

Nature Education and Science Schools Project for Children in Public Care (TUBITAK 4004)

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Abstract

The preschool is a critical period during which permanent learning takes place. The family is the basic institution preparing children for life, and during preschool period, children get prepared for the future with the help of their parents. In this critical period, lack of parental support and care can negatively affect children's psychosocial development, academic achievements and motivations toward science. However, due to family break-ups, loss of a parent, violence or abuse, children may be deprived of the necessary support in this critical stage of their lives. Children suffering from such misfortunes are placed into children's houses and granted public care. According to the statistics of the General Directorate of Child Services, as of 2018, 14,214 children live in Children's Houses in different cities. The main purpose of the Science in Children's House project is to increase the motivation levels of five-year-old children living in children's houses towards learning science, to support their scientific process skills, social-emotional development, self-perceptions and future expectations. In the research, the mixed method has been adopted, thus, both qualitative and quantitative approaches have been used together. While the researchers have used the phenomenology in the qualitative part of the research, they have used the experimental design in the quantitative one. The study group consists of 20 children, 5 years old, living in a Children's Houses complex in Istanbul. The researchers used the criterion sampling method in order to determine the study sample. Children in the study group participated in a nature and science education program consisting of 13 sessions, which included science, nature, art and cultural activities. The "Science Learning Assessment Test for 60-72 Months-Old Children" and "Social Emotional Well-Being and Psychological Resilience Scale for Preschool Children" were used as measurement tools in order to observe the change in children. Moreover, the researchers studied children's awareness of the project activities and their expectations for the future with the "draw and tell" painting activity. Both qualitative and quantitative data analysis methods have been used together in the analysis of the research data. At the end of the project, it came out that the children learned some science concepts and reflected them in their drawings. There were also positive changes in their future expectations and there was a statistically significant change, in favor of the post-test, between the pre-test and post-test scores.

Keywords

Preschool, Children, Science, Nature, Science learning, Social and emotional well-being, Children's house

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