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Research Article

Exploring Socio-Economics and Its Role in the Oral Health Care of Patients in A Philippine Government Hospital

Carmi Angeline R. Alas, Emilio Paul M. Candelaria, Jocelyn B. Canlas, Jaya Grace B. Patacsil, Bernandino P. Malang*

World Citi Colleges Graduate School – Cubao, Quezon City, Bulacan State University – Bustos Campus

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**Corresponding author:*
E-mail:
bernandino.malang@bulsu.edu.ph

ABSTRACT

Despite the availability of dental services and educational programs, as well as, established national health system responses, and oral health interventions and procedures, oral health problems (dental caries, gum diseases and unmet dental needs) persist in the Philippines. The aim of this study was to investigate the socioeconomic factors in terms of sex, age, marital status, educational attainment, occupation, and monthly income and their effect on the oral health awareness in terms of benefit and practices. A total of 100 patients from a selected government hospital were surveyed. The respondents were asked to answer a standardized questionnaire about their socioeconomic status, awareness on the benefits of oral health care, and awareness on the practices for oral health care. Chi-Square Test for Independence was used to identify which demographic and socioeconomic indicators determined the level of awareness of the respondents on the benefits of and practices for good oral health. The Chi-Square Test showed that only sex had a significant relationship with the awareness on the benefits of good oral health (p-value = 0.05). All the other indicators had insignificant effects; Age group (p-value = 0.435), Civil Status (p-value = 0.443), Education (p-value = 0.244), Employment status (p-value = 0.722), Income (p-value = 0.986). For the awareness on good oral practice, both sex and civil status showed a significant relationship (p-values 0.028 and 0.01). For the other indicators, null hypothesis was accepted; Age group (p-value = 0.61), education (p-value = 0.914), employment status (p-value = 0.334), income (p-value = 0.64). The results of this study are in line with the Andersen Healthcare Utilization Model, which holds that people's use of healthcare services is influenced by several predisposing, enabling, and need-related factors. The knowledge of, and observance of, good oral health is essential in determining the need

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for oral healthcare. Moreover, a variety of socioeconomic and personal factors (enabling and predisposing) are crucial in facilitating or impeding people's ability to access and make use of oral healthcare services. Addressing these issues and promoting education and knowledge about the value of excellent oral health practices are crucial for good oral health.

Keywords: *Awareness, Benefits, Dental caries, Government hospitals, Gum diseases, Oral health, Philippines, Practices, Socioeconomic*

Introduction

Oral health is a determinant of overall human wellbeing. However, addressing it is often last in an individual's priority (DOH, 2003). Oral health disease is a major concern that is prevalent across different populations worldwide, yet they are often unrecognized and untreated as such. Various diseases such as dental caries, periodontal diseases, edentulism, lip and oral cavity cancer, cardiovascular diseases, chronic respiratory diseases, and rheumatoid arthritis to name a few have been associated with oral health care (WHO, 2022). According to the World Health Organization (WHO), oral disorders remain the most common noncommunicable diseases, impacting 45% of the population or 3.5 billion people worldwide from childhood to old age.

The Department of Health - Northern Mindanao (DOH-10) claimed that around 87% of Filipinos have oral health problems ranging from tooth decay to gum disease (Luczon 2022). This is consistent with the oral health country profile by the World Health Organization, citing the prevalence of oral diseases across all Filipino age groups - with the highest prevalence of 45% for untreated caries of deciduous teeth in children 1 to 9 years of age.

The Philippines, with its archipelagic geography and population of over 112 million, faces a more serious problem in terms of oral health. In a 1998 National Monitoring and Epidemiological Dental Survey conducted, it was found out that 92.4% of Filipinos had tooth decay and 78% had gum disease (DOH 2021). Although these two (2) diseases were not considered highly lethal, their combined ill effects weaken bodily defense and act as a gateway of entry to other more serious and potentially lethal opportunistic infections.

