

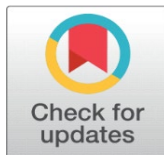
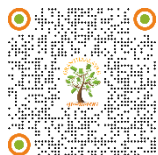
THE RELATIONSHIP OF KNOWLEDGE AND ATTITUDE OF STUDENTS SYIAH KUALA UNIVERSITY ABOUT THE IMPACT OF TOOTH LOSS

Poppy Andriany¹✉, Pocut Aya Sofya²✉, Liana Rahmayani²✉, Cut Fera Novita¹✉, Nanda Nashirah³✉

¹Department of Dental Public Health, Faculty of Dentistry Universitas Syiah Kuala, Indonesia

²Department of Prosthodontics, Faculty of Dentistry Universitas Syiah Kuala, Indonesia

³Faculty of Dentistry, Universitas Syiah Kuala, Banda Aceh 23111, Indonesia



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Corresponding Author

Poppy Andriany,
poppyfaza@unsyiah.ac.id

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ABSTRACT

Introduction, loss of teeth can cause problems with mastication, speech, aesthetics, social activities, inhibit work performance, and daily activities. Causes of tooth loss include trauma, caries, periodontal disease, infection, orthodontic treatment, and knowledge. Knowledge can influence a person & attitude.

Therefore, this study aimed in cross-sectionally assessing the relationship between knowledge and attitudes of Syiah Kuala University students' batch 2018 about the impact of tooth loss. Methods, cross-sectional study design was used in this study, involving 384 subjects, with cluster sampling technique. The results showed knowledge about the impact of tooth loss was 80.1% and attitudes about the impact of tooth loss were 79.5%. The correlation coefficient shows a positive correlation value between the knowledge and attitude variables which shows a significant level ($p < 0.01$). Conclusion, there is a relationship between the knowledge and attitudes of Syiah Kuala University students batch the 2018 about the impact of tooth loss.

Keywords: Student, Tooth Loss, Knowledge, Attitude

1. INTRODUCTION

Tooth loss is an irreversible condition [Emami et al. \(2013\)](#). Loss of teeth can cause problems with mastication, speech, aesthetics, social activities, inhibit work performance, and daily activities [Begum et al. \(2016\)](#). The causes of tooth loss are trauma, caries, periodontal disease, infection, and orthodontic treatment [Mohd et al. \(2018\)](#). Based on research by [Livia et al \(2018\)](#), tooth loss in early adulthood caused by dental caries was 96.5% and traumatic injury was 18.2%. The prevalence of tooth

loss in early adulthood shows the importance of knowledge about dental and oral health [Bobu \(2018\)](#).

Knowledge is a state in which a person is in cognitive contact with reality. Knowledge is one of the important things in the formation of behaviour. Health behaviour is also influenced by knowledge. It was concluded that knowledge is important in maintaining dental and oral health, including knowledge about the impact of tooth loss [Greco and Sosa \(1999\)](#). In line with knowledge, attitude is something that is learned. Attitudes also determine how individuals react to something, including when someone is exposed to a disease [Sari et al. \(2018\)](#).

Early adulthood is a period of transition from adolescence to adulthood. At this time tend to experience changes in the environment, social, and lifestyle [Winpenny et al. \(2018\)](#). The research of [Amal et al \(2017\)](#) showed that individuals with early adulthood who have undergraduate and postgraduate degrees often experience mandibular posterior tooth loss. This study shows poor knowledge about the consequences of tooth loss as well as low levels of awareness and motivation to replace missing teeth [Almutairy and Mohan \(2017\)](#).

Students are individuals who are studying at the university level. Based on age, students are classified in early adulthood. Students in early adulthood will be responsible for their development [Arnett \(2016\)](#).

The research of [Begum et al \(2016\)](#) shows that many experience tooth loss due to several things, one of which is a lack of knowledge about the importance of maintaining dental and oral health [Begum et al. \(2016\)](#).

Based on this background, the researcher is interested in examining the relationship between the knowledge and attitudes of Syiah Kuala University students about the impact of tooth loss. The researcher chose the 2018 Syiah Kuala University students because apart from the 2018 batch being individuals who reached early adulthood, the 2018 batch were also individuals who had gained more knowledge and experience.

