

An overview of environmental attitudes, awareness, sensitivity, and literacy of nursing students in Turkey

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Abstract

The environmental factors are vital determinants for health and wellness of organisms. Because of the population increase, technological developments, more industrial activities and dense traffic, environmental pollution, and destruction became one of the major problems in the world. Various studies indicated that most of the diseases and health problems are closely related with negative environmental factors. Considering the roles and responsibilities of the nurses, increasing the knowledge and awareness of nursing students on environmental issues has vital importance in terms of protecting and improving health. This paper aimed to evaluate the studies on environmental attitudes, awareness, sensitivity, and literacy of nursing students in Turkey. This assessment is important to improve and upgrade these characteristics of nursing students and nurses. It also has an importance for public health. The results of the studies generally indicated that majority of the nursing students had moderate levels of environmental attitudes, awareness, sensitivity, and literacy. Most of the studies confirm that the levels of nursing students on these subjects closely related with components of nursing education and content and composition of subjects. The common result obtained from the studies is to increase the number of subjects and social activities on environmental issues in nursing education for higher environmental awareness, sensitivity, and literacy of nursing students, understanding, and eliminating the problems arising from environmental factors. Considering the roles and responsibilities of the nurses, increasing the knowledge and awareness of students on environmental issues has vital importance in terms of protecting and improving health.

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1. Introduction

Organisms, which are the biotic components of ecosystems, continuously interact with their environment. Environmental factors affect organisms biologically, physically, chemically,

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and socially, in different ways. Therefore, environmental factors are vital for health and wellness of organisms. Climate conditions, soil, water, and air status in an environment are basic abiotic factors that are effective on organisms.

In recent years, technological developments, increase in population, industrial activities and traffic lead to environmental pollution and destruction. Environmental pollution and destruction alter natural habitat conditions of organisms. These differences significantly affect metabolism of living organisms and cause various damages and disease.

Humans need many resources to live healthy. They interact with biotic and abiotic factors of the ecosystem for food, water, respiration, shelter, and other activities. Changes in environmental factors may be harmful directly or indirectly for human health. A difference or damage in an environmental factor may negatively affect human life in several ways. Contaminated food, water and air, limited nutrient, hazardous substances, vector organisms, harmful microorganisms, and habitat disturbance cause several problems such as disease and stress. Various studies indicated that several diseases and health problems are closely related with negative environmental factors.

So, understanding these relationships is vital for health and wellness of humans. It is known that anthropogenic activities are major impacts of environmental problems. The important point is to prevent these activities before environmental problems occur. Because of this, it is important to have knowledge about the factors that threaten the environment and human health.

Environmental health is an important component of public health (Polivka et al., 2012; Cruz et al., 2018). Because of their responsibilities in health protection and promotion, nurses' knowledge and awareness of environmental issues is very important for public health.

This study aimed to discuss the environmental awareness of nursing students in Turkey by evaluating the previous studies. There are several studies on environmental attitudes, awareness, sensitivity, and literacy of nursing students both in the world (Wright, 2003; Camacho Rodríguez and Jaimes Carvajal, 2016; Cruz et al., 2018; Felicilda-Reynaldo et al., 2018; Ha and Lee, 2019; Anåker et al., 2021; Álvarez-Nieto et al., 2022 a,b) and Turkey (Çınar et al., 2010; Bodur and Taşocak, 2013; Çelik, 2016; Sayan and Kaya, 2016; Beser et al., 2017; Baybuga and Sönmez, 2019; Bakan et al., 2020; Mercan and Mercan, 2020; Ergin et al., 2021; Gök and Kılıç, 2021; Kapan and Gürel, 2022; Örs, 2022). By these studies, status of

the knowledge of nursing students on environmental attitudes, awareness, and literacy were evaluated.

