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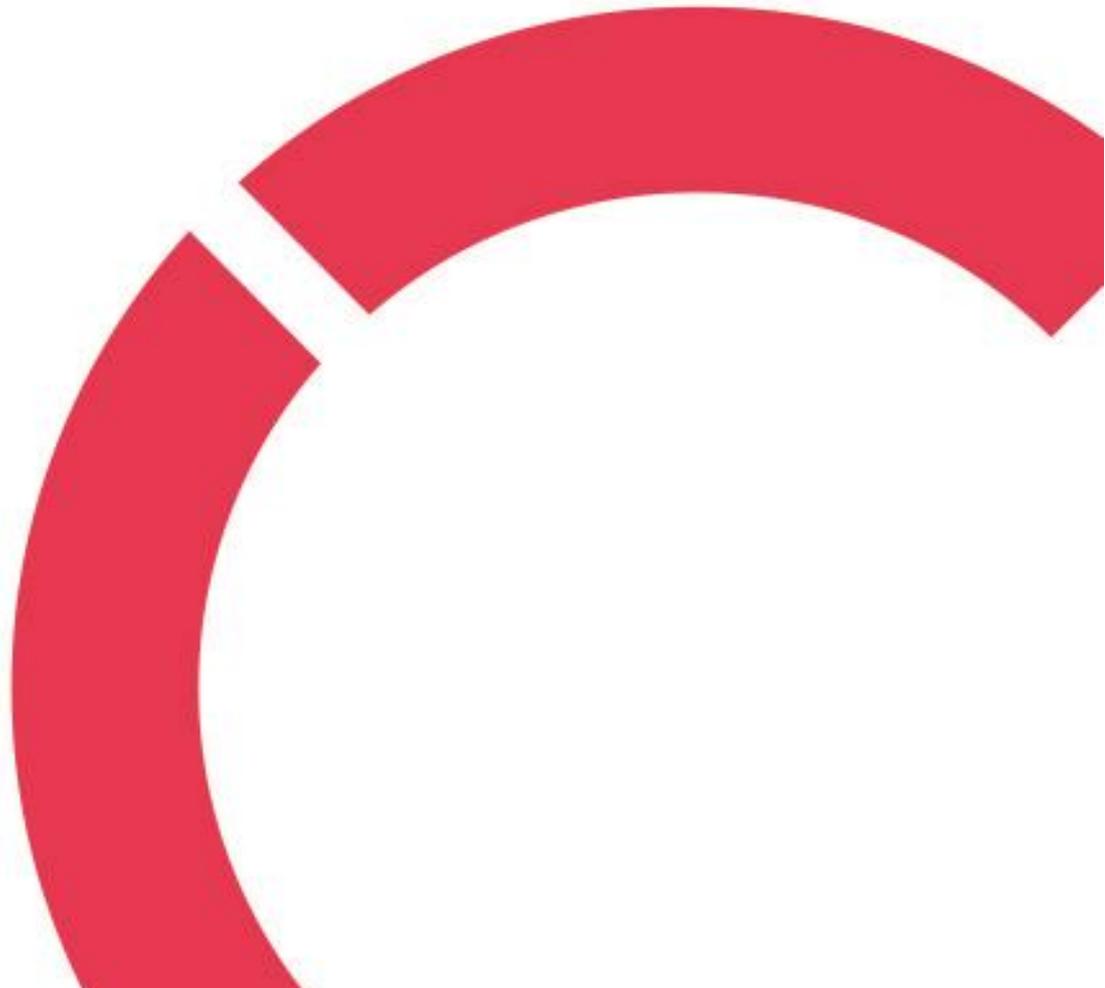
**KNOWLEDGE, ATTITUDE, AND PRACTICE OF NURSING
STUDENTS TOWARDS ORAL HEALTH IN GERIATRIC
PATIENTS**

Thesis

CENTRIA UNIVERSITY OF APPLIED SCIENCES

Degree Programme

December 2023



ABSTRACT

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Degree programme Bachelor of Healthcare, Nursing		
Name of thesis Knowledge, Attitude, And Practice of Nursing Students Towards Oral Health in Geriatric Patients		
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<p>This thesis aims to describe nursing students` understanding, mindsets, and actions about dental hygiene in older people. Also, the thesis aimed to determine how nursing students enrolled at the Centria University of Applied Science perceive oral health knowledge, attitudes, and practices concerning elderly patients. This thesis will be relevant for academic nursing institutions to understand and comprehend the importance of involving initiatives for oral health instruction in the educational system.</p> <p>A quantitative research approach was used for this thesis. A questionnaire designed for this thesis was done via Webropol. The 2nd, 3rd, and 4th year students were the targeted population. The 1st year students were excluded from the thesis process. With an attached consent form, the questionnaire was sent to the students through their various group school emails. A total of 30 students completed the questionnaire, statistical analysis was done via the Webropol survey reporting tool, and results were presented in percentages.</p> <p>To conclude, 72.6 % of Centria UAS students have a good understanding of the dental treatment of older adults as well as attitude and practice. Most students understand that oral health is essential in nursing care. However, it is crucial that in the future, nursing curricula should aim for comprehensive coverage of geriatric oral health. This will help ensure that nursing students are well-trained with important information and competencies to provide adequate oral nursing care and care plans to older adults regardless of educational level, age, or gender.</p>		

Keywords Attitude, Hygiene, Nursing competence, Nursing Knowledge, Older people, Oral health, Practice.

ABBREVIATIONS

WHO: World Health Organisation.

UAS: University of Applied Science.

KAP: Knowledge, Attitude, and Practice.

