low socio-economic status, inaccessibility to oral healthcare services and low level of oral health education among people. It is found that developed countries spend 5-10 per cent of their public revenue on treatment of oral related diseases. Poor oral health also results in preterm labor and spread of bacteria from mother to child^{3,4}.

Oral health diseases are detrimental to the quality of life during childhood through old age and can have an impact on self-esteem, ability to eat, nutrition, and health. They are associated with considerable pain, anxiety, and impaired social functioning⁵. The knowledge prevalent among the youth on dental health is still questionable and there have been no

overt measures taken by the government to increase awareness about oral healthcare. Preventive oral health education is in a transitioning stage in India. Oral health knowledge creates a sense in individuals to adopt self-care practices, but it is not necessarily related to better health practices. In countries like India, TV is the media that reaches to almost all rural and urban areas and plays the major role in creating oral healthcare awareness. The need of the hour is to educate and spread the awareness about dental care through libraries, media and outreach public health programmes to make individuals, and at large, the society, healthy. A study showed that dental students in India commonly had poorer oral health awareness compared to several other countries⁶.

1.2 Need for the Study

Oral healthcare information (OHI) seeking behavior is not very well developed among the younger generation in India. Today, various types of oral healthcare maintenance materials, information and programmes have been conducted in colleges and other institutions. However, the impact will not be significant until people are fully aware about the importance of oral health and its attainment through awareness of good dietary habits and oral hygiene practices. Hence, this study was carried out to understand the level of awareness about OHI seeking behavior among Pondicherry University students.

1.3 Research Problem

This study deals with oral healthcare awareness among Pondicherry University students and to specifically identify the sources of information that provide answers with regards to their dental healthcare. It also looks into the role of libraries in providing oral healthcare information to the general population and various communities. The review of literature suggests that there are strong evidence-based studies correlating poor knowledge on dental healthcare to poor oral health. However, not much evidence is based on the dental health knowledge seeking behavior⁷. This study would be a first of its kind taken up to explore the OHI seeking behavior among University students.

1.4 Aim and Objectives

The main aim of the study is to explore the information seeking behaviour of students on oral healthcare in Pondicherry University. The specific objectives are:

- To assess the OHI needs of students in Pondicherry University;
- To identify the problems faced by the students in accessing the desired OHI.
- To identify the various channels through which these students receive OHI;
- To ascertain the role of LICs in providing OHI to students of Pondicherry University; and
- To identify the best modes of delivering OHI.

1.5 Scope and Limitations

The present study was conducted not only to evaluate the knowledge seeking behavior but also to find out the oral information needs of graduate students. The study will help in understanding the dental knowledge seeking behavior of students and how it will have an effect on the student community and surrounding population. The scope is limited to graduate students of Pondicherry University studying in 13 schools. Due to time and other limitations, 150 students from 10 major schools were involved, so as to give an idea about the overall information seeking behaviour of Pondicherry University students.

2. LITERARTURE REVIEW

Oral health is an important personal health practice of college students⁸. Oral health of an individual depends upon their awareness and attitude. Their attitudes naturally stem from their own experiences, cultural perceptions, family beliefs, and other life situations and have a strong influence on oral health behavior⁹. The oral health behaviour of Indian students has to be improved¹⁰. A study conducted to assess the knowledge, attitude, and practices (KAP) towards oral health among 11 to 12 year olds in a government aided missionary school in Bangalore suggested that the oral health KAP of the participants was poor and needed to be improved. Systematic community oriented oral health promotion programmes are needed to improve oral health KAP of children¹¹.

2.1 What is Information Seeking Behaviour?

Information seeking behaviour is one of the topics which is largely studied & researched under library science. Information seeking is the effort put to acquire or find information to meet the needs and fill the gaps in one's knowledge. Information seeking behaviour (ISB) is all about how the user attempts to find information and how they use that information to meet their needs. Teeth play a very big role in aesthetics; malaligned teeth may have a psychological effect on an individual's social and personal life. Hence elimination of oral diseases will in turn help in harmonizing the general health of an individual¹².