2. Evaluation of studies on nursing students in terms of environmental issues in Turkey

Some of the studies conducted to evaluate the status of nursing students about the environmental issues in Turkey were summarized and presented in the Table 1. Various scales were used to monitor environmental attitudes, awareness, sensitivity, and literacy of nursing students in these studies. Almost, most of the studies reported moderate environmental attitudes, awareness, sensitivity, and literacy levels for nursing students.

Attitudes of nursing students about environmental problems were studied by Çınar et al., (2010), Karahan Okuroğlu (2012), Çelik et al., (2016), Sayan and Kaya (2016), Beser et al., (2017), Baybuga and Sönmez (2019), Bakan et al. (2020). In the study of Çınar et al. (2010), "Environmental Attitude Scale", which was prepared by Berberoğlu and Tosunoğlu (1995), applied to all senior class students of Nursing Department in Sakarya University. It was determined that while the attitudes of nursing students towards environmental problems in many subjects were close to the desired levels, some subjects considered as environmental risks were not perceived as risky enough by the students. According to the results, there was not a significant relationship between the scores and parental education, gender, economic status, and place of residence. Karahan Okuroğlu (2012) applied the "Ecocentric, Anthropocentric and Antipathetic Attitudes towards Environment Scale" to the graduate nursing students at Istanbul University. The fourth-class students' ecocentered attitude score was clearly higher than the second-class students, and their antipathetic attitude score towards the environment was lower than the first-class students and second-class students. Additionally, the mean ecocentric attitude of the female students was higher than male students. No significant relationship was found between the educational status of the parents, income level of the family, longest place of residence unit of the students, being a member of any environmental organization and the mean scores of ecocentric, anthropocentric and antipathetic attitudes to the environment.

Çelik et al. (2016) reported that the nursing students are less sensitive to the environmental issues than the medical faculty students. The demographic characteristics were effective on students' attitudes to the environmental issues.

Sayan and Kaya (2016) studied the environmental attitudes and the environmental risk perceptions of the nursing students. Significant moderate correlation was determined between these factors. Additionally, it was found that some characteristics of the students such as gender, participation to the environmental organizations and interest to the environmental subjects were effective on perception of environmental risks and environmental attitudes.

Beser et al. (2017) and Bakan et al. (2020) aimed to determine the attitudes of nursing students towards environmental problems. Higher scores were determined for fourth year nursing students and becoming a member of environmental organizations increased the scores by Beser et al. (2017). Similarly, Bakan et al. (2020) reported high positive environmental attitude scores for nursing students. Baybuga and Sönmez (2019) conducted a descriptive study on nursing students' environment-centered, human-centered and antipathetic attitudes towards environment. The attitudes of nursing students to the environmental issues were positive. The scores of ecocentric and anthropocentric attitudes of the students were high while their antipathetic attitude score was low.

Ulaş Karaahmetoğlu (2017) compared faculty of forestry students and nursing students in terms of environmental sensitivity and found that nursing students have less environmental sensitivity than faculty of forestry students. This result showed that education is very effective on environmental sensitivity. It can be said that environmental awareness increases as the level of knowledge about the environment increases.

Tunçay (2019) explained that environmental ethics awareness levels of the students were high.

Taking education on this subject had positive effects on awareness scores of students. It was found that there was not any variation in environmental ethic levels among students according to gender, age, class etc.

Gök and Kılıç (2021) reported moderate levels of environmental sensitivity and awareness for nursing students in their study. They explained that social activities and lectures on the environmental issues may improve environmental awareness levels. Similar results were determined in the studies of Ergin et al. (2021), Uzelli Yılmaz (2021), Örs (2022), Kapan and Gürel (2022). These were generally reported moderate environmental literacy levels.

According to results of the studies, environmental knowledge of nursing students is weak in terms of specific environmental issues. They usually had general information about ecological

factors and environmental processes. It is understood that they need more detailed information and experience to understand the requirements of environmental health.

