



Assessing Perceptions and Practices of Environmental Problems: Bahir Dar City, in Ethiopia, in Focus

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

The main purpose of this study was to see the level of environmental perception and perceived environmental practices. It also addressed the correlations among demographic factors, awareness and perceived behaviors. Besides, how gender difference, if any, revealed on people's perception and practice was checked. Fifty participants selected randomly from different working sites (such as football field, shopping centers, and public library) were administered a likert scale questionnaire on perceptions and practices of environmental issues. The descriptive statistics revealed fairly higher level of environmental perception and practices. Correlation coefficients revealed little sign of connection between what the participants perceived about environmental problems and what environmental activities they reported. Besides, insignificant differences between men and women were observed on both their perceptions and pro-environmental behaviors. Therefore, the role background and gender related variables play for pro-environmental issues seemed to be re-examined for a more elaborated explanation on environmental perception and behaviors.

Keywords: Environment; environmental perception; pro-environmental practices; behaviors.

1. INTRODUCTION

The idea of environmental education (EE) has been more pronounced in the 1970s and

designated as the main area of educational attainment in the younger generations believing that sustainable development will only be achieved when the world produces responsible

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citizens who could use natural resources with care and effective maintenance. Environmentally conscious behaviors entail various psychological and practical manifestations including awareness of human behavior' impact on environment, willingness of mitigating and preventing environmental destructions and commitment of taking actions with full energy and dedication (Hungerford & Volk , 1990; Anja Kollmuss & Julian Agyeman , 2002).

Various scholars contend that the intended human behavior on manipulation of environment could only be maintained through well designed educational program that incorporates the issue of environment as its particular agendum to be treated in almost all curricular elements or subjects where a strong foundation of environmental knowledge could be built. Hungerford & Volk (2013) believes when people know more about environmental problems, they will try to act in solving them. A more liner argument is stated that while human beings increase their awareness about environment, they, in turn, change their attitude in a way that it helps them start to take initiative for action (Ramsey and Rickson 1977, cited in Hungerford & Volk, 1990). A more complex analysis on the relation between pro-environmental behavior and its preceding elements such as beliefs, knowledge, attitude, and values observed in the work of Hines's, J. M., et al. 1986. Here, three levels of variables were identified: entry level, ownership and empowerment. Entry level variables denote environment sensitivity, which lacks more depth than ownership variables that signifies in depth understanding of the environmental issues. Empowerment variables reflected on the skills and strategies for solving environmental problems. In this model of environmental behavior, various issues will be interplayed to see observable people's experiences on environmental protection and maintenance activities.

The existing assumptions of determining people's behavior on environmental issues have been tested with various research works. For example, Varoglu et al (2018) investigated the correlation among students' environmental knowledge, attitude and behavior. The study showed significant positive correlations among the stated variables. Siew Wai et al. [1] also examined the relationship among people's perceived self-efficacy, attitudes to environment and pro-environmental behavior. The 500 participants' survey result showed positive

interdependence among the perceived self-efficacy, environmental attitude and pro-environmental behavior. How environmental perception and other social determinants such as living conditions and the subjective evaluation of social inequality did affect environmentally friendly behavior was another area of study and the findings noted direct and indirect influences of environmentally related perceptions, subjective evaluation of living environments, social factors and other demographic characteristics on pro-environmental behavior.

That is, more positive effect of education level on pro-environmental behavior was revealed and confirmed the importance of living environment, social equality and education in sustainable urban planning and efforts to mitigate climate change [2].

Despite all efforts done to see the impact of people's environmental knowledge on their pro-environmental behavior, a dearth of relevant evidences were observed on the idea that human knowledge and affective elements about environment resulted in behavioral manifestations of environmental activities. This study, then, gives highlight on the possible relation between what people know about environment and what they believed to do with environmental issues. More specifically, this study states the following objectives.

