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Elementary School and High School Students' Environmental Worldviews: NEP Scale Application²

Extended summary

Attitudes towards environment represent the ways individuals perceive the world around them. Such attitudes are worth exploring because they frequently determine the behavior that either increases or decreases the quality of the environment. The scale most commonly used in the relevant literature that measures pro-environmental attitudes is the so-called NEP scale. The NEP scale is based on the New Environmental/Ecological Paradigm (NEP), which is based on the view (worldview) that nature has limited resources, it is exposed to harmful human interference and that it is necessary to balance nature itself. Contrary to this view is the old paradigm, i.e., the generally accepted Dominant Social Paradigm (DSP), which is based on the belief in the limitlessness of natural resources, the need for continuous human progress, and the need for growth and development (especially economic). In addition, the supporters of this paradigm have the ingrained opinion that man can solve all problems with the help of science and technology.

It should be emphasized that the NEP scale measures the worldview that implies a set of beliefs affecting the attitudes towards the environment. The term environmental worldview refers to beliefs and values about the way the world works, the role of people in protecting the environment, and the right or wrong way of treating the environment. The environmental worldview affects our relationship with nature and the way we use natural resources (Gillaspy, 2015).

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This means that a positive environmental worldview is necessary to overcome the consumer attitude of man towards natural resources which has long been dominant in most people.

The aim of the paper is to investigate elementary and high school students' environmental worldviews and to determine the dimensionality of the NEP Scale on our sample. In addition, the aim of the paper is point to potential differences between boys and girls as well as students with different school achievements. The environmental worldviews were analyzed using the NEP Scale (New Environmental/Ecological Paradigm) containing 15 items. Each item was measured on a five-level Likert scale with provided responses. The research encompassed 402 students of age 13-15.

Descriptive statistics was used to examine environmental worldviews, while factor analysis (PCA method with Varimax rotation) and parallel analysis (Monte Carlo simulation) were used to determine the scale dimensionality. The t-test for independent samples was used to test the differences between the factors depending on the students' gender, while the Pearson correlation coefficient was calculated to determine the connection between the factors and the school achievement of the students.

The NEP score of the surveyed students is 49.98 ($M = 3.49$; $SD = 1.2$). The overall NEP score of 45 is generally considered to be the boundary between the pro-environmental and anthropocentric worldviews. Any score below 45 means that respondents tend to favor DSP, while those with scores above 45 tend to favor the NEP views. Thus, our respondents show a slight tendency towards a pro-environmental worldview. The data also indicate that 26.44% of the respondents are leaning towards the dominant social paradigm and as many as 23.58% of the respondents showed an ambivalent attitude.

In the first step, factor analysis (PCA method with Varimax rotation) was used to determine the dimensionality of the scale, and the result was that obtained four factors. The analysis showed that there is only one item in the fourth factor. This result led us to do further analyses that would help us understand and properly determine the dimensionality of the NEP scale in our sample. In the second step, in order to check the obtained result, we performed a parallel analysis. Based on the results of this analysis, we decided to keep three factors for further research: the environmental crisis, anthropocentrism, and (anti) exemptionalism. The results of our research are in line with the results of other researchers according to which the dimensionality of the scale may vary depending on the sample and the context in which the NEP scale is applied. The difference between boys and girls was shown in the third factor. According to the results of this research, girls are more inclined to believe that man, regardless of his ability and development of science and technology, cannot be excluded from the natural environment and cannot influence natural processes. School achievement is positively correlated with the environmental crisis factor. Despite the fact that some research shows that environmental knowledge does not guarantee pro-environmental attitudes, and even less pro-environmental behavior, we can say, based on our data, that some connection undoubtedly exists. More precisely, environmental knowledge is not enough, but it is necessary for an individual to build pro-environmental attitudes and to behave in accordance with nature preservation. Modern tendencies of education are moving in the direction of developing students' competencies. The knowledge of individual facts is becoming less and less important, and the importance of connecting

knowledge, skills, and attitudes that enable a student to take appropriate action in a given context, in a given situation, and to perform that activity successfully and efficiently is becoming more and more important.

Keywords: environmental worldview, NEP Scale, environmental education, students

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