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Assessing dental students' attitudes towards the dental care of the underserved in community

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Abstract

Dental students play a vital role in providing oral health care to underserved populations. However, little is known about their attitudes towards providing care to these populations. The purpose of this study was to assess the attitudes of dental students towards the dental care of underserved populations in the community. A total of 248 dental students from a private Philippine university participated in this study. They answered a self-administered questionnaire that assessed their attitudes towards dental care for underserved populations in four domains: societal expectations, dentist/student responsibility, personal efficacy, and access to care. Results showed that majority of dental students had positive attitudes towards providing care to underserved populations. The students believed that it was important for dentists to provide care to these populations, and they felt that they had a responsibility to do so. The students also felt that they could provide effective care to underserved populations, and they believed that these populations should have access to dental care. There were no significant differences in the students' attitudes towards providing care to underserved populations based on their year in school, sex, community or volunteer work experience, area where they lived, social class based on family monthly income, or means of paying for the dental school. Findings of this study can be used to develop programs and initiatives to increase the number of dental students who are interested in providing care to underserved populations.

Keywords: attitude, community dentistry, dental education, public health

Assessing dental students' attitudes towards the dental care of the underserved in community

1. Introduction

Barriers to quality oral health care in community continue to exist in many forms. The prevalence of dental diseases keeps rising across most low- and middle-income nations as urbanization and economic changes occur. This challenge is due to many factors such as lack of preventive dental services such as fluoridization and fluoridation for community, insufficient dental health facilities and an unequal distribution of dental practitioners, making access to primary oral health treatments generally limited (WHO, 2020). Existing across the nations was a pro-rich disparity in dental care coverage, albeit lower-income countries are suffering greater inequality with the lowest dental care coverage than higher-income countries. With thrusts to promote universal coverage in dental care, government and institutions must adopt strategies and interventions to address the dental concerns of the poorest population groups (Hosseinpoor, et al., 2012).

In the Philippine setting according to the Department of Health (2011), the local health care system adapted and developed as it was challenged over time, although it has not fully conquered the disparity issue. Underemployment, scarcity, and unequal distribution are issues that many health care professionals face. Private hospitals are counted more numerous than government hospitals. In tertiary hospitals, where the number of private institutions is four times that of government hospitals, the gap is much more pronounced. Majority of them are clustered in metropolitan cities like Manila.

To overcome these disparities, higher education institutions play a key role in forming dental professionals who are socio-culturally competent, in providing quality oral health care services for all people. From the academic standpoint, identifying enablers and challenges to integrating indigenous cultural competency programs, and devising new techniques in community setting would greatly assist students in becoming socio-culturally competent following graduation (Forsyth, et al., 2019). Dental schools must be keen in providing training, community exposures, clinical courses, workshops, and other innovative strategies to equip the students in understanding health inequalities and population diversity and appreciate universal access to care. (Tiwari & Palatta, 2019; Tiwari, et al., 2020)

The impact of community-based dental care experiences of dental clinicians and their engagements with patients in Clinical Dentistry and laboratory classes have potential to influence students' attitudes in providing basic oral health services for all and as they go further with their professional career. Exposure to community service strengthens their awareness of oral health inequality and variety of dental concerns due to the diversity of the population. Carrying out basic dental service and oral health promotion may favorably affect student attitudes about community service and boost their drive to concentrate on schoolwork. It has potential to increase their self-efficacy in delivering care for various groups of people present in the community (Holtzman & Seirawan, 2009). With hope of forming culturally competent learners and addressing the thrust of the dental profession for universal health care, this research assessed the impact of community dental care experiences to the students' attitudes towards dental care of the underprivileged. Findings of this research may also be used to guide and advise dental schools and oral health care policy makers in developing an effective program and action plans to promote oral health to the public, more importantly to the underserved in the community.

1.1 Objectives of the research

The goal was to assess the dental students' attitudes towards dental care of underserved in the community; more specifically, to: 1) Present the profile of the respondents according to year level, sex, community or volunteer work experience, area where they lived, social class based on family monthly income and means of

paying for the dental school, 2) Determine the students' attitude toward dental health care of the underserved in terms of societal expectations, dentist/student responsibility, personal efficacy and access to care, 3) Test significant difference on the attitude domains when grouped according to profile; and 4) Propose an action plan to enhance community-based dental services and attitudes of dental students for the underserved in community.

