# **Environmental Care Behavior from Knowledge and Social Environment Factors in Pasaman Barat District**

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### **Abstract**

This study aims to see how the influence of environmental knowledge and social environment (family environment, environment, and school environment) community environmental care behavior. This study uses a survey method conducted in six Madrasah Aliyah Negeri Pasaman Barat Regency. The sampling technique used was random sampling, so 179 respondents of class XI IS were obtained. The measuring instrument used is a questionnaire. The data analysis technique used linear regression analysis. The results showed that there was an influence of environmental knowledge and social environment on environmental care behavior, as seen in Fhit (50,909) > Ftab (3.05) of 36.6%. In fact, the most influential factor on environmental care behavior is the influence of social environmental factors on school environment indicators, followed by family environment, and community environment. Meanwhile, environmental knowledge has the least effect. Therefore, the factors that have been identified as influencing environmental care behavior should be considered in planning the development of education for indigenous peoples to achieve environmental sustainability.

### Keywords

environmental knowledge; social environment; caring behavior



### I. Introduction

Environmental problems that are increasingly occurring at this time include global warming, water pollution, waste problems that still threaten the sustainability of human life. Environmental problems are caused not only by natural factors but also by human activities. Humans have a reciprocal relationship and are very dependent on their environment, if humans can maintain and care for the environment properly, the environment will provide comfort in human life. (Nadiroh, 2018; Noverita, 2019). At this time what is happening is on the contrary, many people are less concerned about the environment, so that the environment becomes polluted, and it is not uncommon for disasters to occur. (Nurfajriani, Azrai, & Sigit, 2018; Surtikanti, 2009; Maryani, 2015). Human Resources (HR) is the most important component in a company or organization to run the business it does. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah et al, 2020). The development of human resources is a process of changing the human resources who belong to an organization, from one situation to another, which is better to prepare a future responsibility in achieving organizational goals (Werdhiastutie et al, 2020).

Environmental problems also occur in West Pasaman Regency, where according to a Figernews report (2020) recently there has been pollution from factory waste, filtering that passes and waste directly polluting the river so that it has an impact on public health. In addition to waste pollution, Aziz (2019) also explained that the waste in several areas of West

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Pasaman Regency was not managed properly. If these problems are left unchecked, they will cause bigger problems such as natural disasters(Simarmata & Daulae, 2018; Azmi & Elfyenti, 2017). In solving these environmental problems, it is the responsibility of all parties, including every member of the community.

Students are part of that community, they should also be involved in handling problems that are around them, through actions that reduce damage to the environment, so that later they are able to provide solutions to problems that occur around them. Environmental care behavior is behavior that cares for the environment is a behavior that is slightly detrimental to the environment and provides many benefits to the environment(Kollmuss & Agyemen, 2002). Among students, environmental care behavior is still not visible. Based on the results of previous research, environmental care behavior in students is still relatively low(Princess, 2018). Many factors influence the environmental care behavior of students, including the low knowledge and awareness of students about the importance of protecting the environment(He, Hong, Liu, & Tiefenbacher, 2011).

Environmental care behavior is very important to be developed in order to solve environmental problems and prepare a generation that can master the knowledge, skills, attitudes and values that can minimize the negative impacts that will occur in the future. (Midden, Kaiser, & McCalley, 2007). Education is one way to develop knowledge and awareness of students to care about the environment. Knowledge is the main foundation in understanding individual behavior (He, Hong, Liu, & Tiefenbacher, 2011). Environmental knowledge is knowledge possessed by each individual regarding a series of ecological knowledge related to the environment around them (Chen, 2010). In this study, the environmental knowledge that will be examined are: 1) Knowledge about the causes of environmental problems; 2) Knowledge of the impact of environmental problems; 3) Knowledge of solutions to environmental problems; 3) Knowledge of predictions about future environmental problems; 4) Knowledge of environmental problems in daily life; 5) Understanding of human and environmental dependence

Environmental knowledge can be obtained through education, both formal and non-formal education(Erdogan, Kostova, & Marcinkowki, 2009). Learning geography is one of the lessons that is very closely related to environmental knowledge. Where in geography studies study of natural phenomena and their relation to humans on the earth's surface. Geography learning aims to master knowledge, foster attitudes, awareness and concern for the environment and resources. It should be through the education that students get, both in the school environment and the surrounding environment, students have a concern for the environment. This knowledge will eventually shape attitudes and turn them into environmentally friendly behavior(Hines, Hungerford, & Tomera, 1987)However, at this time the knowledge gained has not been realized in the form of action by the students themselves.