There are various channels through which OHI can be received by the people, including television, newspapers, informative books, and community educational programmes. Among these, newspapers and informative books are the most economical and can be made available in libraries, even in rural areas. Two decades of research indicates that today's health information is presented in a way that is not understood by most people. Nearly 9 out of 10 adults have difficulty in using daily health information that is routinely available in our healthcare facilities, retail outlets, media, books and communities¹³.

From literature, it is found that developed countries like USA, UK, Russia, Germany, and Japan have well-established national health programs which deliver quality dental treatment to even the lower socio-economic group of the population. However, the same scenario does not apply to developing countries. But recently, they are also slowly moving towards the policy of "health for all". In India, oral health has not yet been given as much importance as general health. The National Oral Health Policy was put forward in 1986 by the Indian Dental Association (IDA), which is an integral part of the National Health Policy (NHP). Apart from this, various other programmes that have been implemented based on oral health include National Tobacco Control Programme, National Cancer

Control Programme, National Rural Health Mission and School Health Programme; however, all of these programmes gave negligible importance to oral health. A study was conducted in several parts of India to find out the overall impact of dental health education programmes on schools from 1992 to 2012. The study found that the required information to promote better oral health was spread because of partnerships built on trust, respect, effective communication, shared mission and resource coordination¹⁴. India has around 289 dental colleges and taking the population into consideration, a dentist has a public population ratio of 1:10,000 in urban areas compared to 1:1,50,000 in rural areas. Although dental care is as important as general health, dental care facilties are available only in very few areas at the primary healthcare level. As there is no insurance coverage for the rural population and due to the price hikes among private dental practitioners, the majority of the population under the middle-class revenue grade fails to get proper oral healthcare.

2.2 Oral Health Awareness among University Students

Oral health knowledge should be incorporated in the curriculum for all healthcare professionals. This will improve the oral health status; provide knowledge relevant to the importance of oral health and its maintenance¹⁵. A study with para-medical students showed poor knowledge about oral health and recommended in implementing oral health knowledge in their curriculum and to teach them to become role models to their peers and family members¹⁶.

3. METHODOLOGY

In this study, survey method and questionnaire tool were used to find out the OHI needs of Pondicherry University students. There are many types of data collection tools but questionnaire is the most suitable because it can collect a large amount of data and information over a short period of time from a large number of people.

3.1 Questionnaire Design

The questionnaire consists of 38 questions spread over 3 pages and presented in a clear and precise layout that enables the respondents to read, understand and complete swiftly. The questionnaire was designed after consulting a dentist, to cover all major areas of oral health. The questionnaire consisted of eight sections—Demographics, general habits, problems in getting OHI, channels of receiving OHI, OHI needs, level of oral health awareness, role of LICs in oral health, and the best methods/modes of delivering OHI. A pilot test was conducted with 10 Pondicherry University students and modified in its contents and language as per the suggestions made by the participants.

3.2 Population and Sample

According to the Pondicherry University website statistics, there are a total of 6058 students including postgraduate students, integrated postgraduate students, and research scholars. As it's difficult to cover the total population, therefore, a sample of 150 students was selected for this study, so as to complete within the

Table 1. Demographic profile of the sample

Variable	No. of Respondents	% of Respondents		
Gender				
Male	98	65		
Female	52	35		
Age Group				
18 to 22	82	54.7		
23 to 27	62	41.3		
28 to 32	5	3.3		
33 and above	1	0.7		
Domicile				
Urban areas	71	47.3		
Rural areas	69	46		
Urban slums	10	6.7		
Habits				
Smokers	41	27		
Non-smokers	109	73		
Educational qualification				
PG Students	93	62		
Integrated PG students	18	12		
PhD scholars	39	26		

time given. Pondicherry University consists of 13 Schools and 65 departments, but for this study, students were taken from 10 major schools. Of the total 150 questionnaires distributed, all were responded to, which resulted in 100 per cent response rate. Stratified simple random sampling technique was used to draw the sample in this study.