Table 1. Some of the studies on environmental attitudes, awareness, sensitivity, and literacy of nursing students in Turkey

Author	Subject	Result
Çınar et al., (2010)	Department of Senior Nursing Students' Attitudes Toward Environmental Problems	Attitudes towards environmental subjects in many subjects close to the desired level; some environmental risk is not perceived as risky
Karahan Okuroğlu, (2012)	The impact of nursing education on Students' attitudes towards the environment	High environment-centered attitude mean score; low indifferent attitude scores towards the environment
Bodur and Taşocak, (2013)	Nursing students' views about environmental sensitivity in Turkey	Medium-level sensitivity toward environment
Çelik et al., (2016)	Nursing Department and Medical Faculty Students' Attitudes towards Environmental Problems	High environmental awareness: demographic factors affect environmental attitudes
Ulaş Karaahmetoğlu et al., (2017)	Analysis of nursing and faculty of forestry students' views on environmental sensitivity	Students of faculty of forestry has more environmental sensitivity than students of nursing.
Sayan and Kaya, (2016)	Assessment of the environmental risk perceptions and environmental attitudes of nursing students	Scored highly on environmental risk perceptions
Beser et al., (2017)	Examination of nursing students' attitudes towards environmental problems.	Fourth year students had higher scores for their attitudes to environmental problems
Baybuga and Sönmez, (2019)	Turkish nursing students' ecocentric, anthropocentric and antipathetic attitudes towards the environment	High average ecocentric attitude score, an average anthropocentric attitude score and a low average antipathetic attitude score
Tunçay, (2019)	The Nurse Candidates' Awareness Levels to Environmental Ethics (Specific Çankırı Karatekin University)	High awareness levels to environmental ethics
Bakan et al., (2020)	University students' attitudes towards environmental problems	Positive attitudes towards environmental problems, 67.3% of the students have high scores

Ergin et al., (2021)	A mixed method study on global warming, climate change and the role of public health nurses from the perspective of nursing students	Adequate awareness and knowledge level about global warming and climate change
Gök and Kılıç, (2021).	Environmental awareness and sensitivity of nursing students	Moderate environmental awareness and sensitivity
Örs, (2022)	A measurement of the environmental literacy of nursing students for a sustainable environment	High score for the use and concern dimensions of environmental literacy, and moderate attitudes towards the environment, low scores for the environmental knowledge
Uzelli Yılmaz et al. (2021)	Determination of awareness levels of a group of nursing students towards environmental ethics	High awareness levels of environmental ethics
Kapan and Gürel (2022).	An evaluation of the environmental literacy levels of nursing students in Turkey	Moderate environmental literacy levels

3. Conclusions

According to the studies, the levels of the environmental attitudes, awareness, sensitivity, and literacy of nursing students in Turkey are moderate. The levels of nursing students on these subjects closely related with components of education and composition of subjects. Most of the studies confirm and agree with this opinion. These results showed that environmental subjects in nursing education are insufficient. Today, environmental issues are within the basic vital problems in the world. Problems such as healthy food, water supply, air, soil, water pollution, global climate change are important factors that threaten humanity and our world. Considering the roles and responsibilities of the nurses, increasing the knowledge and awareness of students on environmental issues has vital importance in terms of protecting and improving health. As the number of studies showing the negative effects of environmental problems on human health increases, the necessity of this is better revealed. In this context, the common result obtained from the studies is to increase the number of subjects and social activities on environmental issues in nursing education for higher environmental awareness, sensitivity, and literacy of nursing students, understanding, and eliminating the problems arising from environmental factors. For this purpose, students should be supported with social

responsibility projects, seminars, and courses. People with a high level of environmental knowledge are also better at environmental protection. Since nursing is a profession that is a role model for the society, it is very important for public health to bring this attitude to nurses. When today's conditions are evaluated ecologically in terms of public health, it has been concluded that students should be more directed to environmental health nursing. Preventing diseases caused by environmental problems and living in a clean environment are very important in the formation of a healthy society.

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