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Knowledge of the Problem and Intention to Act on Student Environmentally Responsible Behavior

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Abstract

The issue of national environmental damage itself is a lively issue discussed starting from damage caused by water, water, soil pollution, climate change or global warming, depletion of natural resources, extinction of biodiversity, deforestation, oceans acidification, abrasion, and so on. One of the factors causing damage to the environment is human action which exploits nature excessively and lacks concern for the environment. The purpose of this study was to see the effect of knowledge about environmental issues and the intentions to act on students ' environmental responsibility behavior. Research researchers used a causal survey method by using a type of quantitative research with path analysis techniques (path analysis). Based on the research results, there is a direct effect of knowledge of issue on the intentions to act with a score of 0.587. Second, there is a direct effect of intention to act on environmentally responsible behavior with a score of 0.735. Third, there is a direct effect of knowledge of issue on the attitude of environmental responsibility with a score of 0.603. Finally, there is an indirect effect of knowledge of issue on environmentally responsible behavior through intention to act with a score of 0.431.

Keywords: Intent to act, knowledge of issue, Responsibility Environmental Behavior

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INTRODUCTION

One of the factors causing damage to the environment is human action which exploits nature excessively and lacks concern for the environment (Gifford & Nillson, 2014; Awan, 2013). Environmental problems are also caused by the inability to develop a human lifestyle that is unable to make life in harmony with the environment and the social value system (Daryanto & Suprihatin, 2013). The impact of damage to the environment itself can result in disruption of the ecological balance and can cause natural disasters, so that in this case awareness is needed for humans themselves to be able to protect the environment (Hardiningtyas, 2016).

The problems faced by the environment are the problems of all citizens, both government, society, teachers, and especially students to create awareness and a responsible attitude towards the environment. Then the educational path may be the right place to build the nation's next generation for students to apply the principles of sustainability and environmental ethics (Daryanto & Suprihatin, 2013). According to the behavior model of Hines (1987) (figure 1) the attitude of responsibility towards the environment arises due to several factors, one of which is knowledge of environmental problems (knowledge of issue) and the intention to act (intention to act).

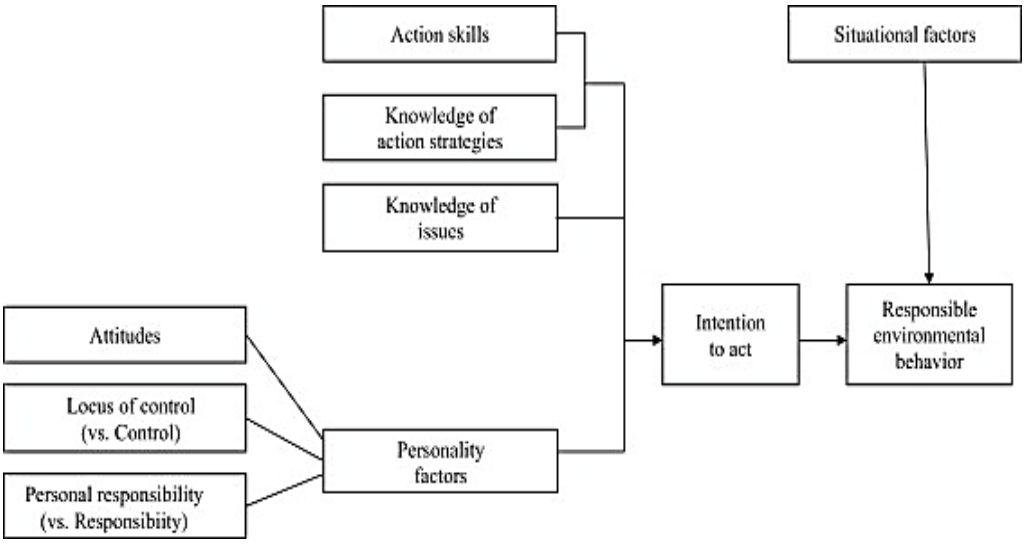

Figure 1. Responsible environmental behavior attitude model (responsible environmental behavior) (Hines, Hungerford, & Tomera, 1987).

Knowledge of environmental problems (knowledge of issues) is one's knowledge of environmental problems or current environmental issues (Kollmuss & Agyeman, 2002). In fact, students' knowledge of environmental problems is still low (Gambro & Switzky, 1996; Ivy, Road, Lee, & Chuan, 1998). A person's lack of understanding regarding environmental problems can reduce a person's sensitivity to environmental responsibility (Varoglu, Temel, & Yilmaz, 2018). A person with high sensitivity to environmental issues will foster an attitude of concern and responsibility for the environment (Matakupan, Putrawan, & Neolaka, 2019).