2. Methods

2.1 Research design

A descriptive research approach was applied to first gather and summarize the data acquired before it can be examined. Descriptive statistics organizes pertinent data relevant to the variables to be investigated so that one can see whether there's anything you need to do to get it ready for analysis (McCarthy, et al., 2019). Survey must present strong research questions employing the least possible number of high-quality, important query items that will spark interest in the respondents. Results from such survey are concrete measurements and stand as evidence on key practices, attitudes, and knowledge of the target population (Story & Tait, 2019).

2.2 Respondents of the study

The respondents were 248 Dentistry students from all six-year levels, enrolled in second semester of SY 2021-2022 in a private dental school. Out of the total population of 388, 248 students participated in the study. Using Raosoft sample size computation, 248 is the acceptable sample size for a total population of 388, to tolerate 5% margin of error and 99% confidence level. One forty (140) out of 388 students opted not to respond and participate in the survey.

2.3 Data gathering Instrument

The adapted questionnaire from Statements in the Attitudes toward Health Care Survey (Habibian et al., 2011) was used. The statements were presented and rated by the respondents to be able to assess their attitude scores under the four domains: societal expectations, dentist/student responsibility, personal efficacy and access to care. Respondents were asked to evaluate the statements on a four-point Likert scale with 1 indicating strong disagreement and 4 indicating strong agreement.

2.4 Data gathering procedure

Due to the restrictions brought about by the pandemic and the limitation of physical access with the students and faculty, data was gathered using Google forms questionnaires that were sent through active social media accounts of the respondents. Results of the survey were tallied by the researchers through Microsoft excel.

2.5 Data analysis

The data was analyzed using frequency count and percentages to determine the number of responses and their percentages in terms of year level, sex, community or volunteer work experience, area where they lived, and means of paying for the dental school. Descriptive statistical analysis was employed for all the variables. The outcomes were the overall total scores on all questions and the sum of scores within the four domains. The independent variables were the year level, sex, community or volunteer work experience, area where they lived, and means of paying for the dental school. The association was assessed and established between the outcomes and the independent variables under study. The statistical test used for test of difference is the Chi-squared test, to compare the observed and expected frequencies of a categorical variable. In this case, the categorical variable is the respondent's profile, and the observed frequencies are the number of respondents in each profile group who gave a particular attitude response. The Chi-squared test is a non-parametric test, which means that it does not require the data to be normally distributed. The test of normality is used to check whether the data is normally

distributed. If the data is not normally distributed, then non-parametric tests are used. In this case, the Chi-squared test is a non-parametric test, which is used to compare the observed and expected frequencies of a categorical variable. It is a good choice for testing for differences in attitudes between profile groups, because it does not require the data to be normally distributed.

2.6 Ethical Consideration Clearance

The researchers invited the respondents to voluntarily take part in the research. They were assured of data privacy and were given informed consent before participating in the study. Before the respondents decide to participate in the study, they were informed of the purpose of the research and what their participation will involve. They were provided with clear procedure for participation and directions on what respondents would be asked to do if they chose to participate. They were informed that their participation was voluntary, and they may decide whether to participate or not. Once they decided to participate, they were asked to give their consent by filling in a certain part in the online survey form. After they filled up the form, they were still free to withdraw at any time and without giving a reason, and were assured that withdrawing from the study will not affect the relationship they have, if any, with the researchers. If they choose to withdraw before data collection is finished, their data will be destroyed. They were informed that there is no direct benefit to their participation in the study. However, they were encouraged to participate as the gathered information from this study will help promote the quality of dental education in the service of underprivileged in community. The researchers ensured that the responses were treated with anonymity and that every effort were made to preserve the confidentiality and privacy of all the respondents.