Scientific research in the medical field shows this constantly: health starts from the mouth (Fiorillo, 2019). While dental health has long been acknowledged as an important component of general well-being, the path to a comprehensive and equitable oral healthcare system has included significant milestones.

Historically, oral health care in the Philippines has been based on traditional methods and home medicines. Dental treatment was frequently sought only when there was discomfort or a serious dental problem. In addition, access to dental needs was restricted, particularly in rural areas. Later, by recognizing the importance of oral health, the Philippine government began to take actions by crafting policies in relation to oral health.

The Philippine Dental Act of 2007, or RA No 9484, the first dental act that provides regulation in the practice of dentistry, solely focuses on the scope of practice of the dental professions. Public oral health programs and directives on the provision of both private and public oral health services are not stated (Mendoza et al 2020). Nonetheless, the government continues its endeavor to address oral health problems. The government had issued policies such as DOH AO 2007-0007 or the 'Guidelines in the Implementation of Oral Health Program for Public Services' that includes dental health care packages across all life stages, from pregnancy to elderly; and DepEd DO 73, s. 2007 or the 'Promoting Oral Health in Public Elementary Schools'. In 2019, the Universal Health Care Act (Republic Act 11223) was adopted which marked the milestone in Philippine healthcare setting including oral health care. However, while the government organizations and other sectors continue to promote oral health. The high prevalence of oral health diseases persists.

RA 11223 states that it is the policy of the state to protect and promote the right to health of all Filipinos and still health consciousness among them. Subsequently, access to healthcare, particularly oral health care, is a fundamental human right, and understanding the factors that restrict or enable this access is critical to Filipinos' well-being. By investigating the role of socioeconomics in oral health care, this research hopes to contribute valuable insights that can update policies and interventions to reduce disparities, improve access, and ultimately promote better oral health outcomes for all Filipinos.

The study will investigate the socioeconomics of oral health care in the Philippines, with a focus on a selected government dental hospital. Specifically, it will explore how age, gender, income, education and occupation affect Filipinos' awareness on good oral health care. We will also inspect the diverse oral health practices of the same group and look for linkages based on the given criterion.

The researchers adopted the Andersen Healthcare Utilization Model and developed the Oral Healthcare Service Utilization Model to analyze the factors that influence access and utilization of dental services and oral health outcomes of the direct patients, and patients' dependents and beneficiaries of the selected government dental hospital. According to Baker S.R. (2009), there have been few studies that have explicitly tested and adapted the model in relation to oral health. The study wants to assess if the different factors including the predisposing factors (including age, sex, education, dental attitudes), enabling factors (family income, participant's perception of difficulty visiting the dentist, available oral healthcare information), clinical measures of need and use of dental services (the number of visits over the past years) has a significant effect in the behaviors and practices of oral healthcare and the awareness on the use of existing oral healthcare services.