The intention to act is a measurable variable in which a person consciously performs actions or behaviors according to his own will (Zheng, Xu, Kong, Deng, & Lin, 2018). Someone who has the intention to act will be very likely to be involved in taking steps or attitudes (Zheng et al., 2018). Therefore, someone who has knowledge of environmental problems or environmental issues will be very likely to take an action or attitude to be responsible for their environment (Pratiwi, Rusdi, & Komala, 2019) through responsible behavior and the indirect effect of knowledge about problems on environmentally responsible behavior through intention to act.

METHODS

In the research, the researchers used a causal survey method using quantitative research types with path analysis techniques (path analysis). This research looks at the direct effect and indirect effect. The direct effect on this research is the direct effect of knowledge about environmental problems (X1) on the desire to act (X2), the direct effect of knowledge about environmental problems (X1) on environmental responsibility behavior (X3) and the direct effect of the desire to act (X2) on environmental responsibility behavior (X3). The indirect effect on this research is the indirect effect of knowledge about the problem (X1) on environmentally responsible behavior (X3) through the desire to act (X2) (figure 2).

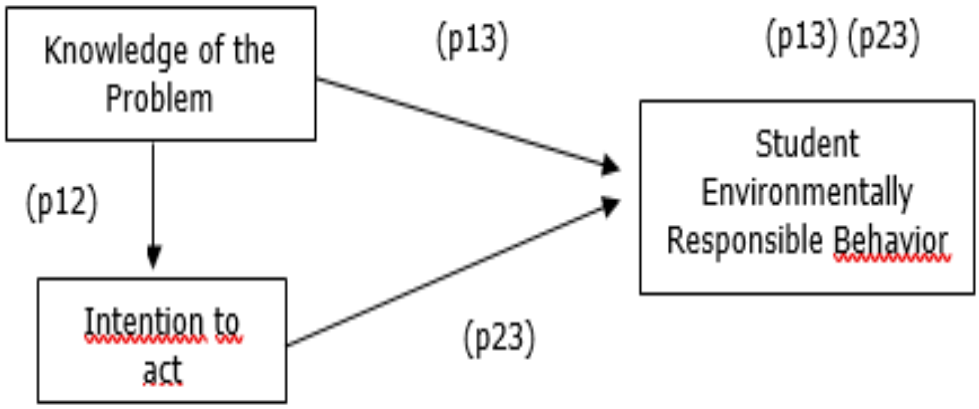

Figure 2. Research hypothetical model

The population in this study were all students of the Al-Ishlah Pharmacy Academy Cilegon in Cilegon City, Banten Province. The total population in the study was 73 people and after using the Slovin formula with a significance of 0.05, the sample obtained was 62 people. The sampling technique in this study uses simple random sampling (table 1).

Table 1. Research Sample

No.	Grade	Sample
1	I	21
2	III	17
3	V	24
Amount		62

This study uses a knowledge aspect instrument to measure knowledge of environmental issues and an opinionated instrument to measure the desire to act and a responsible attitude towards the environment. For the knowledge aspect instrument using moderate multiple-choice questions totaling 47 items with correct answers getting a score of 1 and wrong answers getting a score of 0, the instrument of the desire to act in the form of an opinionator totaling 51 items, and the instrument of environmental responsibility in the form of an opinionator of 43 items. The opinion instrument uses a combination of positive and negative statements (table 2).

Table 2. Scores of positive and negative statements

No.	Answer	Statement	
		Positive	Negative
1	Strongly agree	5	1
2	Agree	4	2
3	Enough	3	3
4	Don't agree	2	4
5	Strongly Disagree	1	5

RESULTS & DISCUSSION

Results

In this study the researchers wanted to see the direct effect of knowledge about the problem on the desire to act, the direct effect of problem knowledge on environmentally responsible behavior, the direct effect of the desire to act on environmentally responsible behavior, and the indirect effect of problem knowledge on environmentally responsible behavior through desire to act. Based on this, the research results are obtained in table 3 and figure 3.

Table 3. Path research results analysis

No	Path	Direct effects	Indirect effects	R 2	t Count	Table α = 0.05
1	Knowledge of the Problem Against the Will to Act (p12)	0.587**	-	0.614	10.318	1,999
2	Knowledge of Problems with Environmentally Responsible Behavior (p13)	0.603**	-	0.371	15,002	1,999
3	Willingness to Act on Environmentally Responsible Behavior (p23)	0.735**	-	0.590	16,521	1,999
4	Knowledge of Problems with Environmentally Responsible Behavior through Desire to Act (p12) (p23)	-	0.431**	-	8,524	1,999