2. RESEARCH METHODS

The research was carried out using a Google Form which was distributed through social media. This type of research is a descriptive study with a cross-sectional design .

This study aims to see the relationship between knowledge and attitudes of Syiah Kuala University students batch 2018 about the impact of tooth loss. Syiah Kuala University consists of 12 faculties and research subjects consist of 32 people in each faculty so that the total subjects of this research are 384 people. Subjects were taken by means of cluster sampling.

The inclusion criteria for research subjects were students of Syiah Kuala University batch 2018 who were still active. The exclusion criteria for this study were Syiah Kuala University students batch 2018 who were not willing to be research subjects and did not have an android .

Research subjects were asked to fill out an online informed consent form and fill out an online questionnaire.

The answer to the "correct" research subject knowledge questionnaire was given a score of 1 , if the "wrong" answer will be given a score of 0. The answer to the attitude of the research subject uses 5 parameters, namely strongly agree (SA), agree (A), natural (N), disagree (D), strongly disagree (SD). The value of the answer

to the positive statement is SA = 5, A = 4, N = 3, D = 2, SD = 1, and the value of the answer to the negative statement is the opposite.

2.1. DATA ANALYSIS

Data were analyzed using Microsoft Excel application and IBM Statistical Product and Social Science (SPSS) version 25 application.

3. RESULTS

The number of subjects in this study was 384 subjects with female subjects dominating than male subjects. There are four measurement results that are measured, namely gender, faculty, knowledge criteria, and attitude criteria. The complete results of the primary data collected can be seen in the table below.

Table 1

Table 1 Frequency Distribution of Subjects by Gender		
Gender	Amount	Percentage (%)
Man	100	26.0
Woman	284	74.0
Total	384	100

Table 2

Table 2 Frequency Distribution of Subject Knowledge by Gender				
Knowledge				
Gender	Good	Enough	Not enough	Total
Man	58 (58 %)	23 (23 %)	19 (19 %)	100 (100 %)
Woman	202(71.1 %)	52 (18.3 %)	30 (10.6 %)	284 (100%)
Total	260 (67.8 %)	75 (19.5 %)	49 (12.7 %)	384 (100 %)

Table 3

Table 3 Attitude Frequency Distribution by Gender				
Attitude				
Gender	Good	Enough	Not enough	Total
Man	61(61 %)	38(38 %)	1(1 %)	100(100 %)
Woman	206(72.5 %)	75(26.4 %)	3(1.1 %)	284(100 %)
Total	267(69.5%)	113(29.4 %)	4(1.1 %)	384(100 %)

Table 4

Table 4 Distribution of Knowledge Frequency by Faculty				
Knowledge				
Faculty	Good	Enough	Not enough	Total
Faculty of Dentistry	31(96.9 %)*	1(3.1 %)	0(0 %)	32 (100 %)

Faculty of Medicine	24(75%)	5(15.7 %)	3(9.3 %)	32 (100 %)
Faculty of Nursing	27(84.5 %)	2(6,2 %)	3(9.3 %)	32 (100 %)
Faculty of Veterinary Medicine	23(71.9 %)	5(15.6 %)	4(12.5 %)	32 (100 %)
Faculty of Economics and Business	18(56.3 %)	4(12.5%)	10(31.2 %)*	32 (100 %)
Faculty of Math and Science	22(68.8 %)	6(18.7 %)	4(12.5 %)	32 (100 %)
Faculty of Teacher Training and Education	19(59.5 %)	10(31.2 %)	3(9.3 %)	32 (100 %)
Faculty of Engineering	19(59.5 %)	6(18.7 %)	7(21.8 %)	32 (100 %)
Faculty of Law	16(50 %)	9(28.2 %)	7(21.8 %)	32 (100 %)
Faculty of Agriculture	25(78.2 %)	6(18.7 %)	1(3.1 %)	32 (100 %)
Faculty of Marine Affairs and Fisheries	19(59.5 %)	9(28.2 %)	4(12.5 %)	32 (100 %)
Faculty of Social Science and Political Science	17(53.2 %)	12(37.5 %)	3(9.3 %)	32 (100 %)
Total	260(67.7 %)	75(19.5 %)	49(12.8 %)	384 (100 %)