4. DATA ANALYSIS

All the relevant data such as gender, age, domicile and other responses to various questions were processed using Microsoft Excel software. The responses to open-ended questions were categorised into a few broad categories for the purpose of analysis.

4.1 Profile of the Sample

Sample profile is given in Table 1, in which 65 per cent were male and 45 per cent were female. The majority of the respondents were in between 18 to 22 years of age, having maximum age of 32 years and minimum of 18 years. Of the total, 71 students (47.3 %) come from urban areas, 69 students (46 %) were from rural areas and 10 students from urban slum areas.

4.1.1 General Habits

Out of 150 respondents, the majority (73 %) was non-smokers and only 27 per cent were smokers. One of the reasons could be, Pondicherry being a humid place, many students do not have a smoking habit, as compared to universities in North India where temperatures can get very low. It is found that 39 students smoke cigarettes, 9 students smoke cigars, 3 students smoke pipes, and 2 mentioned other types of smoking materials. The university students prefer cigarettes due to their age, environment in which they live in.

Table 2. Reasons for visiting a dentist

No. of respondents	% of respondents
46	36
33	25
15	12
13	10
7	5
7	5
5	4
4	3
	33 15 13 7

Note: Respondents were allowed to tick more than one option; hence the total percentage exceeds 100.

Table 3. Channels for accessing OHI

Channel	No. of Respondents	% of Respondents		
Friends or neighbors	40	18		
"Free"media (e.g. newspapers, radio, social media)	38	17		
Doctors, nurses, social workers or other professionals	32	15		
Someone who faces the same issues (i.e. a peer advisor)	30	14		
Government Health Centre (PHC/CHC)	21	10		
Mass communications (e.g. leaflets, posters)	23	10		
Libraries	12	5		
Specialist advice and advocacy services	11	5		
Volunteers	8	4		
Community or faith organizations	4	2		

Note: Respondents were allowed to tick more than one option; hence the total percentage exceeds 100.

4.1.2 Frequency of Smoking

Of the total, 73 per cent smoke daily, 5 per cent smoke several times in a week, 12 per cent smoke once a week, and the remaining 10 per cent smoke rarely. The majority of the students smoke daily, which is not good for their health because it may affect other students' health.

4.1.3 Habit of Chewing Tobacco & Other Materials

In total, 8 students have the habit of chewing tobacco and 10 students have the habit of chewing betel nut or paan leaves. The majority (82 %) of students do not have the habit. Out of the 18 students, only one student chews tobacco several times a week, 8 students chew tobacco daily and 6 students chew tobacco seldomly.

4.2 Frequency & Reasons for Visiting a Dentist

It is found that the majority of students visit a dentist as and when required, but 20 students have mentioned that they visit once in a year and 9 students indicated that they visit once in six months and one respondent visits once in two years. Depending upon their eating and general habits in life, the damage to teeth takes place accordingly.

Table 2 shows that half (51 %) of the students visit a dentist for teeth cleaning and filling of cavities. About a third (32 %) visit for teeth whitening, bonding, root canal treatment and crown/cap placement. Few respondents indicated that they visit for fixing braces and extraction of teeth. It is found that 49 per cent of the respondents had their first cavity at the age of 10 to 15 years, 20 per cent at the age of 16 to 20 years, while 19 per cent had their first cavity in the early age of 5 to 10 years, and 12 per cent at the age of 21 to 25 years. This varies from person to person and also due to food habits and family background.

4.3 Problems in accessing OHI

Of the total, over half (53 %) of the respondents had difficulty in accessing OHI. The major problem in accessing OHI is due to lack of oral healthcare awareness among people. In addition to that, there are many restrictions to access information such as lack of network facility and technical knowledge.

