The Role of Parents' Knowledge, the Environment on Student Behavior and Its Impact on Dental and Oral Health in the Work Area of the Public Health Center in Central Mamuju

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Abstract

This study aims to measure and analyze the role of parental and environmental knowledge on student behavior and its impact on dental and oral health in the Public Health Center (Puskesmas) working area in Central Mamuju. It researched it at the Lara Public Health Center, Korossa District, Central Mamuju. The sampling technique used was Stratified Proportional Random Sampling. The total population was 2400, and the final sample obtained was 343 samples. The analysis tool used is path analysis using SPSS version 25.0 software. The results showed that among the variables that became the indicators of this study, the variable of the role of parental knowledge had the highest significance value among other variables. Both the direct influence of knowledge on oral health and the power of expertise through the intervening variable student behavior in the Puskesmas Work Area in Central Mamuju, meanwhile, variables with negative and insignificant values are shown in the direct influence of environmental variables on student behavior in the Puskesmas working area in Central Mamuju. Thus, the role of parental knowledge becomes a trigger in influencing student behavior and health behavior.

Keywords

Role of knowledge, Environment, Student Behavior, Oral and Dental Health.

1. Introduction

The development of health midwives leads to an increase in the health status of the community, including dental and oral health services (Ministry of Health, 2012). Dental & oral health services are essential in improving and maintaining health, prevention, and restoration of dental health for the community (RI Law No.36 / 2009 Article 93). According to Riskesdas 2013, the percentage of dental and oral health problems in Indonesia was 25.9%, increasing 2.5% compared to 2007, which was only 23.4%.

Dental and oral disease is a common disease that can attack anyone and has a progressive nature if treatment or treatment is not carried out quickly. The perceptions and attitudes of the Indonesian people towards oral health are still lacking due to the lack of planting of the importance of maintaining oral health from an early age.

Suppose it is related to tooth brushing behavior in Indonesia. In that case. There appears to be an increase in the proportion of the population brushing their teeth every day for 2007. namely 91.1% to 93.8% in 2013. When looking at brushing teeth, it appears that the proportion is small and even has a decrease, wherein 2007 it was 7.3% to 2.3% in 2013

The role of parents is essential in maintaining the health of their children, especially in matters of oral hygiene, because preschool children tend to depend a lot on their parents. Parents are obliged to maintain the cleanliness of their children's teeth. At this time, various health problems can occur in preschool children, one of which is dental caries or what is usually known as cavities. Another factor contributing to the high prevalence of caries is the lack of parental knowledge, environment, and student behavior on maintaining oral dental health.

Mother's knowledge, attitudes, and actions affect the condition of their dental and oral health later. Parents need to know how to care for their child's teeth and provide instruction on caring for teeth properly. Most parents consider milk teeth to be temporary and are immediately replaced with teeth, so most think that the damage to milk caused by inadequate oral hygiene is not a problem (Piwitaning, 2013). Knowledge about oral health is acquired in complex cognitive processes. In the study, there was a correlation between the level of knowledge and the oral health status. Attitude is also knowledge coupled with action based on ability as participatory knowledge with attitude and control (Sasmita et al., 2010).

Research (Sumiati, 2013) shows that factors related to dental health care in children include internal factors (such as attitude, motivation, and knowledge); and external factors (such as means of transportation). The results showed that the most important thing related to exemplary care for children's dental health is parental knowledge. This is also the case in the Puskesmas Lara, Karissa district, Central Mamuju, where parents, the environment, and student behavior impact dental and oral health problems, which are still low. The above conditions prompted the author to examine the role of parental knowledge, the environment on student behavior, and its impact on oral health in the work area of Puskesmas Lara, Karissa district, Central Mamuju.

2. Literature Review

2.1. The role of parental knowledge and student behavior

Human knowledge is an essential part of life because, with knowledge, humans can act and behave normally and away from deviation. As stated by (Notoatmodjo 2007), knowledge as the most crucial thing shapes individual actions. Children will get a lot of lessons from their parents so that from a young age the children will always get knowledge and behavior from their parents by imitating them. This behavior develops in children, both cognitive, affective, and psychomotor behaviors. This aligns with Bloom's (1998) opinion that human behavior is divided into 3 (three) things: cognitive, affective, and psychomotor behaviors. The findings in line with this study are (Worang et al., 2014), which states that parental knowledge affects behavior formation; knowledge is the most important domain of the construction of individual actions. Knowledge is the formation of behaviors. A person is considered to lack knowledge when he cannot explain, know, and analyze it. (Notoatmodjo 2007) suggests that knowledge in cognitive behaviors is known as the lowest level form; a person is considered to understand or know when he can remember the material or material he has studied, including recalling something from the material has received.