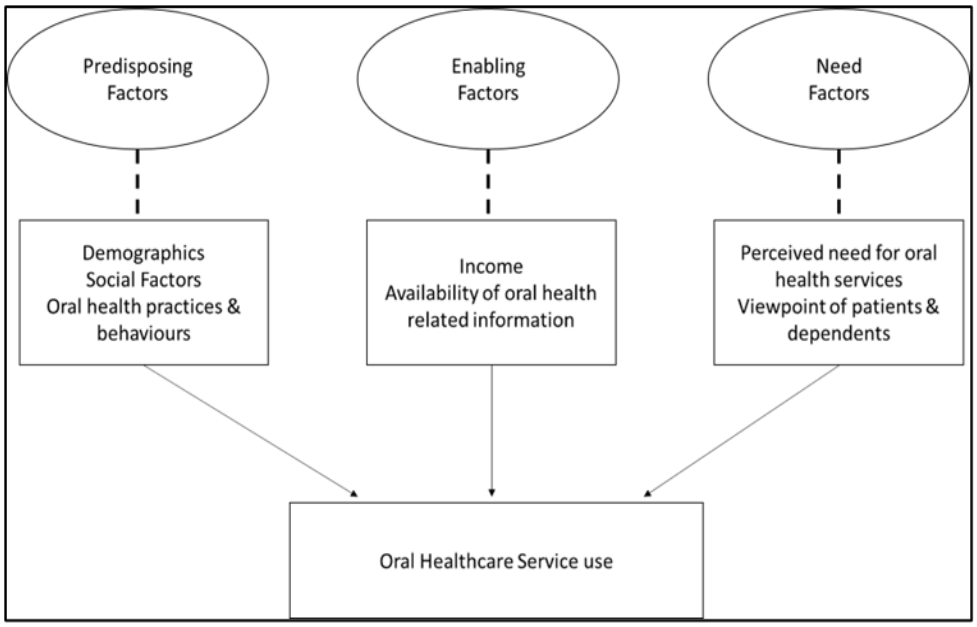

Figure 1. Andersen Healthcare Utilization Model
Revisiting the Behavioral Model and Access to Medical Care: Does it Matter? Journal of Health and Social Behavior

The study will explore the associations of the respondents' socio-economic profile, awareness of the benefits and practices of oral health care, and actual oral health practices and habits. Specifically, it will consider the following factors: sex, age, marital status, educational attainment, occupation, and monthly family income, vis-a-vis their awareness and actual practices.

Methodology

The researchers employed a mixed method approach, utilizing both quantitative and qualitative methods, to study the role of socio-economics on the respondents' awareness on the practices and benefits of oral health care. The quantitative research design was used to capture the important socioeconomic factors like income, educational attainment, and oral health status, thus providing a foundational understanding on the topic. Then a qualitative approach was employed to give insights between the interactions of these factors in respondents' oral health level of awareness and oral health practices.

To better identify the association between socio-economics and oral health care awareness, the researchers adopted the Strategies in the Conduct of the National Dental Survey (NSOH in the Philippines, January 2019) as a baseline strategy. Additionally, this study followed the Andersen Healthcare Utilization Model which is often used in healthcare research to assess how various determinants impact the use of healthcare services.

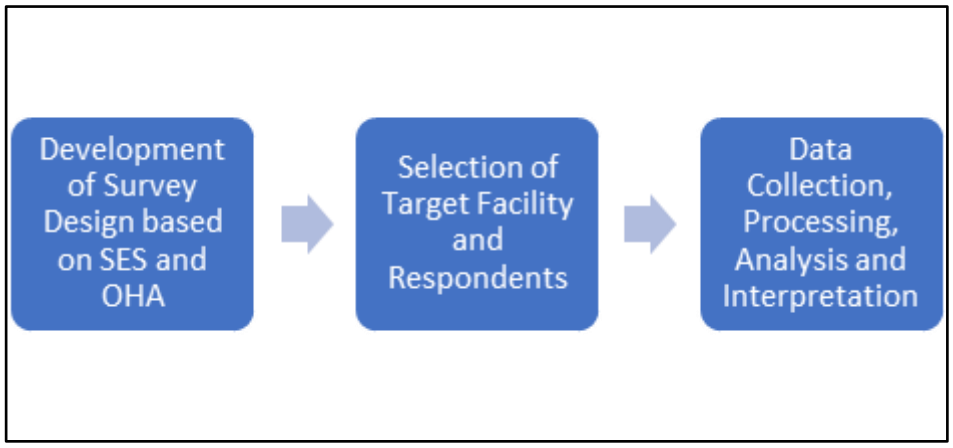

Figure 2. Strategy in the Conduct of Survey

The selected Philippine government hospital was chosen based on its accessibility and availability of oral health care services. A convenience sampling was used, considering the feasibility of reaching the target group of respondents within the period of study. The respondents were identified among civilian human resource personnel and dependents of the military personnel seeking oral health care treatments in the selected hospital.

