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A Study of Environmental Attitudes Between Rural and Urban Students

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A Study of Environmental Attitudes Between Rural and Urban Students

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By

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Abstract

With growing environmental concern and climate change rapidly occurring, it is important to understand how these issues will impact different areas of the world. Both urban and rural areas will be impacted in different ways. In order to tackle these climate issues and create environmental policies, it is important to understand environmental attitudes of residents in all areas. Understanding environmental attitude may help understand environmental behavior. An environmental attitude is a psychological tendency expressed by evaluating the natural environment with some degree of favor or disfavor (Milfont and Duckitt, 2010). A literary analysis was conducted to determine if there is a significant difference in environmental attitude between rural and urban students. It was found there is not enough evidence to conclude there is a difference in attitude.

Introduction

There is growing concern towards environmental issues all over the world. With climate change occurring, it is important to realize that everyone will be impacted. Both rural and urban areas will be impacted in different ways (Acka et al., 2005). For rural areas, there may be issues such as deforestation. For urban areas, there can be issues with land use, transportation, and air and water quality. With urbanization being an issue impacting both areas, it is important to realize that urban dwellers may have less access to the natural environment. However, urban areas may have more access to resources discussing the natural environment. Having this limit to the natural environment may create a larger appreciation for it. Also, the environmental priorities of urban and rural residents may differ. It is important to understand environmental attitudes of rural and urban residents to help with environmental policy creation and to possibly understand behavior towards the environment.

To understand if there are differing attitudes between rural and urban dwellers, the terms environmental knowledge, environmental attitude, and pro-environmental behavior need to be defined. Environmental knowledge is the amount of information an individual has concerning environmental issues. An environmental attitude is a psychological tendency expressed by evaluating the natural environment with some degree of favor or disfavor (Milfont and Duckitt, 2010). Pro-environmental behavior is exhibiting actions that benefit or have the least amount of harm on the environment. There is a linear model showing the process of exhibiting pro-environmental behavior (Kollmass and Agyeman 2002). It is commonly perceived having a positive environmental attitude leads to pro-environmental behavior.

Figure 1: Linear model used by Kollmass and Agyeman, 2002.

However, this linear model does not take into consideration outside factors. In contrast to this linear model, it is important to consider studies that do not show a correlation between positive environmental attitudes and pro-environmental behavior. With this contrasting concept, outside factors are taken into consideration. Opposing studies suggest environmental attitudes are formed from life experiences (Bradley et al., 1999). Culture, socioeconomic status, religion, age, gender, education, income, and any other socio-demographic or socio-psychological factors should also be considered (Alp et al., 2006) (Tuncer et al., 2004) (Buta et al., 2013).

For Nebraska specifically, it will be important to understand both urban and rural demographics. According to the United States Department of Agriculture Economic Research Service (USDA ERS), in 2018, about 34% of Nebraska's population lived in rural areas ("State

Data," n.d.). Although only about 1/3 of the population live in rural areas, the state itself is roughly 90% rural land ("Nebraska Data and Statistics", n.d.). However, a majority of the population live in urban areas. Understanding the different attitudes both areas may face towards the environment will be important to factor into environmental policy.

The question that needs to be addressed is "do students who attend urban schools have a better environmental attitude than students who attend rural schools?". The objective of this study is to determine if there is a significant difference in environmental attitude between urban and rural students.

Materials and Methods

Originally, a quantitative approach was going to be used to measure environmental attitudes. Students in 8th grade were going to be surveyed at Aurora Middle School, in Aurora, Nebraska, and Westside Middle School, in Omaha, Nebraska. However, due to the COVID-19 outbreak, it was best to conduct a literary analysis to avoid any personal contact. To conduct a literary analysis, the only materials needed were a laptop and scholarly articles. With access to the University of Nebraska-Lincoln library databases and owning a laptop, the materials were no issue.

To begin the literary search, a systematic method was created to determine which scholarly articles would be included. First, two different search engines were used to access scholarly articles. These search engines were Google Scholar and Academic Search Premier. These databases were used because they contain numerous peer-reviewed, scholarly articles. In order to search the plethora of articles, a decision tree was created to help determine which articles were relevant to the study. The creation of the decision tree is parallel to the process used

by Ardoin et al., in 2018, in '*Environmental education and K-12 student outcomes: A review and analysis of research.'*

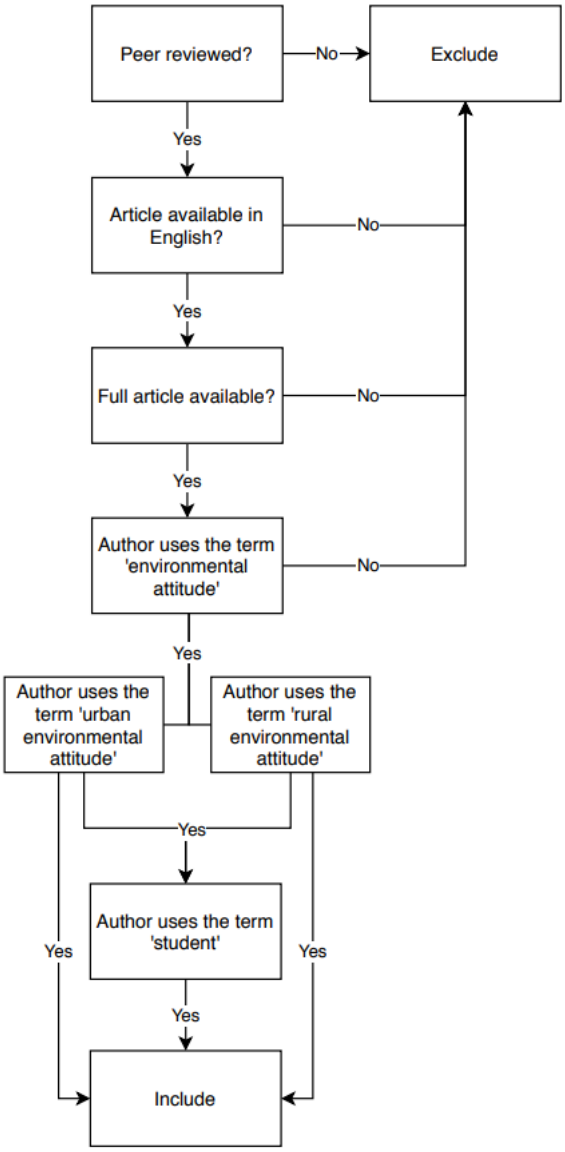

Figure 2: Decision tree to determine which scholarly articles are included/excluded

