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## ABSTRACT

One of the main requirements of modern society, and for the sake of its survival, is the formation of socially responsible behavior towards the greatly endangered environment. Every day we are faced with the problems of pollution, global warming, depletion of the ozone layer and many others. Therefore, it is of paramount importance to influence the youngest generations to develop attitudes that will develop a high awareness of the need to protect nature and how to treat it. In this sense, today, and for the sake of the future, we must actively work on the development of pro-environmental attitudes in children, which would manifest themselves in pro-environmental behavior tomorrow. The development of this cognitive component, that is, the attitude requires the society to instil in the child knowledge about nature, its benefits, but also its demands and the inseparability of man from it, which affects the child's affective relationship towards it, the feeling of attachment to the environment that becomes an integral part of values. With their conative component, attitudes also initiate individuals to act. This especially necessary during the current COVID-19 pandemic and the unresolved question of the origin of the virus. Was it created artificially in laboratories or is it of natural origin, as nature's response to man's relationship to it. Some studies show that children in the first grades of elementary school understand the phenomenon of environmental pollution, they even know about different types of pollution, but they still do not understand the causes of these events. Therefore, although there is not much research dealing with this problem, we consider it important to analyse current knowledge about the psychological factors influencing the development of pro-environmental attitudes in children.

**Key words:** *pro-environmental attitudes, pro-environmental behaviour, identification, self-efficacy*

## **INTRODUCTION**

Early childhood experience significantly affects the formation of personality in general, including the formation of attitudes that will govern the behaviour of an adult. Therefore, different socialization agents, such as family, kindergarten, school, etc., have their own role in this process. They are the ones who instil in the child information that will be the foundation for the formation of a future attitude, and who are role models for the child with their personal example of pro-environmental behaviour. The processes of identification with authorities and introjection of their values allow children to develop motivation to establish functional adaptive behaviours towards the environment. This affects the formation of beliefs and values that have an even greater intentional power than the attitudes themselves. Beliefs can be acquired in different ways, but they are mainly the result of the interaction between the environment and the personality traits of the individual who acquires them (Poškus, 2017). The beginning of everything is perception and the way an individual sees things. Schumm and Bogner (Schumm, Bogner, 2016) find a positive correlation between the perception of the environment and acquired knowledge about the environment. Perception is largely conditioned by the attention that is directed to interesting content. Therefore, environmental content should be presented in the most interesting way possible. Also, the development of a sense of self-efficacy, as a personal belief in the ability to establish control over the level of efficiency of

personal action and control over events that affect our lives, with adequate information about the impact of those events, contributes to the development of pro-environmental behaviour. That feeling of self-efficacy is, in itself, a significant motivational element. Another important aspect is the individual factor of connection with nature, because this connection greatly contributes to the development of pro-environmental attitudes and values, creating a positive emotional relationship of the child towards it. Guiding the child towards desirable activities can lead to the formation of habits (as repeated actions) which will result in pro-environmental actions in the future, in the behaviour pattern of the individual. Self-categorization in peer groups, in which pro-environmental behaviours prevail, can play a role in the formation of a "pro-environmental" specific identity at the moment of identity formation.

A number of factors influence the development of pro-environmental attitudes. In the literature, attitudes towards the environment, knowledge about environmental topics, and individual properties such as gender, culture, level of education, political beliefs, etc. are mostly emphasized (Evans et al, 2018). At least two of these factors directly represent the results of learning and experience. Early childhood represents the period of the most intensive learning, so we can expect that values and behavioural patterns related to environmental protection take place intensively in this period.

## **PRO-ENVIRONMENTAL ATTITUDES AND PRO-ENVIRONMENTAL BEHAVIOR**

Pro-environmental attitudes can be defined as a predisposition and prerequisite for pro-environmental behaviour. The authors (Hines et al.: Eilam, Trop, 2012) state that pro-environmental behaviour is an intention to act and as a step towards acquiring pro-environmental behaviour.