1.1 Objectives of the Study

This study aimed at:

1. Assessing people's environmental perceptions and self-reported environmental practices.
2. Examining correlations, among the people's background, environmental perception and practices
3. Investigating the gender differences, if any, on the people's perceptions and practices

2. METHODS

This mini survey study involved fifty participants randomly selected from Bahir Dar city. It is located in the North Western part of Ethiopia around 500 km away from Addis Ababa, the city of the Federal Government. The presence of Lake Tana and the world's longest river Abay or Nile River might have given the city more prominence and recognition by the tourists and the international diplomats. The city has nearly half a million residents and serves as an

administrative and commerce center of the Amhara regional state.

The current study selected fifty participants randomly selected at different working sites such as football field, shopping centers, and public library. As a result, the participants had varied differences in gender, age, education, economic status and marital condition.

This current study also used a survey questionnaire developed in the form of 20 likert scale items (strongly agree =5, agree = 4, neutral = 3, disagree= 2, strongly disagree- 1) which had three parts. The questionnaire was adapted from Cömert's [3] environmental knowledge and pro-environmental behavior survey questionnaire.

The data collected through the survey questionnaire were analyzed in the descriptive statistics and correlations.

3. RESULTS

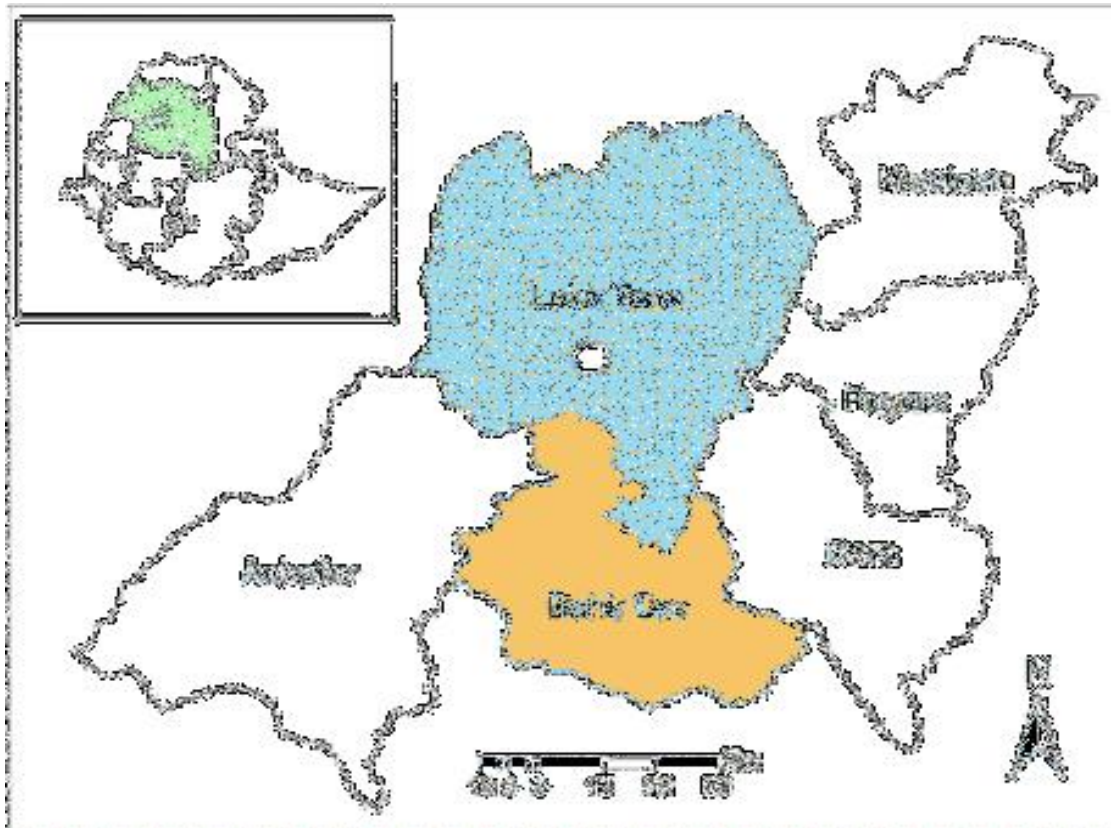
3.1 Background of the Participants

As the Fig. 1 below shows, there are significant variations on their background (gender, age,

education, family and economic status). Of the fifty participants selected to fill out the questionnaire only 37 (17 women and 20 men) returned the questionnaire filled in. Majority of the participants (35 - 94%) were youth group and significant number of participants (24-64%) were with degree and above qualification; while a higher share of participants (21-56%) were not married and a little more than half of the participants (21-56%) did not have sufficient income for their living.

