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Psychology of Personality: Real and Virtual Context

THE PSYCHOLOGICAL DETERMINANTS OF PROENVIRONMENTAL BEHAVIOR: A STUDY ON THE RUSSIAN SAMPLE

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Abstract

Reducing greenhouse gas emissions and energy consumption are important steps in the fight against climate change. The study of the factors, which determine of proenvironmental behavior, can facilitate the search of the solutions of ecological problems. Proenvironmental behavior, as well as its components and determinants receive a lot of attention from researches across the globe. However, the number of studies on this topic conducted in Russia is fairly limited. Thus, the present article contains the results of the study, which was conducted to identify the psychological determinants of proenvironmental behavior in the field of energy conservation of Russian young men and women. The sample amounted to 197 university students (59 males and 138 females), aged from 17 to 28. Initially, we assumed that proenvironmental behavior in the field of energy saving depends on personality characteristics of an individual and the values they share. Values, personality traits and the components of the time perspective were viewed as the variables important for the subject. The results show that proenvironmental behavior is directly affected by such variables as “universalism: nature”, “security: societal”, “empathy”. Such variables as “stability of emotions”, “positive past”, “social desirability: subject” and “benevolence: caring” have an inverse effect on proenvironmental behavior. The articles also shows the limitations of the study and the research perspectives for the field of proenvironmental behavior.

Keywords: Energy saving, personality, proenvironmental behavior, time perspective, values.

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1. Introduction

Fight against climate change and its consequences is listed among 17 Sustainable Development Goals. They have become the basis of the document "Transforming our world: the 2030 Agenda for Sustainable Development", adopted by UN in 2015. Increased emissions of greenhouse gases leads to climate change. Households account for a significant share of greenhouse gases emissions, stipulated by energy consumption, which makes the end users an important target group of the energy saving cause (Abrahamse, 2007).

Energy saving initiatives are implemented in Russia on federal, regional and municipal levels. However, these problems cannot be solved unless we look at the consumer's personality and their behavior.

2. Problem Statement

Russian researchers are currently paying relatively low attention to the problem of proenvironmental behavior, thus it becomes extremely important to study the determinants of proenvironmental behavior in Russian population.

2.1. Defining proenvironmental behavior and its types

The term proenvironmental behavior is not widely used in Russian psychological discourse. We understand proenvironmental behavior as a set of actions aimed at minimization of negative impact of an individual or a group of people on the environment, as well as energy conservation activities and general environmental friendliness. This type of behavior includes a range of activities aimed at energy consumption minimization (including renewable energy), buying organic (green) products waste management and recycling, participating in environmental campaigns etc.

2.2. Determinants of proenvironmental behavior

The following causes are mentioned among the determinants of proenvironmental behavior more often than others: values and value orientations (Stern & Dietz, 1994; Poortinga et al., 2004; Shmeleva, 2009), self-identification (Van der Werff et al., 2014; Wu & Yang, 2018), purposes and aims (De Groot & Steg, 2009; Lindenberg & Steg, 2007), motivation (Leygue et al., 2017), time perspective (Carmi, 2013; Milfont & Gouveia, 2006), gender (Zelezny et al., 2000), age (Grønhøj & Thøgersen, 2009) etc.

In Schwartz's (1977) Norm Activation Model (NAM), "the personal norm" acquires the central position. It corresponds to moral obligation to perform a certain action of abstain from doing it. Moreover, the described model includes such variables as "problem awareness", "result efficiency" and "responsibility attribution".

The Norm Activation Model has become instrumental for our study, as our questionnaire which is aimed to identify the peculiarities of energy saving behavior in young males and females and their proenvironmental level, uses this methodology.

Russian researches list values among the most important factors in environmental awareness development (Medvedev & Aldasheva, 2001). Such values as "universalism" and "kindness" are mentioned as ecologically significant (Shmeleva, 2009).

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3. Research Questions

Our analysis shows that the determinants of proenvironmental behavior in Russian populations are understudied. On top of that, we currently have no scientifically proven methods of proenvironmental behavior formation.

In this regard, it is considered necessary to:

- identify the content and mechanisms of social and psychological determination of proenvironmental behavior in Russian population;
- expand our knowledge of social and psychological determinants of proenvironmental behavior with regard to energy saving;
- justify the need of further studies of psychological determinants of proenvironmental behavior in Russian population.

4. Purpose of the Study

The study aims to identify the psychological determinants of proenvironmental behavior in the field of energy conservation of Russian young men and women. Initially, we assumed that proenvironmental behavior in the field of energy saving depends on personality characteristics of an individual and the values they share.

5. Research Methods

The study of psychological determinants of proenvironmental behavior in the filed of energy saving was conducted using the following methods:

- Designer's questionnaire aimed at determining the features of energy saving behavior in young men and women the level of its "proenvironmentalism".

The questionnaire can be divided into two parts: the first part gives the respondent's profile (gender, age, study year, faculty), while the second – the peculiarities of their energy saving behavior. The questions in the second part contain statements concerning energy-saving behavior. The respondent has to state, to which degree do they agree or disagree with each of the 11 statements using the 7-point scale (from 1 - "strongly disagree" to 7 – "strongly agree"). The questionnaire has four scales: "Problem awareness" (knowledge of the negative effects of energy use), "responsibility attribution" (attribution of responsibility for the negative effects of energy consumption), "result efficiency" (actions aimed at reducing the amount of energy consumed), "personal norm" (reflects the degree of moral responsibility to perform a certain action or to abstain from it). The first two scales manifested reliability (Cronbach's alpha) of 0.75, whereas the 'personal norm' scale showed 0.84. These results are quite high for using the scale. The 'result efficiency' scale got Cronbach's alpha of 0.4, which made us exclude it from subsequent analysis.