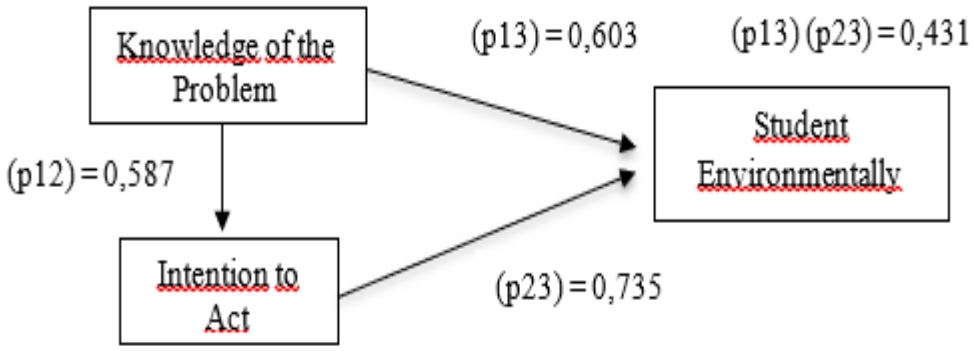

Figure 3. Path Research result path analysis

Discussion

Based on table 3, the path coefficient results of the direct effect of knowledge about the problem on the desire to act (p12) is 0.587 with a t_{count} of 10.318 with a t_{table} value of 1.999. Because the value of t_{count} is greater than t_{table}, there is a direct effect of knowledge about the problem on the desire to act. This finding is similar to the results of Fibula's research (2020) which states that one who has high knowledge about environmental problems and issues affects the desire to act (Purnama, Putrawan, & Sigit, 2020).

One who has knowledge about the problem tends to have the desire to act to carry out the behavior or attitude consciously, this is a prerequisite for one' acts must be based on prior knowledge of what attitude and behavior that person will do. This is also consistent to the research results of Liu's research (2020) which stated that the knowledge or cognitive component is significant for programs that will be carried out by someone (Liu, Teng, & Han, 2020).

Furthermore, the direct effect of problem knowledge on environmental responsibility behavior (p13) obtained a path coefficient score of 0.603 with a t-count value of 15.002 and a t-table value of 1.999, because the t-count value is greater than t-table, there is a direct effect of problem knowledge on responsible behavior environmental responsibility. This is consistent with the results of Ariksrikiana's research (2018) which states that knowledge of environmental issues has a positive effect on environmentally responsible behavior (Ariksrikiana, Nuryadin, & Sunaryo, 2018).

Awareness about environmentally responsible behavior will grow along with increasing knowledge about environmental problems, this is the basis that knowledge is needed for a person to become aware, sensitive, and concerned about his environment so that it will automatically have implications for environmentally responsible behavior (Schutte & Bhullar, 2017). This is in line with the results of Habibie's research (2020) which states that knowledge of problems has a positive effect on environmentally responsible behavior (Habibie, 2020).

The direct effect of the desire to act on environmentally responsible behavior (p23) is 0.735 with a t-count value of 16.521 and a t-table value of 1.999, because the t-count value is greater than t-table, there is a desire to act on responsible behavior environment. This is in accordance with the results of research by Islamiati (2021) and Mahardika (2021) which state that the desire to act has a positive effect on environmentally responsible behavior (Islamiati, Putrawan, & Vivanti, 2021; Mahardika, Putrawan, & Sigit, 2021).

The desire to act becomes a component of environmentally responsible behavior. This is based on the desire to act (intention to act) personality and knowledge of environmental issues. In accordance with the results of Mahardika's research (2021) which states that the driving factor for environmentally responsible behavior is personality, this action is a positive action with the support of 5 personality factors (big five personality) (Mahardika, Putrawan, & Sigit, 2021). This is in accordance with the Hines model (1987) which states that the desire to act effects the behavior of environmental responsibility (Hines et al., 1987).

Finally, the path coefficient value of the indirect effect of knowledge about the problem on environmental responsibility behavior through the desire to act (p13)(p23) is 0.431 with a t-count value of 8.524 and a t-table value of 1.999, because the t-count value is more than t-table, so there is the indirect effect of knowledge about the problem on environmentally responsible behavior through the desire to act. This is in accordance with the results of Fatria's research (2019) which states that knowledge of environmental issues will affect a person to act in environmentally responsible behavior (Fatria, Putrawan, & Artanti, 2019).

The results of other studies indicate that there is a direct indirect effect of knowledge about the problem on environmental responsibility behavior through the desire to act (Iman, Miarsyah, & Sigit, 2019). The level of knowledge about environmental issues will affect one's environmental responsibility behavior, then this responsible behavior is manifested through concrete actions through the desire to act. It is understood that the desire to act is a real manifestation of one's level of knowledge and the formation of environmentally responsible behavior is effectd by 3 components, namely knowledge, feelings, and the desire to act (Malvestio, Fischer, & Montaño, 2018; Pimentel et al., 2004).

CONCLUSION

Based on the results of the research above, there is a direct effect of knowledge about the problem on the desire to act with a score of 0.587. Second, there is a direct effect of the desire to act on environmentally responsible behavior with a score of 0.735. Third, there is a direct effect of knowledge about the problem on the attitude of environmental responsibility with a score of 0.603. Finally, there is an indirect effect of knowledge about the problem on environmentally responsible behavior through the desire to act with a score of 0.431.

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