3. Results and discussion

Table 1

Percentage Distribution of the Respondents' Socio-demographic Profile

Sex	Frequency	Percentage (%)
Male	50	20.2
Female	198	79.8
Year Level		
First year	30	12.1
Second year	61	24.6
Third year	29	11.7
Fourth Year	85	34.3
Fifth Year	21	8.5
Sixth Year	22	8.9
Do you have community or volunteer work experience between high school to dental school?		
Yes	248	100.0
Area where you lived		
Urban (major/highly developed city)	84	33.9
Suburban (small city)	100	40.3
Rural (agricultural/farm)	64	25.8
Social class based on family monthly income		
Poor (Less than PHP 10,481)	10	4.0
Low-income class (but not poor; between PHP 10,481 and PHP 20,962)	23	9.3
Lower middle-income class (Between PHP 20,962 and PHP 41,924)	69	27.8
Middle middle-income class (Between PHP 41,924 and PHP 73,367)	84	33.9
Upper middle-income class (Between PHP 73,367 and PHP 125,772)	37	14.9
Upper-income class (but not rich; between PHP 125,772 and PHP 209,620)	19	7.7
Rich (PHP 209,620 and above)	6	2.4
Means of paying for the dental school		
Personal saving	6	2.4
Parental support	162	65.3
Scholarship/grant	10	4.0
Loans	1	.4
Combination of any of the above	69	27.8"

Table 1 presents the Percentage distribution socio-demographic profile of the respondents. Majority of the students are female (79.8%), others were male (20.2%). More women are taking up Dentistry because they were more interested in studying medical and health sciences, as well as arts and providing esthetic services. Many female students enrolled in college programs related to arts and social science (Gao, 2022). Since Dentistry is a health science that requires use of arts and relational skills, more women are becoming interested in studying it. These skills are helpful especially in patient assessment and management, as well as in communicating to patients about various dental procedures. Women have an advantage in the dental profession since they are more capable of creating good interpersonal relationships and using social skills. Many women are choosing to specialize in dental medicine because of these benefits and gender-specific propensity for caring and aesthetic services.

All respondents had community or volunteer work experience between high school and dental school. This is because community engagement is part of the high school curriculum of the Philippine Educational system as mandated by Department of Education (2015). This enables the students to study concepts and techniques from the social sciences to comprehend, investigate, and analyze issues with modern communal life. Community-action projects that promote engagement, solidarity, and citizenship are done, inspired by the fundamental principles of human rights, social justice, advocacy, and empowerment for all people. It attempts to strengthen students' sense of collective identification and motivation to participate in communal efforts to advance the common good. It enables students to incorporate applied social sciences into activities centered around community service.

Most of the students were living in suburban or small city (40.3%), followed by those living in urban or major/highly developed city (33.9%) and least living in rural or agricultural/farmland (25.8%). Because the university where the study was conducted was located in a suburban or a small city, many of the students stayed within the proximity of the university. This practical set up helps them have easy access to the school and their personal day-to-day necessities. According to Morganti et al. (2014), a suburban area is a residential area that is near an urban center and connected to it by major roads and public transportation. Farms can also be located within it. Only a few industries are scattered in suburbs, where agriculture is the primary purpose. It is a developed area next to a sizable industrial metropolis and is reasonably densely populated, close to the formal city limit (Barber, 2016). The teaching and learning process may be affected by the students' location in rural, urban, or suburban settings (Laguador, 2021). Many higher education facilities were found in urban areas. Prior to pandemic, students would travel anywhere from a few minutes to over an hour just to get to class each morning and would then return to their various locations at night. However, everything needs to change when the pandemic hits the Philippines in March 2020. Everything must be conducted remotely or online to keep up with the timetable of classes.

Majority of students (33.9%) were from middle middle-income class, whose income ranges between PHP 41,924 and PHP 73,367. This is followed by those in lower middle-income class (27.8%) with income between PHP 20,962 and PHP 41,924, and those in upper middle-income class (14.9%) with income between PHP 73,367 and PHP 125,772. Many dentistry students came from middle-income class. This is similar to the participants' demographics of the study of Riad et al. (2021), where most dental students were from upper-middle-income.

Table 2 presents the assessment of the respondents on their attitudes toward health care as to societal expectations. The composite mean of 2.88 indicates that the respondents agreed in general. Among the items cited, local government should be responsible for funding programs to meet the oral health care needs of its residents and communities should be responsible for providing facilities for the care of the needy got the highest mean score of 3.63 and 3.50 respectively. Dentistry students were aware of the responsibility of the local government to fund programs to meet the oral care needs of the people, and so most of them expected that the local government would provide for community dental programs. Because the less fortunate are unnecessarily and unjustly restricted in where they can live, and are far too frequently forced to settle in the older, decaying central areas of urban communities, the local government units were challenged to address the socioeconomic

conditions of the disadvantaged in their area. In the US setting, community action was a new public policy approach that aimed to support low-income people in their endeavors to organize and mobilize themselves with the least amount of government guidance to bring about good change in their areas (Gaber, 2019).