Table 5

Table 5 Attitude Frequency Distribution by Faculty				
Faculty	Attitude			Total
	Good	Enough	Not enough	
Faculty of Dentistry	32(100 %)	0(0 %)	0(0 %)	32 (100 %)
Faculty of Medicine	23 (71.8 %)	9(28.2 %)	0(0 %)	32 (100 %)
Faculty of Nursing	21 (65.7 %)	11(34.3 %)	0(0 %)	32 (100 %)
Faculty of Veterinary Medicine	21 (65.7 %)	11(34.3 %)	0(0 %)	32 (100 %)
faculty of Economics and Business	19 (59.5 %)	12(37.5 %)	1(3 %)	32 (100 %)
Faculty of Math and Science	19 (59.5 %)	12(37.5 %)	1(3 %)	32 (100 %)
Faculty of Teacher Training and Education	20 (62.5 %)	12(37.5 %)	0(0 %)	32 (100 %)
Faculty of Engineering	20 (62.5 %)	12(37.5 %)	0(0 %)	32 (100 %)
Faculty of Law	23 (71.8 %)	9(28.2 %)	0(0 %)	32 (100 %)
Faculty of Agriculture	29 (90.7 %)	3(9.3 %)	0(0 %)	32 (100 %)
Faculty of Marine Affairs and Fisheries	21 (65.7 %)	9(28.2 %)	2(6,1 %)	32 (100 %)
Faculty of Social Science and Political Science	19 (59.5 %)	13(40.5 %)	0(0 %)	32 (100 %)
Total	267 (69.5 %)	113(29.4 %)	4(1.1 %)	384 (100 %)

Table 6

Table 6 Relationship Between Knowledge and Attitude			
Variable	N	Correlation Coefficient	P
Knowledge	384	0.494	0.000*
Attitude	384	0.494	0.000*

* Correlation is significant at the 0.01 level (2-tailed)

4. DISCUSSION

Tooth loss is an *irreversible condition*. Studies show that tooth loss is strongly associated with socioeconomic factors and is more common in poor populations and in women. Other factors related to the prevalence of tooth loss were age, education, access to dental care, comparison between dentists and population, and insurance coverage. Loss of teeth can affect the psychological, social, and physical disorders of individuals so that it reduces the quality of life [Emami et al. \(2013\)](#).

Based on [Table 1](#), it is known that the research subjects were 100 men and 284 women. The results of this study indicate the research subjects with female sex more than research subjects with male sex. This is in accordance with the number of 2018 Syiah Kuala University students on the Syiah Kuala University data portal, which are dominantly female as many as 4,480 people compared to 2,829 male gender.

The distribution of knowledge of research subjects based on gender which can be seen in [Table 2](#), shows that research subjects who have good knowledge about the impact of tooth loss on subjects with male sex are 58 people (58%) and 202 women (71.1%). The results of this study indicate that more female research subjects have good knowledge about the impact of tooth loss. This is thought to be because women have a higher curiosity than men. The results of this study are supported by research by [Manierre \(2015\)](#) which shows that women tend to be more happy to seek information about health than men, so women have a higher level of knowledge [Manierre \(2015\)](#). Other research that supports is the research of [Harish et al \(2017\)](#) which shows that there is a significant difference between the knowledge of women and men, women have higher knowledge than men [Kumar et al. \(2017\)](#).

[Table 3](#), shows the attitudes of the subjects by gender, that the research subjects who had a good attitude about the impact of tooth loss on the subject were 61 people (61%) male and 206 women (72.5%). This situation shows attitudes about the impact of tooth loss on female research subjects are better than men. This is presumably because women feel more worried about their health. The results of this study are supported by research by [Debbie et al \(2015\)](#) which shows that women's attitudes are better than men [Haski-Leventhal et al. \(2017\)](#).