2.2. Student environment and behavior

Children's environment is much influenced by emotions in him whether it is fun or not. How children adapt to the environment, collaborate, share with those around them depends on how parents provide education and develop their children's emotions from an early age. Research in line with this research is (Fajar Lukman Tria, 2016), which finds a relationship between environmental factors and student behavior. The environment of school-age children has a significant impact on their development. School-age children are the same as living in groups or prefer to play in groups (Potter & Perry, 2005), explaining environmental factors. Namely, the biological development of school-age children, sometimes experiencing a slowdown due to nutrition, good things (Nath et al., 2021; Suharyanto et al., 2021; Umanailo et al., 2021). When they arrive home looking for fruit or snacks needed according to the energy they have expended, school-age children come home. The cognitive development of school-age children appears in their ability

to think logically and not. For example, they can solve problems according to how they feel. They begin to think logically (Jannah et al., 2019; Lionardo et al., 2020; Yusuf et al., 2019). The psychological development of schoolage children can be seen in the urge to compete and the skills created to be equal to older people/adults. For example, they start working to produce something through skills, creativity, and involvement in work where it is considered socially necessary. The moral development of school-age children can be seen in how children understand and follow the rules. They also sometimes spend a lot of time with their peers.

2.3. The role of knowledge and dental and oral health

Knowledge is essential to shape individual action. Based on research, behavior-based expertise tends to last longer than without knowledge (Notoatmodjo, 2012). The role of parental knowledge becomes crucial to be a reference in evaluating things that have been previously done for future improvements. This is in line with the opinion (Febrianto et al., 2014), where knowledge results from remembering something, including recalling previous events, whether on purpose or not. This comes after contact or observation of objects. The findings of this study are in line with the results (Wijayanti et al., 2016) and (Eddy & Mutiara, 2015) that knowledge has a significant positive effect on oral health.

2.4. Environment and dental and oral health

The environment is the first space where a person can take many lessons in his life, including children, from minor to adult get many things from their environment—related to the child's environment to dental and oral health risks. According to Wong (2009), school-age children's environment significantly impacts their development and relationships with others. Different things were found in this study that the climate did not affect dental and oral health.

2.5. Student behavior and oral health

Human behavior is an act of the individual himself that has a broad scope, such as speaking, crying, crying, laughing, writing, working, walking, reading, and so on (Notoatmodjo, 2007). In this study, indicators of student behavior understand that students can have awareness, interest, make considerations, and try to adapt to that behavior. Behavior is the activity/activity of living things (Ervina et al., 2019; Novitasari et al., 2019; Rumaolat et al., 2019). According to (Estiwidani Dwana, 2008), students or students learn and attend education as individuals. The results of research findings (Sebastian et al., 2017) on dental and oral health behavior in children and (Wijayanti et al., 2016) say that behavior has a positive and significant impact on dental and oral health.

3. Methods

3.1. Research Design

This study uses a correlational design, namely the relationship between independent variables, intervening variables, and dependent variables. The independent variables (independent) include the role of parental knowledge (XI), Environment (X2); The intervening variable is student behavior (Y1), while the dependent variable is oral health (Y2). This study uses a quantitative approach to test theories by looking at the relationship between variables. According to Creswell (2003), these variables are measured using an instrument in numbers that make it easier to carry out analysis according to statistical procedures.

The research was conducted at the Puskesmas Lara, Karossa District, Central Mamuju. The location selection was based on the Puskesmas Lara, Karossa District, Central Mamuju, which was representative to represent research on the role of parental knowledge, the environment on student behavior, and its impact on dental and oral health. The study lasted for about two months (September - October 2019).

The population covers the generalization area, including the object or subject that is the research data source. (Sugiyono, 2007) defines population as a generalization of things/issues with specific numbers and characters determined by researchers as material to be studied and concluded. A total of 2400 populations using Stratified Proportional Random Sampling and the Slovin formula (Umar, 1999) obtained a final sample of 343 respondents.

3.2. Variable measurement

The variables in this study were measured using a Liker scale ranging from 1 to 5. The number 1 (one) indicates the criteria for strongly disagreeing, and a scale of 5 (five) indicating the requirements for strongly agreeing with the statements in the questionnaire.

The level of parental knowledge is the basis for the formation of behavior. A person is said to lack knowledge if he cannot recognize, explain and analyze a situation. The indicators used to refer to (Notoatmodjo, 2007), including 1) Tofu; 2) Understanding; 3) Application; 4) Analysis; 5) Synthesis; and 6) Evaluation. The environment of school-age children has a significant impact on their development and relationships with others. The indicator refers to (Potter & Perry, 2005), namely: 1) Biological development; 2) Cognitive development; 3) Psychological development, and 4) Moral development.