Table 2

Attitudes toward Health Care as to Societal Expectations

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. It is not the responsibility of the local government to fund programs that provide dental care to the needy.	1.74	Disagree	6
2. Communities should be responsible for providing facilities for the care of the needy.	3.50	Strongly Agree	2
3. It is the responsibility of church-related organizations to provide some funding for oral health care services.	2.44	Disagree	5
4. Local government should be responsible for funding programs to meet the oral health care needs of its residents.	3.63	Strongly Agree	1
5. Churches should provide facilities for dental care of the needy.	2.58	Agree	4
6. Society is responsible for providing for the oral health care of its members.	3.37	Agree	3
Composite Mean	2.88	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 =Strongly Disagree

Given the breadth and depth of the socioeconomic status of the underserved, dentistry students' expectation for the government to act is observed. Because dental services are expensive and would necessitate provision for adequate facilities, materials and professional care, dental students expected the local government units to provide and assist the public to have a conducive and affordable access to these dental services. The government plays a part in shaping the lives of the people and influencing the behavior of the people. As a social worker and an initiative-driver, the government's role in upholding safety and order in society is important, especially as a social agent for addressing the needs that must be regulated in the society (Dana et al., 2021). Government involvement has a substantial positive impact on dental and oral health; the more the government's influence, the more is its capability in boosting dental health of the country.

Aside from expecting adequate support from the local government, students also believed that communities should be responsible for providing facilities for the care of the underserved. The public's high awareness of the importance of health services, particularly in maintaining oral health, is a critical component of its positive and valuable impact on dental and oral health (Dana et al., 2021). With various communities making ways to provide dental service, the underserved in the community can be greatly helped. Dental students have been invited to join several private sector's initiatives to conduct dental health education programs for targeted members of their local community. Students were given the opportunity to be exposed performing dental programs in the community with the support of the non-government communities. Dentistry, instead of being isolated and detached from the conventional health care system, ought to be more integrated, particularly with primary care services. The international thrust for universal health coverage presented an excellent setting for this integration. Dental care systems should emphasize oral health promotion and maintenance and attaining better oral health equity (Watt et al., 2019).

Other items were rated agree such as society is responsible for providing for the oral health care of its members (3.37) and churches should provide facilities for dental care of the needy (2.58). This shows that dental students affirmed the important roles of society and churches to promote oral health. Through collaborative community programs and health care settings, opportunities for expanding oral disease prevention and practices among the public are being created. It includes the implementation of community-based demonstration projects for oral health care, giving dental hygienists the opportunity to excel in their historic role as oral health prevention specialists. WHO supports professional integration, referring to collaboration between professionals both within and between organizations (Prasad et al., 2019).

However, they disagreed that it is the responsibility of church-related organizations to provide some funding

for oral health care services (2.44) and it is not the responsibility of the local government to fund programs that provide dental care to the needy (1.74). Dental students do not expect the church-related organization to shoulder any oral health care services, mainly because this is beyond their main pastoral and spiritual roles. Since dental services are performed by appropriate professional organizations, students relieved the church organizations from any responsibilities in providing such services to the underserved.

A study by Berkley-Patton et al. (2019) highlighted tremendous opportunities to reach out to community members who may have limited access to care and are at high risk for HIV through church-related outreach ministries. Underserved community members being given with church-based HIV education and testing interventions has potential to help assist in reducing African American HIV disparities. This health promotion initiative relates on how the church made use of the health needs of their members; such may also be done to simply promote and educate about oral health especially among those disadvantaged members of the church, and not to fund specific dental treatments which could be expensive and need specialized care.

Dental students reaffirmed their belief that it is the local government's responsibility to provide for the dental care of the needy. The Philippine government through the Oral Health Division of the DOH (2022) initiated community-based health programs for the dental care of the citizens, including its funding and monitoring. There are basic dental services provided by DOH and the local government units made available at the rural health units, urban health centers, districts, and provincial/city hospitals for the general public.