3.2 Environmental Perceptions

As Fig. 2 shows, the responses of participants to the environmental issues become considerable. Almost all of the participants seem to understand the existing environmental concerns. The participants' perception on the significant role of the day-to day human activities, and industrialization process to influence environment wellbeing became prominent (Mean, 4.51; 4.05 and 4.21). That is, considerable level of understanding about environment problem in relation of people interaction tended to be seen on the research participants.



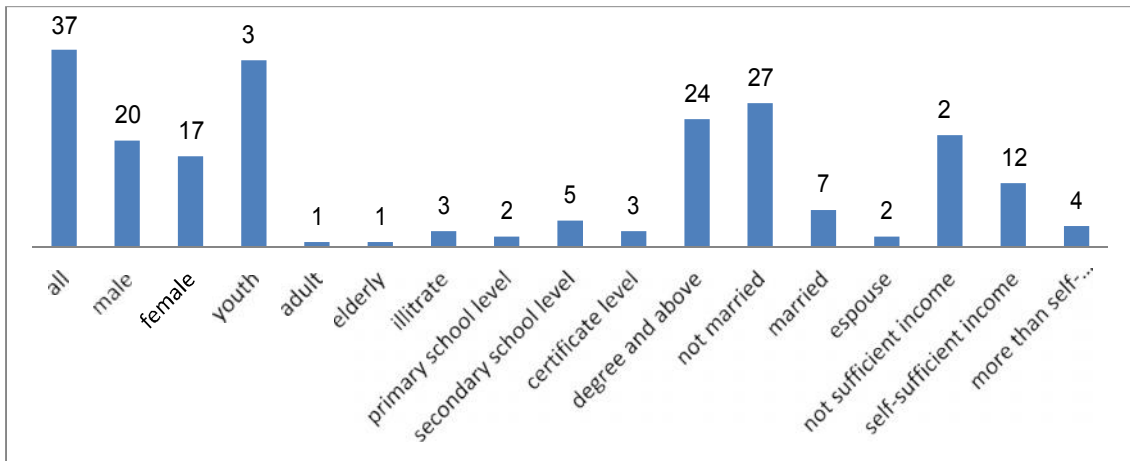


Fig. 1. Background of the participants

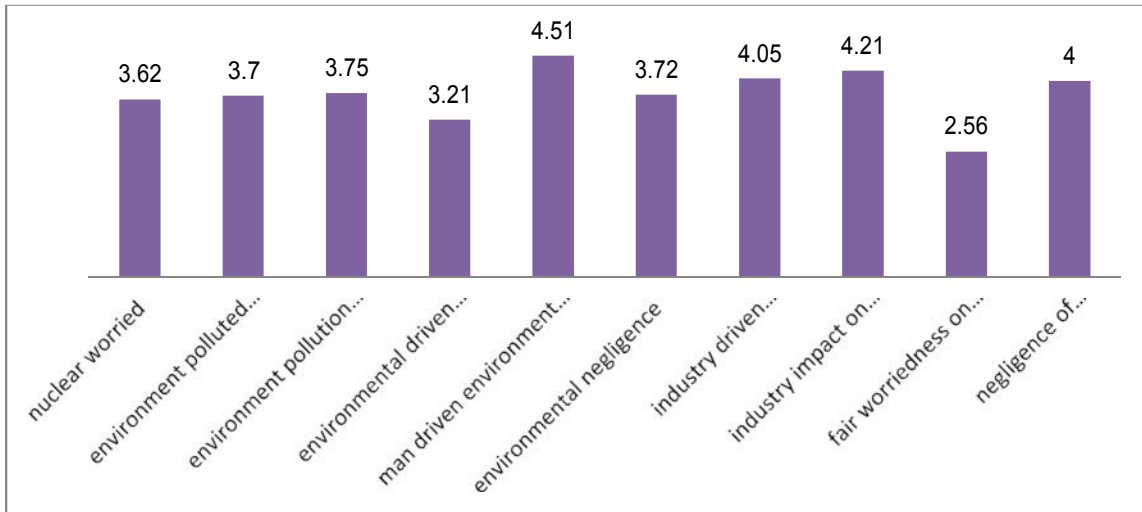


Fig. 2. Participants' environmental perceptions

3.3 Environmental Practices

Fig. 3 below indicates the participants' response concerning their practices and experiences in solving, if not, minimizing the environmental problems. The data showed that majority of the participants attempted to involve themselves in the efforts people make in protecting and rehabilitating their own environment (Mean, 5.00 ; 5.00; 4.29; 4.45; and 4.54 respectively). This means, the research participants seemed to a greater participation in the environment related activities and would add up our hope for minimizing environment related problems in the future.

3.4 Gender Difference on Environmental Perception

As Fig. 4 below indicates, slight variations on the environmental perceptions were observed between men and women participants. In the majority of the items, men participants showed higher mean responses compared to women (e.g., Mean, 4.15, 3.00; 3.95, 3.41; 4.05, 3.35 men & women respectively). Conversely, women respondents showed merely higher mean responses in a few items (e. g., Mean, 3.88, 3.65; 4. 40, 4.64; 2.88, 2.30 women & men respectively). In other words, differences are there between men and women on their understanding about the environmental issues in

which compatible form of environmental intervention or differing environmental influences could be expected.

