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The role of environmental ethics in improving the ecological behavior of urban youth in Jakarta

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Abstract. This research wants to see to what extent the role of environmental ethics plays in improving the ecological behavior of urban youth in Jakarta is an important part of efforts to create an ecologically comfortable city life. Environmental ethics teaches ethical principles that must be considered in managing and maintaining the environment. Meanwhile, ecological behavior displays practical attitudes and actions that can be taken to maintain the surrounding environment. Paying attention to the principles of environmental ethics is expected to have a positive impact on the ecological behavior of youth in the city of Jakarta. A questionnaire was used with measuring instruments, the Environmental Ethics Scale and General Ecological Behavior (GEB), which were distributed to 37 teenagers from a middle school and early level students aged between 15-20 years in Jakarta. This research states that there is a positive relationship between environmental ethics and the ecological behavior of urban adolescents. The more teenagers understand environmental ethics, the more they can improve their ecological behavior in everyday life. If urban youth have good ecological behavior, then this will help reduce the impact of the risk of environmental pollution, which will support urban planning that will become more comfortable in the future.

1. Introduction

Environmental pollution has become a serious problem in all major cities in the world, including Jakarta. According to the records of the Swiss air quality index recording company, IQAIR, this city has been named the most polluted city in the world for several days. [1] Apart from air pollution, there is also water pollution and flooding due to improperly organized waste management. According to records from the Forum for the Environment (Walhi), in 2015, the waste produced in Jakarta reached 7,506 tons per day, increasing to 8,399 tons per day in 2023. This situation certainly has an adverse impact on the health of residents and also the comfort of living in urban areas. Various efforts have been made by the sanitation department and the city planning and planning department to overcome this environmental problem, but if they are not supported by the ecological behavior of the residents who live there, all these efforts will not bring satisfactory results. All environmental problems in Jakarta cannot be separated from human behavior itself, including youth. Therefore, it is necessary to change ecological behavior based on awareness of environmental ethics to help reduce or overcome the risk of environmental pollution in order to create a comfortable, sustainable city. The ecological behavior of teenagers is vital to maintaining environmental sustainability. A clean and well-maintained environment is an



important element in every city planning program because thanks to good city planning, people's standard of living can increase where people can enjoy various complete facilities such as cleaning facilities and open green spaces. All of these urban planning facilities must be supported by the ecological behavior of youth as an important part of society determining the nation's future. According to Florian G. Kaiser et al. [2], ecological behavior is an individual's attitude to protect the environment and reduce negative impacts that can damage the environment based on a sense of responsibility, knowledge, and ecological values that are willing to be fought for. These three elements of responsibility, knowledge, and environmental values form ecological behavioral intentions, which then give birth to ecological behavior. Meanwhile, environmental ethics is a critical reflection on norms and values as well as moral principles known in society to be applied in biotic communities and ecological communities.[3] So, environmental ethics contains critical reflection regarding what humans must do when facing moral choices related to environmental issues, including moral choices in meeting their life needs. Environmental ethics discusses moral norms and rules that regulate human behavior in dealing with nature, as well as moral principles that underlie human behavior in dealing with nature.[4]

There are three commonly known environmental ethical theories, namely anthropocentrism, biocentrism, and ecocentrism. Anthropocentrism is an environmental ethical theory that views humans as the center of the universe system. Meanwhile, biocentrism considers that not only humans but every life and living creature has value and is valuable in itself. Meanwhile, ecocentrism assesses that all ecological communities, both living and non-living creatures, are related to each other and moral responsibility applies to all these elements.[5] Attfield criticizes anthropocentric ethical theories which view only humans as important in nature and other creatures as subordinate to them. For Attfield, this theory cannot be maintained because empirically there is interdependence between humans and other creatures. Biocentric theory is better than anthropocentric because it does not highlight human egoism toward other creatures, and this theory recognizes the moral position of all living creatures.[6]

Starting from biocentric and ecocentric ethical theories, several environmental ethical principles can be formulated which can become a guide and guidance for human behavior in dealing with nature. *First*, an attitude of respect for nature: humans have a moral obligation to respect the universe and all its contents because nature has value in itself. *Second*, the principle of responsibility requires humans to take the initiative and take real action to protect the universe. *Third*, the principle of cosmic solidarity encourages humans to save the environment because nature has the same values as humans. *Fourth*, the principle of caring for nature: a one-way moral principle without expecting anything in return, without personal interests. *Fifth*, the principle of no harm is to care about nature and at least not take actions that threaten the existence of other living creatures. *Sixth* is the principle of living simply and in harmony with nature: Humans make sufficient use of nature, but there is a limit to just living properly as a human. *Seventh* is the principle of justice: equal access for all members of society in determining policies for managing natural resources and preserving nature. *Eighth*, the principle of democracy is related to determining policies in the environmental sector that determine whether the environment is good or bad. *Ninth*, the principle of moral integrity: avoiding abuse of power for one's own and group interests at the expense of the interests of the people and the environment.[7]