Table 3

Attitudes toward Health Care as to Dentist/Student Responsibility

Indicators	Weighted Mean	Verbal Interpretation	Rank
Dentists should be responsible for providing oral health care to the needy.	3.51	Strongly Agree	2
Dentists should volunteer their time working in a free clinic.	3.21	Agree	5
Individual dentists should not be willing to provide care for their patients who cannot pay.	1.88	Disagree	7
Dental students should be involved in providing dental care for the needy.	3.42	Agree	4
To care for needy patients, each dentist should allow for 15% of the care he/she provides to be true charity.	3.04	Agree	6
All dental students should become involved in community health efforts.	3.54	Strongly Agree	1
Dental students should not be concerned about problems of the needy.	1.70	Disagree	8
All dental students should be involved in community activities.	3.50	Strongly Agree	3
Composite Mean	2.97	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 =Strongly Disagree

Table 3 presents the assessment of the respondents on their attitudes toward health care as to dentist/student responsibility. The composite mean of 2.97 indicates that the respondents agreed in general. Among the items cited, the statements—all dental students should become involved in community health efforts; dentists should be responsible for providing oral health care to the needy and all dental students should be involved in community activities got the highest mean score of 3.54, 3.51 and 3.50 respectively, all with verbal interpretation of strongly agree.

Students felt involved and responsible in attending different community health efforts because this is part of their curriculum under Community Dentistry and Public Health. Included as well in the program outcome of Dentistry is the thrust for students to plan and deliver community and extensive dental services (CHED, 2018). This program outcome is introduced to the students in their first year when they took up Perspectives in Dentistry. This was further established in their fourth and fifth year through discussion and immersion activities in Dental Public Health courses. Students were also given opportunity to service the general public by providing dental care by working in different clinical cases and requirements for live patients in Clinical Dentistry. Furthermore, the college of Dentistry provided different community extension activities in some key points of their academic years to promote awareness among students about their indispensable role in caring for the oral health of the population.

Involvement-learning experiences in dental school may have a favorable impact on students' attitudes about community involvement, which will eventually lead to delivering care to the underprivileged (Coe et al., 2015; Kaur et al, 2019). There was a significant improvement in the students' attitudes towards community service after participating in the community-based dental education program. Students reported a greater awareness of the oral health needs of the community, a stronger sense of social responsibility, and a greater willingness to provide dental care to underserved populations. This supports the positive attitude of the students toward their responsibility to provide dental care and be involved in community dental efforts as important key indicator of the learning process of their course.

Students believed that dentists should be responsible for providing oral health care to the needy. As future dentists, students foresee their important role in the continuity of providing service to the needy as they begin their professional career. Since they appreciated their community outreach efforts in collegiate years, they saw the importance of translating this further on into their own dental clinic practice. This is supported by Rohra et al. (2014) who emphasized that the dentists' assessments of the quality of their community-based dental education (CBDE) and its impact on their professional lives were highly connected with their attitudes and behavior toward underprivileged patients. Their evaluations of the quality of their CBDE experiences, as well as their judgments of the advantages of these experiences, were substantially connected to their professional attitudes and behavior related to providing care to marginalized groups. To further support this, a systematic review of 20 studies found that CBDE has a positive impact on dentists' attitudes and behaviors toward underserved populations. However, the quality of CBDE programs varies, and that impact of CBDE on dentists' practice behaviors may be influenced by other factors, such as availability of resources and support in their communities (Johnson, et al., 2021).

However, they disagreed that dental students should not be concerned about the problems of the needy (1.70) and individual dentists should not be willing to provide care for their patients who cannot pay (1.88). This indicated that the students felt the concern to provide dental care to the underprivileged despite their financial difficulty. Students understood the financial constraints of the needy to provide for the expensive dental costs. During their clinical training, students were able to provide for the dental equipment, materials and laboratory costs of their clinical procedures. This enables them to relieve the patients from burden of paying for the costs of the dental treatment. In support to benevolence and moral ethics of dentistry, students felt the need to provide dental care despite financial constraints on the part of the patients.

Some patients belonging to low socioeconomic status are unable to spend on dental treatment. They would rather find a charlatan if treatment were necessary and economical (Moideen et al., 2021). Although one of the barriers to acquiring dental service is the cost, students believe that this should not hinder the underprivileged from accessing the dental service they needed. This showcases the students' positive attitude towards dental care for the poor, and willingness to provide service regardless of the patient's capacity to pay.

Table 4 presents the assessment of the respondents on their attitudes toward health care as to personal efficacy. The composite mean of 3.30 indicates that the respondents agreed in general. Among the items cited, students personally want to be involved in providing care for the needy during their dental career and students interested in volunteering for programs that provide dental care for the needy during their dental school academic years got the highest mean score of 3.69 and 3.63 respectively, both with verbal interpretation of strongly agree.