Fig. 5 below shows mean responses of the men and women participants on their environmental practices. The figure indicates, in the majority of items, slightly higher mean responses of the women on their experiences of dealing with environmental problems (e.g., Mean, 2.70, 2.94; 2.70, 2.82; 4.10, 5.92; 5.10, 4.30; female and male respectively). While, in a few items, men responded with a bit higher mean score (e.g., Mean, 4.20, 4.00; 4.00, 3.17; 4.55, 4.00 men and women respectively). Generally, compared with men, the women's seemed to do with some more on environmental problems. That is, the women attempted to involve in environmental activities that could help maintain the eco-system or reduce the destructive effect of global warming.

Fig. 6 below indicates correlation coefficients among the participants' background (age, education and economic status), environmental perception, and practices. Negative but statistically insignificant correlations are observed between the participants' background (age and education) and both perceptions and practices (Cor. -.149, and -.039, P > 0.05). Conversely, positive but weak correlations are seen between the participants' economic status and the perceptions as well as practices (Cor.

0.04 & 0.007 p > 0.005). Generally, although there are weak positive and negative correlations among the variables, all of them are statistically insignificant. That is, there seems to have little sign of connection between what the participants perceive about environmental problems and what environmental activities they reported. Besides, the background elements such as age, gender, education and economic status did not appear to correlate with the perceptions and practices of the participants.

4. DISCUSSION

Assessing the level of people's environmental perception and practices was the main target of this study. The questionnaire data showed that the participants tended to have a considerable level of awareness about the environmental issues. They reported that environmental problems in one way or the other could affect their life and it needed mechanisms to address. Similarly, the participants did show fairly high level of perceived environmental practices. They tended to feel that they were attempting to do environmental activities required to redress the problem. However, in both perceptions and environmental practices, a statistical significance was hardly observed and the descriptive responses might have been resulted from other intervening variables.