The data was collected using a self-administered standardized questionnaire design to capture relevant information pertaining to socioeconomic factors and oral health. The questionnaire consisted of both closed-ended and open-ended questions to ensure comprehensive data collection. The 2008-2010 Korea National Health and Nutrition Examination Survey (KNHANES) was used as the basis for the collection and reporting of data. The instrument covered the following key areas: demographic profile, socio-economic factors, prevalence of oral diseases, level of awareness on oral health care benefits, and level of awareness on oral health care practices.

The survey instrument was pre-tested for clarity and comprehensibility among a small group of individuals before the actual data collection to ensure its appropriateness. Additionally, since the researchers used a non-probability sampling method in choosing the participants in the survey, the Cronbach's alpha coefficient was used as a measure of reliability to test whether the participant's responses on Likert scales have internal consistency. The table below provides the interpretation of the values.

Table 1. Cronbach's alpha coefficient

Cronbach's α Value Range	Interpretation
0.91 - 1	Excellent
0.81 – 0.90	Very Good
0.71 – 0.80	Good and Acceptable
0.61 – 0.70	Acceptable
0.01 – 0.60	Not acceptable

To generate insightful conclusions and respond to the research questions, the collected data was subjected to a careful statistical analysis using a significant level of 5%. Descriptive statistics (frequencies and percentages) was used to summarize demographic profiles, socioeconomic status, level of awareness on the benefits and existing oral health care practices of the respondents. Chi square test for independence was used to determine the relationship of level of awareness in benefits of good oral health and level of awareness in good oral practices among socioeconomic factors.

Results and Discussions

Good oral health is important in our daily lives, especially in the long run as we age. Proper oral hygiene and good oral practices are necessary to maintain and preserve the health of our mouth. This study has shown that mouth problems, including toothache, gum pain, tongue, and jaw discomfort, is prevalent in our country. For this study alone, 85% of the respondents have experienced different mouth problems. Even if the majority of the respondents understand the importance of good oral health (71% agree and strongly agree) and good oral practice (81% agree and strongly agree), many of them fail to visit a dentist regularly due to a busy schedule while some due to financial issues. Another reason is the improper use of oral hygiene kits. Most are just brushing their teeth when in fact, this is not the only thing you need to do to maintain good oral health. The frequency of cleaning your mouth is also of utmost importance. Several demographic factors have shown a significant relationship with the level of awareness on the benefits of good oral health and practice. A person's sex and civil status determine how a person understands good oral health and practice. Dental caries and gum diseases are still rampant in the country so proper oral healthcare and educating the public about good oral practices is necessary.

The results of this study are in line with the Andersen Healthcare Utilization Model, which holds that people's use of healthcare services is influenced by several predisposing, enabling, and need-related factors. The knowledge of, and observance of, good oral health is essential in determining the need for oral healthcare. Moreover, a variety of socioeconomic and personal factors (enabling and predisposing) are crucial in facilitating or impeding people's ability to access and make use of oral healthcare services. Addressing these issues and promoting education and knowledge about the value of excellent oral health practices are crucial for good oral health.

Table 2 and 3 shows the distribution of respondents according to demographic profile and socioeconomic status.

Table 2. Distribution of Respondents According to Demographic Profile

Demographic Profile N = 100		
Age Group	**N**	**%**
1 to 9 y/o	1	1.00%
10 to 19 y/o	3	3.00%
20 to 29 y/o	16	16.00%
30 to 39 y/o	38	38.00%
40 to 49 y/o	24	24.00%
50 to 59 y/o	5	5.00%
60 to 69 y/o	13	13.00%
Sex	**N**	**%**
Male	28	28.00%
Female	72	72.00%
Civil Status	**N**	**%**
Single	43	43.00%
Married	55	55.00%
Separated	1	1.00%
Widowed	1	1.00%