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1 INTRODUCTION

Oral health is defined as a person being pain-free and can speak, chew, smile, taste, and express various feelings without experiencing uneasiness or suffering. Additionally, dental wellness is a condition of the oral cavity being free of illnesses, including throat cancer, holes, missing teeth, mouth soreness, and periodontal diseases. The whole well-being of an individual depends on oral hygiene. However, deprived oral condition can lead to pneumonia, malnourishment, or dehydration (WHO 2021).

World Health Organization defines older people as people from age 65 and above. The senior population is growing in both developed and underdeveloped countries. Aging comes with many challenges, with oral health maintenance being one of them due to loss of talent. Oral cavity changes in older people, such as loss of a tooth, dental caries, and poly medication, which harm their oral health. Also, older people depend on help to practice good dental hygiene because of decreased functional ability and mental well-being illnesses such as anxiety and depression (Kosan 2019).

Nurses are essential in providing care and promoting health. However, nurses must be knowledgeable about providing and guiding older people to perform oral hygiene. Nurses are responsible for assessing, evaluating, and planning oral care plans specific to each individual. However, nurses need the education and training to perform oral health assessments (Ashour, 2020; Anton, 2022).

To guarantee that all graduating students are adequately prepared for offering oral medical care services, this research intends to characterize the Understanding, mindset, and behavior of Centria UAS nursing learners toward the dental well-being of older adults. It also recommends how nursing schools can incorporate oral condition education and training programs into nursing curricula.

2 THEORETICAL FRAMEWORK

This chapter defines keywords such as oral health in geriatric, knowledge, attitude and practice, nursing competencies, and geriatric population.

2.1 Oral health and Oral hygiene

Oral hygiene refers to methods or ways in which the mouth is kept clean or reduced from disease-causing microbes to help develop overall superiority of life. Mouth hygiene for mature persons will include brushing the mouth with a soft to medium bristle toothbrush two times a day, minimum, using toothpaste with fluoride. Also, oral hygiene aids such as electric toothbrushes are more appropriate in cases where older people cannot have a good grip on the toothbrush. Moreover, fluoride mouthwashes and gels can prevent gum diseases and tooth decay. Also, it is vital for older people with dentures to properly take care of them by ensuring that they fit correctly in the mouth and do not cause discomfort. Dentures should be cleaned with fluoridated toothpaste twice a day as well (Daniella 2023; Wu 2021).

The dental hygiene of older adults is very vital for their overall well-being. Practicing good oral health by older people helps improve their quality of life. Aging comes with physical deterioration, impaired cognitive abilities, and mental illness, affecting overall functional ability. Thus, the aging population is more prone to a high risk of lousy mouth sanitation. Also, because mature persons take many medications, it affects their oral health as it causes a decrease in saliva production, which can cause dry mouth. Some other oral health diseases common in older people include tooth decay, gum diseases, and dental caries being the most common (Sharma, 2019).

2.2 Nursing Knowledge

Nursing Knowledge can be defined as nursing students' awareness about patient care. An important role is played by nurses in the attention of mature persons. Oral care is primary care. However, nurses should be able to assist or perform mouth care as part of their daily routine. Providing nurses and nursing students with knowledge about mouth care is vital as it builds their skills to perform these roles. Therefore, nursing students and nurses need to attend seminars to be trained to properly assess

oral cavities for any changes or abnormalities, understand different dental diseases, and create care guides for them (Alshoul, 2021).

2.3 Attitude and Practice

Attitude and practice can be defined as feeling and action towards oral health. To improve the dental wellness of older people, nurses, and nursing learners must have a positive outlook towards it to help improve the quality of care. Also, changing from an unhealthy attitude to a positive attitude and practice relies on adequate knowledge (Daniella 2021).

2.4 Nursing Competencies

Nursing competency is defined as the abilities that are required to perform one's role as a nurse. These abilities include knowledge, professional attitude, practices, values, skills, and beliefs. A competent nurse should be able to have these attributes to be able to provide quality care and patient safety. In Finland, nursing students are taught at the Universities of Applied Sciences. The nursing degree program at Centria UAS is three-and-a-half to 4 years of seven semesters and full-time study courses. Nursing study in Finland consists of about two-thirds theoretical research and clinical practices, which have seven work placements where students work in the health care setting under the supervision of their nursing tutors and future colleagues. With a degree in nursing from Finland, nurses can work in different parts of the world (Kielo-Viljamaa 2021).

2.5 Older people

An older person is a person who is above 65 years of age. Human lifespan probability has drastically increased, and as such, there is a rapid growth in the elderly population. Aging is a natural process and has been viewed to have a negative impact as it decreases social, physical, and cognitive abilities. Aging also comes with illnesses, disability, and cognitive impairment (Amarya 2018).

3 RESEARCH PURPOSE, GOALS, AND QUESTIONS

The purpose of this study is to provide an overview of the Understanding, mindset, and actions of nursing learners about older people's dental health. Moreover, the aim is to determine how the Centria University of Applied Science nursing students perceive oral health understanding, mindset, and actions concerning elderly patients. This thesis will be relevant for academic nursing institutions to understand and comprehend the importance of initiatives for mouth hygiene instruction in the school curriculum.

The research questions are:

1. What understanding do Centria UAS nursing students have about older people's oral health?
2. What are the attitudes and practices of nursing students of Centria UAS toward the importance of oral health of elderly persons?

4 METHODOLOGY

This thesis is a cross-section study with all undergraduate nursing students of Centria UAS from 2nd year of study and above. First-year nursing students were excluded from the research. The students were sent questionnaires to answer. The questionnaires were sent to the students via email with a cover consent letter, making known the purpose and goal of this study. This study population was chosen because training and having a good attitude and practice towards it will help them provide quality care for dependent patients in their future careers.