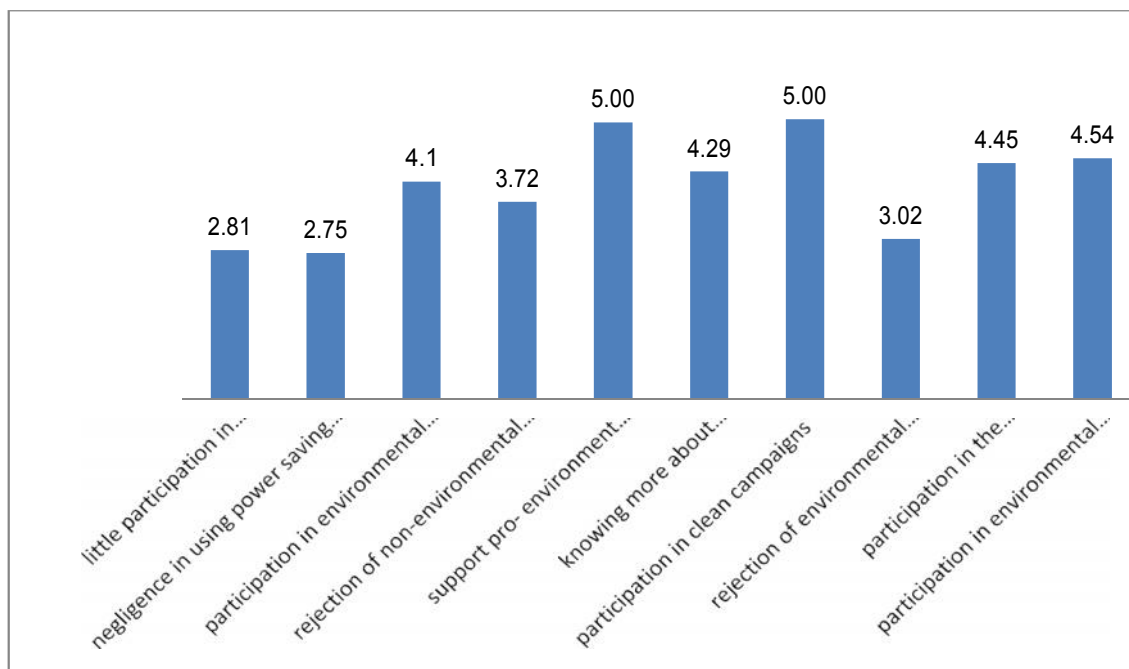


Fig. 3. Environmental practices

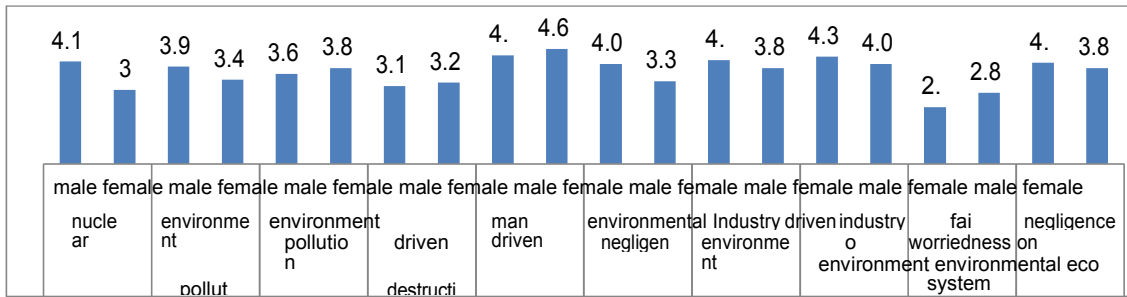


Fig. 4. Gender differences on environmental perception Gender differences on environmental practices