*Mean Age: 38.4, Std. Dev: 12.6

Table 3. Distribution of Respondents According to Socioeconomic Status

Socioeconomic Status N = 100		
Education	**N**	**%**
Elementary	3	3.00%
High School	1	1.00%
College	72	72.00%
Vocational	5	5.00%
Post-graduate	19	19.00%
Employment Status	**N**	**%**
Employed	87	87.00%
Self-employed	2	2.00%
Unemployed	11	11.00%
Income	**N**	**%**
Below P10,957	5	5.00%
P10,957 to P21,914	18	18.00%
P21,915 to P43,828	42	42.00%
P43,829 to P76,669	21	21.00%
P76,670 to P131,484	11	11.00%
P131,485 to P219,140	2	2.00%
Above P219,140	1	1.00%

The 30- to 49-year-old age group makes up the considerable portion of respondents and accounts for (62%) of the total participants in this study. This implies that the study primarily captures the perspectives and experiences of individuals on their prime working and family-building years. While, a great majority (72%) completed college degrees, and a notable (19%) having attained post-graduate qualifications. Majority of respondents are actively engaged in employment (87%), with a predominant proportion falling within the income

range of 20,000 to 40,000, comprising (42%) of the working respondents. This implies that the study mainly captures the perspectives of well-educated and gainful employment individuals, which may have an impact on the type of insights and feedback gathered.

Tables 4 & 5 offer insights into the prevalence of dental caries and gum diseases and how respondents had experienced of pain in the oral cavity and its frequency.

Table 4. Distribution of Respondents According to Prevalence of Dental Caries and Gum Diseases

Prevalence of Dental Caries and Gum Disease N = 100		
Reason for Dental Visit	**N**	**%**
Regular check-up	47	47.00%
Work requirement	6	6.00%
Pain in the mouth	24	24.00%
Follow-up check-up	3	3.00%
Others	20	20.00%
Reason for Mouth Pain	**N**	**%**
Teeth	70	70.00%
Gums	12	12.00%
Tongue	1	1.00%
Jaw	2	2.00%
None	15	15.00%
Reason for not having Oral Health Care	**N**	**%**
Not affordable	14	14.00%
Not included in the insurance	1	1.00%
Too far	5	5.00%
No available time	60	60.00%
Afraid of the dentist	7	7.00%
Others	13	13.00%

Table 5. Mean Score and Std. Dev. on Frequency of Pain in Specific Part in Oral Cavity

Frequency of Pain in the Specific Part	**Mean Score**	**Std. Dev.**	**VI**
Teeth	2.03	0.95	Very Seldom
Gums	1.81	0.88	Very Seldom
Tongue	1.36	0.69	Never
Jaw	1.47	0.73	Never
Overall Frequency of Pain	**1.67**	**0.86**	**Never**

1: 1.0 – 1.79 (Never) 2: 1.8 – 2.59 (Very Seldom) 3: 2.6 – 3.39 (Seldom)
4: 3.40 – 4.19 (Frequently) 5: 4.2 – 5.0 (Very Frequently)

On the other hand, only (47%) of respondents regularly visit a dentist, this indicates a concern gap in routine dental examinations. Significantly, more than (70%) of respondents suffered from toothaches, which is an evident sign of oral health problems and demands more frequent dental visits. About (60%) of respondents attribute their lack of dental visits to a busy schedule, indicating the need for more oral health education and awareness as well as practical scheduling options. The fact that (14%) of respondents declared they could not afford oral health care is also a significant concern, emphasizing the need for accessible and cost-effective options to guarantee oral health for a larger segment of the population.

Furthermore, most respondents did not report frequently experiencing oral pain. This suggests a relatively low prevalence of chronic dental issues among the surveyed population.

However, it is important to consider that even less frequent instances of oral pain may be an indication of hidden dental issues that require attention.

Table 6 & 7 shows the degree to which respondents are aware of the benefits and practices of maintaining their oral health.