4.1 Quantitative research

Quantitative research collects and analyses measurable data in number forms rather than words. Quantitative research aims to process numbers to variable measurements to answer a research question. Quantitative data analysis is divided into descriptive statistics, which describes data in a readily accessible form. It is appropriate for measuring hypothesis testing and inferential statistics, which obtain a result from a wider population (Van den Berg, 2023).

Quantitative research involves data collection, management, analysis, and interpretation. Data collection consists of designing a question using Webropol. As soon as questionnaires were tested, they were sent out to be filled as accurately and honestly as possible. Once data is collected, storing them safely to prevent damage is essential. Data management carefully prepares the data for analysis. In data management, variables are constructed to define anything that can be measured. Attaching quotes to quantitative variables assists with the interpretation of results (Van den Berg, 2023).

4.2 Data Collection

The practice of acquiring knowledge regarding a particular issue is gathering information.

The target group for this study were from 2nd year nursing student and above. A target of 30-50 was planned to achieve for the research. However, a total of 30 respondents were obtained.

The questionnaire for this thesis was created from the results of previous research. The Likert scale method was used to design the questionnaire, where the options were strongly agreed, 2: consent, 3:

neither agree nor disagree, 4: disagree, and 5: strongly disagree. The survey consists of four parts. Firstly, the student's socio-demographic variable. Knowledge-based problems made up the second section, the third part discussed the attitude, and the last part was questions on the practice of Centria UAS Nursing students concerning the dental health of older people.

Data for this thesis was collected via questionnaires designed with Webropol. The questionnaire link was sent via email for the students to answer. The questionnaires were created in simple English. Moreover, a consent form was attached when sending the questionnaires out.

Before sending out the questionnaire to students, a pilot test was done among three people (n=3). This was done to ensure there were no mistakes in the questionnaire and that the questions were understandable. Participant's consent was taken into consideration as well as confidentiality. However, they did not participate in the survey because they were not nursing students of Centria UAS.

4.3 Data Analysis

This is a process of using software or other tools to change and process raw data into meaningful information. (Sarma 2015). The quantitative data for this research was analyzed using a Webropol 3.0 Webropol reporting tool that produces fast automated reports. The reports for this research were presented in percentages.

4.4 Ethical considerations

A collection of guidelines that direct study plans and ideas is an ethical inquiry concern. When it comes to how closely methods of investigation should abide by the permitted, competent, and societal responsibilities governing research endeavors of selected individuals, ethical guidelines provide an explanation of the moral values system. (Manton 2014).

Quantitative analysis was used for this research; thus, questionnaires were created, putting ethical values into action during the process.

Ethical clearance or approval was obtained from the school's head of academic research to distribute the questionnaires further. The questionnaires were sent to the students upon approval via email. Furthermore, participants' full consent was considered as completing the questionnaire was voluntary. The confidentiality and privacy of participants will also be considered throughout the process. A consent cover letter was attached to the questionnaire, which explained to the students how to respond to the

questions and also ensured them that their privacy and confidentiality were sufficiently protected. Also, enough time was given to the students to complete this survey.

5 RESULTS

This chapter explains the research survey findings from 2nd, 3rd, and 4th year nursing students of Centria UAS. The 1st year nursing students were excluded from the research. The research analysis was done by emailing the questionnaire to all the targeted groups. Also, the results from this thesis were extracted from the webropol analysis tool.

5.1 Student demographic variables

The demographic variables for this study were gender, age, and study year. First, out of 30 respondents, 23.3% (n=7) were men, and 76.6% (n=23) were women. Thus demonstrating that more women than men answered the survey's questions. Secondly, out of the 30 respondents, 17% (n=5) were between the ages of 18-23, 36.7% (n=11) were between the ages of 24 and 29. Also, 33.3% (n=10) were between age 30-35 and finally age 36 and above were 13.3% (n=4). And lastly, 50% of the students who completed the questionnaire were fourth-year students, 37% from third-year students, and 13% from second-year students.

Figure 1

Gender distribution (n=30)

Presents gender of nursing students. Females represent the highest number, 70%, and males represent 30%.

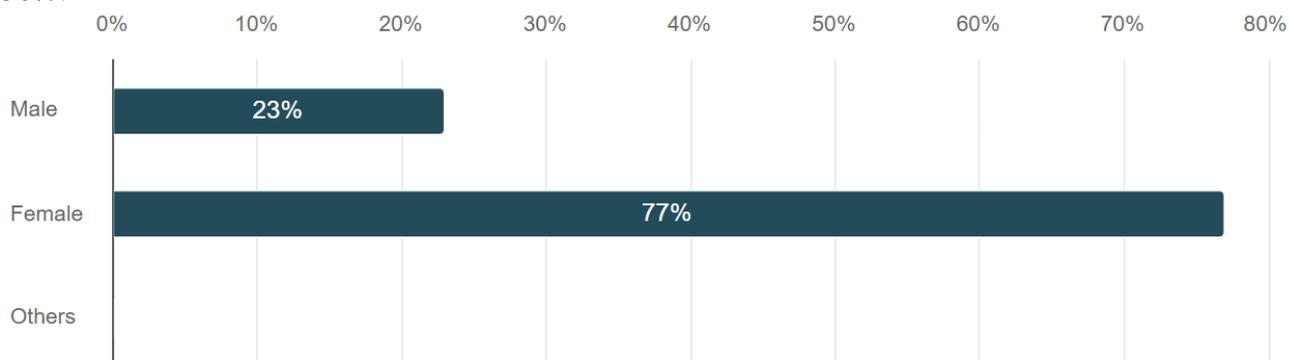


Figure 2

Age distributions (n=30)

The chart below presents the age distribution of the students, with 24-29 being the highest number of respondents and age 36 and above being the lowest number of respondents.

