

University of Sopron
Faculty of Forestry

Doctoral (PhD) Dissertation Theses

NATURAL ENVIRONMENTAL SOCIALIZATION OF
CHILDREN LIVING IN CHILD PROTECTION CARE

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2.1. Relevance of the topic

Child protection foster care has gained increasing social and scientific importance in recent years, as children growing up in state care often face complex psychosocial problems, emotional trauma, and deficits in socialization. Institutional upbringing, despite the best intentions, is often unable to fully replace the emotional and relational functions of the family environment. This may have long-term negative consequences for mental health and the chances of social integration. Consequently, there is a growing need for complex, preventive, and compensatory pedagogical approaches that respond specifically to the needs of this vulnerable group.

At the same time, the role of environmental education has become increasingly valued, particularly with the spread of experience-based and emotionally engaging pedagogical approaches that support mental well-being. Disconnection from the natural environment—common among children living in deprived circumstances—may further increase anxiety, emotional instability, and deficiencies in coping strategies. However, international research clearly demonstrates that contact with nature strengthens resilience, reduces stress, and positively influences emotional regulation and the development of social competences.

The relevance of the topic is further reinforced by the fact that environmental education within the Hungarian child protection system remains marginal and insufficiently explored at the systemic level. Although good practices exist, their scientific analysis and impact assessment are limited. Therefore, it is justified to examine the role that environmental education may play in supporting emotional security, internal locus of control, and social integration among children living in state care.

3.2. Research Objectives

The aim of the research is to examine how the absence or presence of the natural environment influences the environmental attitudes of

children living in child protection care, as well as their psychosocial characteristics, with particular attention to academic performance, social relationships, anxiety levels, and resilience.

In addition to analyzing the characteristics of children, the research also explores institutional and human factors within the child protection system, especially professionals' attitudes toward environmental education. The study also aims to lay the foundations for development-oriented environmental education programs.

Another objective of the research is to map the environmental attitudes and educational practices of adults working in child protection, based on the assumption that children's relationship with nature is significantly influenced by the value systems transmitted by adult role models and the institutional environment.

4.3. Research Hypotheses

Hypotheses concerning children living in child protection care

H1: Child rights regulations—both national and international—do not make the right to access nature sufficiently explicit, even though the psychosocial benefits of time spent in nature are scientifically proven.

H2: It can be assumed that in both Hungarian and the international literature the relationship between children's connection to nature in child protection care and their psychosocial and career-orientation outcomes appears primarily in the form of good practices, program descriptions, and policy documents, while empirical studies exploring complex relationships remain limited.

H3: The environmental attitudes of children living in child protection care are moderately positive but lower than those of children raised in families. Children growing up in institutions emphasizing nature-oriented lifestyles show more positive attitudes and richer natural science knowledge than those living in urban institutions far from natural environments.

H4: In the structure of environmental attitudes among children in child protection care, cognitive and affective components dominate, while

the conative (behavioral) dimension is underrepresented, indicating a gap between attitudes and behavior.

H5: In the leisure activities of children in child protection care, access to natural environments is less frequent, less autonomous, and emotionally less rich than among their peers living in families. Consequently, their natural science knowledge is more fragmented, their experiential base is narrower, and their environmental attitudes more rule-based than rooted in experiential attachment. This effect is stronger in Hungarian than in Romanian institutions.

H6: Children living in institutions with a nature-oriented approach show lower levels of anxiety and more positive environmental attitudes than those living in institutions lacking such an orientation. Children with positive environmental attitudes also show significantly lower anxiety levels than those with negative attitudes.

H7: A higher proportion of resilient children can be found in institutions providing a nature-oriented lifestyle than among those living in environments isolated from nature. Children with more positive environmental attitudes demonstrate significantly higher resilience.

H8: Children with better academic performance display more positive environmental attitudes, broader interests, and greater openness toward natural and social phenomena than lower-performing peers.

H9: Children with deeper and more detailed knowledge of natural sciences demonstrate more positive environmental attitudes than less informed children.

H10: The time spent in child protection care is inversely related to children's environmental attitudes: the longer a child remains in care, the weaker their environmental attitude becomes.