After creating the decision tree, different terms were used to search for articles. These terms included "environmental attitude", "student", "urban", "rural", "urban environmental attitude", "urban student", "rural environmental attitude", and "rural student,". These terms were used to find a variety of sources that may not include each specific term in the article title. After searching the specific terms, the search was then narrowed down by "peer-reviewed articles",

"full article available", and articles in the English language. It was easier using broader terms because it produced more results. The specific phrase "urban and rural environmental education" was used, but only rendered two results on Academic Search Premier. Articles related to environmental attitudes were the most abundant, with a mixture of studies done on students and adults.

To use the relevant articles, terms necessary to the study needed to be defined. The terms urban and rural first needed to be defined. The United States Census Bureau defines 'urban' as an area of 50,000 or more people. These areas consist of dense, large populations built up, close together. 'Rural' is defined as anything that is not urban. In contrast to urban areas, rural areas are characterized by less dense, sparse populations built at a distance (Ratcliffe et al., 2016).

Results

My literary search included numerous studies from the United States and foreign countries. Although there were studies from all over the world, they all used similar approaches in measuring environmental attitude. There were also very limited results specifically focused on demographic area influencing attitude. A majority of the results focused on environmental knowledge and/or environmental education influencing environmental attitude.

Out of all of the results on Academic Search Premier and Google Scholar, there were only 5 that had information relevant to this study. Four out of the five studies used Likert scale answer options. A Likert scale is a rating scale commonly used for measuring how people feel. For the study methods, there were a variety of questions/statements modeled after well-known attitude measurement models. The Children's Environmental Knowledge and Social Knowledge Scale (CHEAKS) is a two-part questionnaire that has both Likert scale answers and multiple-choice answers. The NEP is a scale that assesses how individuals view environmental issues

(Cordano et al., 2003). This scale can be used to measure environmental attitude and concern. The scale states straightforward questions and statements. For example, one statement on the *New Ecological Paradigm* is "If things continue on their present course, we will soon experience a major ecological catastrophe," (Dunlap et al., 2000). This scale has been used worldwide and in numerous studies because it is a concise, easy to understand measurement of environmental attitudes. The Environmental Attitudes Inventory (EAI) evaluates the multidimensional nature of environmental attitudes. In the relevant articles found, each article used questions or statements either directly from these or similar to them to measure environmental attitudes. Likert scale answers were used because they can be converted into quantitative data. The previous studies

that have analyzed students' environmental attitudes focused on 6th grade to undergraduates.

Name of study	Country/Year	Age	Method
Climate Change Risk Perception among Agriculture Students: the Role of Knowledge, Environmental Attitude, and Belief in Happening	Iran, 2018	Undergraduate students	Survey with Likert scale
A Statistical Analysis of Children's Environmental Knowledge and Attitudes in Turkey	Turkey, 2006	6th, 8th, 10th grade students	CHEAKS questionnaire (Likert scale)
A comparative study of environmental knowledge, attitudes and behaviors among university students in China	China, 2011	Students 16-20 years old	Survey with True, False, and I Don't Know
Secondary Students' Environmental Attitudes: The Case of Environmental Education in Bangladesh	Bangladesh, 2011	Secondary students	Environmental attitude scale with Likert scale
Environmental Attitudes of the 6th Grade Students from Rural and Urban Areas: A case study for Ankara	Turkey, 2004	Students in 6th grade	45 question-questionnaire with Likert scale

Figure 3: Table showing which scholarly articles were included in this study.

Discussion

By analyzing my results, it is clear that environmental attitudes are a complex concept. It may be hard to determine an environmental attitude based solely off of where an individual lives. The 2011 study in China looked at undergraduates from Shanghai which is a very urban area and undergraduates from Gansu, a very rural area. The students ranked environmental issues and answered environmental questions with True/False or I Don't Know. Both groups listed the same environmental issues for the first two but their third listings differed. Shanghai students put

ozone depletion and Gansu students put air pollution. This related to where each group lives. Air pollution is extremely bad in Gansu. Along with this, the two groups differed in environmental knowledge. However, the knowledge only differed by less than a point. Gansu students knew more about soil degradation and water pollution while Shanghai students knew more about litter. For environmental attitudes, only 4 out of the 16 questions had significant difference in answers based on region. The study done in Turkey in 2004 looked at urban and rural 6th grade environmental attitudes found that there was no significant difference in general environmental attitudes between the two areas. It was found that urban students had more environmental awareness for environmental problems.

Overall, it is clear there are not enough studies to strongly support that urban and rural students have different environmental opinions. Numerous studies pointed out that income, age, length of living in the area, gender, and education may influence an individual's environmental attitude. It is clear that using questionnaires with Likert scale modeled answers are the best way to measure an attitude. More studies should be conducted to determine what factors influence attitude the most. It is important to understand environmental attitude because it can help with policy creation, environmental education implementation, and facing current and future climate change impacts.

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