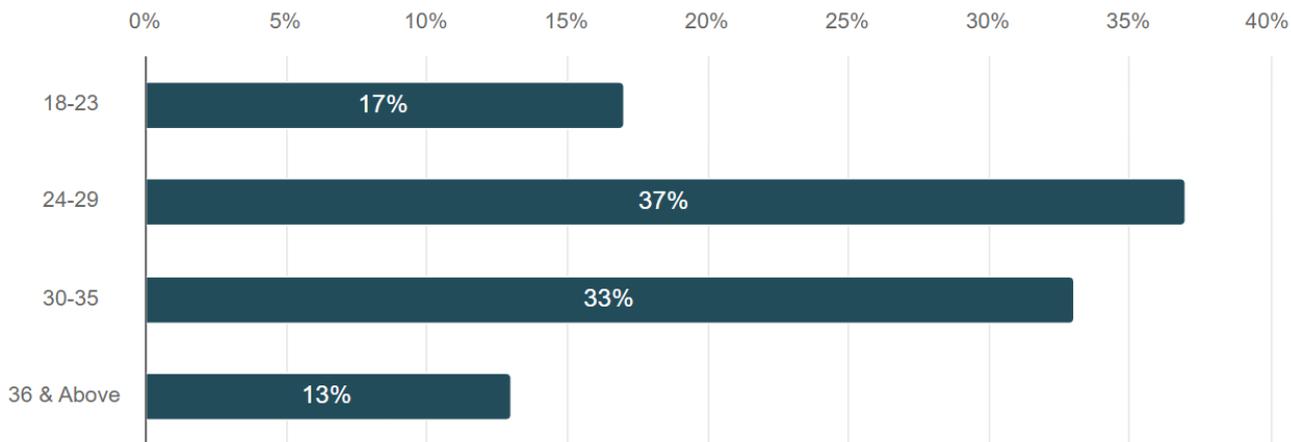
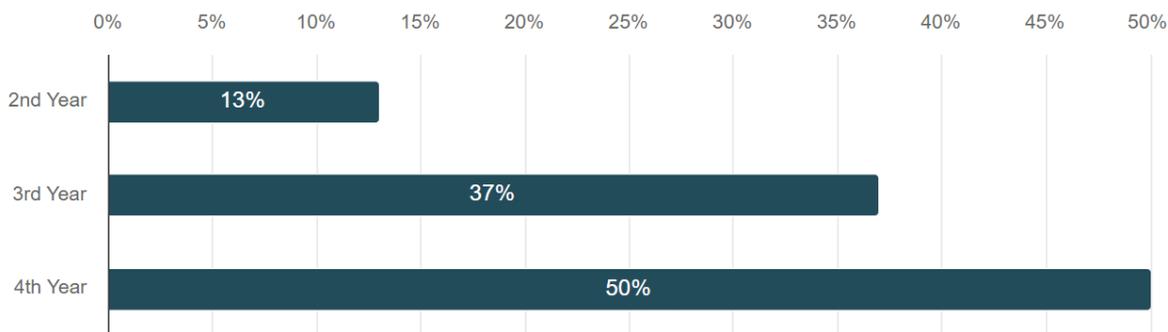


Figure 3

Study year(n=30).

The chart below presents the different study years of the students, with 4th-year students being the highest number of respondents, with 50%. That is the mad up half of the respondents of this survey.



5.2 Information of nursing students headed for providing dental hygiene to older people.

Firstly, the study results showed that in nursing pupils' information providing dental hygiene, 37.3% strongly agreed to all knowledge-related questions, 35.3% of the students decided to all the knowledge questions, whereas 13.4% of Respondents expressed no opinion. This gives the mean score knowledge of 2. On the other hand, 11.3% strongly disagreed with all the questions regarding ability, and 2.7% disagreed. Half of the participants, 50%, strongly agreed that oral hygiene is fundamental for dependent inpatients, and 36.7% agreed. However, only 3.3% of the students disagreed with this, and 6.7% neither agreed nor disagreed (figure 4). Thus, this means that nursing students of Centria are knowledgeable about giving older patients dental treatment.

Most of the pupils strongly agreed and agreed that functional ability lessens the effectiveness of mouth hygiene in mature persons, which was 46.6% and 36.7%, respectively. Meanwhile, only a tiny percentage of students neither agreed nor disagreed nor strongly disagreed with this, which was 6.7%. Also, only a tiny portion of the students disagreed with this statement, which was about 3.3% of the students.

Also, the use of poly-medication by older people can affect their oral hygiene and health. This can be seen as 33.3% and 36.7% of the participants strongly agreed and agreed with this. Only 20% of the students disagreed with that, and 0% of the students strongly disagreed. Furthermore, 20% of the students neither agreed nor disagreed with the fact that poly-medication can affect the dental hygiene of elderly sufferers.

Over 60% of participants accepted that bad dental hygiene of the elderly can induce bronchitis via inhalation. Over 30% of the Pupils were unaware that impaired dental well-being could cause aspiration pneumonia, and some disagreed with this, while others neither agreed nor disagreed.

More than 50% of the students accepted that they had received adequate Expertise and capacity to evaluate older patients' dental conditions, probably during the study course or practical training at the hospital. However, 40% of the students did not receive any education regarding oral health and oral health assessment during their training.