Based on the researchers' initial observations, the students' environmental care behavior was still low, as evidenced by the fact that most of the students did not throw garbage in its place, did not take care of the plants, just let the garbage scattered, store food waste in the desk drawer, let the dirty class result in a dirty and unsanitary environment. healthy. In addition, most students still use private vehicles such as motorbikes to go to school. This will increase environmental pollution such as global warming. Some of the schools that were sampled in this study also did not provide facilities that support students' environmental care behavior.

This means that the application of environmental education in schools has not been able to strengthen the readiness to behave in caring for the environment. This is influenced by several factors such as: unavailability of facilities and infrastructure in the school environment, lack of awareness from within the students themselves, and the influence of the environment on students both at home and in the community. Kollmuss and Agyemen (2020) explain that in looking at one's environmental care behavior, one cannot go through only one aspect. The formation of environmental care behavior is a complex matter, there are internal influences and external influences. Internal factors include knowledge, attitudes, responsibilities, locus of control, etc., while external factors are environmental influences, both social and physical, economic level, (Kollmuss & Agyemen, 2002; Norshariani, 2016; Zsoka, Szerenyi, Szechy, & Kocsis, 2013).

Education about the importance of protecting the environment is not only obtained through formal education, environmental education must be carried out early and continuously. The social environment is a place for students to get environmental education. In the social environment, students interact with family, community, even friends, teachers in their school environment. The social environment issocial interaction between people, either directly or through observationally, namely observing what other people are doing or wearing (Peter & alson, 2016). A good environment will affect a person's mindset and attitude, and vice versa if the environment is bad then a person's mindset and behavior will also be bad. (Posumah, 2021).

The theory of social influence shows that social norms are passed down by family and peers in the social circle of students. Individual behavior is not only driven by our own preferences and identities (Whitmarsh & O'Neill, 2010), but through the observed behavior of others or through the existence of norms (Farrow et al. 2017). Therefore, the condition of the social environment of students here has a very important role in shaping environmental care behavior. In this study, the social environment variables that will be seen are the family environment, school environment, and community environment(Dewantara, 2010; Kollmuss & Agyemen, 2002). Several previous studies have argued that the social environment, be it the family, community, or school environment has an important role and is responsible for implementing caring and loving behaviors for the environment in everyday life which will eventually shape these students into individuals who care about the environment. surrounding environment(Tamara, 2016; Muslim, Almegi, Alfiah, Akmal, & Amelia, 2021; Mustika & Sahudra, 2018; Septiyani & Suniasih, 2020)

The family is the first educational environment for a person, therefore habits and parenting patterns, interactions, habits of parents greatly influence the formation of student behavior. Berk in (Ramadhani, Fernanda, Sari, & Hariani, 2018). If in the family environment, students are accustomed to behavior that cares for the environment, it will become a habit and provide a sense of independence to take action if the child is thrown into a wider social environment. The second is the community environment, the community environment is an environment where individuals interact socially with individuals other than their families (Indiriani, 2019). The community environment includes neighbors and playmates. The community environment that is used as a reference in socializing is by looking at the local culture that will affect a person's development.

In society, a child tends to imitate the behavior of the people in it. The community environment can be said to be very influential on the development of a person's behavior, if someone is in a good environment then accustomed to taking environmental care actions, it will directly encourage someone to take the same action.(Dasopang & Montessori, 2018). The school environment also contributes to the formation of environmental care behavior, especially for students, where students communicate with their school environment everyday. Rasmilah (2016) says that the attitude of responsibility is the value of a person's

characteristics while the attitude of caring is one of the cultures that must be instilled in students. The school environment is a very important environment in shaping the mindset and character of children(Subianto, 2013).

Based on the background and theory above, this research wants to see environmental care behavior, here the researcher wants to see how the influence of knowledge and social environment factors on environmental care behavior of students in Madrasah Aliyah Negeri Pasaman Barat.

### II. Research Method

This research uses quantitative researchwithsurvey method. Survey research seeks to provide a quantitative description or numerical description of the tendencies, attitudes, or opinions of a particular population by examining a sample of that population (Creswell, 2016). The sample in this study were students of class XI Social Sciences. The sample was drawn using simple random sampling so that 179 students were obtained at Madrasah Aliyah Negeri Kab. Pasaman Barat as respondents. The data collection technique used test questions for environmental knowledge and questionnaires for social environment and environmental care behavior. Furthermore, the data analysis technique used multiple linear regression analysis with the help of the SPSS v.25 application. This research was conducted in six Madrasah Aliyah Negeri Pasaman Barat Regency.

### III. Result and Discussion

# 3.1 The Effect of Environmental Knowledge and Social Environment on Environmental Care Behavior

To analyze the effect of environmental knowledge and social environment on environmental care behavior using multiple regression analysis using SPSS v.25. The results of the effect can be seen in the ANOVA table, by comparing the values of Fcount and Ftable (Kuncoro, 2009), with a significance level ( $\alpha = 0.05$ ).

