



Research Article

ISSN: 2581-3218
IJDR 2023; 8(2): 32-34
Received: 31-07-2023
Accepted: 11-09-2023
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www.dentistryscience.com
doi: 10.31254/dentistry.2023.8202

The Relationship between Tooth Loss and Quality of Life Based on OHIP-14

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Abstract

Introduction: The loss of natural teeth, whether replaced with dentures or not, can affect quality of life, particularly oral health-related quality of life. The loss of one or more teeth causes functional impairment that has a very negative impact on quality of life. Severe tooth loss greatly affects a person's quality of life and affects their survival. **Methods:** This study used a descriptive approach with a cross-sectional design. The 97 samples in this study were taken by accidental sampling method. The research instrument used in this study was the OHIP-14 questionnaire. The research data were then processed and analyzed with the Pearson correlation test. **Results:** Pearson correlation analysis obtained $p (<0.05)$ which indicates that there is a significant relationship between tooth loss and quality of life related to the oral cavity. **Conclusion:** Tooth loss is associated with quality of life related to the oral cavity. Therefore, promotive and preventive efforts for oral health need to be improved for better health.

Keywords: Edentulous, OHRQOL, OHIP-14.

INTRODUCTION

Tooth have a very important function in the life of every individual. Apart from aesthetics and phonetics, teeth have a masticatory function that plays an important role in maintaining human nutrition. Tooth loss affects many areas of life. Tooth loss can affect facial shape and speech function [1,2]. Oral health problems can be caused by poor oral hygiene status, especially caries and periodontal disease, which are the two main causes of tooth loss [3].

The loss of one or more teeth causes functional impairment that has a very negative impact on quality of life. Severe tooth loss will certainly greatly impact a person's quality of life and interfere with the survival of the patient [4,5].

Quality of life according to the World Health Organization (WHO) is a person's perception in the context of culture and norms that are appropriate to where the person lives and relates to goals, expectations, standards, and concerns during his life [3]. Oral health related quality of life has been recognized by WHO as a multidimensional concept to measure quality of life related to oral health and has been developed in various ways by clinical approaches, but this clinical approach is limited in terms of functional and psychosocial aspects of oral health. The Oral Health Impact Profile (OHIP) is one of the most frequently used to measure Oral Health Realized Quality of Life [6].

Because of this problem, this study was conducted to determine the relationship between tooth loss and quality of life.

MATERIALS AND METHODS

This study is a descriptive study with a cross sectional study design. Sampling in this study was carried out by accidental sampling method. The research instrument used in this study was the OHIP-14 questionnaire.

Statistical Analysis

Data were analyzed using SPSS (version 20.0) and computation of descriptive statistics were followed by Pearson Correlation Test (appropriate bivariate analyses).

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RESULTS

Table 1 contains the characteristics of 97 respondents, consisting of 63 women (64.9%) and 34 men (35.1%). Based on table 2, 74 respondents (76.29%) had a good quality of life, 21 respondents (21.65%) had a moderate quality of life, and 2 respondents (2.06%) had a poor quality of life. Based on table 2 the maximum tooth loss in respondents was 25. Based on table 3 the results of the Pearson correlation analysis test obtained $p < 0.05$ which means the results show that there is a forced relationship between the relationship between tooth loss and quality of life based on OHIP-14.

Table 1: Age, Gender Characteristics and Quality of Life of Respondents

	Mean	Minimum	Maximum	Standard Deviation
Age	32,18	5	77	14,93
		n		%
Gender	Male	34		35.1%
	Female	63		64.9%
Quality of Life	Good	74		76.29%
	Moderate	21		21.65%
	Poor	2		2.06%

Table 2: Overview of the Number of Tooth Loss in Patients

	Mean	Minimum	Maximum	Standard Deviation
Tooth Loss	1,96	0	25	4,15

Table 3: Pearson Correlation Analysis Test Results

		OHIP-14
Tooth Loss	Pearson Correlation	383**
	P value	000

DISCUSSION

This study used the OHIP-14 questionnaire based on age, gender, and the amount of tooth loss, then conducted a Pearson test using SPSS to see the relationship between factors that affect the quality of life of people who experience tooth loss. In the table regarding the relationship between gender and tooth loss on quality of life, $p < 0.05$ was obtained, which means that there is a relationship between tooth loss and quality of life. This study was conducted with a sample of individuals aged 5-77 years. Based on gender, 63 women with a percentage of 64.9% and 34 men with a percentage of 35.1%.

The results of this study agree with the research of Rizkillah et al that there is a significant relationship between posterior tooth loss and quality of life in the age group 45-65 years of research based on OHIP-14. The results of previous studies also agree with the research of Perkasa et al that there is a significant relationship between tooth loss based on the number and quality of life related to oral health in the elderly [7].

Oral health related quality of life is a multidimensional construct related to the impact of oral health that affects functional, social, and psychological abnormalities, even affecting the well-being or quality of

life of each individual. Individuals with posterior tooth loss can directly affect a person's quality of life because it can affect masticatory function, and even cause disruption of psychosocial problems consisting of seven dimensions of quality of life, namely, functional limitations, physical pain, psychological discomfort, physical disability, psychological disability, social disability, and handicap / limitation [12-14].

Physical disability can cause dissatisfaction with the food consumed and tends to have to cut food so that it is easy to consume due to disruption of the chewing process in individuals with loss of >3 posterior teeth [7]. Functional limitations will cause functional decline in the oral cavity such as difficulty speaking, difficulty chewing food, and difficulty in tasting food properly. Previous research states that individuals with three or more posterior tooth losses can cause disruption of the mastication process [8].

Tooth loss that is left untreated will have physical and psychological impacts that cause limitations when speaking, affect the condition of the temporomandibular joint, to affect aesthetic appearance [4,8,9]. Anatomically, tooth loss will cause resorption of alveolar bone which gradually causes a decrease in the peak of the alveolar bone. These anatomical changes will also affect the treatment that the patient will undergo. Aesthetic changes will probably be the biggest concern. As a result of tooth loss, the patient's facial condition will experience changes, especially a decrease in facial height and a decrease in the vertical dimension of the occlusion if no treatment is carried out [10]. Therefore, tooth loss can be called the strongest predictor of oral-related quality of life [11].

CONCLUSION

There is an effect of tooth loss on oral health related quality of life. Therefore, special attention is needed to maintain the number of teeth in the elderly in order to have a better quality of life.

Acknowledgments

Acknowledgments are addressed to Hospitalia RSGMP Baiturrahmah.

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HOW TO CITE THIS ARTICLE-

Amran R, Lisfrizal H, Ningrum V. The Relationship between Tooth Loss and Quality of Life Based on OHIP-14. *Int J Dent Res* 2023; 8(2):32-34. doi: 10.31254/dentistry.2023.8202

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