Through these basic principles of environmental ethics, it becomes clear that ecological behavior can be more focused. In various studies, several researchers have found a link between environmental ethics and ecological behavior, for example D. Safitri et al.[8] who see that environmental ethics can be a model for pro-environmental behavior who studied 349 students at Jakarta State University. There is a positive relationship between pro-environmental behavior and environmental ethics. The issue of environmental ethics is also an important concern, not only in relation to ecological behavior, but also in relation

to urban planning and design that pays attention to the environment.[9] According to Heymans, urban planning and design need to pay attention to ecological factors so that harmonious relationships are created and the risk of environmental destruction is avoided.[10]

Research on ecological behavior, especially among teenagers, has been carried out by Widjanarko & Marlina [11] in the context of environmental conservation in the Muria mountains. The research findings are that teenagers can show their responsibility in preserving the environment around Mount Muria, and they also have adequate knowledge about the animals around the mountains, and they also have the awareness to preserve the environment in the Muria Mountains. Likewise, a study has been conducted on the ecological behavior of teenagers in a secondary school in Jakarta.[12]

However, research on the role of environmental ethics in improving ecological behavior among teenagers in Jakarta is more specific because it involves the younger generation, who will also be actors and agents of change in the future. The increasingly complex environmental problems in the city of Jakarta require a new breakthrough in managing the environment through improving the ecological behavior of teenagers based on the realization of environmental ethics in everyday life. Faced with quite serious environmental problems in Jakarta, researchers currently formulate the following problem: what is the role of environmental ethics in efforts to develop ecological behavior among teenagers in order to support the city of Jakarta to become a more beautiful city?

2. Methods

This research uses a combination of quantitative and qualitative methods. The selection of respondents was based on purposive sampling, namely a non-random sampling technique which was determined based on certain characteristics which were considered to be closely related to the characteristics of the population. The population of this research is teenagers aged 15 -21 years who live in Jakarta. A total of 20 questionnaires were distributed directly to respondents, while 17 questionnaires were filled out via Google Forms. So, the total respondents collected were 37 people. It should be realized that taking a sample of 37 teenagers cannot be considered the voice of all teenagers in Jakarta. However, sampling can help understand the general picture of the ecological behavior of Jakarta's youth.

The questionnaire was created based on the theory of Environmental Ethical Principles (EEP) of Keraf [13] and ecological behavior called General Ecological Behavior (GEB) which was developed by Kaiser & Shimoda [14] to measure ecological behavior based on three indicators of sense of responsibility, environmental knowledge and values. environment. For the questionnaire regarding environmental ethics, a statement is provided for the nine principles of environmental ethics, for example principle 1) respect for nature, the statement is submitted: "I dispose of rubbish in any form according to the appropriate place". Then, respondents answered with two choices: agree or disagree. Likewise for principle 2) responsible attitude, with the statement: "I participate in the environmental cleanliness program where I live." Then respondents were asked to answer: agree or disagree. To test whether respondents had ever heard of the ethical principles in question, the following question was asked: "Have you ever heard of the 9 principles of environmental ethics above, whether in class or among friends at school/campus?" Then, to see the relationship between environmental ethical principles and ecological behavior, the question was asked: "Do environmental ethical principles help or not help in developing ecological behavior?"

Meanwhile, the questionnaire regarding ecological behavior asked questions according to three indicators of sense of responsibility, environmental knowledge and environmental values. To reveal a sense of responsibility, two questions were asked: 1) "Why do you think we care for the environment around you?" 2) "When you walk around your neighborhood in

Jakarta, have you ever thrown rubbish?" Meanwhile, to reveal environmental knowledge, four questions were asked: 1) "Do you know the cleaning service in Jakarta and what their duties are?" 2) "Do you know any city parks or beautiful environmental places in Jakarta?" 3) "Where do you get your knowledge about the environment?" 4) "Is environmental knowledge taught in schools and in what subjects?" The environmental value consists of two questions: 1) "What have you done to keep the environment around you in Jakarta clean?" 2) "What else can you do to improve environmental sustainability and cleanliness where you live in Jakarta?"

Data analysis techniques are carried out based on the percentage of answers, while questionnaires with open questions are categorized based on themes. Researchers carry out validation by asking colleagues to check the categorization carried out by researchers.

3. Results and Discussion

Of the total number of 37 respondents there were 15 men (41%) and 22 women (59%) with an age range of 15 years 2 people (5%), 16 years 2 people (5%), 17 years 10 people (27%), 18 years 19 people (53%), 19 years 2 people (5%), and 20 years 2 people (5%). 33 people (89%) still have high school education and 4 people (11%) have gone to college. Their domicile is in West Jakarta 25 people (68%), South Jakarta 7 people (19%), East Jakarta 2 people (5%), North Jakarta 2 people (5%) and Central Jakarta 1 person (3%).