Environmental behaviour is a reflection of man's attitude towards nature. This behaviour can be understood as a dimension that ranges from hostile behaviour towards the

environment, through controversial or inconsistent environmental behaviour to a pro-environmental attitude towards the natural environment (Krajhanzl, 2010).

Pro-environmental behaviour is a prerequisite for preserving a healthy environment, but also for establishing sustainable development as a process that strives to establish a balance between social, environmental and economic requirements (Mitrović, Mitrović, 2020). It can be defined as

"behaviour intended to benefit the environment, while pro-environmental behavioural intentions refer to the desire to engage in actions related to the preservation of the environment in the future" (Weimer et al, 2017). Pro-environmental behaviour aims to reduce negative effects on the environment. There is a high probability that a person who has pro-environmental attitudes will also exhibit such behaviour, but this connection need not be direct or consistent. Someone can be careful when using the amount of water and thus show pro-environmental behaviour. This, however, does not mean that the behaviour is caused by a pro-environmental attitude, this person may in fact just be someone who does not want to pay for water use. In addition, one of the main obstacles to behavioural change is that many environmental issues are essentially social dilemmas in which the conflict between immediate individual and long-term collective interest is resolved (Palomo-Velez et al., 2020).

## **PRO-ENVIRONMENTAL EDUCATION**

The goal of environmental education is to familiarize children with the need to take care of the environment by providing them with opportunities and contents that promote pro-environmental behaviour. Clayton and Myers (Clayton, Myers, 2009) emphasize that the success of pro-environmental education depends on the child's knowledge of biology and ecology, the level of cognitive development, affective factors resulting from the level of the child's connection with nature, as well as motivation, above all, the level of self-efficacy. In general, we can talk about two different approaches to environmental behaviour: anthropocentric and ecocentric (Alagoz, Akman, 2016). The anthropocentric approach is oriented towards man and his needs and is close to an egocentric attitude, while the ecocentric approach emphasizes the importance of balance in nature and the survival of not only man, but also all other living beings, which represents an altruistic orientation aimed at the conservation and protection of natural resources (Shumm, Bogner, 2016).

Research by Boeve and Petegem (Boeve-de Pauw, Petegem, 2011) shows that knowledge about the environment is negatively correlated

The most famous theory of pro-environmental behaviour was given by Stern (Stern: Goldman et al, 2020). According to him, a comprehensive model should include: *individual value-oriented variables* such as attitudes, norms, beliefs, goals, which in the educational sense correspond to the goals of affective learning; *individual abilities* that include the knowledge and skills required to act in accordance with the goals of cognitive learning; *contextual factors* that include opportunities and limitations, aspects of the social and physical environment such as material resources, technology, legal regulations, etc.; *habits* as a result of accumulated experiences of previous behaviours. Hansmann and Steiner (Hansmann, Steimer, 2017) add to this social factors such as position, roles, group dynamics, etc.

There is an interdependence among these factors and their intercorrelations result in a certain type and measure of pro-environmental behaviour.

with an egocentric attitude towards the environment. Research conducted with preschool children aged five to six (Kahriman-Ozturk et al., 2012) showed that in explaining their reasons for pro-environmental actions most children still express anthropocentric attitudes. The authors explain this by the fact that children of this age belong to Piaget's preoperational stage of cognitive development, which is still characterized by a dominant egocentrism that prevents them from seeing things from the perspective of the external environment.

After investigating different samples of young children, some authors (Khan: Evans et al., 2007) find that there is a significant degree of agreement in moral reasoning about different environmental topics among children belonging to different cultures and social statuses. The same authors conclude that children clearly identify and recognize environmental issues and that between the age of six and eight there is a shift from an anthropocentric understanding to an understanding of the impact of abuse of the environment and the damage caused by that abuse. These pro-environmental tendencies are profiled by the eleventh year of life. Such results