Table 6. Mean Score and Std. Dev. on Level of Awareness on Benefits of Proper Oral Healthcare

Awareness on Benefits of Good Oral Health	Mean Score	Std. Dev.	Interpretation
1. Toothache can hinder work or study.	4.4	0.9	Strongly Agree
2. Rotten teeth can cause bad breath.	4.56	0.89	Strongly Agree
3. Bad teeth can lower self-esteem.	4.61	0.88	Strongly Agree
4. Oral health can be linked to heart problems	3.96	1.13	Agree
5. Early extraction of baby teeth can cause misaligned adult teeth.	3.18	1.37	Neutral
Overall Awareness	**4.14**	**1.17**	**Agree**

1: 1.0 – 1.79 (Strongly Disagree) 2: 1.8 – 2.59 (Disagree)
3: 2.6 – 3.39 (Neutral) 4: 3.40 – 4.19 (Agree) 5: 4.2 – 5.0 (Strongly Agree)

For the first, second and third statement, the majority of the respondents have strongly agreed that toothache affects study and work, causes bad breath and lowers self-esteem. For the fourth statement, respondents have only agreed in general regarding the connection of oral health with heart ailments and for the 5th statement, due to a partial agreement and disagreement by the respondents, a "Neutral" sentiment was observed. In general, the respondents have agreed on the benefits of good oral health.

Table 7. Mean Score and Std. Dev. on Level of Awareness on Oral Healthcare Practices

Awareness on Good Oral Health Practices	Mean Score	Std. Dev.	Interpretation
1. Not brushing your teeth at least twice a day is bad for oral health.	4.46	0.98	Strongly Agree
2. Frequent eating or drinking of sweet food or drinks while not brushing your teeth afterwards is bad for your oral health.	4.49	1.09	Strongly Agree
3. Not gargling after eating is bad for your oral health.	4.1	1.01	Agree
4. Smoking is bad for your oral health.	4.51	1	Strongly Agree
5. The use of dental floss is as important as brushing your teeth for oral health.	4.02	1.21	Agree
Overall Awareness	**4.32**	**1.08**	**Strongly Agree**

1: 1.0 – 1.79 (Strongly Disagree)
2: 1.8 – 2.59 (Disagree)
3: 2.6 – 3.39 (Neutral)
4: 3.40 – 4.19 (Agree)
5: 4.2 – 5.0 (Strongly Agree)

In terms of mean scores on the awareness of good oral health practice, the respondents have strongly agreed that not brushing your teeth at least twice a day, eating sweet foods and smoking is bad for oral health. On the other hand, the respondents have only agreed that not gargling after eating food and use of dental floss is as important as using a toothbrush will contribute to oral health. In general, the respondents have strongly agreed on good oral health practices.

Based on self-assessment of respondents according to their awareness on good oral health, many respondents strongly agree with the statements highlighting how toothaches can interfere with work or study, how bad breath is related to tooth decay, and how dental issues can affect one's self-esteem. However, the correlation between heart disease and oral health and the belief that early tooth extraction causes crooked teeth is comparatively in less agreement, with a significant proportion of respondents expressing disagreement or uncertainty. Additionally, the great majority of respondents strongly agree that eating sweet foods and brushing your teeth less than twice a day are bad for your oral health. Furthermore, a sizable percentage of the participants are aware of how smoking has a negative effect on oral health. While only (39%) of respondents strongly agreed with the significance of gargling after meals, and a comparably smaller percentage strongly agreed with the need to use dental floss in addition to a toothbrush to maintain good oral health. These findings imply that while important behaviors like consistent brushing and diet selections are well understood, there is room for improvement in emphasizing the value of supplementary practices like post-meal gargling and flossing.