4.4 Channels for Accessing OHI

With regards to accessing the required OHI, 56 per cent of the respondents indicated that they are able to access it on public health domains.

Table 3 shows the top 3 channels to access OHI were friends or neighbours, free media and doctors, nurses, social workers & other professionals, while the least three preferred channels are specialist services, volunteers and community or faith organisations.

Table 4 shows the ranking of various channels of communication by respondents. Here, the total weightage was calculated by number of respondents opted for each rank multipled with the rank weightage (for rank 1 weightage is 10, rank 10 weightage is 1) and then added all ten rank values to get its final weightage value. Based on the total weightage value, these channels are ranked. It is clear that many respondents preferred doctors, nurses, social workers or other professionals the most. Friends and neighbors was the 2nd most preferred channel of communication and third was libraries. The least preferred channel was community centres.

4.5 Sources for Accessing OHI

Of the total, 81 per cent (121) of respondents revealed their interest in accessing OHI. Out of the 121 students, 91 per cent (111 students) indicated that OHI is necessary for selecting a dentist.

In Table 5, it is found that the top information sources are Internet, Books or magazines, peer groups and Television. The least used sources for selecting a dentist are University Health Center and Yellow pages. The top two providers of OHI are Government Health Centers (72 %) and medical educational institutes (29 %) followed by World Health & National Health Organisations (26 %) and NGOs (17 %). The kind of OHI needed for identifying a specialist included number of years

Table 4. Ranking of channels for communication by respondents

Ranking of respondents by their rank weightage (rank 1: weightage value is 996 gradually reduces to rank 10 value is 616)					Total	Rank						
	1	2	3	4	5	6	7	8	9	10	– weitage	No.
Friends or neighbors	12	26	14	20	9	20	12	16	14	5	889	2
Someone who faces the same issues (i.e. a peer advisor)	11	10	16	26	13	18	14	14	21	5	823	5
Volunteers	2	9	15	12	20	29	15	25	15	16	751	9
Community or faith organizations	10	5	19	21	14	15	23	21	13	14	819	6
Libraries	18	23	14	10	5	20	17	18	13	8	865	3
Community centres	1	3	5	15	39	9	13	12	16	35	616	10
"Free" media (e.g. newspaper, radio, social media)	15	18	16	14	20	12	15	4	17	17	839	4
Mass Communications (e.g. leaflets, posters)	12	15	24	11	8	11	16	15	21	15	793	8
Specialist advice and advocacy services	24	18	13	14	4	7	9	20	16	23	814	7
Doctor, nurse, social worker or other professionals.	43	21	12	5	16	9	14	3	15	10	996	1

(1 is highest rank with 10 weightage and 10 is lowest rank with 1 weightage)

Table 5. Sources for accessing OHI

Information source preferred for selecting a Dentist	No. of respondents	% of respondents
Internet	38	21
Magazines or books	33	19
Peer group	31	17
TV	24	13
Newspapers	23	13
University health center	18	10
Yellow pages	12	7

of experience (49 %) and their good will (25 %). Peer review is the next priority (29 %) and educational degrees (21 %) after that. While searching for OHI on Internet, 67 per cent of students indicated that they do not take any precautionary measures; however, one third (33 %) do take precautionary measures.

Cross examining OHI from various channels, about 75 per cent of respondents reported that they do not cross examine through other channels and 25 per cent of respondents cross examined the same from other channels to confirm their oral healthcare knowledge. They feel that to look good, it is necessary to have perfect teeth. About 88 per cent of respondents said that it is necessary to have perfect teeth to look good; however, for 36 per cent of them, it is not necessary to have perfect teeth to look good but 35 per cent of the respondents have indicated that looking good is important to them.

4.6 Level of Oral Health Awareness

Health awareness is composed of three areas. First is the

respondent's level of knowledge about dental health, second is knowledge about the use of specialised dental products and third is level of awareness on oral health. In this study, a majority (81.3 %) of students indicated that they have the basic knowledge for maintaining oral health and the remaining students do not.