Table 4 shows that students have willingness to be involved in different outreach program of the college. Since most of the community programs were run and implemented by students themselves, they were able to nurture the desire to be involved and participate as opportunity arise. This is because volunteering can help reduce stress, mentally empower participants, and provide a sense of purpose in life (Emad et al., 2021), a phenomenon seen among medical students who can make a significant contribution to teaching and healthcare activities. Volunteering in healthcare is advantageous to medical students on both a personal and academic level.

Table 4

Attitudes toward Health Care as to Personal Efficacy

Indicators	Weighted Mean	Verbal Interpretation	Rank
I feel personally responsible for providing dental care to the needy.	3.39	Agree	3
I would be interested in volunteering for programs that provide dental care for the needy during my dental school academic years.	3.63	Strongly Agree	2
I feel I am personally unable to have an impact on the problem of meeting the dental needs of the underserved.	2.48	Disagree	4
I personally want to be involved in providing care for the needy during my dental career.	3.69	Strongly Agree	1
Composite Mean	3.30	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 =Strongly Disagree

A study by Adejimi et al. (2021) presented majority of respondents (91.2%) saw volunteering during the COVID-19 pandemic as a form of educational experience despite being perceived as dangerous. In the case of a health manpower crisis and if government made the request, final-year students were more inclined to volunteer. Further supporting the good attitude of the students toward volunteerism, they disagreed that they feel they are personally unable to have an impact on the problem of meeting the dental needs of the underserved. (2.48). This is because they felt they were able to contribute to the good oral health of their underserved patients. The students in the study had a positive attitude towards volunteerism and believed that they could make a difference in the lives of those who are underserved in terms of dental care.

There are several reasons why the students in the study may have had this attitude. First, they may have been exposed to volunteerism at a young age and seen the positive impact that it can have on others (Bang et al., 2020). Second, they may have been taught the importance of giving back to their community (Mascarenhas et al., 2020). Third, they may have felt a sense of empathy for those who are underserved and wanted to help (Kalyan et al, 2017). Whatever the cause, the dental students' positive attitude toward volunteerism in the study is encouraging. It implies that they are eager to participate and make a difference in the world. This is significant since volunteerism may be extremely beneficial in solving societal issues such as a lack of access to dental care. Students can volunteer in a variety of ways to assist address the dental needs of the disadvantaged.

Table 5 presents the assessment of the respondents on their attitudes toward health care as to access to care. The composite mean of 2.88 indicates that the respondents agreed in general. Among the items cited, access to oral health care is a right got the highest mean score of 3.74 with verbal interpretation of strongly agree. This supports the least mean score of 2.48, where they disagreed that not everyone should have access to dental care. The highest mean score, 3.74 for the statement "access to oral health care is a right" suggests that respondents strongly believe that everyone should have access to dental care. This is significant because it demonstrates that students understand the importance of oral health and believe that everyone should have equal opportunities to maintain good oral health. This implies that respondents believe dental care is a basic human right. They think that no one, regardless of income or insurance status, should be denied access to dental treatment.

Oral health is essential for overall wellness. Dental issues can lead to a number of health issues, including heart disease, stroke, and diabetes. People who lack access to dental care are more prone to suffer from these health issues (Happell, et al., 2015). Dental students are future dental professionals who will be responsible for providing dental care. Dental students can volunteer their time to provide dental care to underserved populations, to those living in rural areas or those who are homeless. They can educate the public about the importance of oral health through presentation, workshop, and outreach activities, to advocate for policies that improve access to dental care.

The lowest mean score, 2.48, was for the statement "not everyone should have access to dental care." This suggests that respondents disagree with the idea that some people should be denied access to dental care. The fact that respondents disagree with this idea is significant for dental students. It shows that there is a strong belief

among them that everyone should have access to dental care, regardless of their patient's income or capacity to pay. This belief can help to motivate dental students to work to improve access to dental care for all people. In a study of Catalanotto (2019), dental therapy can be delivered in a safe, high-quality, effective, and ethical approach to improve the dental health profession, enhance dental care access, and obtain oral health equity.

