ADAPTIVE PARENTING STRATEGIES IN A TECHNOLOGICAL WORLD: EFFECTS OF A SIX-WEEK EXPERIENTIAL AND NON-FORMAL EDUCATION PROGRAM IN ARAD COUNTY (ROMANIA)

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Abstract: *Contemporary parenting increasingly requires adaptive strategies to address technological, social, and emotional challenges affecting family life. This study investigated the outcomes of a six-week non-formal education program that integrated outdoor experiential learning activities with multimedia-based workshops, implemented in Arad County, Romania. A pre–post mixed-methods design was employed. Forty parents participated in the program and completed the Parenting Sense of Competence Scale (PSOC) and the Parent–Child Relationship Inventory (PCRI) before and after the intervention. Paired-samples analyses indicated statistically significant post-intervention improvements in parenting efficacy and satisfaction, as well as in key dimensions of the parent–child relationship, including communication, emotional support, and limit setting (p < .05). In addition, qualitative data obtained through semi-structured interviews suggested perceived improvements in parental confidence, emotional regulation, and family interaction. Although the absence of a control group limits causal inference, the findings indicate positive within-participant changes following program participation. The study highlights the potential contribution of integrated experiential and multimedia approaches within non-formal parenting education programs aimed at supporting adaptive parenting in contemporary contexts.*

Keywords: *adaptive parenting; non-formal education; experiential learning; multimedia strategies; parental resilience; family dynamics.*

Introduction
In a rapidly evolving technological society, the traditional models of parenting face unprecedented challenges. Adaptive parenting strategies have become crucial for maintaining emotional stability, resilience, and strong parent-child relationships (Parker, 2020). The capacity of families to adjust to dynamic social and technological changes directly influences children's psychological development and overall family well-being (Coyne et al., 2021).

Non-formal and experiential educational practices, such as outdoor learning activities and multimedia-based interventions, offer innovative pathways for strengthening parental resilience and adaptability (Beames, Higgins, & Nicol, 2012; Livingstone & Blum-Ross, 2020). Through such experiences, parents and children are encouraged to co-create knowledge, solve problems collaboratively, and develop emotional regulation skills essential in today's world (Waite, 2017).

The concept of adaptive parenting emphasizes flexible, responsive, and context-sensitive approaches to child-rearing (Skinner & Edge, 2021). This is particularly relevant in the face of technological immersion, which redefines family interactions and demands new forms of parental engagement and supervision (Uhls, 2017). The integration of non-formal education and multimedia strategies in parenting interventions is thus an emerging research frontier with significant implications for educational policy and family support systems. (Pânișoară, 2013; Bocoș, 2013)

This study aims to explore the impact of experiential and non-formal education programs on the development of adaptive parenting practices among families in Arad County, Romania. By examining both outdoor educational experiences and the use of multimedia tools, we seek to identify effective strategies for enhancing family resilience in a technological world.

Building on existing literature regarding adaptive parenting, experiential learning, and non-formal education, the present study aimed to examine changes in parental perceptions following participation in a six-week outdoor and multimedia-based parenting program. Specifically, the study addressed the following hypotheses:

H1: Parents will report significantly higher levels of parenting efficacy and satisfaction, as measured by the Parenting Sense of Competence Scale (PSOC), following program participation compared to pre-intervention levels.

H2: Parents will report significant post-intervention improvements in the quality of the parent–child relationship, particularly in communication, emotional support, and limit setting, as measured by the Parent–Child Relationship Inventory (PCRI).

In addition, qualitative data were collected to explore participants' subjective experiences of the program and to provide contextual understanding of perceived changes in parenting practices and family interactions.

Literature review

Adaptive parenting has emerged as a crucial framework in addressing the dynamic demands faced by modern families. According to Masten and Barnes (2018), adaptive parenting involves the ability to modify caregiving behaviors based on children's developmental needs and environmental changes. This flexible parenting style has been shown to promote resilience, emotional regulation, and social competence in children. (Pânișoară & Pânișoară, 2019)

Non-formal education offers a unique avenue for fostering these adaptive skills. Outdoor education programs, in particular, have been associated with increased problem-solving abilities, self-efficacy, and emotional well-being among both children and their parents (Becker et al., 2017; Gill, 2014). These educational experiences differ from traditional classroom instruction by emphasizing experiential learning, autonomy, and cooperative engagement with the environment.

Multimedia strategies are also gaining prominence in contemporary parenting interventions. As argued by Livingstone and Blum-Ross (2020), the integration of digital tools such as video storytelling, virtual simulations, and mobile applications can support parents in promoting adaptive behaviors and emotional understanding in children. However, Coyne et al. (2021) caution that parental mediation is crucial to ensuring that technology use supports, rather than hinders, developmental outcomes.

Outdoor education combined with multimedia approaches provides a hybrid model of experiential learning that can be particularly effective in enhancing parental adaptability. Studies by Gray (2013) and Waite (2017) emphasize that shared outdoor experiences strengthen family bonds and improve communication skills, while multimedia tools can reinforce these experiences beyond physical activities.