Figure 4

Knowledge of nursing students (n=30)

The table below presents the nursing pupils' awareness of dental hygiene in elderly patients. They show that about 86.7% understand that Dental wellness is crucial for those who are dependent.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Average	Median
Oral hygiene is fundamental for dependent inpatients	50.0%	36.7%	6.7%	3.3%	3.3%	2	2
Functional ability reduces the effectiveness of oral hygiene in the elderly	46.6%	36.7%	6.7%	6.7%	3.3%	2	2
The use of poly medications by the elderly can affect their oral health	33.3%	36.7%	10.0%	20.0%	0.0%	2	2
Poor oral hygiene of the elderly can cause aspiration pneumonia	33.3%	30.0%	26.7%	10.0%	0.0%	2	2
I have received adequate knowledge and skills required to perform an oral health assessment on old people during my course	23.3%	36.6%	16.7%	16.7%	6.7%	2	2
Total	37.3%	35.3%	13.4%	11.3%	2.7%	2	2

5.3 Assertiveness and preparation of nursing learners headed for providing dental hygiene to the elderly.

Figures 5 and 6 present a table that presents the mindset and behavior of nursing learners toward oral health in geriatric patients, respectively.

The participants' attitude in this survey was good as 80% (n=24) of the students' attitudes on mature person's dental hygiene were good. More than 70% agreed to the fact that dental hygiene of older people ought to be assessed periodically by nurses, whereas only about 6% did not show a positive attitude towards that.

Furthermore, it is critical to observe that all pupils comprehend the duty and obligation of a nurse to supervise the elderly mouth hollow and care plan periodically. Also, over 80% of the students agreed and understood that oral health is equally essential to nursing care as any other consideration nurses provide to their patients. On the other hand, 20% of the students did not see oral health as crucial as other nursing care activities. Furthermore, 80% of the students showed a good attitude that oral care is more critical for those who are reliant as they rely on the nurse to help perform proper oral hygiene.

In addition, about 30% of the students understand that performing this oral care to older people is not unpleasant. However, over 50% of the students think that it is an unpleasant task to complete this activity.

Figure 6 below presents data related to the students' practice toward oral health to older people. 13.3% and 3.4% of the students agreed that it does matter whether the dentures of older people are cleaned and checked regularly. Whereas 10% of the participants neither agreed nor disagreed. However, 40% and 33.3% of the students understand that it is essential to check and clean these dentures regularly. 23.3% and 40.0% of the participants agreed and agreed that they can confidently provide dental care plans, while 10% of these students do not know if they can offer care plans, as they neither agreed nor disagreed. On the other hand, 13.3% of the students cannot provide care plans according to patient's needs.

Over 60% of the students can provide oral care with proper and adequate communication, while less than 40% of these students cannot communicate properly when providing oral care. 56.7% and 36.7% of the participants understood that using fluoridated toothpaste and cleaning teeth two times a day can help prevent tooth decay. 3.3% of the students disagreed, and 3.3% neither agreed nor disagreed.

Furthermore, 60% of the students know the suitable methods that may be applied when giving dental treatment. However, 40% neither agreed nor disagreed if they knew the techniques required for oral care.

Figure 5

Attitude of nursing students(n=30)

The chart below presents nursing pupils' perspectives on senior citizens' dental hygiene.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Average	Median
The oral health of the elderly should be assessed periodically by nurses	50.0%	43.4%	3.3%	3.3%	0.0%	2	2
Nurses have the responsibility of supervising oral hygiene care	40.0%	60.0%	0.0%	0.0%	0.0%	2	2
It is an unpleasant task to clean the mouth of the elderly	16.7%	23.3%	13.3%	30.0%	16.7%	3	3
Oral health care is of equal importance to other nursing care	50.0%	36.7%	6.7%	3.3%	3.3%	2	2
Oral health care is more critical for dependent inpatients	40.0%	40.0%	16.7%	3.3%	0.0%	2	2
Total	39.3%	40.7%	8.0%	8.0%	4.0%	2	2

Figure 6

Practices of nursing students (n=30)

The chart below presents the performance of nursing learners in the dental hygiene of older people.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree	Average	Median
It does not matter if I clean and check dentures regularly	3.4%	13.3%	10.0%	33.3%	40.0%	4	4
I can provide dental care plans according to patient's needs	23.3%	43.4%	20.0%	13.3%	0.0%	2	2
I can communicate properly and adequately when providing oral care	23.3%	40.0%	20.0%	13.3%	3.4%	2	2
Brushing of teeth at least twice a day with fluoridated toothpaste prevents tooth decay	56.7%	36.7%	3.3%	3.3%	0.0%	2	1
I know the appropriate technique when brushing elderly persons mouth	30.0%	30.0%	40.0%	0.0%	0.0%	2	2
Total	27.3%	32.7%	18.7%	12.6%	8.7%	2	2

6 DISCUSSION, METHODOLOGICAL CONSIDERATION, AND CONCLUSION

This chapter discusses the methodological considerations in which the research was conducted, the discussion of findings, and the conclusion.

6.1 Methodological consideration

For this research, quantitative data analysis was used to analyze the data. This choice of methodology was used based on the intention of the study. A descriptive quantitative analysis method was used where results were displayed using percentages. The data was computed via Webropol survey and reporting tool. However, different ways can be implemented when conducting nursing research. Participatory research was used for this thesis, emphasizing direct engagement and perspective. This method is designed to collaborate with a community directly and those involved with the issue being studied (Vaughn 2020).

Qualitative methodology, on the other hand, allows participants to express their experiences. Data is presented via interpretation.

Carrying out a quantitative survey was very interesting. However, I had some limitations during the process. Some of these limitations include the participants receiving the questionnaire and not giving consent; hence, it was not filled out and returned. Also, the time when some questionnaires were returned delayed the thesis process. Furthermore, some participants might have wanted some clarity on some questions but did not have the opportunity to do so.