Table 1 Respondent profile

Gender	Number (people)	Percentage
Man	15	41%
Woman	22	59%
Total	37	100%
Education		
High school	33	89%
University	4	11%
Total	37	100%
Domicile		
West Jakarta	25	68%
South Jakarta	7	19%
East Jakarta	2	5%
North Jakarta	2	5%
Central Jakarta	1	3%
Total	37	100%

In relation to environmental ethics, especially regarding the statements formulated for each principle of environmental ethics, the following results were obtained. Generally, respondents agreed with the formulation of the statement for each attitude. There were only a few statements that respondents did not agree with, for example regarding attitudes of affection and care with the formulation: I feed and drink wild animals wherever I am (12 respondents disagreed). Then follows the principle of living simply and in harmony with nature with the formulation of the statement: I often walk to places that are close by rather than driving a motorized vehicle (9 respondents disagreed). Then the principle of responsibility with the formulation of the statement: I participate in an environmental cleanliness program where I live with 7 people who disagree. For more complete results of the percentage of agreeing and disagreeing with the formulation of the statement of environmental ethical principles, you can see the following table.

Table 2 Principles of environmental ethics

No	Principles of Environment Ethics	Statement	Answer		
			Agree	Disagree	Total
1	An attitude of respect for nature	I dispose of rubbish in any form in the appropriate place	37	0	37
			100%	0%	100%
2	Responsible attitude	I participate in the environmental cleanup program where I live	30	7	37
			79%	21%	100%
3	Solidarity attitude	I always motivate my friend to continue to maintain a clean environment together	35	2	37
			95%	5%	100%
4	An attitude of love and care	I feed a wild animal wherever I am	25	12	37
			68%	32%	100%
5	The principle of no harm	I don't damage the grass and plants around me	35	2	37
			95%	5%	100%
6	The principle of living is simple and in harmony with nature	I often walk to places that are close by rather than driving a motorized vehicle	28	9	37
			76%	24%	100%
7	Principle of justice	I support imposing sanctions on environmental destroyers	33	4	37
			89%	11%	100%
8	principle of democracy	I support a variety of local wisdom that preserves nature	37	0	37
			100%	0%	100%
9	principle of moral integration	I support the government program to carry out environmental analysis on every development program implemented	37	0	37
			100%	0%	100%

It turns out that not all respondents have ever listened to the principles of environmental ethics formulated in the questionnaire. It can be seen from the following table that there are only 23 people who have ever heard of the principles of environmental ethics, while the remaining 14 people have never heard of them (see Table 3). However, most respondents agreed that the principles of environmental ethics helped them to develop ecological attitudes and behavior to maintain the environment around them. 30 people said they helped and only 7 people said they didn't help (see Table 4).

Table 3 The principles of environmental ethics have been heard before

Principles of Environmental Ethics	Total	Percentage
Ever been	23	62%
Never	14	38%

Source: Primary data processed (2024)

Table 4 Environmental ethics helps develop ecological behavior

Principles of Environmental Ethics	Total	Percentage
Helpful	30	81%
Not helpful	7	18%

Concerning ecological behavior includes environmental responsibility, environmental knowledge and environmental values.

Regarding *environmental responsibility*, why is it necessary to protect the environment according to teenagers because we live together with nature, not just humans. This is necessary because if not us, who else? We care about our surroundings, starting from the small things. To maintain environmental balance and sustainability. Maintaining an

environment like what religion teaches is that cleanliness is part of faith. Maintaining the environment is very important because it can create harmony both felt and seen with the five senses and also cleanliness in the environment can bring health to the surrounding environment and minimize the presence of disease. We need to protect the environment by creating cleanliness and beauty around where we live. It is necessary to protect the environment so that it is not further damaged and maintain the balance of the ecosystem.

When walking around the neighborhood in Jakarta, teenagers admit that they have thrown rubbish, due to the lack of rubbish bin facilities in Jakarta. There are also bad habits that are starting to change gradually to throw away rubbish in the right place. There is also the factor of laziness in throwing away rubbish. A teenager admitted that he tried to throw the rubbish he produced into the rubbish bin. If there were no rubbish bins nearby, he chose to take the rubbish home so it could be thrown away where it should be. Teenagers admit that they don't like throwing rubbish carelessly, because environmental cleanliness is a shared responsibility.