ANOVAa								
Model		Sum of	df	Mean	F	Sig.		
		Squares		Square				
1	Regression	4700,807	2	2350,404	50,90	.000		
	_				9	b		
	Residual	8125,740	176	46,169				
	Total	12826.547	178					
a. Dependent Variable: Environmental Care Behavior								
b. Predictors: (Constant), Social Environment, Environmental Knowledge								

Table 1. ANOVA Test Results

Based on table .1 above, the value of Fcount (50.909) > Ftable (3.05), it means that H0 is rejected and Hi is accepted. Furthermore, when viewed from the significance value (Sig.), namely, the value of sig. (0.000 < 0.05), so it can be concluded that the model used is appropriate and variables X1 and X2 have a significant effect on variable Y. That is, knowledge of the environment and social environment have a significant influence simultaneously on environmental care behavior. It can be concluded that the higher the environmental knowledge and the better the role of the social environment, the students' environmental care behavior will also be higher. Furthermore, to see how much influence the

environmental knowledge and social environment variables have on the environmental care behavior variable, the Rsquare (R2) value can be seen in table 1.

**Table 1.** Coefficient of Determination

Model Summaryb							
Mode	R	R	Adjusted R	Std. Error of the			
1		Square	Square	Estimate			
1	.605a	.366	.359	6.79478			
a. Predictors: (Constant), Social Environment, Environmental Knowledge							
b. Dependent Variable: Environmental Care Behavior							

Based on table 2 above, it can be seen that the Rhit value is 0.605, it can be interpreted that the influence between environmental knowledge and social environment on environmental care behavior is positive with a close relationship level of 0.605. Based on the classification of riduwan and kuncoro (2014) the close relationship between X1 and X2 to Y is in a strong category. The results also state, if knowledge of the environment and social environment is 0.605, then environmental care behavior will also increase by the same point as the increase in the value of environmental and social knowledge. If you look at the guidelines in the interpretation table of the correlation coefficient according to Riduwan and Kuncoro (2014), then the strength of the correlation between the two variables above is a strong category.

Furthermore, to see how much influence environmental knowledge and social environment have on environmental care behavior, it can be seen on the Rsquare (R2) value, namely, 0.366. This means that the variables of environmental knowledge and social environment can affect the environmental care behavior variables together by 36.6%. To see the effect of each variable can be seen in the results of the t-test coefficients below:

Table 2. Correlation coefficient

Coefficientsa									
Model	Unsta	ndardiz	Standardi	t	Si	Collinearity			
	ed Coefficients		zed Coefficie		g.	Statistics			
			nts						
	В	Std.	Beta			Toleran	VIF		
		Error				ce			

Based on table 3 the value of tcount in table 4.17 is, tcount (7.494) > ttable (1.97). Next is the value of Sig. in table 4.20, which is 0.000 < 0.05. That is, H0 is rejected and H1 is accepted, it can be concluded that knowledge and social environment (X) have a significant influence on environmental care behavior (Y). From table 1.3 also obtained the following linear regression equation Y = 6.961 + 1.221 + 0.739X. This means that all independent variables have a significant and positive effect on the dependent variable. The magnitude of the influence of each variable can be seen from the value of on the environmental knowledge variable, the value of (0.265), it can be concluded that environmental knowledge affects students' environmental care behavior by 7%. As for the social environment variable value (0.550), then, it can be concluded that the social environment affects the environmental care behavior of students by 30%. From the two variables above, it can be concluded that a good social environment will more influence the environmental care behavior of students.

### 3.1 Discussion

## a. The influence of environmental knowledge on environmental care behavior

Based on the results of linear regression analysis in examining the effect of environmental knowledge variables on environmental care behavior variables of students at the West Pasaman State Madrasah Aliyah. It can be concluded that there is a positive and significant influence between the variables of environmental knowledge on the environmental care behavior of the students of Madrasah Aliyah Negeri Pasaman Barat. Environmental knowledge can affect students' environmental care behavior by 7%, with a correlation coefficient (R) of 0.254. This means that if the environmental knowledge of the students of Madrasah Aliyah Negeri Pasaman Barat increases, the environmental care behavior of students also increases.