Reliability and validity were considered as the questionnaire was developed from previous existing research relevant to the research questions. The articles that were used for the study were scientific. Centria's thesis guide was also taken into consideration during the thesis process. A pilot test was conducted in which the input was reviewed to ensure the validity of the questionnaire. The result obtained from this survey is reliable because participants received individual consent to fill out and return the questionnaire.

6.2 Discussion

Nursing learners' understanding, mindset, and behaviors regarding dental hygiene in elderly individuals were the main focus of the present investigation. To give senior patients the most effective treatment, nurses must be well-versed in dental hygiene principles and have an upbeat mentality and competence.

To stop patients' conditions from worsening, it is also critical to stress how crucial it is to give dental treatment regularly. This may be accomplished by implementing dental treatment strategies, instructions, and instructional initiatives. The findings indicate that Centria UAS nursing learners have an excellent Knowledge, Attitude and Practice for the dental condition of older people. However, some of the students have poor Knowledge, Attitude and Practice. This was demonstrated in a prior study by Veerasamy, which revealed nursing learners' inadequate awareness of dental hygiene (Veerasamy 2022).

For this research, the study shows that students generally recognize the significance of dental hygiene, i.e., they understand how vital dental wellness is for older people regardless of different age groups, with the highest recognition seen among the 24-29 and 30- 35 age groups. This recognition is considered significant given that the complex healthcare system needs an impact on geriatric oral healthcare. This can be seen in a previous study (Bhattarai & Alsour 2017).

According to the survey, most Centria UAS nurses believe that polymedication is an issue that might impact senior citizens' dental hygiene. The finding thus reflects similar results given by Yavagal (2020). The survey showed that 63.3% of respondents knew oral health can cause aspiration pneumonia. This can also be seen in a previous study (Bhagat 2023).

From the results, the study also identifies gender base differences and recognizes that female nursing students at Centria UAS have more significant oral health knowledge than male students. Nonetheless, the observed gender differences encourage educational strategies to ensure that all nursing students, regardless of gender, possess a comprehensive understanding and good attitude toward oral health towards older people. Also, regarding educational level, the 4th year students made the highest number of participants(n=15) and are more likely to have better Understanding, disposition, and behavior. The increase in knowledge of these students may be due to greater clinical exposure and curriculum. This can be seen in a study by Mamai-Homata, which revealed that females tend to view dental hygiene more favorably than men (Mamai-Homata 2017).

Also, most of the participants have had previous knowledge from their coursework or clinical placements about the oral health of older people. However, a good number of students have not had any prior knowledge. This can be seen in earlier research conducted in Saudi Arabia, where most students did not receive any formal education concerning the dental hygiene of older persons (Ashour 2020).

From this study, Centria UAS students showed an excellent outlook on giving dental treatment. In previous research conducted in Japan, students showed a poor attitude toward oral care and felt the need to learn more about dental care (Haresaku 2018). In the study, the majority of the pupils thought of dental care as an essential part of nursing, and it is the nurse's responsibility to supervise periodically (Yvagal 2019). Also, from this study, 40% of the students agreed that cleaning the elderly mouth was unpleasant. This conclusion is supported by research done in India, where most participants firmly agreed that cleansing a senior's mouth canal is uncomfortable (Al Rababah 2018).

For this thesis, 100% of the students agreed that nurses are responsible for supervising oral hygiene care, and more than 80% of the participants acknowledged the significance of evaluating older people's dental hygiene. It can also be seen in a result conducted from previous research (Bhagat 2023).

From the studies, the students' attitude was good; however, some had a poor attitude towards oral health. This can be seen in a survey conducted by (Shubayr & Mosa 2020). For this study, 40% of the pupils agreed that washing the elderly mouth was unpleasant. This is a result conducted by Yavagal 2019.

The practice of the students towards oral health care of the elderly was fairly good. However, poor, among some students. Most of the students clean the elderly patients' mouth twice a day. This can be seen in a research done in Asmara, Eritrea, more than half of the participants give dental treatment to older people, although only a small percentage do so regularly (Dagneu 2020).

6.3 Conclusion

The survey findings highlight the significant relationship between learners' academic achievement and the acknowledgment of the critical role in oral health care. As students' progress with their studies, there is an evident trend of increased recognition of their vital role in providing oral care. Moreover, the survey reveals a gender gap that requires attention within the educational system, as female nursing students exhibit a more prominent recognition of dental hygiene's significance than male students. However, the survey does not explain the underlying reason; further investigation is needed.

Even though nursing students of Centria UAS have presented a good understanding, disposition, and behavior toward oral health among older people, it is essential that in the future, nursing curricula should aim for comprehensive coverage of geriatric oral health. This will help ensure that nursing students are well-trained with important information and competencies to provide adequate oral nursing care and

care plans to older adults regardless of educational level, age, or gender. Thus, nursing educational institutions must train their students for their challenges and responsibilities in nursing and senior oral care.

6.4 Project management

Carrying out quantitative research has been a learning process for me. This research process has helped me gain more knowledge about the research topic, identify the gaps in the thesis topic, and propose recommendations. Also, this thesis process has helped me improve my interactive and communication skills. It has also helped me be patient, sacrifice, think critically, and be a good time manager.