Oral and dental health is intended as a dental and oral health problem that results from tooth decay which can interfere with activities. The indicators used to refer to (Tampubolon 2010): 1) Limited tooth function; 2) Physical disabilities; 3) Pain every time you chew; 4) Psychic discomfort, and 5) Psychic disabilities.

4. Results

4.1 Reliability Test

This study uses SPSS (Statistical Product & Service Solution) 16.0 for the window. Before the data processing is first conducted, test the validity and reliability of questionnaires. Validity test with significance test 0.05 with 2-tailed trial comparing r-count and r-table. The calculated R-value is taken from the Cronbach-Alpha column correlated item -Total Correlation. Meanwhile, the r-table is obtained using the formula df=n-2 (Sugiyono, 2012). Thus, the number of samples in this study as many as 343 respondents. which means df = 343-2 = 341, resulting in a r-table value of 0.095.

The results of the questionnaire data processing can be known the validity of each question item with valid values on all variables (the role of parental knowledge, environment, student behavior, and dental and oral health). Reliability testing of all question items of each research variable using Cronbach Alpha (alpha coefficient), considered reliable if the Cronbach Alpha> 0.6 (Hall, 2001). The table 1 can be known Cronbach Alpha value of all variables tested has a value above 0.60. As shown below in Table 1:

Number of Cronbach-Variable Status **Items** Alpha Role of The Year (X1) 0,802 Reliable 6 Item Environment (X2) 4 Item 0,836 Reliable Student Behavior (Y1) 0,808 Reliable 5 Item Dental and Oral Health (Y2) 5 Item 0,810 Reliable

Table 1. Uji reliability

Source: Processed data,2019

4.2 Descriptive Statistical Analysis

Descriptive statistical analysis in this study is an analysis used to describe respondents' perceptions of the items or details of statements submitted in the questionnaire. Respondents' answer numbers start from numbers 1 to 5 in each item of the questionnaire statement of each variable studied. Research conducted in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju. Variables studied are the Role of Knowledge (X1) and Environment (X2) as independent variables / free, Student Behavior (Y1) as a variable moderating/intervening, and Dental and Oral Health (Y2) as dependent variables / bound.

4.3 The role of parental knowledge (X1)

 $X1.\overline{2}$

X1.3

The instruments used in this study show that the variables of the role of parental knowledge are grouped in 6 indicators, namely: 1) know,2) understand, 3) application, 4) analysis, 5) synthesis, and 6) evaluation. In general, the description of the study results on work ethic variables can be described in Table 2. following.

Minimum Maximum Std. Deviation Sum Mean n X1.1 343 2 5 1435 4.18

2

2

343

343

Table 2. Descriptive analysis of the role of knowledge (X1)

5

5

1411

1439

4.11

4.20

.576

553

.572

X1.4	343	3	5	1442	4.20	.535
X1.5	343	3	5	1412	4.12	.544
X1.6	343	3	5	1433	4.18	.573
sum	343	18	30	8572	24.99	2.731
Valid N (listwise)	343					

Source: Processed data, 2019.

The Table 2 obtained information about the variable description of parental knowledge in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju Subdistrict. The ideal score on this variable is $5 \times 6 \times 343 = 10,290$, of which 5 is the highest answer score, 6 is the number of statement items, and 343 is the number of respondents. The number of percentage scores of variables is $8572/10,290 \times 100 \% = 83.30\%$. Thus, the variable role of parental knowledge amounted to 83.30% of the expected (100%).

Environment (X2)

The instruments used in this study show that environmental variables are grouped into 4 (four) statements, namely: 1) biological development, 2) cognitive development, 3) psychosocial development, and 4) moral development. In general, a description of the study results can be shown from the results of the analysis in Table 3.

Table 3. Descriptive Environmental Analysis (X2)

	n	Minimum	Maximum	Sum	Mean	Std. Deviation
X1.1	343	2	5	1432	4.17	.576
X1.2	343	2	5	1417	4.13	.549
X1.3	343	3	5	1413	4.12	.562
X1.4	343	3	5	1438	4.19	.555
sum	343	12	20	5700	16.62	1.968
Valid N (listwise)	343					

Source: Processed data, 2019.

The Table 3 obtained information about environmental variables in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju Subdistrict. The ideal score on this variable is $5 \times 4 \times 343 = 6860$, where 5 is the highest answer score, 5 is the number of statement items, and 343 is the number of respondents. The number of percentage scores of variables is $5700/6860 \times 100 \% = 83.09 \%$. Thus, the environmental variables in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju District amounted to 83.09% of the expected (100%).

