



Motivation and Dental Health Self-Care Behavior with Adolescent Quality of Life using OHIP-14

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Abstract

Background: The prevalence of dental and oral disease in Indonesia is still high (57.6%) and the most cases are dental caries and periodontal disease. Adolescents during puberty are prone to oral health problems, so they need attention from dental and oral health care programs. Preventive measures against dental and oral diseases need to be carried out in adolescents so that there are no disturbances in function, activity, and work productivity which will affect quality of life. Technological developments require innovation to detect oral health-related quality of life (OHRQoL) in adolescents early. **Objective:** To determine the relationship between motivation and dental health self-care behavior with the quality of life of adolescents using the Oral Health Impact profile-14 or OHIP-14 questionnaire. **Method:** This type of research is observational analytic with a cross sectional design. The research location is at the Junior High School in the Sleman Regency area. The sample was 100 teenagers aged 12-15 years. The sampling technique was carried out using purposive sampling. The data analysis used was bivariate analysis using chi-square correlation to determine the relationship between motivation and dental health behavior and quality of life in adolescents. **Results:** There is a significant relationship between motivation and quality of life ($p=0.004$; $OR=4.74$). Adolescents with low motivation have a tendency to have a low quality of life 4.74 times compared to adolescents with high motivation. There is a significant relationship between dental health self-care behavior and quality of life ($p=0.041$; $OR= 5.47$). Adolescents with bad behavior tend to have a lower quality of life 5.47 times compared to adolescents with good dental health behavior. **Conclusion:** There is a relationship between motivation and dental health self-care behavior and quality of life in adolescents.

Keywords: Motivation, Behavior, Quality of Life of Adolescents

INTRODUCTION

Quality of life is recognized as an important part of health and is considered in the assessment of therapy and wellness programs. Quality of life evaluates perceived health from a multidimensional perspective including physical, psychological, social, and environmental aspects.¹ Quality of life related to oral health is called Oral Health-Related Quality of Life or OHRQoL.^{2,3}

Adolescents are one of the groups at high risk of having health problems. In dental and oral health, this threat can be avoided by preventing dental and oral diseases.⁴ Oral health has an impact on the quality of life of adolescents, and the OHRQoL measurement instrument that is often used is the Oral Health Impact Profile-14 (OHIP-14) which contains 14 dimensions of quality of life. The OHIP-14 concept measures various aspects of oral health, for example psychological, physical and social aspects. A high OHIP-14 score will always equate to a negative impact on OHRQoL.⁵ Pain and psychological discomfort are the OHIP-14 dimensions most frequently reported as impacting OHRQoL in adolescents.⁶

Several studies say there is a relationship between motivation for dental care and quality of life in medical students and based on the OHIP-14 dimensions it was found that good quality of life is highest for functional limitations, social disabilities and obstacles. stated that gender, location of residence, region, only child status, parental education, frequency of carbohydrate consumption, self-perception of

oral health status, visits to the dentist in the last 12 months, knowledge, age, and the DMFT index were related to OHRQoL.^{7,8} OHRQoL measurements are currently still carried out using questionnaires such as the Oral Impact on Daily Performance (OIDP).^{9,10} Child Perceptions Questionnaire (CPQ).^{11,12}, the Oral Health Impact profile-14 (OHIP-14).^{1,5}

A preliminary study on students of SMPN Gamping in Sleman Regency in 2021 showed that the prevalence of dental caries and periodontal disease in students was still high with a DMFT index of 4.6 and a low periodontal status of 65%. Based on this description and in line with the Dental Health Department's research roadmap for 2019-2023, the researchers argue that the need for dental assistants to detect OHRQoL includes motivation and self-care behavior for dental health using OHIP-14 in adolescents.

METHOD AND MATERIAL

This type of research is analytic observational with a cross sectional design. The sample is adolescents aged 12-15 years with a total of 100 children. The sampling technique was carried out by purposive sampling. Influence variables consist of dental care motivation, and dental health self-preservation behavior. The affected variables consist of quality of life. The research instrument was the OHIP-14 questionnaire and the scale used was ordinal. Quality of life is measured using the Oral Health Impact Profile-14 (OHIP-14) including the dimensions of functional limitations, physical pain, psychological discomfort, physical disability, psychological

disability, social disability, and handicap. Factors related to oral health include sociodemographic characteristics (gender, maternal education, parental occupation), motivation, knowledge, behavior, oral hygiene, and experience of dental

caries. The data analysis used was bivariate analysis using chi-square correlation to determine the relationship between motivation and dental health behavior with the quality of life of adolescents.