Of the total, only 15 per cent of students have an excellent to above average level, over half (59 %) have an average level, and over a quarter (26 %) of the students has an elementary or below average level of oral health awareness. Thus, there is a need for providing OHI to improve awareness.

The students were also asked to indicate the health of their teeth and gums. It was found that the majority of the students have good (32 %) to average (36 %) health of teeth and gums. However, less than a fifth (17 %) of students has a poor to very poor state and a small percentage (7 %) of students does not know about the state of health of their teeth. So, educational institutions should provide some ways and means of educating and improving their awareness on oral healthcare.

4.7 Role of LICs in Oral Healthcare

Which libraries should provide information on oral health and have respondents tried to look for information on oral healthcare in any of these libraries? According to this survey, 96 students indicated that LICs should provide OHI and the remaining 54 students do not agree to the same. Of the total, 65 students have not found the appropriate libraries in Pondicherry to find information or answers for their dental queries, however, 34 students have found answers for their dental queries.

4.7.1 Type of libraries that should provide information on oral health

Table 6 shows that 40 per cent of respondents are in favour of Public libraries to provide information on oral health, over a fifth (22 %) of students are in favour of University libraries, and

Table 6. Type of libraries that should provide OHI

Type of libraries	No. of respondents	% of respondents
Public libraries	94	40
College libraries	37	16
University libraries	53	22
Medical and Dental Libraries colleges	51	22

the same percentage of respondents favour libraries associated with medical and dental colleges (22 %). However, 16 per cent of students suggested college libraries provide information on oral health. Since it is not an essential requirement, the majority (82.7 %) of students have not tried, but out of the remaining students who tried in local libraries, they were able to find the required OHI.

4.8 Methods/Modes of delivering OHI

Table 7 shows that less than a third (30 %) prefer oral health counselling as their first choice, followed by audio&video materials (24 %) as their next preferred choice. Written materials (11 %) and lectures (14 %) are less preferred modes. Based on the survey, it was found that OHI seeking behavior by Pondicherry University students is poor. Respondents do not have the basic knowledge and understanding for managing their oral health. The barriers for accessing health information were also analysed and it was found that lack of oral healthcare awareness and restriction to access information resources were the main barriers.

Table 7. Best modes of delivering OHI

Mode of delivering OHI	No. of respondents	% of respondents
Digital content	52	21
Audio and video tapes	59	24
Written materials	28	11
Lectures	34	14
Health counselling	76	30

5. DISCUSSION

The lack of OHI has played a major havoc in establishing good oral health practices in the general public. Thus, 53 per cent of respondents indicated that there was some difficulty in obtaining the OHI. Of the total that consume smokeless forms of tobacco, 2 students have a habit of chewing paan and tobacco, of which one respondent is from Uttar Pradesh and another respondent is from Andhra Pradesh; 8 people have a habit of chewing paan, and 10 people have a habit of consuming tobacco. When they were segregated according to their departments, the highest rate of tobacco usage was seen among students of the School of Physical, Chemical & Applied Sciences (6 respondents), followed by students of the School of Engineering & Technology (2 respondents), and the remaining

belonged to the School of Media and Communication, School of Performing Arts, School of Social Sciences and School of Life Sciences (1 respondent each). A survey conducted with students at the University of Delhi, found that 16.3 per cent of students were tobacco users¹⁷. Betel quid, 'paan' or 'gutka' is a mixture of ingredients including chopped betel nut, herbs, slaked lime or 'chuna', red katha paste (made from the khair tree), spices and sometimes tobacco, wrapped in a betel leaf. Chewing smokeless tobacco such as paan or gutka is popular in many South Asian countries, but all forms of tobacco can harm health. Studies have also found that betel nut itself can increase the risk of cancer, so chewing betel quid without tobacco is also harmful¹⁸.