Student Behavior (Y1)

The instruments used in this study showed that the behavior variables of students are grouped in 5 (five) statements, namely 1) awareness, 2) attraction, 3) weighing, 4) trying, and 5) adopting. In general, a description of the study results on environmental variables can be shown in Table 4 below.

Table 4. Descriptive Analysis student behavior (Y1)

	n	Minimum	Maximum	Sum	Mean	Std. Deviation
X1.1	343	3	5	1441	4.20	.533
X1.2	343	2	5	1431	4.17	.569
X1.3	343	1	5	1417	4.13	.642
X1.4	343	2	5	1429	4.17	.561
X1.5	343	2	5	1413	4.12	.573
sum	343	15	25	7131	20.79	2.324
Valid N (listwise)	343					

Source: Processed data, 2019

Based on Table 4, information can be obtained about the description of student behavior in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju Subdistrict. The ideal score on this variable is 5 x 5 x 343 = 8575, where 5 is the highest answer score, 5 is the number of statement items, and 343 is the number of respondents. The

total score percentage of the variable is 7131 / 8575 x 100 % = 83.16%. Thus, the value of student behavior in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju Subdistrict is 83.16% than expected (100%).

Dental and oral health (Y2)

The instruments used in this study showed that dental and oral health variables are grouped in 5 (five) statements, namely 1) limitation of dental function, 2) physical disabilities, 3) pain of each chew, 4) psychic discomfort, and 5) psychic disabilities. In general, a description of the study results on dental and oral health variables can be shown in Table 5 below.

	n	Minimum	Maximum	Sum	Mean	Std. Deviation
X1.1	343	2	5	1436	4.19	.557
X1.2	343	2	5	1445	4.21	.545
X1.3	343	3	5	1430	4.17	.519
X1.4	343	3	5	1412	4.12	.528
X1.5	343	3	5	1444	4.21	.543
sum	343	15	25	7167	20.90	2.197
Valid N (listwise)	343					

Table 5. Descriptive Analysis Dental and Oral Health (Y2)

Source: Processed data, 2019.

The Table 5 obtained information about health in oral teeth in the working area of Puskesmas Lara, Karossa District, Central Mamuju. The ideal score on this variable is $5 \times 5 \times 343 = 8575$, where 5 is the highest answer score, 5 is the number of statement items, and 343 is the number of respondents. The number of score percentages of variables is $7167 / 8575 \times 100 \% = 83.58\%$. Thus, dental and oral health value in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju, amounted to 83.58% of the expected (100%).

4.4 Path Analysis Structure I

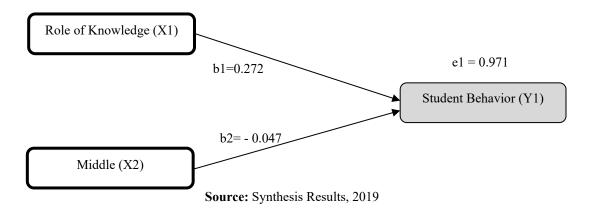


Figure 1. Diagram Structure I

T-Test

The regression coefficient value (b1) obtained that the regression coefficient value (b1) = 0.272 with a significant significance of 0.000 (Sig < 0.05) (Figure 1). Thus, it is stated that the variable role of parental knowledge has a positive and significant effect on student behavior. The magnitude of the influence of knowledge on student behavior can be seen in standardized coefficients beta by 0.272 or 27.2%, which means that any increase in parental knowledge will increase student behavior by 27.2%. Thus, the high low behavior of students was influenced by the role of parental knowledge by 27.2%, while the remaining 72.8% was influenced by other factors outside the model studied.

Regression coefficient value (b2) = -0.047 with significance level of 0.562 which means insignificant. Based on the significance value (Sig.) in the SPSS output, the results show the Sig value. > 0.05, so it is stated that environmental

variables have a negative and insignificant effect on student behavior. The magnitude of negative and un-significant environmental variables on student behavior can be seen in the standardized coefficients beta of -0.047, which means the environment does not improve student behavior. The same thing if you look at the comparison of the calculated t and t table values.

F-TestHere are the regression results for the F test (simultaneous)

Table 6. Simultaneous Test (F Test) (ANOVA)

1 R				Mean Square	1	Sig.
	Regression	104.240	2	52.120	10.169	$.000^{b}$
R	Residual	1742.646	340	5.125		
T	Γotal	1846.886	342			

Table 7. Model Summary

			Adjusted-R	Std. The error of				
Model	R	R-Square	Square	the Estimate	Durbin-Watson			
1	.238ª	.056	.051	2.264	1.848			
a. Predict	a. Predictors:(Constant), Environment(X2), Role of Knowledge(X1)							
b. Depen	b. Dependent Variable: Student Behavior (Y1)							

Source: Processed data, 2019.