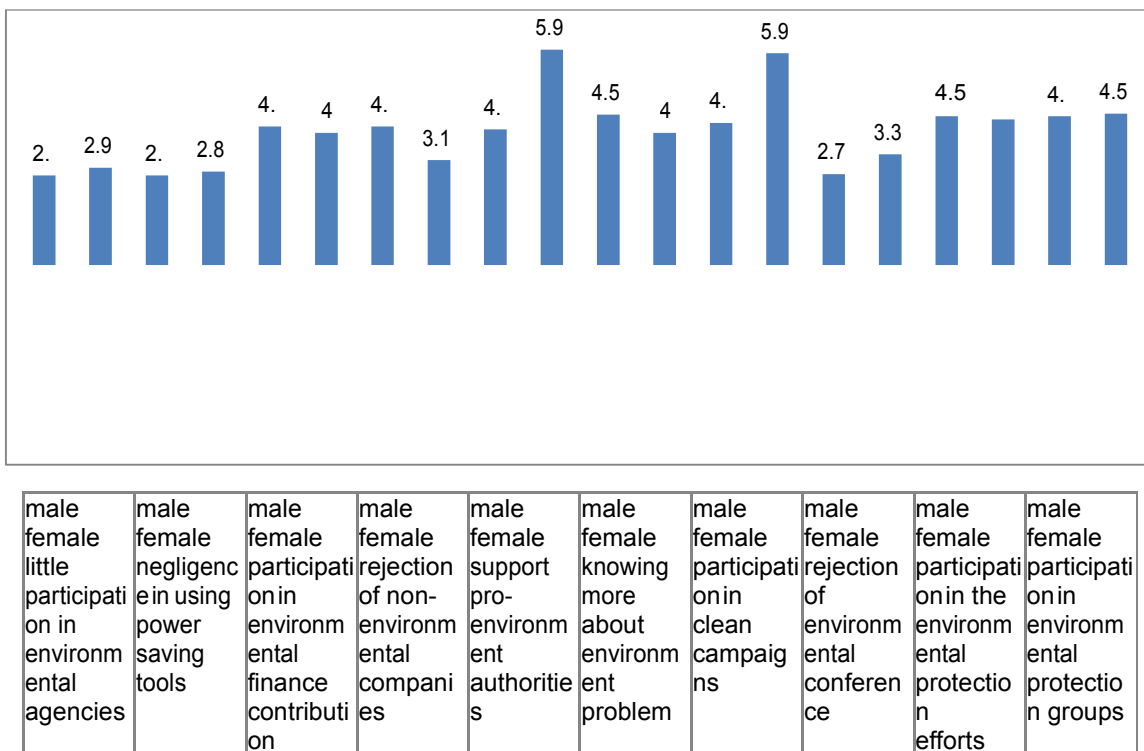


Fig. 5. Gender differences on environmental practices Correlations among background (age, family status and economy), environmental perception and practices

		Perception	Practices
age	Correlation	-.149	-.039
	Significance (2-tailed)	.393	.822
education	Correlation	.068	-.004
	Significance (2-tailed)	.696	.981
economic status	Correlation	.047	.007
	Significance (2-tailed)	.790	.970

Fig. 6. Correlations among background (age, family status and economy), environmental perception and practices

This finding contradicts with the research evidences that showed positive interdependence between perception of environmental problems and experiences of pro-environmental activities [4,5]. Nevertheless, some other research works confirm reports that failed to show the link between the environmental knowledge and environmental behaviors [6-8]. Generally, the possible interdependence between people's environmental perceptions and environmental behaviors still needs much more investigations [9].

5. CONCLUSIONS

The findings of this study revealed considerable level of perception about environmental issues and reported environmental practices though it was a statistically insignificant. The possible correlations among background variables, perceptions and practices of the participants were not shown statistically significant. Based on the findings, the following conclusions are drawn.

1. There seemed to have fairly higher level of perceptions the participants hold about environmental problems as well as pro-environmental behaviors the participants reported though the inferential statistics failed to show significance. That is, the descriptive statistics indicated considerable level of awareness and reported practices of the participants' about environmental issues. However, these figures were not revealed statistically significant value in which the observed perceptions and behaviors did not seem to be confirmed.
2. There appeared to show little interdependence among the participants' environmental perceptions, practices and their backgrounds (age, marital status, educational status and economic status). In other words, the correlation results revealed that the positive and negative coefficients of the target variables failed to show a statistically significant value.
3. There seemed to have little gender differences on the perceptions and practices that the participants revealed on environment. That is, the descriptive statistics variation between the women and men participants shown in the preceding figure was not supported with inferential statistical significance that rejected the

gender differences on perceptions and practices of environmental issues.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Author has declared that no competing interests exist.

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