REFERENCES

- Alshloul MN 2021. Oral Health Knowledge, Attitude, and Practice Among School Children in Abha-Saudi Arabia. *The Journal of School Nursing*. 0(0). doi:10.1177/10598405211012981. (<https://www.sciencedirect.com/science/article/pii/S0099176713005096>)
- Al Rababah DM, Nassani MZ, Baker OG, Alhelih EM, Almomani SA, Rastam S. 2018. Attitudes and practices of nurses toward oral care of hospitalized patients – a cross-sectional survey in Riyadh, Saudi Arabia. *J Educ Health Promot*. 7:149. https://scholar.google.com/scholar_lookup?journal=J+Educ+Health+Promot&title=Attitudes+and+practices+of+nurses+toward+oral+care+of+hospitalized+patients+%E2%80%93+a+cross-sectional+survey+in+Riyadh,+Saudi+Arabia&author=DM+Al+Rababah&author=MZ+Nassani&author=OG+Baker&author=EM+Alhelih&author=SA+Almomani&volume=7&publication_year=2018&pages=149&pmid=30596121 accessed 04.11.2023.
- Amarya S, Singh K, and Sabharwal M 2018. Ageing Process and Physiological Changes. *Gerontology*. InTech. DOI: 10.5772/intechopen.76249. <https://www.intechopen.com/chapters/60564> .(accessed 01.05.2023). <https://climbtheladder.com/data-collection-skills/> .
- Andersson M., Wilde-Larsson B., Persenius M. 2019. Oral care – identifying quality improvement areas. *International Journal of Health Care Quality Assurance*, 32(1), 45–58. <https://doi-org.ezproxy.centria.fi/0.1108/IJHCQA-09-2017-0176>.
- Anne Manton, Lisa A. Wolf, Kathy M. Baker, Margaret J. Carman, Paul R. Clark, Deborah Henderson, Kathleen E. Zavotsky 2014 Ethical Considerations in Human Subjects Research, *Journal of Emergency Nursing*, Volume 40, Issue 1.
- Ashour AA. Knowledge, Attitudes, and Practices Regarding Oral Health and Oral Care Among Nursing Staff at a Mental Health Hospital in Taif, Saudi Arabia: A Questionnaire-based Study. *Journal of Advanced Oral Research*. 2020;11(1):34-44. doi:10.1177/2320206820910300.
- B Wu, RA Anderson, Y Pei, 2021. Care partner-assisted intervention to improve oral health for older adults with cognitive impairment: a feasibility study.
- Bhagat, V., Hoang, H., Crocombe, L.A 2023. Australian nursing students' perception, knowledge, and attitude towards oral healthcare of older people and associated factors: a national cross-sectional survey. *BMC Nurs* 22,. <https://doi.org/10.1186/s12912-023-01366-https://bmcnurs.biomedcentral.com/articles/10.1186/s12912-023-01366-x#citeas> accessed 20.10.2023.
- Dagnaw ZA, Abraham IA, Beraki GG, Tesfamariam EH, Mittler S, Tesfamichael YZ. Nurses' attitude towards oral care and their practicing level for hospitalized patients in Orotta National Referral Hospital, Asmara-Eritrea: a cross-sectional study. *BMC Nurs*. 2020 Jul 10;19:63. Doi: 10.1186/s12912-020-00457-3. PMID: 32665767; PMCID: PMC7348104. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7348104/#CR20> accessed 05.11.2023.

Daniela Brandão Andrade-Leite, Sandra Cristina Martins-Santos, Sónia Marlene Marques-Gomes, Isabel de Jesus Oliveira, 2023. Knowledge, attitudes and practices of nurses regarding oral hygiene of dependent inpatients, *Enfermería Clínica* (English Edition), Volume 33, Issue 1.

Emilia Kielo-Viljamaa, Jaakko Viljamaa, Riitta Suhonen, Leena Salminen, Minna Stolt, Ettinger, R., Marchini, L, 2022. Oral Care in Long-Term Care Settings. In: Hogue, CM., Ruiz, J.G. (eds) *Oral Health and Aging*. Springer, Cham. https://doi.org/10.1007/978-3-030-85993-0_10.

Kosan Z, Bedir B, Derelioglu SS, Aydin OB, Aras A. Is the Knowledge of Oral-Dental Health of Students Studying at a University Sufficient? *Journal of Advanced Oral Research*. 2019;10(2):145-153. doi:10.1177/2320206819875913.

Mamai-Homata E, Koletsi-Kounari H, Margaritis V 2016. Gender differences in oral health status and behavior of Greek dental students: a meta-analysis of 1981, 2000, and 2010 data. *J Int Soc Prev Community Dent* 2016;6:60–68

Mishra, Prabhaker; Pandey, Chandra M; Singh, Uttam; Gupta, Anshul1.; Sahu, Chinmoy2; Keshri, Amit3 2019. Descriptive Statistics and Normality Tests for Statistical Data. *Annals of Cardiac Anaesthesia* 22(1):p 67-72, Jan–Mar 2019. | DOI: 10.4103/aca.ACA_157_18.

Sarma, S. K 2015. Data Collection in Organizational Research: Experiences from Field. *International Journal of Rural Management*, 11(1), 75–81. <https://doi-org.ezproxy.centria.fi/10.1177/0973005215569384>.

Sharma V., Yadav A., Thakur A., Dubey S., Mohanty L., Paul R 2019. Knowledge about oral health, hygiene, and practices among undergraduate and post-graduate dental students in the state of Jharkhand in Eastern India. *International Journal of Research in Health and Allied Sciences*, 5(5), 1–6.

Van den Berg RG. Measurement Levels – What and Why? SPSS Tutorials. <https://www.spss-tutorials.com/measurement-levels/>. Accessed April 2023.

Shubayr, Mosa & Alexander, Leah & Tabatabai, Mohammad & Alagili, Dania. 2019. Knowledge, Attitude, and Practice of Oral Health Promotion among Oral Health Providers in Saudi Arabia. *Journal of Contemporary Dental Practice*. 20. 231-238. 10.5005/jp-journals-10024-2503. https://www.researchgate.net/publication/332868185_Knowledge_Attitude_and_Practice_of_Oral_Health_Promotion_among_Oral_Health_Providers_in_Kingdom_of_Saudi_Arabia accessed 04.11.2023.