The Table 6 and Table 7 obtained the value of the F count of 10,169 with a significant rate of 0.000 less than 0.05 (5%). Thus, simultaneously concluded the role of parental knowledge (X1) and environment (X2) positively and significantly affects students' behavior in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju Subdistrict. The results of path analysis (path analysis) Structure I influence the role of parental knowledge(X1) and the environment (X2) on the behavior of students (Y1) in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju Subdistrict are:

$$Y1 = 15,94 + 0,272X1 + (-0.047) X2 + e1$$

4.5 Path Analysis Structure II

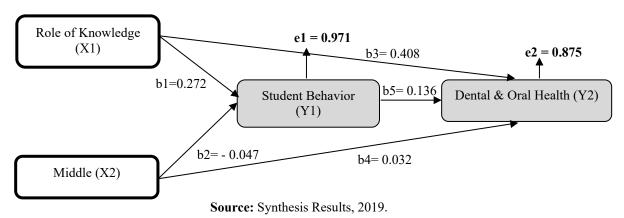


Figure 2. Structure Diagram II

T-Test

Regression coefficient value (b3), it is obtained that the regression coefficient value (b3) = 0.408, which means that any increase in the role of parental knowledge (X1) will improve dental and oral health by 0.408 with a significant significance of 0.000. Thus, it is stated that the role variable of people's knowledge (X1) has a positive and significant effect on dental and oral health variables (Y2). The magnitude of parental knowledge on dental and oral health was seen in standardized beta coefficients of 0.408 or 40.8% (Figure 2).

The coefficient of regression value (b4) = 0.032 means that each increase in the environment (X2) will improve dental and oral health (Y2) by 0.032 with a significant rate of 0.668 which means insignificant. Thus, environmental variables (X2) have no positive and significant effect on dental and oral health. The magnitude of environmental variables (X2) on dental and oral health variables (Y2) can be seen in the standardized coefficients beta value of 0.032.

The regression coefficient value (b5) = 0.136, which means that any improvement in student behavior (Y2) will improve dental and oral health (Y2) by 0.136, with a significance score of 0.006 smaller than 0.05, so it is considered that there is a positive and significant influence. Thus, it is stated that student behavior variables (Y1) have a positive and significant effect on dental and oral health variables (Y2). The magnitude of the influence of student behavior variable (Y1) on dental and oral health variables (Y2) can be seen in standardized coefficients beta, which is 0.136.

Here are the results of test F (simultaneous) (Table 8 and Table 9).

Iodel		Sum of Squares	df	Mean Square	F	Sig.
	Regression	384.153	3	128.051	34.287	.000
	Residual	1266.069	339	3.735		

Table 8. Simultaneous Uji (F Test) Model II (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	384.153	3	128.051	34.287	.000 ^b	
	Residual	1266.069	339	3.735			
	Total	1650.222	342				
a. Dependent Variable: Dental &Oral Health (Y2)							
b. Predi	b. Predictors: (Constant), Student Behavior (Y1), Environment (X2), Role of Knowledge (X1)						

Table 9. Model Summary

			Adjusted R	Std. The error of		
Model	R	R Square	Square	the Estimate	Durbin-Watson	
1	.482a	.233	.226	1.933	1.785	
a. Predictors: (Constant), Student Behavior (Y1), Environment (X2), Role of Knowledge (X1)						
b. Dependent Variable: Dental &Oral Health (Y2)						

The F-test value is 34,287, with a significant rate of 0.000 less than 0.05 (5%). Thus, simultaneously concluded the role of parental knowledge (X1), environment (X2), and student behavior (Y1) positively and significantly affect dental and oral health (Y2) in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju.

Meanwhile, the adjusted R Square (Adj R2) value indicates 0.233 or 23.3%. This means that 23.3% of the up-anddown variations in dental and oral health variables (Y2) can be explained by variable variations in the role of parental knowledge (X1), environment (X2), and student behavior (Y1). At the same time, the rest is explained by other variables outside of this research model.

Path Analysis Model II influences the role of parental knowledge (X1), environment (X2), and student behavior (Y1) on dental and oral health (Y2) in the Working Area of Puskesmas Lara, Karossa District, Central Mamuju are: Y2 = 9.446 + 0.408X1 + 0.032X2 + 0.136Y1 + e2

5. Discussion

The variable influence of parental knowledge on student behavior is positive and significant; as stated by (Notoatmodjo 2007), learning as the domain is most important to shaping individual actions. The important thing related to parents' level of knowledge is the formal knowledge they gain through school; it aligns with the opinion

(Sardiman, 2014) that legal, educational factors influence learning. As it is known that behavior plays a vital role in the surrounding environment and impacts health status, it is stated by (Azwar 2013) that behavior has a significant role in a person's health status, groups, and communities.