When the frequency of tobacco usage was compared with their domicile, it was found that a higher probability was seen among students from urban slum areas (7), followed by rural areas (6). The state wise comparison showed a higher prevalence of tobacco use among students from the states of Kerala, Andhra Pradesh and New Delhi (3 from each state). Other students with tobacco use belonged to the states of Tamil Nadu (1), Puducherry UT (2), Meghalaya (2) and Uttar Pradesh (2). This survey shows that nearly one third of the students have a habit of smoking. The majority of these students (73 %) smoke everyday. In another study of 4394 respondents in the state of Andhra Pradesh, it was found that smoking prevalence was 41.03 per cent, thus there is a need to formulate strict policies to guide youngsters to understand the deadly effect of tobacco¹⁹. Carbon monoxide reduces the amount of oxygen the blood can carry and reduces the oxygen levels in the body. Tar is a sticky residue which contains benzopyrene, one of the deadliest carcinogenic agents known. Other compounds are carbon dioxide, nitrogen oxides, ammonia, volatile nitrosamines, hydrogen cyanide and volatile sulphur containing compounds, volatile hydrocarbons, alcohols, aldehydes and ketones. Most of these compounds are known for causing cancer of various organs in the human body.

After introducing the Cigarettes and other Tobacco Products Act in 2003, the government announced an important initiative undertaken by this programme is the setting up of Tobacco Cessation Clinics in India. 13 clinics were set-up in 12 states across the country to cultivate awareness among the public to quit tobacco use. National Guidelines for Treatment of Tobacco Dependence have also been developed and disseminated by the Government in 2011, to facilitate training of health professionals in tobacco cessation. The National Tobacco Control Program was launched by Ministry of Health and Family Welfare in 2007-08, to bring greater awareness about the harmful effects of tobacco use and effective implementation of Tobacco Control Laws. National level public awareness/mass media campaigns for awareness building and behavioural change were planned to be carried out20. With regards to their level of knowledge, a majority of the respondents (59 %) had average knowledge and only 3 respondents had excellent knowledge in oral health (2 from Kerala, 1 from Andhra Pradesh), of which, two respondents come from the School of Physical, Chemical and Applied Science, and one respondent from the School of Humanities.

When they were asked about their oral health status, more

than a third of the respondents believed their oral hygiene to be average (36 %). A similar study was conducted to find out the level of oral health awareness and found that even educated students were not aware about oral health²¹. In this survey, 4 respondents admitted that they do not brush their teeth daily. Out of these 4 students, 2 respondents come from the School of Engineering & Technology, one from the School of Management and another from the School of Media and Communication.

Oral health education/training can be reinforced in the public mainly by healthcare professionals, including orthodontists, dental specialists, doctors, government aided organisations like primary and community health centres, NGOs, government and private hospitals and nursing homes. A study showed the laid-back attitude of medical professionals towards establishing good oral hygiene among pregnant women lead to premature births²². Even though more than 50 dental organisations came together to prevent tobacco usage, it was not successfully implemented²³.

The best method of delivering OHI to the public is by health counselling and the other methods were through audio and video tapes (24 %), digital content (21 %); lectures (14 %) and written materials was the least preferred method (11 %). In rural areas and semi-urban areas, the main barriers for OHI to reach the population are lack of network facility, restriction to access information resources, lack of oral health awareness and lack of technical knowledge. The other reasons include disinterest to search for information regarding oral health problems and unavailability of resources regarding oral health.

Overall, the majority (64 %) agreed that LICs may play a major role in providing OHI; of which, maximum number of respondents opted for public libraries (40 %). Mass media plays an important role in spreading awareness and providing OHI. From the present study, it was found that oral health knowledge levels among university students is average, which is comparatively low with regard to their literacy level. LICs play an important role to them as a resource. The study also informs us of their opinion that government health centres, including PHCs and CHCs, should be the primary information centres for oral healthcare. Oral health is important, and LICs can change the perspective on oral health among the public by increasing their knowledge.