Hypothesis concerning professionals

H11: Professionals working in child protection generally have positive and emotionally committed environmental attitudes; however, these are not always supported by sufficient ecological knowledge or consistent action practices. According to their perception, environmental

education is underrepresented at the institutional level, mainly due to human resource factors (preparedness and workload). Nevertheless, many professionals are open to further training, indicating realistic opportunities for development.

Hypothesis concerning the model

H12: It is assumed that a nature-based environmental education model integrated into the daily operation of children's homes—through regular contact with nature, reflective learning, action-oriented participation, and resilience-strengthening practices—positively influences children's environmental attitudes, the integration of their natural science knowledge, and their psychosocial adaptation.

5.4. Research Methods

The research employed a mixed-methods approach combining quantitative and qualitative data collection and analysis procedures in order to interpret the investigated phenomena comprehensively.

Quantitative methods were used to explore measurable aspects of environmental attitudes, anxiety, and resilience and to examine their statistical relationships. Qualitative methods enabled deeper understanding of institutional and human factors within child protection services, particularly the attitudes and experiences of professionals.

To assess children's environmental attitudes, age-specific questionnaires were developed covering four age groups: preschool, lower primary school, upper primary school, and secondary school students.

For preschool children, a semi-structured measurement tool in the form of a picture-supported booklet with storytelling elements was developed to examine cognitive, affective, and behavioral dimensions of environmental attitudes. Data collection was conducted individually in a safe environment through interview-based administration using a standardized scoring system. Due to mental and psychological limitations in this age group, however, only a limited number of

evaluable responses were obtained; therefore, the results for this group were not included in further analysis.

Questionnaires for school-aged children included demographic information, learning habits, relationship with nature, concrete natural science knowledge, and Likert-scale measurement of environmental attitudes. Open-ended questions were analyzed through qualitative content analysis, while closed items were processed using quantitative statistical methods.

Standardized psychological instruments were applied to examine psychological characteristics. Anxiety levels were measured using the Hungarian adaptation of the Spielberger State–Trait Anxiety Inventory for Children, while resilience was measured using the GYIRM-25 scale (and GYIRM-20 in the control group). Resilience was assessed only among upper-primary and secondary school students in accordance with the age validity of the instrument.

Children’s responses were complemented by observations and informal conversations. Educators were also involved in clarifying demographic and life-history data in order to reduce subjective bias.

Semi-structured interviews were conducted with child protection professionals as a qualitative method. These interviews focused on cognitive, affective, and conative components of environmental attitudes, institutional practices, barriers to environmental education, and openness to further training.

6.5. Research Results

The academic performance, connection to nature, natural science knowledge, and psychological characteristics (anxiety and resilience) of children living in child protection care are closely related to the quality of the educational environment and the accessibility of direct nature experiences. Their school performance in both countries moderately lags behind that of children living in families, although the averages are somewhat more favorable in Hungarian children’s homes. Significant differences can be observed in access to nature: institutions in Romania more frequently provide a nature-oriented lifestyle, while

in Hungary leisure time is more often dominated by digital activities. In both countries, children living in families have richer and more emotionally meaningful nature experiences. Natural science knowledge within the child protection sample is heterogeneous and largely experience-based, while it lags behind the family-based control group particularly in conceptual and theoretical domains.

When psychosocial indicators are examined in an integrated manner, the results show that the lower primary school years represent a sensitive period for the development of coherent and positive environmental attitudes. By adolescence—especially within the child protection context—the behavioral (conative) component remains persistently underdeveloped: knowledge and positive attitudes do not, or only to a limited extent, translate into actual behavior. Age-related fluctuations in anxiety and levels of resilience together outline vulnerable developmental transitions: in preadolescence, the child protection population is characterized by higher anxiety, more limited opportunities for action, and a more fragmented attitude structure. Independence analyses indicate that environmental attitude is most strongly associated with resilience, more weakly with natural science knowledge, and even more weakly with academic performance and anxiety; thus, it functions more as a psychosocial resource than as a direct predictor.