The influence of environmental variables on student behavior is negative and insignificant. These findings align with (Sumaryanti 2017) that the environment does not guarantee that one can create good behavior but can have the opposite impact. In addition, the findings of this study are not in line with the results (Fajar Lukman Tria, 2016) that the environment influences the behavior of children, that the success of the goal is not possible without the involvement of family members, schools, and the community environment around the child. In a child's environment, peers become the main factor that changes the way the child acts and behaves. This is by the opinion (Nurmalitasari, 2015) that peers as social, environmental factors that have an essential role in the development and growth of children. The negative and significant influence on children's behavior in this study is more on non-technical forces because it relates to the child's condition narrowly where the environment with the development of the child can have a significant impact on and form the person and behavior of the child according to the surrounding conditions.

The variable influence of parental knowledge on dental and oral health is a significant positive. Knowledge as a domain is essential for shaping individual actions. From the study results, behavior with a knowledge base will be more resistant than the other way around (Notoatmodjo, 2007). Knowledge can positively or negatively impact how the child assesses and interprets the knowledge or understanding given by his parents. According to (Paul Wahana, 2016), learning is sourced first from traditions, customs, and religions that instill heritage values. This source takes the form of standard norms and rules and applies them in daily life.

The effect of environmental variables on dental and oral health is insignificant. The findings of the study are also not in line with the findings (Sebastian et al., 2017) and (A'yun et al., 2016), which get the results that the environment affects dental and oral health, this environmental influence starts from the most miniature environment in the family to the outside environment (community).

The effect of student behavior variables on dental and oral health is positive and significant. Indicators of student behavior in this study indicate that students can have awareness, interest, make considerations, and adopt that behavior. Behavior is the activity of living things. Behavior as human activities has a broad scope, such as talking, laughing, crying, writing, working, reading, walking, and so on (Notoatmodjo, 2007). According to (Estiwidani Dwana, 2008), students who follow the process and education are individuals. The meaning of behavior is sometimes limited to what is seen outside of physical and psychomotor concerns. The findings of this positive and significant influential study are in line with the results (Sebastian et al., 2017) in his research on dental and oral health behaviors in elementary school children in Banjar District and (Wijayanti et al., 2016) in his study on attitudes, behaviors. And knowledge of parents about dental and oral health in Banten Province who said that behavior has a positive and significant impact on dental and oral health.

The influence of variable roles of people's knowledge on dental and oral health through variable intervening of student behavior is positive and significant. These findings are in line with the results (Purbarini Kawuryan, 2015), (Sariningrum & Irdawati, 2009), and (Martin et al., 2018) that knowledge has a positive and significant effect on dental and oral health. Ability becomes the most critical milestone of character or behavior formation, and behavior becomes a milestone of adherence to dental and oral health behaviors. Knowledge creates awareness for the personal self that ultimately forms positive character/behavior. This is in line with the finding (Lely Suratri et al., 2016) that the better knowledge, attitude, and behavior towards the maintenance of dental and oral hygiene, the better the health and behavior.

The influence of environmental variables on dental and oral health through variable intervening of student behavior is significant. This significant influence is more on the role of erratic intervening behavior of students so that positive results are obtained. Different things are found in the direct effect between environmental variables and dental and oral health variables that give little value. Healthy behavior is a factor that affects the health of an individual /person. The cause of people behaving in a fit or not is from their knowledge, example, and resources (such as gaskets, energy, money, time, etc.), and culture (Pay et al., 2017).

6. Conclusions

Based on the research results and discussion in this study regarding the role of knowledge of people, the environment on student behavior, and its impact on dental and oral health in the Lara Health Center Work Area, Karossa District, Central Mamuju. It can be concluded that among the variables that become the indicators of this study, parental knowledge has the highest significance value among other variables. The direct influence, the role of knowledge on dental, oral health, and the power of learning is through intervening variables on student behavior in the Work Area of the Puskesmas Lara, Karossa District, Central Mamuju. Meanwhile, variables with negative and insignificant values are shown in the direct influence of environmental variables on student behavior in the Puskesmas Lara, Karossa District, Central Mamuju. Thus, the role of parental knowledge becomes a trigger in influencing student behavior and health behavior. It is hoped that this research can contribute to the repertoire of science, especially in human resource management, and is also expected to provide benefits for both practitioners and researchers. To be used as a reference in completing the authority. Of the study results with the exact scope of language. It is also hoped that further research can be carried out with the variables that are different.