6. CONCLUSIONS

Oral health problems are the most common conditions affecting the general health of people. However, not much attention is given to this area, hence, the government, dental colleges/hospitals and NGOs should work together to improve the existing situation, so that society will benefit. The present study was done to identify the awareness of Pondicherry University students, so that the same could be adapted to the general population; all of which will help to decrease oral disease prevalence by reinforcing information and the importance of oral health. This study found that students of Pondicherry University are educated and have full knowledge about general health but have average knowledge about oral health and neglect to take proactive steps to improve their

oral health. Many respondents had the habit of using tobacco either in smoking or smokeless forms and most of them had the awareness that smoking can cause cancer, but still chose to smoke. The main reason for all these problems is the lack of awareness for OHI. In order to educate people more about current strategies for tobacco use cessation, various methods can be implemented. Based on the results of this study, the most efficient ways to relay OHI to the public are through the internet, LICs, newspapers and television. The study concludes that the barriers for achieving good oral health should be removed, which can be done by increasing OHI accessibility in LICs, college & university libraries and by educating the general population about the importance of oral health, thereby, uprooting one of the nation's problems.

REFERENCES

- 1. World Health Organisation / Strategies for oral disease prevention and health promotion. (n.d.). Retrieved from https://www.who.int/oral_health/strategies/cont/en/ (accessed on 7 May 2020).
- 2. World Health Organisation (n.d.). Retrieved from https://www.who.int/health-topics/oral-health/#tab=tab_1. (accessed on 7 May 2020).
- Khanna, S. The interaction between tobacco use and oral health among tribes in central India. Tobacco induced diseases, 2012, 10(1), 16. doi: 10.1186/1617-9625-10-16.
- Silk, H.; Douglass, A.B.; Douglass, J.M. & Silk, L. Oral health during pregnancy. *Am. Fam. Physician*. 2008, 77(8): 1139-44.
- 5. Sheiham, Aubrey. Oral health, general health and quality of life. *Bull. World Health O.* https://www.who.int/bulletin/volumes/83/9/editorial30905html/en/. (accessed on 7 May 2020).
- 6. Muthu, J.; Priyadarshini, G.; Muthanandam, S.; Ravichndran, S. & Balu, P. Evaluation of oral health attitude and behavior among a group of dental students in Puducherry, India: A preliminary cross-sectional study. *J. Indian Soc. Periodontol.*, 2015, **19**(6), 683–686.
- Subait, A.A.; Alousaimi, M.; Geeverghese, A.; Ali, A. & Metwally, A.E. Oral health knowledge, attitude and behavior among students of age 10-18 years old attending Jenadriyah Festival Riyadh; a cross-sectional study. *Saudi J. Dental Res.* 2015. doi: 10.1016/j.sjdr.2015.05.001.
- 8. Reddy, V.; Bennadi, D.; Gaduputi, S.; Kshetrimayum, N.; Siluvai, S. & Reddy, C.V. Oral health related knowledge, attitude, and practice among the pre-university students of Mysore city. *J. Int. Soc. Prev. Community Dent.*, 2014, 4(3), 154–158.
- 9. Bashiru, B.O. & Omotola, O.E. Oral health knowledge, attitude and behavior of medical, pharmacy and nursing students at the University of Port Harcourt, Nigeria. *J. Oral Res. Rev.*, 2016, **8**, 66-71.
- 10. Dagli, R.J.; Tadakamadla, S.; Dhanni, C.; Duraiswamy, P. & Kulkarni, S. Self reported dental health attitude and behavior of dental students in India. *J. Oral Sci.*, 2008, **50**(3), 267-272.
- 11. Harikiran, A.G.; Pallavi, S.K.; Hariprakash, S. & Nagesh, K.S. Oral health-related KAP among 11-to 12-year-old