Vaugh, L.M., & Jacquez, F 2020. Participatory Research Methods-Choice points in the Research Process. *Journal of Participatory Research method*, 1(1). <https://doi.org/10.35844/001c.13244>.

Veerasamy A, Lyons K, Crabtree I, Brunton P. Knowledge of nursing graduates on oral health care for older people in the long-term upkeep. *J Dent Educ*. 2022.

World Health Organization 2021. Oral Health. World Health Organization, Regional Office for Africa; (access April 2023). <https://www.afro.who.int/health-topics/oralhealth>.

Yavagal PC, Dalvi TM, Benson T, Lakshmi S, Yann THW, Gowda T. Knowledge, Attitude and Practices Related to Oral Health Among Nursing Students in Davangere City: A Cross-Sectional Survey. *Oral Health Prev Dent.* 2020;18(1):493-498. doi: 10.3290/j.ohpd.a43367. PMID: 32515420.

Yavagal, Puja & Dalvi, Tanushri & Benson, Tanya & Lakshmi, Sree & Ho, Tammy & Gowda, Trijanya, 2020. Knowledge, Attitude, and Practices Related to Oral Health Among Nursing Students in Davangere City: A Cross-Sectional Survey. *Oral health & preventive dentistry.* 18. 493-498. 10.3290/j.ohpd.a43367.https://www.researchgate.net/publication/342079356_Knowledge_Attitude_and_Practices_Related_to_Oral_Health_Among_Nursing_Students_in_Davangere_City_A_Cross-Sectional_Survey accessed 04.11.2023.

Research questionnaire

'KNOWLEDGE, ATTITUDE, AND PRACTICE OF NURSING STUDENTS TOWARDS ORAL HEALTH IN GERIATRIC PATIENTS. '

The target group for this study were from 2nd year nursing student and above. A target of 30-50 was planned to achieve for the research.

The questionnaire for this thesis was created from the results of previous research. The Likert scale method was used to design the questionnaire, where the options were 1: strongly agree, 2: agree, 3: neither agree nor disagree, 4: disagree, and 5: strongly disagree.

Such a survey consists of four parts. Firstly, the student socio-demographic variable. Knowledge-based topics made up the next section; the third part consisted of attitude questions, and the last part was questions on the practice of Centria UAS nursing learners regarding senior dental hygiene.

APPENDIX 1 / 2

Knowledge, Attitude, and Practice of nursing students towards oral health in the geriatric patients questionnaire. (please mark an x on the statement that corresponds to you)

Demographic variables

Gender: male female others

Age: 18-22 23-28 29-34 35 and above

Year of study: 2nd year 3rd year 4th year and more

Below are statements about the Nursing learners' understandings, beliefs, and behaviors about elderly clients' dental hygiene. For each, please indicate whether you strongly agree, neither agree nor disagree, disagree, or strongly disagree.

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Questions on Knowledge

No	Questions	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
1	Oral hygiene is fundamental for dependent inpatients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Functional ability reduces the effectiveness of dental care in older people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	The use of poly medications by the elderly can affect their oral health.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Poor oral hygiene of the elderly can cause aspiration pneumonia.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	During my course, I have received adequate abilities and information needed to conduct a dental hygiene assessment on older adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Questions on attitude

6	The oral health of older people should be assessed periodically by nurses.	<input type="checkbox"/>				
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7	Nurses have the responsibility of supervising oral hygiene care.	<input type="checkbox"/>				
8	It is an unpleasant task to clean the mouths of older people.	<input type="checkbox"/>				
9	Oral health treatment is just as necessary as additional medical care.	<input type="checkbox"/>				
10	Oral health care is more critical for dependent inpatients.	<input type="checkbox"/>				

Questions on Practice

11	It does not matter if I clean and check dentures regularly	<input type="checkbox"/>				
12	I can provide dental care plans according to patients' needs.	<input type="checkbox"/>				
13	I can communicate properly and adequately when providing oral care.	<input type="checkbox"/>				
14	Brushing teeth with fluoride toothpaste a minimum of two times daily prevents tooth decay.	<input type="checkbox"/>				
15	I know the appropriate technique when brushing an older adult's mouth.	<input type="checkbox"/>				

Ethical declaration

I am Sandrine Nana, a Centria University of Applied Sciences nursing student. The title of my thesis topic is; **KNOWLEDGE, ATTITUDE, AND PRACTICE OF NURSING STUDENTS TOWARDS ORAL HEALTH IN GERIATRIC PATIENTS.**

This research aims to describe nursing learners' Understanding, mindset, and actions regarding oral health in older people. Moreover, the aim is to determine how the Centria University of Applied Science nursing pupils perceive dental hygiene understanding, mindset, and actions concerning elderly patients. This thesis will be relevant for academic nursing institutions to understand and comprehend the importance of including instruction on dental hygiene programs in school curricula. A research permit was obtained from kiirjamo@centria.fi to carry out this research, and Timo Kinnunen supervises the thesis.

I request you all participate in my research survey questions for this thesis. Attached to this mail is my questionnaire. Please open the link and complete the survey questionnaires. The questionnaire lists statements about nursing learners' Understanding, mindset, and actions toward oral health in geriatric patients. For each, please indicate with a click whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree. I would appreciate it if you all help me complete the survey. However, participation in the survey is voluntary.

Note that all data will be kept entirely private, and the data obtained will be solely used for this thesis. Your identity will remain unknown while completing his survey.

Thank you for participating in my research survey. Should you have any inquiries about the questionnaire, contact me at Sandrine.NanaNcheto@centria.fi.

Best regards

Sandrine Nana (NNRNS19K)