Table 8. Distribution of Respondents According to Source of Dental Information

Levels of Awareness on Proper Oral Healthcare N = 100			
Statement	Responses	N	%
You are knowledgeable about the importance of oral health care and regular check-up.	Yes	96	96.00%
	No	4	4.00%
If you answered yes, where did you get your knowledge or information about oral health care?	Dentist	71	71.00%
	Media	18	18.00%
	Family & friends	7	7.00%
	None	4	4.00%

In general, a great majority (96%) of respondents, have adequate knowledge of proper oral healthcare. (71%) of them reported getting their information from dental professionals, highlighting the crucial role that dentists play in informing the public about good oral health habits. Additionally, (25%) of respondents learned about things from non-professional sources like social media, family, and friends and suggests a need for further collaboration between dental practitioners and public health efforts to ensure the dissemination of accurate and evidence-based information to reach a broader audience.

Table 9 shows the test for reliability of responses based on Cronbach's alpha coefficient.

Table 9. Test for Reliability of Responses

Scale Reliability Statistic		
	Cronbach's α	**Interpretation**
Prevalence of Dental Caries and Gum Diseases Scale	0.782	Good and Acceptable
Awareness on Benefits of Good Oral Health Scale	0.838	Very Good
Awareness on Good Oral Health Practices Scale	0.889	Very Good

In terms of frequency of pain in the teeth, gums, tongue, and jaw, the scale has a "good and acceptable" set of responses (Cronbach's α within 0.71 - 0.8 range). In terms of awareness on benefits of good oral health and good oral health practice, both scales have "very good" set of responses in terms of internal consistency (Cronbach's α within 0.81 - 0.9 range).

The tables below enable an in-depth assessment of the relationship between awareness of the benefits of oral health and good oral health practices by taking into account the socioeconomic factors of the respondents.

Table 10. Relationship of Respondents Level of Awareness in Benefits of Good Oral Health among Demographic and Socio-economic Factors

Awareness on Benefits of Good Oral Health N = 100				
Socio-economic Factors	**X^2**	**p-value**	**Decision**	**Interpretation**
Age Group	24.5	0.435	Accept null hypothesis	insignificant
Sex	9.17	***0.05***	Reject null hypothesis	significant
Civil Status	12	0.443	Accept null hypothesis	insignificant
Education	19.5	0.244	Accept null hypothesis	insignificant
Employment Status	5.33	0.722	Accept null hypothesis	insignificant
Income	11.4	0.986	Accept null hypothesis	insignificant

Chi-Square Test for Independence is used to identify which demographic and socioeconomic indicators determine the level of awareness of the respondents on the benefits of good oral health. Only the sex indicator showed a significant relationship with the awareness on the benefits of good oral health. Thus, this is where the null hypothesis is rejected (p-value = 0.05). All the other indicators have insignificant effects; Age group (p-value = 0.435), Civil Status (p-value = 0.443), Education (p-value = 0.244), Employment status (p-value = 0.722), Income (p-value = 0.986).

Table 11. Relationship of Respondents Level of Awareness in Good Oral Health Practices among Demographic and Socio-economic Factors

Awareness on Good Oral Practices N = 100				
Socio-economic Factors	**X^2**	**p-value**	**Decision**	**Interpretation**
Age Group	21.5	0.61	Accept null hypothesis	Insignificant
Sex	10.9	***0.028***	Reject null hypothesis	Significant
Civil Status	26.1	***0.01***	Reject null hypothesis	Significant
Education	8.99	0.914	Accept null hypothesis	Insignificant
Employment Status	9.1	0.334	Accept null hypothesis	Insignificant
Income	21	0.64	Accept null hypothesis	Insignificant

For the awareness of good oral practice, both sex and civil status showed a significant relationship (p-values 0.028 and 0.01). For the other indicators, null hypothesis is accepted; that is, Age group (p-value = 0.61), education (p-value = 0.914), employment status (p-value = 0.334), income (p-value = 0.64).

Comparably, the 30- to 49-year-old age group of respondents show high levels of agreement on the awareness of good oral health practices. For gender, more females approved these practices and the need for gender-specific oral health awareness campaigns are highlighted by gender difference. Married people mostly agree, presumably because of family obligations and health awareness among this group. The positive correlation between education, employment, income, and oral health awareness is highlighted by the fact that respondents with college degrees, those employed, and middle-class earners are all knowledgeable about good oral health practices. Gender factors and civil status are significantly associated with the level of awareness on the benefits of good oral health practices. On the other hand, all other indicators, including age group, education, employment status, and income, did not exhibit a statistically significant influence.

