

Article

Exploring the Moderating Role of Environmental Education in Promoting a Clean Environment

Lianfeng Ma ^{1,2,*} , Pomi Shahbaz ³ , Shamsheer ul Haq ³  and Ismet Boz ⁴

¹ School of Finance and Economics, Xi'an Jiaotong University, Xi'an 710061, China

² Planning and Financial Department, Guangzhou Civil Aviation College, Guangzhou 510403, China

³ Department of Economics, Division of Management and Administrative Science, University of Education, Lahore 54770, Pakistan; pomi.shahbaz@ue.edu.pk (P.S.); drshamsheer@ue.edu.pk (S.u.H.)

⁴ Department of Agricultural Economics, Ondokuz Mayıs University, Samsun 55139, Turkey; ismet.boz@omu.edu.tr

* Correspondence: malianfeng@stu.xjtu.edu.cn

Abstract: Environmental education plays a significant role in improving environmental knowledge and shaping the eco-friendly lifestyles of young people. Young people's daily actions and habits will determine the future of the Earth as a planet. The literature regarding youths' environmental knowledge, climate change awareness, environmental attitude, and their impact on pro-environmental intentions and sustainable household consumption practices is very scarce. Therefore, this study explored the relationship between environmental knowledge, climate change awareness, environmental attitude, and the pro-environmental intentions of university students. The study also assessed the moderating effect of environmental education on pro-environmental behavior and sustainable household consumption practices, providing a comparative analysis of students with and without environmental education, which is unique in the literature. The data were collected from 2137 Chinese university students selected through a purposive and random sampling method through survey questionnaires. Descriptive statistics and partial least squares structural equation modeling (PLS-SEM) were used to analyze the collected data. The findings revealed that environmental knowledge, climate change awareness, and environmental attitudes of the students positively affected their pro-environmental intentions. Moreover, pro-environmental intentions also positively affected the adoption of sustainable practices. The result also showed that the impact of pro-environmental intentions on sustainable consumption practices was greater for those whose education included environmental courses than for those whose education did not. Therefore, it is suggested that environment-related courses be incorporated into the study plans of each discipline as a compulsory subject for promoting green intentions and shaping eco-friendly lifestyles for environmental sustainability.

Keywords: environmental education; eco-friendly lifestyles; pro-environment behavior; climate change awareness; environmental knowledge; PLS-SEM



Citation: Ma, L.; Shahbaz, P.; Haq, S.u.; Boz, I. Exploring the Moderating Role of Environmental Education in Promoting a Clean Environment. *Sustainability* **2023**, *15*, 8127. <https://doi.org/10.3390/su15108127>

Academic Editors: Athanasios Mogias, George Malandrakis and Panayota Koulouri

Received: 15 April 2023

Revised: 7 May 2023

Accepted: 11 May 2023

Published: 17 May 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

Human civilization's impact on the earth system, which is seen as a complex and sensitive organism in an unstable balance, is a major worry among politicians and scientists in the modern day. Many people are aware of and concerned about global warming, but fewer realize that human activity is now considerably more powerful, and its impacts may be far more harmful than we currently anticipate [1]. Thus, academics and policymakers believe that encouraging pro-environmental behavior will aid in resolving these issues because many environmental problems are the result of human activity [2]. Households have progressively evolved into a geological force that is profoundly affecting the planet in ways that are greater than those caused by natural forces. These changes have significant ramifications for the earth's trajectory as well as for the Earth's systems and social decision-making. This perspective holds that humanity's most important task is to design a stabilized