

Development and psychometric analysis of a new scale to measure adolescents' social and public commitment for environment

Sofia Santisi, Caterina Primi, Angelo Panno, Luciano Romano, and Maria Anna Donati

To mitigate the effects of climate change, it is urgent humans globally adopt actions that benefit the natural environment. Adolescents can have an important role in this process, as their commitment in social and public pro-environmental behaviors are fundamental in raising awareness among adults and modeling children. Although measurement of youth's environmental commitment is strategic, instruments to that aim, specifically for adolescents, are limited, and most of them focus on a unidimensional set of private behaviors. Our general goal was to provide an instrument that can be used for epidemiologic surveys and to conduct cross-cultural comparisons. This contribution regards the first step of this process, i.e., to develop a brief and multidimensional scale to assess social and public environmental engagement in adolescents, and to analyze its psychometric properties. After a focus group with adolescents to verify the items adequacy, nine items with a Likert response scale (from 1, *strongly disagree* to 5, *strongly agree*) were administered to 1826 Italian adolescents (58.1% males; $M_{age} = 16.40$; $SD = 1.25$). Evidence for a bifactor model with a general factor and two specific dimensions – *Social engagement in promoting pro-environmental behaviors* and *Environmental activism* – was provided. For this reason, the scale was entitled *Scale for Social and Public Environmental Commitment – For Adolescents* (SSPEC-A). Measurement invariance for sex and age was analyzed. Both the general and the specific factors had a good internal consistency. The total score at the scale was negatively correlated with materialism and positively related to climate change worry. Overall, this study provided a new, multidimensional, reliable, and valid brief tool for measuring social public environmental engagement in adolescents. Studies about its cross-cultural invariance are needed to analyze its potentiality in being used in reports and comparisons involving different countries.