Concerning *knowledge about the environment*, teenagers know that there is an office tasked with managing the cleanliness of the city of Jakarta, namely the Cleanliness Service. The task of this service is to clean the city of Jakarta and maintain the city of Jakarta so that it remains in a clean condition. They also care for and maintain living environments such as parks and urban forests. Apart from that, the Jakarta Cleanliness Service is responsible for ensuring that public places are always clean, and for disposing of rubbish to final disposal sites. Several city parks deserve the attention of Jakarta residents, for example, Child-Friendly Integrated Public Space (RPTRA) Kalijodo, Kalideres Park, and Jakarta City Stadium City Park. Apart from that, there is Tebet Eco Park, as well as the city forest in the Monas area, Allianz Eco Park, Suropati Park, etc.

Teenagers acquire knowledge about the environment in general from the internet, school, and parents. A teenager said that his mother was the Head of the Environmental Service in the City of Jakarta. According to him, awareness of the environment grew gradually where when his mother took office, he as a child had a moral responsibility and also tried to change for the better and was aware of the environment.

According to teenagers, knowledge about the environment is also taught at school, such as in social studies, biology, and chemistry subjects. It is indeed taught mainly in entrepreneurship and science lessons, but one of my criticisms of environmental lessons at school is that they are too normative, in other words, too same-like and not interesting to listen to, so students' interest in environmental knowledge is also minimal. Preserving the environment, caring for and protecting the environment, processing waste into useful items, sorting types of waste. Natural science and social science are important elements that teenagers need to know to protect their environment.

In relation to the *environmental values* they are fighting for, teenagers admit that they have made various efforts to preserve the environment, such as sorting waste according to its categories, throwing rubbish in its place, maintaining cleanliness and trying to be environmentally obedient citizens of Jakarta, such as throwing rubbish in its place, having the habit of cleaning every day after eating and also doing community service activities. Once created a campaign as one of the school's assignments that encouraged people to maintain cleanliness, plant 'mother-in-law's tongue' plants to reduce pollution around the house, and provide the latest data on RTB (Green Open Space) which is still not enough for the standards of green open space in big cities like Jakarta. Apart from that, private people also do things that have a good impact on the environment, such as using public transportation, walking if it is accessible, throwing rubbish in the right place, choosing rubbish at home, taking part in community service around the neighborhood, etc.

Youth can still make *various efforts to improve the sustainability* and cleanliness of the environment where they live in Jakarta, such as working together to keep Jakarta clean, working together, adhering to rules in protecting the environment, and continuing socialization for environmental awareness. By cleaning, especially slum areas, they can be

further improved. Maybe social sanctions are quite effective for people who throw rubbish and make public places dirty. Social sanctions on social media are quite effective in deterring other people and becoming afraid when they don't maintain cleanliness. Don't burn rubbish carelessly, don't throw rubbish into the river, but process rubbish into useful items that can be reused.

The research results show that environmental ethics helps respondents with their ecological behavior in line with research conducted by Citra Nurkalimah [15] in Kampung Naga, Tasikmalaya Regency, West Java, which still maintains environmental ethics in managing and caring for nature and the surrounding environment. Thanks to the good ecological behavior of the residents of Kampung Naga, their area has officially become a cultural heritage and tourism area in West Java Province. Likewise, this research is in line with research conducted by Batavia et al [16] who argue that environmental ethics can be an effective means of influencing human behavior, including pro-environmental behavior. So pro-environmental behavior as part of ecological behavior needs to be realized more concretely and concretely in the environment, for example in the form of responsibility, knowledge and values that must be fought for together. Human behavior, such as behavior in preserving the environment, must be carried out with full responsibility. Ecological behavior will be more effective if it is supported by adequate knowledge about the environment. Above all, we must uphold the values of civilization, humanity, and the environment itself. In the context of a big city like Jakarta, young people are required to fight for ecological behavior based on sound environmental ethics, in order to create a more comfortable and healthy urban life for every resident.

4. Conclusion

From the research results, it is proven that there is a close relationship between environmental ethics and the ecological behavior of teenagers in Jakarta. The principles of environmental ethics that they have heard about and really help them in guiding their daily ecological attitudes and behavior. Jakarta's youth have adequate awareness and responsibility to care for the surrounding environment. The more knowledge teenagers have about the environment, the higher the likelihood they will carry out ecological behavior related to environmental maintenance. Therefore, to improve ecological behavior, it is necessary to have three important elements, namely a sense of responsibility, adequate environmental knowledge, and environmental values that continue to be fought for in concrete daily actions. Not only does it have these three elements, but it also strikes a balance between a sense of responsibility, knowledge about the environment, and the struggle for environmental values in the realm of practice. Not only teenagers, but all levels of society who have knowledge need to always care about the environment around them and protect the environment, because environmental issues are a common problem, it is necessary to have good cooperation between all levels of society, especially teenagers, the government and environmental activists, so that creating a beautiful and comfortable city of Jakarta. The limitation of this research is the limited sample size. So, further research can be carried out by taking a larger sample so that it can get closer to the ecological behavior of Jakarta's youth.

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