Recommendations

The following recommendations can be implemented to raise awareness of oral health on the basis of the findings from the study of the significant relationships between socio economics factors and level of awareness:

1. Conduct of comprehensive Oral Health Education (OHE)
    a. Implement a community-based oral health programs that focus on in-offices, and neighborhood community centers to provide extensive oral health education to all demographic groups and to involve people of all ages and backgrounds despite a busy schedule.
    b. Increased involvement of said dental facility to its partner hospital by programming oral health days which can be an effective strategy to encourage active participation and collaboration with other healthcare professionals to communicate to its clientele and explain oral health and its implication to systemic health.
    c. Enhance public awareness campaigns about the value of preventive care in the early detection and impart importance of seeking professional care to avoid longer-term and more serious issues.
    d. Intensification of public education about the many advantages of good oral health and dispel widespread misconception to ensure that people make informed decisions about oral health that is supported by the best available scientific evidence.
    e. Promotion on the significance of post-meal gargling and regular use of dental floss as aid to regular toothbrushing. It is imperative to increase the current understanding of good oral health practices to ensure that the general public has a more complete understanding of and adherence to effective oral hygiene practices.

2. Make periodic assessment of improvement on oral health care practices
    a. Review of current health surveillance indicators used and check its responsiveness to demands and needs.
    b. Regular evaluation on oral health awareness to the patients under its jurisdiction and assess the efficacy of programs by routinely conducting surveys and gathering feedback. Make the necessary changes and improvements to the awareness initiatives' content, delivery strategy, and accessibility using the data based on the result.

3. Develop gender-tailored oral health campaign

    To create and implement oral health campaigns tailored to specific genders. Build distinct awareness campaigns with a focus on women and men, each addressing specific oral health issues and stressing

preventive measures. To reach a larger audience, work with organizations that cater to particular genders. In addition, Conduct OHE specifically to women, due to hormonal changes that may affect oral health.

4. Enforce marital-status focus oral health

   To create programs that take civil status into account as a major aspect of oral health awareness. Create materials and workshops that are especially suited to the requirements of married people and single people. Include details on individual oral hygiene routines for singles and family dental care for married couples. For initiatives aimed at married people, collaborate with marriage and relationship counselors.

5. Implement school-based oral health programs

   Increased involvement in schools and introducing oral health instruction in classrooms and working with school administration to incorporate oral health education into the curriculum and make it a regular part of students' learning experiences, this is a good way to instill good oral health knowledge at an early age. Furthermore, providing rewards during visits to caries-free students especially in young children, is an effective strategy to recognize their good oral hygiene.

6. Maximize usage of digital platforms to raise oral health awareness

   Make use of technological resources to improve patient engagement and reach a wider audience. Initiate creation of engaging social media pages, and user-friendly websites to share trustworthy information on oral health, to promote oral hygiene habits and dispel myths. To engage and educate the public, use real-time question and answers with dental professionals, educational videos, and online quizzes.

7. Devise a scheme to accommodate patients

   To find ways to accommodate individuals with busy schedules, it is crucial to promote flexible scheduling options. Since the majority of respondents are employed from Monday to Friday and also the surveyed dental treatment facility has the same working hours, it emphasizes the need to approach this concern and find ways to accommodate individuals with busy schedules. The usage of the Sick Call Slip and issuance of a Dental Certificate as recognition for the visit is one strategy that could result in the employee being excused from work. Moreover, employers have a critical role to play in raising employee awareness of oral health issues.

8. Do collaboration, training and partnership

   Develop partnerships with local dentists and medical professionals to guarantee the accuracy and reliability of the information. To facilitate and spread oral health awareness programs, work with local community organizations, educational institutions, and workplaces.

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