The above results also prove the theoretical opinion described in the theoretical framework section, where environmental knowledge can encourage someone to behave in a caring manner towards the environment(Hines, Hungerford, & Tomera, 1987; Kollmuss & Agyemen, 2002; He, Hong, Liu, & Tiefenbacher, 2011; Zsoka, Szerenyi, Szechy, & Kocsis, 2013; Azucena, Molina, & Ana, 2012). The results are the same as several previous studies conducted on students in secondary schools in several other countries which concluded that someone who has knowledge about the importance of protecting the environment will be accompanied by actions that do not damage the environment. Environmental knowledge is a term used to denote knowledge and awareness about environmental problems and solutions(Zsoka, Szerenyi, Szechy, & Kocsis, 2013).

Judging from the results, the magnitude of the influence of environmental knowledge is relatively small. This means that here the initial knowledge is expected to change the behavior of individuals, including their concern for the environment, but in reality there are things that are not in accordance with the actions they take. In other words, someone who has high knowledge does not necessarily have behavior that cares about the environment. Several other studies also argue that not always someone who has good knowledge will form positive behavior. This is influenced by several other factors, such as internal factors (attitude, personal responsibility, and trust), while the environmental factors are social influences, information resources, and environmental management facilities.(Norshariani, 2016; Kaiser & Fuhrer, 2003; Kollmuss & Agyemen, 2002; Kalantari, Fami, Asadi, & Mohammadi, 2007).

Knowledge only helps overcome psychological barriers, such as ignorance but has not revealed that this knowledge affects a person's ecological behavior. Someone who has

good environmental knowledge and is accompanied by a will and they feel it is a good thing to do, then it is accompanied by behavior. Therefore, knowledge requires other factors in realizing the results of knowledge into behavior. Some opinions about knowledge do not directly affect behavior but as a mediation of morals, feelings of guilt, and intentions to take actions that care about protection. (Sousa, Correia, & Clara, 2020). Even so, the knowledge factor cannot be ignored, this shows that environmental knowledge requires the support of positive internal factors, such as attitudes, sense of responsibility, willingness to act, and encouragement from external factors such as influence in the social environment.

### b. The Influence of Social Environment on Environmental Care Behavior.

Based on the results of regression analysis Based on the results of linear regression analysis in examining the influence of social environmental variables on environmental care behavior variables of students at the West Pasaman State Madrasah Aliyah. It can be concluded that there is a positive and significant influence between the social environment variables on the environmental care behavior of the students of Madrasah Aliyah Negeri Pasaman Barat. Environmental knowledge can affect students' environmental care behavior by 30.5%, with a correlation coefficient (R) of 0.553. This means that if the social environment (family environment, community environment, and school environment) of students increases, the environmental care behavior of students also increases.

Based on the results of the study, it can be concluded that the social environment has a significant effect on the environmental care behavior of students, the hypothesis can be(Hines, Hungerford, & Tomera, 1987; Kollmuss & Agyemen, 2002; Brooks, 2010), which states that environmental factors such as family, school, community environment affect behavior towards the environment. This idea supports the findings of research by Schuett (2011), which found that social networks such as family and friends have a greater influence on one's environmental behavior compared to mass media. If someone is in a good social environment and gives a good role in shaping environmental care, then it will be formed in a new behavior from a person and most people will imitate how the actions of the people around him, if someone sees other people accustomed to throwing garbage In place, a new feeling or desire will arise to participate in the activity. The social environment, be it the family environment, (Tamara, 2016; Muslim, Almegi, Alfiah, Akmal, & Amelia, 2021; Mustika & Sahudra, 2018; Septiyani & Suniasih, 2020).

The theory of social influence shows that social norms are passed down by family and peers in the social circle of students. Individual behavior is not only driven by our own preferences and identities (Whitmarsh & O'Neill, 2010), but also through the observed behavior of others or through their social environment. This means that in shaping environmental care behavior involves many factors, it cannot only focus on one factor. Someone who has high knowledge about the environment is not influential enough in shaping their behavior, therefore there must be support from the surrounding environment. Collective action theory (Triandis, 1988) argues that in promoting environmental care behavior to be better seen from group values, and people will tend to act in the interests of the group. Based on this theory, it implies that the values that exist in the social environment that are carried out together will encourage individuals to consider their actions more.

### IV. Conclusion

Based on the results of data analysis, it can be concluded that there is a significant influence between environmental knowledge and social environment on the environmental care behavior of students at Madrasah Aliyah Negeri Pasaman Barat. This means that the higher the environmental knowledge and the better the social environment, the higher the environmental care behavior of the students of Madrasah Aliyah Negeri Pasaman Barat. The factor that most influences the environmental care behavior of the students of Madrasah Aliyah Negeri Pasaman Barat, is the social environment factor (family environment, community environment, and school environment), with an effect of 30.5%. While the environmental knowledge factor affects the environmental care behavior of students by 6.5%, and the rest is influenced by other factors outside the environmental knowledge factor and social environment.

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