All of this points to the key conclusion that, within the child protection context, the development of environmental education cannot be limited to the mere transmission of knowledge or the strengthening of attitudes. Real opportunities for action, regular and structured nature-based programs, autonomous decision-making situations, and emotionally secure relationships together create the conditions in which positive environmental attitudes can translate into actual behavior, while simultaneously strengthening resilience and reducing psychological strain among young people living in child protection care.

Most professionals working in child protection institutions consider environmental education and time spent outdoors to be important. They demonstrate strong emotional commitment to nature conservation and

possess basic cognitive knowledge about environmental issues. However, this is only partially reflected in everyday practice: children participate in relatively few outdoor activities, which are mostly spontaneous and poorly structured. Excursions and targeted environmental programs are rare, and a significant proportion of staff members do not lead such activities at all during a given month. Environmental education is mainly implemented at the level of practical everyday habits (selective waste collection, energy conservation, not littering) and experience-based programs (excursions, caring for animals and plants), while systematic, theoretical knowledge receives less emphasis.

Implementation is primarily hindered by organizational, resource-related, and motivational barriers (lack of time and staff, insufficient funding, absence of institutional priorities, and colleagues' passivity), meaning that positive attitudes often cannot be translated into action. The sample also reflects a highly feminized and aging professional workforce, along with staff turnover, which further increases workload pressures. At the same time, it is encouraging that approximately half of the staff are explicitly open to further training in environmental education, while another portion show conditional interest. Overall, professionals provide a good starting point at the affective and basic cognitive levels; however, structured environmental education at the institutional level requires stronger organizational support, methodological training, and more stable resources

7.6. Conclusions

The developmental, psychosocial, and environmental indicators of children living in child protection care (academic performance, environmental knowledge, attitudes, anxiety, and resilience) can be interpreted as an interconnected system strongly influenced by the form of upbringing, access to nature, and developmental transitions related to age. Students living in children's homes show more vulnerable academic performance and resilience; their environmental knowledge is often experience-based but conceptually fragmented, while their environmental attitudes are generally positive. At the same time, a

pronounced “attitude–behavior gap” can be observed: favorable cognitive and emotional orientations do not always translate into actual environmentally responsible behavior. Regular, everyday access to nature—particularly in nature-oriented institutional contexts—can play a protective role: it supports resilience, has a mildly protective effect against anxiety, and is associated with more positive environmental attitudes. However, its effect is not deterministic but operates in interaction with other psychosocial factors.

Among professionals working in child protection, strong and predominantly positive environmental attitudes and value commitments can be identified; however, their practical implementation is fragmented, inconsistent, and carried out within heavily constrained organizational frameworks. While the cognitive and affective components are favorable (professionals are aware of and consider environmental education important), the conative dimension—the consistent translation of attitudes into everyday action—remains weak, primarily due to logistical, resource-related, and workload-related barriers. A significant proportion of professionals are open to further training in environmental education, indicating considerable development potential. For environmental education to become more effective, institutional-level commitment, the integration of structured and regular nature-based programs, and strengthened methodological support are essential so that the existing positive attitudes can be transformed into practices that genuinely support children’s natural socialization, resilience, and long-term well-being.

8-7. Theses

Theses Concerning Children Living in the Child Protection System

T/1. Based on the results of the research, it can be concluded that legislative amendment is justified in order to explicitly state that: “Every child has the fundamental right to spend quality time in the natural environment, which supports their healthy physical, mental, intellectual, and moral development.”

T/2. Based on a review of Hungarian and international literature, it can be concluded that there are currently no comprehensive, empirically grounded research results that systematically demonstrate the complex, indirect relationships between the connection to nature, environmental attitudes, psychological well-being, social competences, and career- and work-socialization outcomes of children and young people living in child protection care. The available international sources mainly consist of good practices, program descriptions, and policy documents, which indicates a significant research gap and justifies the empirical testing of the hypothesis.

T/3. The results of our research indicate that the environmental attitudes of children living in child protection care consistently lag behind those of their peers raised in families, although both groups fall within the moderately positive range. It has been confirmed that child protection institutions providing nature-oriented environments and regular outdoor activities demonstrate higher environmental attitude scores, more differentiated natural science knowledge, and a less pronounced decline in attitudes during adolescence.