RESULT AND DISCUSSION

Table 1: Frequency Distribution based on respondent characteristics

Variable		n	%
Age	12 years	4	4.0%
	13 years	78	78.0%
	14 years	18	18.0%
Gender	Man	36	36.0%
	Women	64	64.0%
Mother's Education	Elementary school	6	6.1%
	Junior high school	13	13.1%
	Senior high school	42	42.4%
	College	38	38.4%
Parents' job	Government employees	26	26.0%
	Private	43	43.0%
	Farmers / Traders	4	4.0%
	Laborer	12	12.0%
	Etc	9	9.0%
	Doesn't work	6	6.0%

Based on the results of research on junior high school adolescents in the Sleman Regency, Yogyakarta aged 12-15 years, it was found that out of 100 adolescents it was known that most were 13 years old, 78 (78.0%). Most of the teenagers are women 64 (64.0%). The mother's highest level of

education is senior high school 42 (42.4%). Most parents' work is private 43 (43.0%). Wu et al. stated that gender, parental education, self-perception of oral health status, knowledge, age, and the DMFT index are related to OHRQoL.⁸

Table 2: Frequency distribution of knowledge, motivation, behavior, and quality of life

Variable		Mean	SD	n	%
Dental Care Motivation		4.76	0.51		
Motivation	Low (<5)			20	20.0%
	High (≥5)			80	80.0%
Dental Health Self-Care Behavior		4.42	1.26		
Behavior	Not good (<4)			10	10.0%
	Good (≥4)			90	90.0%
Total Quality of Life Score		24.59	6.42		
Quality of life	Low (<23)			46	46.0%
	High (≥23)			54	54.0%

Table 2 shows that the average dental care motivation score is 4.76, based on the median cut off, it was found that the majority of teenagers had dental care motivation in the high category of 80 (80.0%). Motivation for dental care is influenced by attitudes, behavior and knowledge about teeth.¹³ High motivation can affect dental and oral health in adolescents. Motivation also influences adolescent awareness

to treat damage to their teeth, so they are able to maintain dental and oral health which includes efforts to overcome it, and are able to instill healthy behavior from an early age.¹⁴ Dental health care behavior obtained an average of 4.5 and based on the median cut off, it was found that most adolescents had dental health self-care behavior in the high category of 90 (90.0%). More than half of the quality of life of

adolescents is in the high category (54.0%). Oral health behavior is one of the factors that causes gingivitis in

adolescents aged 12-15 years.¹⁵

Table 3: Results of Analysis of Motivation and Oral Health Behavior with Quality of Life in Adolescents

		Quality of Life					
		Low (<23)		High (≥23)		p	OR
		n	%	n	%		
Motivation	Low (<5)	15	32.6%	5	9.3%	0.004*	4.74
	High (≥5)	31	67.4%	49	90.7%		
Behavior	Not Good (<4)	8	17.4%	2	3.7%	0.041*	5.47
	Good(≥4)	38	82.6%	52	96.3%		

Table 3 shows the p-value of motivation with quality of life of 0.0004 ($p < 0.05$). The p-value of knowledge with quality of life is 0.0001 ($p < 0.05$). The p-value of behavior with quality of life is 0.041 ($p < 0.05$). This shows that there is a relationship between motivation and dental health behavior on the quality of life in adolescents. This is in line with the research by Zuhri et al. shows that the higher the motivation for dental care, the better the quality of life, this is because the level of knowledge can influence a person's behavior towards oral diseases. Dental and oral health knowledge is very important in supporting behavior to maintain dental and oral hygiene and health.⁷

Awareness to take advantage of medical services is increasing which encourages motivation to visit dental health services, so as to reduce dental health problems in adolescents. Health problems in the oral cavity and are serious can cause a decrease in the quality of life of individuals. Quality of life related to oral health is called Oral Health-Related Quality of Life or OHRQoL.² OHRQoL is a person's assessment of the impact of dental and oral health problems that can affect the quality of life related to oral health in adolescents, the higher the dental health problems, the worse the quality of life.¹⁶

CONCLUSION

Based on the research results, it can be concluded that there is a significant relationship between motivation ($p = 0.004$) and dental health self-care behavior ($p = 0.041$) and quality of life. This shows that there is a relationship between motivation and dental health behavior on the quality of life in adolescents. The higher the motivation for dental care, the better the quality of life. Dental health problems that can affect the quality of life related to oral health in adolescents, the higher the dental health problems, the worse the quality of life.

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CONFLICT OF INTEREST

The authors declare that they have no conflict interests.

ETHICAL CLEARANCE

This research has received a certificate of appropriate research ethics from the Yogyakarta Health Research Ethics Commission No.DP.04.03/e-KEPK.1/243/2023 dated 27 February 2023.

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