are in agreement with Piaget's findings, who points out that egocentrism, as a developmental phase, turns into a more socialized behaviour after the age of six. However, based on research conducted in our country, in which primary and secondary school students were compared (Jovanović, Živković, 2016), the authors conclude that students of these age groups do not differ in terms of pro-environmental behaviour, which they believe is the consequence of the curricula that are primarily focused on acquiring environmental knowledge, and not on the development of moral and affective segments of personality. One of the goals of pro-environmental education is the acquisition of environmental awareness. "Environmental awareness, in addition to knowledge about changes in nature caused by human action, also contains understanding about the possibilities and ways of solving environmental problems" (Bulatović et al., 2019). Therefore, curricula should include pro-environmental content, acquisition of skills and ways of mastering what the student should know and how to acquire skills for pro-environmental action (Kos et al., 2016). Various authors agree that there is no difference between cognitive and affective learning, i.e., learning in the classroom and outside of it, and learning activities should be designed to allow for different classroom and outside of classroom experiences (Pittman, 2012). The physical design of the school has its own

influence on learning. Gifford et al. (Gifford et al., 2011) emphasize that there are differences between small and big schools because big schools have a greater variety of activities, but they also highlight that students from big schools primarily learn as observers, while students from smaller schools, which lack some resources, learn as participants and also acquire more skills through direct involvement in the activities.

Therefore, the perfect learning situations are those in which students can participate, communicate, develop critical thinking skills, develop creativity and an ethical attitude towards decision-making in solving environmental problems (Wals et al, 2014).

This can also allow for the development of self-efficacy in children, which is a good basis for the adoption of certain behavioural models. The theory of planned behaviour predicts the control of perceived earlier behaviours, which indicates that those that the individual perceives to have performed successfully will be more likely to be adopted, which is the basis for feelings of self-efficacy (Yadav, Pathak, 2016). Therefore, children should not only be passive recipients of information (Kos et al., 2016) on how to behave pro-environmentally, but should be provided with opportunities to play an active role in the independent acquisition of knowledge that will allow them to understand the impact of their activities on the environment.

### **FACTORS AFFECTING THE FORMATION OF PRO-ENVIRONMENTAL ATTITUDES**

There are a number of factors that influence the formation of pro-environmental attitudes and, consequently, pro-environmental behaviour. The results of the research that analysed the correlation between gender and pro-environmental attitudes give contradictory and weaker correlations, but in general, if significant differences were shown, they speak in favour of girls showing more pronounced pro-environmental attitudes (Schumm, Bogner, 2016). Research on the influence of mother, as a figure who by nature has a protective relationship, also does not provide consistent results or significant correlation with pro-environmental behaviour. One extensive study

of pro-environmental attitudes and pro-environmental behaviour, with children aged six to eight, was conducted by Evans et al. (Evans et al., 2007). Their research shows that children of this age express desired environmental attitudes and strive to behave in an ecologically and socially responsible way. They reliably report pro-environmental attitudes and behaviours, but have a low level of commitment to engage in various activities. The authors attribute this to methodological causes, suggesting that it is necessary to design more challenging environmental situations and behaviours in which children of this age could engage. Evans' later longitudinal research

(Evans et al, 2018), however, shows that early experiences in nature, around the age of six, as well as time spent in nature in childhood, along with a good education, are significant predictors of pro-environmental behaviour in later adolescents because they lead to the formation of connections between the child and nature, which later results in specific behaviour. Moreover, experience that children have in the wild, such as scouting activities, are more likely to be predictors of pro-environmental behaviour than experiences in tamer natural conditions, such as gardening. The same research also shows that children who grew up next to mothers who expressed pro-environmental attitudes and behaviours show significant changes in pro-environmental behaviour, compared to other peers, after the age of twelve, which is explained by the maturation of the child. Parents have the main and special influence on the development of their children. Gronhoj and Thogersen (Gronhoj, Thogersen, 2012) find that in the comparison of pro-environmental attitudes and pro-environmental behaviour, it is the behaviour that is positively correlated with the child's pro-environmental behaviour. This shows the importance of the parents' personal example, especially considering that children primarily identify with what is obvious. Trying to test the hypotheses of parental role and parental status, and the question of whether having a child increases the frequency of expressing pro-environmental behaviour, Thomas et al. (2018) conclude that this behaviour is manifested more often only by those parents who had their first child, but who in the past also expressed a high level of concern for environmental issues. Other research, however, shows that parents whose

families are larger have greater knowledge about the environment and have more positive attitudes about its preservation (Palomo-Velez et al., 2020).