In [Table 4](#), it can be seen that the knowledge of the research subject based on the faculty. Of the 12 faculties that were used as subjects, 31 people (96.9%), showed that the research subjects had good knowledge about the impact of tooth loss on the Faculty of Dentistry (96.9%), It appears that the faculties related to health have a better level of knowledge sequentially than the Faculty of Dentistry, Faculty of Nursing, Faculty of Medicine, and Faculty of Veterinary Medicine. This is presumably because students in faculties related to health have received more knowledge related to health including the impact of tooth loss compared to other faculties. The results of this study are supported by research conducted by [Harish et al \(2017\)](#). This research shows that students of the Faculty of Dentistry have more knowledge and attention in maintaining dental and oral health [Kumar et al. \(2017\)](#).

The distribution of attitudes of research subjects based on faculties can be seen in [Table 5](#), of the 12 faculties that became subjects, 32 people (100%) had a good attitude about the impact of tooth loss on the Faculty of Dentistry. This is presumably because students of the Faculty of Dentistry have already gained knowledge in courses in dentistry. In accordance with the research of [Santosh et al \(2017\)](#), shows that students of the Faculty of Dentistry have a better attitude than other faculties. Students of the Faculty of Dentistry have understood about

maintaining good oral and dental health and the consequences of neglecting it so that it can motivate them to pay more attention to dental and oral health, including the impact of tooth loss [Kumar et al. \(2017\)](#).

The research subjects gave the most correct answers about knowledge, namely the question about losing front teeth can cause loss of self-confidence. This is presumably because students feel that losing their front teeth will reduce their aesthetic value and affect social interactions. In accordance with the research of [Emami et al. \(2013\)](#) which showed that tooth loss had a negative impact on social life and daily activities [Emami et al. \(2013\)](#). The first question about tooth loss having a negative impact on overall health showed that the percentage of research subjects answered the least with the correct answer. This is presumably because students do not know enough that tooth loss can have an impact on general health. This is in accordance with research by [Rica et al \(2019\)](#) which showed that students had low knowledge about the impact of tooth loss on general health. Tooth loss can also be associated with general health through other indirect mechanisms such as changes in eating behavior and causing malnutrition. Tooth loss can also be directly related to general health, through the inflammatory and immune responses. Tooth loss can affect image, appearance and activate the stress response system, which can have consequences on general health [Barboza-Solís et al. \(2019\)](#).

The frequency of the answers of the research subjects based on the statements on the questionnaire about attitudes that gave the most appropriate answers, namely the statements about decreased self-confidence if you lost front teeth. This is presumably because students are worried that losing their front teeth will affect communication. This is supported by the research of [Osamah et al \(2020\)](#) which shows that losing front teeth will affect the patient's personality emotionally, socially, psychologically, reducing the quality of life [Haag et al. \(2017\)](#). Statements about tooth loss can have a negative impact on overall health indicate the percentage of research subjects who gave the least appropriate answer. This is presumably because students do not pay much attention to the impact of tooth loss on general health. This is supported by research by [Haag et al. \(2017\)](#) which shows that many students do not pay attention to the impact of tooth loss on general health. Given that dental and oral health is an integral part of general health, individual dental status can affect the quality of life related to general health, as well as the overall well-being of individuals [Haag et al. \(2017\)](#).

In [Table 6](#). Shows there is a relationship between knowledge and attitudes. The level of strength between the correlation of knowledge and attitude variables is sufficient and shows a positive value so that the relationship between the two variables between knowledge and attitude is unidirectional, thus it can be interpreted that the knowledge of Syiah Kuala University students about the impact of tooth loss if it is increased then attitudes will also increase.

Knowledge can influence a person's attitude. This study shows that there are several faculties that have less knowledge but have good attitudes. This is presumably because attitudes are not only influenced by knowledge or education but can be influenced by several other factors [Zhang et al. \(2020\)](#). A limitation in this study is that the author only discusses knowledge and attitudes based on education.

5. CONCLUSION

There is a relationship between the knowledge and attitudes of Syiah Kuala University students batch 2018 about the impact of tooth loss. The relationship

between the two variables of knowledge and attitude is unidirectional, meaning that if the knowledge of the Syiah Kuala University students about the impact of tooth loss is high, the attitude will be better.

CONFLICT OF INTERESTS

None.

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