- school children in a government-aided missionary school of Bangalore city. *Indian J. Dent. Res.*, 2008, **19**(3), 236.
- 12. Marcenes, W.; Kassebaum, N. J.; Bernabé, E.; Flaxman, A.; Naghavi, M.; Lopez, A. & Murray, C.J. Global burden of oral conditions in 1990-2010: A systematic analysis. *J. Dent. Res.* 2013, https://www.nlm.nih.gov/medlineplus/aboutmedlineplus.htm (accessed on 7 May 2020).
- 13. National action plan to improve health literacy. US Department of Health and Human Services. National Health Portal (2015). http://www.nhp.gov.in/effects-of-tobacco-on-health pg(accessed on 7 May 2020).
- Gambhir, R.S.; Sohi, R.K.; Nanda, T. & Sawhney, G.S. Impact of school based oral health education programmes in India: A systematic review. *J. Clin. Diagn. Res.*, 2013, 7(12), 3107.
- 15. Kaur, S.; Kaur, B. & Ahluwalia, S.S. Oral Health knowledge, attitude and practices amongst health professionals in Ludhiana, India. *Dentistry*, 2015. **5**(7), 1-5.
 - doi: 10.4172/2161-1122.1000315.
- 16. Usman, S.; Bhat, S.S. & Sargod, S.S. Oral health knowledge and behavior of clinical medical, dental and paramedical students in Mangalore. *J. Oral Health and Commun. Dent.*, 2007,1(3), 46-48.
- 17. Kumar, R.; Alka, S.; Khushwah, M.A.; Prakash, S. & Vijayan, V.K. A study of tobacco consumption among college students of University of Delhi, India. *Indian J. Prev. Soc. Med.*, 2010, **41**(3), 41-198.
- 18. The oral cancer foundation, 2016. http://www.oralcancerfoundation.org/cdc/cdc_chapter3.php (accessed on 7 May 2020).
- 19. Garg, S.; Garipelly, R.; Nagappa, A.N. & Mateti, U.V. Evaluation of attitude, behavior, knowledge, and smoking rates among youngsters from Southern India: A surveybased study from Andhra Pradesh. *Int. J. Student Res.*, 2013, **3**(2), 35-41.
- 20. Kaur, J. & Jain, D.C. Tobacco control policies in India:

- Implementation and challenges. *Indian J. Public Health*, 2011, **55**(3), 220.
- 21. Gaszynska, E.; Szatko, F.; Godala, M. & Gaszynski T. Oral health status, dental treatment needs, and barriers to dental care of elderly care home residents in Lodz, Poland. *Clin. Interventions Aging*. 2014, **9**, 1637-1644. doi: 10.2147/cia.s69790.
- 22. Al-Habashneh, R.A. Survey of medical doctors' attitudes and knowledge of the association between oral health and pregnancy outcomes. *Int. J. Dent. Hyg.*, 2008, **6**(3), 214-220
- 23. Tomar, S.L. Dentistry's role in tobacco control. *J. Am. Dent. Assoc.*, 2001, **132**, 30S-35S.

CONTRIBUTORS

Ms Haritha, K is a graduate student of the Dept. of Library and Information Science, Pondicherry University, Puducherry and now workins as School Librarian at Hira Model School.

Prof Chennupati K. Ramaiah is working as Dean, School of Media and Communication & Professor, Dept. of Library and Information Science, Pondicherry University. His research interests are Multimedia, Hypertext, CAI, User Interfaces, HCI, Web/E-Publishing, Healthcare, LIS and Archival Informatics

Dr Gulla Surya Prakash is an alumni of AIIMS. Presently working as Senior Consultant Cardiologist at CARE Hospitals, Hyderabad. His research interests are preventive cardiology, hypertension, heart failure, interventional cardiology.

Dr Chennupati Deepti is a medical graduate doctor doing part-time practice at Hyderabad. Her research interests are healthcare communication and preventive medicine.