References

- A'yun, Q., Hendrartini, J., & Supartinah, A. Pengaruh keadaan rongga mulut, perilaku ibu, dan lingkungan terhadap risiko karies pada anak. Majalah Kedokteran Gigi Indonesia. https://doi.org/10.22146/majkedgiind.11267, 2016.
- Azwar, S. Sikap Manusia: Teori dan Pengukurannya. In Sikap Manusia: Teori dan Pengukurannya. https://doi.org/10.1038/cddis.2011.1, 2013.
- Creswell, J. W. Creswell, J.W. In Research design Qualitative quantitative and mixed methods approaches. https://doi.org/10.3109/08941939.2012.723954, 2003.
- Eddy, F. N. E., & Mutiara, H. Peranan Ibu dalam Pemeliharaan Kesehatan Gigi Anak dengan Status Karies Anak Usia Sekolah Dasar. Medical Journal of Lampung University, 2015.
- Estiwidani Dwana. Konsep Kebidanan. Yogyakarta: Fitramaya, 2008.
- Ervina, A., Zulmi, D., Ariesta, R., Aridawarni, Y., Aminah, A., & Umanailo, M. C. B. The Relationship of Patterns Use of Time and Income Family with Juvenile Delinquency in Junior High School Students at Lebak Distric. International Journal of Scientific & Technology Research Volume, 8(10), 2019.
- Fajar Lukman Tria. Perilaku Sosial Anak Usia Dini Di Lingkungan Lokalisasi Guyangan 2016. JPUD Jurnal Pendidikan Usia Dini. https://doi.org/10.21009/jpud.101.07, 2016.
- Febrianto, M. F. M., Setiadarma, W., & Aryanto, H. Penerapan media dalam bentuk pop up book pada pembelajaran unsur-unsur rupa untuk siswa kelas2 SDNU Kanjeng Sepuh Sidayu Gresik. Jurnal Pendidikan Seni Rupa. (2014).
- Hall, P. Statistical Science. In Mathematics Unlimited 2001 and Beyond. https://doi.org/10.1007/978-3-642-56478-9_28, 2001.
- Jannah, M., Widohardhono, R., Fatimah, F., Dewi, D. K., & Umanailo, M. C. B. Managing cognitive anxiety through expressive writing in student-athletes. International Journal of Scientific and Technology Research, 8(10), 2019.
- Kemenkes. Peraturan Menteri Kesehatan Republik Indonesia Nomor 007 Tahun 2012 Tentang Registrasi Obat Tradisional. In kementerian kesehatan republik Indonesia, 2012.
- Lely Suratri, M. A., Sintawati, F., & Andayasari, L. Pengetahuan, Sikapdan Perilaku Orang Tua tentang Kesehatan Gigi dan Mulut pada Anak Usia Taman Kanak-kanak di Provinsi Daerah Istimewa Yogyakarta dan Provinsi Banten Tahun 2014. Media Penelitian Dan Pengembangan Kesehatan. https://doi.org/10.22435/mpk.v26i2.5449.119-126, 2016.
- Lionardo, A., Kurniawan, R., & Umanailo, M. C. B. An effectiveness model of service policy of building permit (IMB) based on a green spatial environment in palembang city. Proceedings of the International Conference on Industrial Engineering and Operations Management, 2588–2596, 2020.
- Martin, E. N., Sirat, N. M., & Poltekkes Denpasar, J. Kesehatan Gigi Dan Mukut. Jurnal Kesehatan Gigi, 2018.
- Nath, T. K., Jashimuddin, M., Chairul, M., Umanailo, B., Bugis, M., Nursyifa, A., Sangadji, M., Kembauw, E., Lionardo, A., & Nasirin, C. The Need of Land for Industry and Housing as a Trigger Development on Modern Society. 5, 701981, 2021.
- Notoatmodjo, S. Promosi Kesehatan & Perilaku. In Jakarta: Rineka Cipta, 2007.
- Notoatmodjo, S. promosi kesehatan dan perilaku kesehatan (edisi revisi 2012). Jakarta: Rineka Cipta, 2012.
- Novitasari, R., Ninsix, R., Usanti, T. P., Adiansha, A. A., Soesantari, T., Said, M. F., Hehamahua, H., Hanapi, H., Indrayani, N., Kubangun, H., Musa, M. N. D., AR, N., Bugis, R. Q., N, R., Tuaputy, U. S., Widyawati, N., Prastyorini, J., Wali, M., P, N. D., ... Umanailo, M. C. B. The Existence of Waranggana in Tayub Ritual. International Journal of Scientific & Technology Research, 8(10), 2019.
- Nurmalitasari, F. Perkembangan Sosial Emosi pada Anak Usia Prasekolah. Buletin Psikologi. https://doi.org/10.22146/bpsi.10567, 2015.