Table 5

Attitudes toward Health Care as to Access to Care

Indicators	Weighted Mean	Verbal Interpretation	Rank
Dental care should be provided without charge for those who cannot pay.	3.05	Agree	2
Not everyone should have access to dental care.	1.69	Disagree	5
Access to dental care is a privilege.	2.99	Agree	3
People have a right to unlimited dental care regardless of their ability to pay.	2.93	Agree	4
Access to oral health care is a right.	3.74	Strongly Agree	1
Composite Mean	2.88	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 =Strongly Disagree

Other items were rated agree such as dental care should be provided without charge for those who cannot pay (3.05), access to dental care is a privilege (2.99) and people have a right to unlimited dental care regardless of their ability to pay (2.93). These findings imply that the respondents think everyone should have access to dental care, regardless of their financial situation. Respondents believed that dental care is a necessity rather than a privilege. In a study by Colton et al. (2014), there was a public consensus that dental care should be accessible to everyone, regardless of their ability to pay. This gives dental students and dentists a mandate to work toward ensuring that dental care is more widely available.

Dentists and dental students have a special chance to help the general public's oral health and can contribute to the accessibility of dental treatment in a variety of ways. They can achieve this through giving free dental care to people who cannot afford it, fighting for legislation to reduce the cost of dental care, and promoting oral health awareness among the public. They might provide their time as volunteers at dental offices that assist low-income people. Additionally, they might endeavor to create dental residency programs that concentrate on serving marginalized populations. They can also promote laws that increase dental insurance coverage and lower the cost of dental care. They can both contribute to the public's understanding of the value of good oral health.

Table 6

Summary Table on the Attitudes toward Health Care

Indicators	Weighted Mean	Verbal Interpretation	Rank
1. Societal Expectations	2.88	Agree	3.5
2. Dentist/Student Responsibility	2.97	Agree	2
3. Personal Efficacy	3.30	Agree	1
4. Access to Care	2.88	Agree	3.5
Composite Mean	3.01	Agree	

Legend: 3.50 – 4.00 = Strongly Agree; 2.50 – 3.49 = Agree; 1.50 – 2.49 = Disagree; 1.00 – 1.49 =Strongly Disagree

Table 6 summarized the students' attitude towards health care with composite weighted mean of 3.01, indicating that students have agreeable attitudes toward health care for the underserved in the community, with personal efficacy getting the highest mean of 3.30 and access to care and societal expectations getting the least mean of 2.88. This shows that students had an overall agreeable attitude towards healthcare for the underserved, generally believing that healthcare should be accessible to everyone, regardless of their ability to pay.

They had the highest mean score for personal efficacy, which means that they believe that they can make a difference in improving healthcare for the underserved. The students had the lowest mean score for access to care and societal expectations, which means that they believe that there are barriers to accessing healthcare for the underserved and that society does not expect them to do anything about it. These findings suggest that there is a need to educate students about the importance of healthcare for the underserved and the barriers that exist to

accessing healthcare for this population. This is supported by the findings of Blue (2013), Dande et al (2019) and Stephens et al (2015) which emphasized the importance of the dental curriculum in providing opportunities to enhance attitudes and practices of students in delivering health care services to the underprivileged.

Table 7 disclosed the comparison of responses on attitudes toward health care when grouped according to profile. It was observed that there was no significant difference since all the computed p-values were greater than the alpha level. This means that the responses do not vary statistically and implies that the attitude was the same across the respondents' profile.

Table 7

Difference Responses on Attitudes toward Health Care When Grouped According to Profile

Sex	λ^2_c / U	p-value	Interpretation
Societal Expectations	4566.5	0.394	Not Significant
Dentist/Student Responsibility	4835	0.798	Not Significant
Personal Efficacy	4762.5	0.674	Not Significant
Access to Care	4668	0.529	Not Significant
Year Level			
Societal Expectations	4.091	0.536	Not Significant
Dentist/Student Responsibility	3.128	0.68	Not Significant
Personal Efficacy	9.187	0.102	Not Significant
Access to Care	7.667	0.176	Not Significant
Area where you lived			
Societal Expectations	1.647	0.439	Not Significant
Dentist/Student Responsibility	1.695	0.429	Not Significant
Personal Efficacy	1.533	0.465	Not Significant
Access to Care	1.322	0.516	Not Significant
Social class based on family monthly income			
Societal Expectations	2.287	0.683	Not Significant
Dentist/Student Responsibility	1.766	0.779	Not Significant
Personal Efficacy	7.869	0.097	Not Significant
Access to Care	7.755	0.101	Not Significant
Means of paying for the dental school			
Societal Expectations	3.351	0.501	Not Significant
Dentist/Student Responsibility	7.116	0.13	Not Significant
Personal Efficacy	3.764	0.439	Not Significant
Access to Care	4.354	0.36	Not Significant