The same authors advise promoting messages to children that would encourage parents to think about the negative consequences of not acting towards nature protection. Locus of control as a predictor of individual activities also affects pro-environmental behaviour. Individuals with an internal locus of control, who realize that the causes of their behaviour are within themselves and that a change in behaviour also changes the environment, more often behave in an environmentally responsible manner, while individuals with an external locus of control and the belief that nothing depends on them, that everything is a matter of coincidences and fate are less likely to see the consequences of their behaviour (Weimer et al., 2017).

Therefore, we can assume that children with an internal locus of control will more easily adopt pro-environmental attitudes. Talking about the influence of school on pro-environmental behaviour, some authors talk about "situational strength" which refers to the degree of presence of pro-environmental signs, as associative elements, which both teachers and students could perceive and understand in a similar way (Runhaar et al, 2019). In a "powerful situation" there is an abundance of associative cues that send an unambiguous message and exert psychological pressure to exhibit the desired behaviours. Procedural matters and activities are aligned here. If there is no such compliance, then ambivalence and ambiguity about the expected behaviour occurs, which creates a "weak situation".

## **CONCLUSION**

The modern way of life and the trends it brings require intensified care for the preservation of the environment. The entire development of man occurs as a striving for balance through the processes of accommodation and assimilation, i.e., the adaptation of man to the environment, as well as the environment to the man himself in order to survive in it. T adjustments should be balanced, because many times throughout

history, man has expressed the desire not only to use, but also to abuse nature, which has led to a serious imbalance that, in the end, endangers man himself. Therefore, it is of crucial importance to promote various types of pro-environmental behaviours. The prerequisite for this is to learn and establish pro-environmental attitudes and beliefs from early childhood, as a predisposition for this kind of

behaviour. Considering the sequence of children's cognitive development, their understanding goes through different stages and requires maturation in order for the behaviours to manifest in the desired way. Precisely because of this, in the process of pro-environmental education, children should be allowed to participate in numerous activities during which they will directly try out pro-environmental

behaviour's and directly perceive their effects. In this way, starting from the fact that children will behave pro-environmentally because adults ask them to do so and because it is socially desirable and often rewarded, children can acquire the intrinsic values of pro-environmental behaviour through the learning process, which will, consequently, make it continuous and effective.

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## SAŽETAK

Један од кључних захтева модерног друштва, а зарад његовог опстанка, јесте формирање социјално одговорног понашања према увелико угроженој животној средини. Свакодневно се срећемо са проблемима загађења, глобалног загревања, смањења озонског омотача и многим другим. Стога је од превасходног значаја утицање на најмлађе генерације да развију ставове који ће доприносити високој свести о потреби заштите природе и начину опхођења према њој. У том смислу данас, а зарад будућности, морамо активно радити на развоју проенвиromенталних ставова код деце који би се сутра манифестовали у проенвиromенталном понашању. Развој когнитивне компоненте става захтева од околине усађивање знања детету о природи, њеним благодетима, али и њеним захтевима и нераздвојности човека од ње, што утиче и на успостављање афективног односа детета према њој, осећања привржености животној средини која постаје саставни део вредности. Ставови са својом конативном компонентом иницирају и деловање индивидуе. Ово се посебно истиче као потреба у садашње време пандемије КОВИД-19 и неразрешеног питања порекла вируса. Да ли је он настао вештачки у лабораторијама или је природног порекла, као одговор природе на однос човека према њој. Нека истраживања показују да деца у првим разредима основне школе разумеју феномен загађења животне средине, чак знају и за различите врсте загађења, али још увек не спознају узроке тих дешавања. Стога, иако нема много истраживања која се баве овим проблемом, сматрамо значајним анализу садашњих сазнања о психолошким факторима утицаја на развој проенвиromенталних ставова код деце.

**Кључне речи:** *проенвиromентални ставови, проенвиromентално понашање, идентификација, самоефикасност*

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