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- For the study of personality traits, we used the Big Five Questionnaire-2-R (as adapted by E. Osin et al.).
- We used Zimbardo Time Perspective Inventory (ZTPI) (as adapted by A. Syrtsova, E. Sokolova and O. Mitina), to diagnose the relations of an individual to the time continuum.
- We used Portrait Values Questionnaire-Revised-2R S. Schwartz to measure the values.

The sample amounted to 197 people (59 males and 138 females), aged from 17 to 28 (M = 18,4, SD = 1,3). The majority of the subjects were university students who volunteered to participate in the study as part of their course of psychology. The students got additional points as a reward. The questionnaire was computer-based and conducted in the university lab.

Based on the results obtained, we studied the regressional dependence between personal traits, values, time perspective and proenvironmental behavior in the field of energy saving. Find this dependence we applied the method of multiple regression analysis (step sampling method).

6. Findings

To identify the psychological determinants of proenvironmental behavior in the field of energy saving we relied on multiple regression analysis (step sampling method) (R = 0.557; R2 = 0.311; F = 27,291; p ⩽0.001) (Table 01). Since multiple determination coefficient R2 = 0.311, is means that 31% of dispersion of proenvironmental behavior in the field of energy saving is determined by the variable given above.

This statistical method allowed to study the combined effect of independent variables (personal traits, values and time perspective) on the dependent variable (proenvironmental behavior in the field of energy saving).

Table 01. Multiple regression analysis results. Values of final regression model coefficients

Determinants	B	Std error	β	t	p
(Constant)	22.200	4.584		4.843	.000
Universalism: nature	2.086	.237	.487	8.819	.000
Stability of emotions	-.201	.094	-.090	-2.131	.034
Security: societal	.628	.184	.167	3.423	.001
Positive past	-2.759	.838	-.142	-3.292	.001
Empathy	.322	.124	.121	2.597	.010
Social desirability: subject	-.257	.110	-.101	-2.344	.020
Benevolence: caring	-.561	.273	-.111	-2.053	.041

Proenvironmental behavior in the field of energy saving is directly influenced by the following variables: “universalism: nature” (β = 0.487, p = 0.000), “security: societal”(β = 0.67, p = 0.001), “empathy” (β = 0.121, p = 0.010) and inversely related by the following variables: “positive past” (β = -0.142, p = 0.001), “benevolence: caring” (β = -0.111, p = 0.041), “social desirability: subject” (β = -0.101, p = 0.020) and “stability of emotions” (β = -0.090, p = 0.034).

Thus, proenvironmental behavior is significantly affected by such values as “universalism: nature”, “security: societal” and “empathy”. According to Schwartz (1977), “universalism” already includes two

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points, which are directly related to environmental issues. No wonder that this value is the strongest initiating cause of proenvironmental behavior. Schultz and Zelezny (1999) have developed two separate scales for measuring "universalism" value. One scale included the points containing questions on the environment, whereas the second did not contain such questions. These results make us claim that the "universalism" value (questions on environment excluded) significantly contributes to environmental concern prediction.

We have also identified the inverse effect of "positive past" on proenvironmental behavior. Negative perception of the past makes the person change their present and future and focus more on achieving the set goals. These results are consistent with findings of other researches, who also claim that there is no significant impact of "past" temporal orientation on proenvironmental behavior and attitudes (case example of water-saving) (Corral-Verdugo et al., 2006; Valizadeh et al., 2018).

Thus, in order to develop proenvironmental behavior in the field of energy saving, it is important to teach young people to be conscious users of the planet's resources. They also need to cherish the nature, be aware of the needs of others and strive to maintain social stability. "Proenvironmental" individual is emotional, compassionate and capable of empathy. Berenguer (2007) also disclosed the connection between empathy and environmental behavior. Namely, the participants who showed higher empathy levels also demonstrated higher concern for environment.

7. Conclusion

Our study focused on the study of psychological determinants of proenvironmental behavior in young Russian males and females. The retrieved data shows the importance of values, personality traits and the components of the time perspective for proenvironmental behavior analysis. The regression model allowed us to identify the psychological determinants of proenvironmental behavior in the field of energy saving in young Russian males and females. These values are "universalism: nature", "security: societal", "benevolence: caring" (reverse impact). Important personality traits here are "empathy", "social desirability: subject" (reverse impact), "stability of emotions" (reverse impact), the components of the time perspective "positive past" (reverse impact).

The results obtained provide a basis for the development of psychological programs aimed at proenvironmental behavior formation in the field of energy saving. Such programs can later be used in educational institutions of different levels as well as in pubic and private companies.

It should be noted that this study has certain limitations which do not allow us to make generalizations. Among these limitations are age uniformity and gender misbalance in the participants. Later studies of determinants of proenvironmental behavior should be conducted in populations of varied professional and age groups or within the framework of a longitudinal study, in which we can note the dynamics of proenvironmental behavior formation.

Apparently, Russia is currently only beginning to explore the determinants of proenvironmental behavior. Further inquiry into this issue, studies on other age, professional and social groups in other regions of the country shall give us a better understanding of the nature of a "proenvironmental" individual.

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