Legend: Significant at p-value < 0.05"

There is not enough evidence to conclude that the attitudes toward health care differ significantly between different profiles. This is because the p-values, which measure the probability of obtaining the observed results by chance, were all greater than the alpha level, which is the threshold for statistical significance. We cannot be confident that the observed differences in attitudes are due to anything other than chance. Therefore, the attitudes toward health care are the same across the respondents' profiles.

There is no single profile that has a significantly different attitude toward health care than any other profile. Regardless of their age, gender, race, ethnicity, or socioeconomic status, people are likely to have similar attitudes toward health care. The Agency for Healthcare Research and Quality (2020) study found that people with low socioeconomic status are more likely to experience poor health outcomes, such as chronic diseases, disability, and premature death. Disparities persist even after controlling for factors such as age, race, and ethnicity. This suggests that health care providers should not make assumptions about a patient's attitude toward health care based on their profile. Instead, they should take time to get to know each patient as an individual and understand their unique needs and concerns.

In addition, dental care providers should focus on providing high-quality care to all patients, regardless of their socioeconomic profile. This is because, even if people have similar attitudes toward health care, they may still have different needs and concerns. By providing high-quality care to all patients, dental care providers can help to ensure that everyone can achieve and maintain good health, regardless of who they are.

Table 8

Proposed Action Plan to Enhance Community-Based Dental Services and Attitudes of Dental Students for the Underserved in Community

KRA/ Objectives	Strategies	Expected Outcome	Persons Responsible
Societal expectations– to advocate local government to fund programs that provide dental care to the needy	Partner with community organizations and local government to lobby elected officials to support policies that expand access to dental care, such as subsidies and projects for dental care Partner with community organizations or local government units to provide dental care at an adopted community	Increase the funding and opportunities for community-based services for the needy	School administration, faculty, students
Dentist/Student Responsibility – to provide care for patients who cannot pay	Adopt an underserved community to provide dental care in the dispensary of Clinical Dentistry Partner with community organizations to provide dental students with opportunities to gain clinical experience in underserved settings	Increase the number of students who are willing and able to provide care to underserved populations	School administration, faculty, students
Personal efficacy – to enable students to have an impact on the problem of meeting the dental needs of the underserved.	Partner with community organizations to provide exposures and training to dental students on how to provide culturally competent care	Increase the confidence and competence of students to provide care to underserved populations Increase the number of underserved patients who feel comfortable seeking dental care.	School administration, faculty, students
Access to Care – to advocate that everyone should have access to dental care.	Develop and implement a public awareness campaign about the importance of oral health. Partner with organizations to promote oral health education and prevention programs.	Increase the number of people who are aware of the importance of oral health and take steps to improve their oral health.	School administration, faculty, students

4. Conclusion and recommendation

4.1 Conclusion

Majority of the respondents were female, fourth year students, with community or volunteer work experience between high school to dental school, living in suburban, belonging in middle middle-income social class, and have parental support as means for paying dental school. Dental students have agreeable attitudes toward health care for the underserved in the community as to societal expectations, dentist/student responsibility, personal efficacy and access to care. The students' attitudes toward health care are the same across the profiles, since there was no significant difference among them when grouped according to profile. The researchers were able to propose an action plan to enhance the community-based dental services and attitudes of dental students for the underserved in community.

4.2 Recommendation

Dental educational institutions may continue to encourage community or volunteer work experience between high school and dental school, and collaborate with local government units and dental associations for community-based projects. Dental schools may incorporate the needs of the underserved into the curriculum by including courses on oral health disparities, cultural competency, and exposure to underprivileged communities in public health. Students may be provided more opportunities to interact with the underserved through clinical rotations at community health centers or through volunteer opportunities with underserved populations. The proposed action plan may be considered by dental schools for further discussion and may be reviewed for possible utilization. Further research on oral health disparities and on interventions to improve the oral health of the underserved may be conducted to identify the best practices for improving the oral health of these populations.

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