- Paulus Wahana. Filsafat Ilmu Pengetahuan. In Pustaka Diamond. https://doi.org/10.1017/CBO9781107415324.004., 2016.
- Pay, M. N., Widiati, S., & Sriyono, N. W. Identifikasi faktor yang mempengaruhi perilaku anak dalam pemeliharaan kebersihan gigidan mulut:Studi pada Pusat Pengembangan Anak Agape Sikumana Kota Kupang, Nusa Tenggara Timur, Indonesia. Majalah Kedokteran Gigi Indonesia. https://doi.org/10.22146/majkedgiind.9900, 2017.
- Potter, P. A., & Perry, A. G. Buku ajar fundamental keperawatan: konsep, proses, dan praktik. Jakarta: EGC. https://doi.org/IOS3107-49534, 2005.
- Purbarini Kawuryan, S. Membelajarkan Ilmu Pengetahuan Sosial Berbasis Pengetahuan Daur Hidup Manusia Jawa. Jurnal Ilmiah WUNY. https://doi.org/10.21831/jwuny.v16i5.4215, 2015.
- Rumaolat, W., Lihi, M., Hamka, H., & Umanailo, M. C. B. Factors associated with mother in doing diarrhea prevention efforts in Toddler Village Iha work area community health center Amahai. International Journal of Scientific and Technology Research, 8(10), 2019.
- Sardiman, A. Interaksi Dan Motivasi Belajar Mengajar. In Interaksi & Motivasi Belajar Mengajar, 2014.
- Sariningrum, E., & Irdawati, I. Hubungan tingkat pendidikan, sikap dan pengetahuan orang tua tentang kebersihan gigi dan mulut pada anak balita 3 5 tahun dengan tingkat kejadian kareis di paud jatipurno. Berita Ilmu Keperawatan ISSN 1979-2697, 2009.
- Sasmita, H., Keliat, B. A., &Budiharto, B. Peningkatan Kemampuan Kognitif dan Perilaku Pada Klien dengan Harga Diri Rendah Melalui Cognitive Behaviorur Therapy. Jurnal Keperawatan Indonesia, 13(1), 26–31. https://doi.org/10.7454/jki.v13i1.227, 2010.
- Sebastian, W. A., Mayasari, Y., & Ruslan, M. R. R. Pro Dan Kontra Antara Hubungan Menyusui Dan Early Childhood Caries (ECC). Jurnal Ilmiah Dan Teknologi Kedokteran Gigi. https://doi.org/10.32509/jitekgi.v13i1.854, 2017.
- Suharyanto, A., Hartono, B., Irwansyah, I., Tuwu, D., Chairul Basrun Umanailo, M., & Morshed Ahmad, M. Marginalization socio farm laborers due to conversion of agriculture land, 2021.
- Sugiyono, M. P. K. Kualitataif dan R&D, Bandung: Alfabeta, Sugiyono, Metode Penelitian Kuantitatif Kualitatif Dan R&D Bandung: Alfabeta, 2007.
- Sumaryanti, L. Meningkatkan Motivasi Belajar Dengan Model Talking Stik With Music di SD Negeri Janti Slahung Ponorogo. AL-ASASIYYA: Journal of Basic Education. https://doi.org/10.24269/ajbe.v1i2.685, 2017.
- Sumiati. Sistem Reproduksi Manusia. Journal of Chemical Information and Modeling. https://doi.org/10.1017/CBO9781107415324.004, 2013.
- Tampubolon, N. Dampak Karies Gigi & Penyakit Periodontal Terhadap Kualitas Hidup, 2010.
- Umanailo, M. C. B., Apriyanto, M., Lionardo, A., Kurniawan, R., Amanto, B. S., & Rumaolat, W. Community Structure and Social Actions in Action of Land Conversion. Frontiers in Environmental Science, 9, 2021.
- Wijayanti, N. P. A., Damayanthi, L.P.E., Sunarya, I.M.G., & Putrama, I. M. Pengembangan E-Modul Berbasis Project Based Learning Pada Mata Pelajaran Simulasi Digital Untuk Siswa Kelas X Studi Kasus Di SMK Negeri 2 Singaraja. Jurnal Pendidikan Teknologi Dan Kejuruan. https://doi.org/10.23887/jptk.v13i2.8526, 2016.
- Worang, T. Y., Pangemanan, D.H.C., & Wicaksono, D.A. Hubungan Tingkat Pengetahuan Orang Tua Dengan Kebersihan Gigi dan Mulut Anak di TK Tunas Bhakti Manado. E-GIGI. https://doi.org/10.35790/eg.2.2.2014.5777, 2014.
- Yusuf, S., Umanailo, M. C. B., Putri, R. N., Qhuril, D., Ely, M., & Darma, D. Village Institution Relations in the Utilization of Village Funds in Namlea District. International Journal of Scientific & Technology Research, 8(8), 1837–1842, 2019.

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