T/4. Our investigations show that the structure of environmental attitudes among children living in child protection care becomes increasingly differentiated along the developmental trajectory. While cognitive and affective components maintain stable dominance, the conative (behavioral) dimension systematically lags behind. The persistent underdevelopment of the conative component is not merely the result of motivational deficits but also reflects structural characteristics of institutional functioning. It can be purposefully developed through expanding opportunities for experiential learning, self-regulation, and practical environmental action.

T/5. Based on the results of the investigations, it can be concluded that a positive environmental attitude is not merely an emotional orientation but also a learning resource that supports the accumulation and retention of natural science knowledge. However, its effect is indirect and manifests most strongly through the structural characteristics of the educational context. Accordingly, children with more detailed and

deeper natural science knowledge are more likely to display more positive environmental attitudes. At the same time, the role of attitude is modulatory rather than deterministic, operating primarily through the mediation of motivational, emotional, and cognitive engagement.

T/6. It can be concluded that a positive orientation toward nature is associated with reduced anxiety; however, the magnitude of this effect is not sufficient for it to be considered an independent predictive factor. Using mathematical statistical methods, it was found that the strength of pairwise relationships is detectable but weak. Hungarian and Romanian values are similar both in child protection settings and in family contexts.

T/7. In light of the results, it can be concluded that children's environmental attitudes are not merely cognitive or emotional orientations but also represent a resilience-supporting personality dimension, the strengthening of which is measurably associated with the development of coping skills. This thesis therefore highlights that everyday access to nature and environmental education not only foster ecological awareness but also have a psychological protective effect. Consequently, they should be considered integral rather than optional elements of resilience-development practices in child protection institutions.

T/8. Our results indicate that environmental attitude functions not as a primary determinant but as a supportive, context-dependent resource for academic success, particularly in life situations where structural and emotional support factors (family background, stable relationships, cultural capital) are more limited. Furthermore, it can be concluded that a positive environmental attitude is not merely an emotional orientation but also a learning resource that supports the accumulation and retention of natural science knowledge; however, its influence is indirect and manifests most strongly through the structural characteristics of the educational context.

T/9. Our investigations demonstrate that there is a consistent positive relationship—though not a deterministic one—between children's

environmental attitudes and the depth of their natural science knowledge. Children possessing more detailed natural science knowledge are typically accompanied by more positive environmental attitudes. However, this relationship is primarily modulatory and supportive in nature: environmental attitude is not a primary determinant but rather an indirect resource in the development of knowledge. The strength of this relationship varies depending on the educational context and is more pronounced in more structured and supportive environments (family upbringing), while among children living in child protection care the relationship appears weaker but directionally consistent.

T/10. The research results partly confirm the assumption that the length of time spent in child protection care is negatively associated with children's environmental attitudes. At the same time, they indicate that this relationship is not determined solely by duration but rather by the degree of nature orientation within the institutional environment.

Theses Concerning Professionals

T/11. The results indicate that the majority of professionals working in child protection services consider environmental education and children's time spent outdoors to be important and demonstrate positive environmental attitudes at both affective and cognitive levels. However, emotional commitment and basic environmental knowledge alone do not result in regular and conscious environmental education practices among professionals in the child protection system, because the conative (behavioral) dimension remains weak due to structural, resource-related, and workload-related factors. At the same time, the considerable—though conditional—willingness of professionals to develop suggests that, with appropriate institutional support, time allocation, methodological background, and opportunities for further training, attitudes can be effectively transformed into consistent pedagogical practice.

Thesis Concerning the Model

T/12. A nature-based environmental education model integrated into the daily operation of children's homes has been developed. This model not only contributes to shaping environmental attitudes but also exerts a complex developmental effect on the integration of children's natural science knowledge and their psychosocial adaptation. The approach—built on regular contact with nature, reflective learning, action-oriented participation, and resilience-strengthening practices—creates a supportive educational environment that is particularly capable of strengthening children's internal resources and stabilizing their developmental trajectories within the structurally and emotionally resource-poor context of child protection.

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