Despite the growing interest in these interdisciplinary strategies, there remains a need for empirical studies that systematically evaluate their combined impact on adaptive parenting practices, particularly within diverse socio-economic and cultural contexts. Addressing this research gap, the present study focuses on families from Arad County,

Romania, examining how non-formal, outdoor, and multimedia interventions contribute to the development of resilience-oriented parenting.
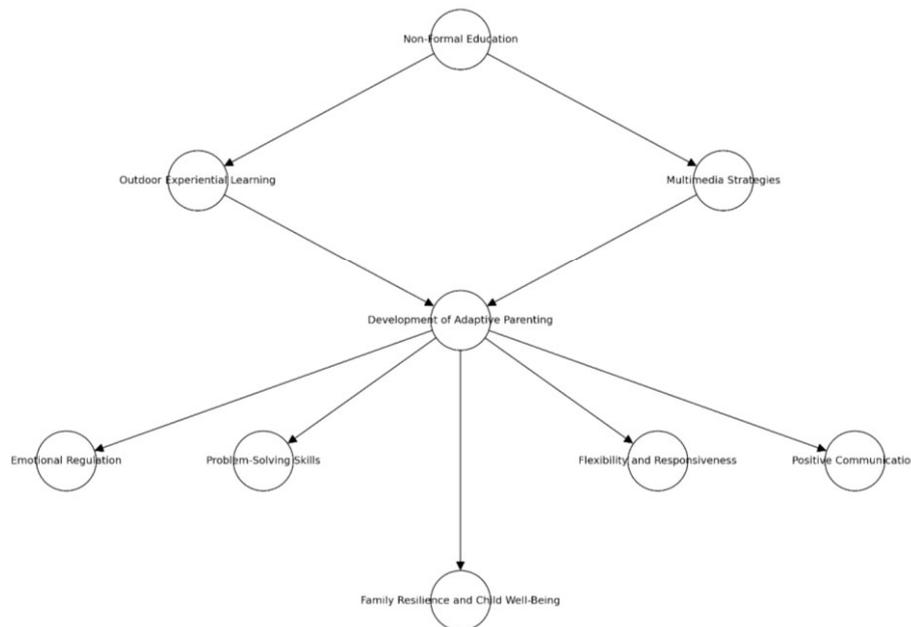

Fig 1. Conceptual map linking non-formal education to adaptive parenting and family resilience

Based on the reviewed literature, a conceptual framework was developed to illustrate the hypothesized relationships among non-formal education, adaptive parenting, and family resilience (Figure 1).

Methodology
Research design
This study employed a mixed-methods research design, integrating quantitative and qualitative approaches to comprehensively explore the impact of experiential outdoor education and multimedia-based strategies on adaptive parenting practices. Quantitative data were collected through standardized surveys administered before and after the intervention, while qualitative insights were gathered via semi-structured interviews. The combination of both methods allowed for a deeper understanding of the mechanisms through which non-formal education supports parenting adaptability (Creswell & Plano Clark, 2017).

Participants
The study included 40 families from Arad County, Romania, recruited through purposive sampling. Eligibility criteria required families to have at least one child aged between 6 and 14 years and to express willingness to participate in a six-week program involving outdoor experiential activities and multimedia-based educational sessions. For the purposes of quantitative analysis, one parent from each family completed the research instruments.

The participating families represented both urban and rural areas and varied in socio-economic background. Participation was voluntary, and parents were informed about the aims and procedures of the study prior to enrollment. All participants provided informed consent before taking part in the research.

Intervention Description
The intervention consisted of a six-week non-formal education program designed to support adaptive parenting through a combination of outdoor experiential learning activities and multimedia-based workshops. The program targeted both parents and children and was implemented in Arad County, Romania.

Each weekly session integrated two complementary components. The outdoor experiential component involved cooperative activities aimed at promoting communication, emotional awareness, problem-solving, and collaborative decision-making within the family context. These activities encouraged direct parent–child interaction and reflection on parenting behaviors in real-life situations. The multimedia-based component focused on guided discussions, video materials, and digital resources addressing contemporary parenting challenges, including emotional regulation, constructive communication, and the management of children's interaction with technology.

Sessions followed a structured sequence that included activity engagement, guided reflection, and group discussion, allowing participants to connect experiential learning with everyday parenting practices. The program emphasized active participation, reflection, and shared learning rather than didactic instruction. Participation across sessions was consistent with the non-formal education framework, which prioritizes flexibility, learner engagement, and experiential meaning-making.

Instruments
Quantitative data were collected using two validated instruments:
- The Parenting Sense of Competence Scale (PSOC) (Gibaud-Wallston & Wandersman, 1978; Johnston & Mash, 1989),

which measures parents' perceived competence and satisfaction in their parenting role. The scale has been widely used to assess parental self-efficacy and emotional functioning.

- The Parent-Child Relationship Inventory (PCRI) (Gerard, 1994), which evaluates multiple dimensions of the parent-child relationship, including communication, emotional support, involvement, and limit setting.

Qualitative data were collected through semi-structured interviews based on a thematic guide focusing on perceived changes in parental strategies, emotional regulation, and family dynamics following participation in the intervention program.

Data Analysis

Quantitative data were analyzed using a pre–post within-subjects approach. Paired-samples *t*-tests were conducted to examine differences between pre-intervention and post-intervention scores on the Parenting Sense of Competence Scale (PSOC) and selected subscales of the Parent–Child Relationship Inventory (PCRI). Statistical significance was evaluated using an alpha level of .05.

In addition, Pearson correlation analyses were performed on post-intervention scores to explore associations between parenting sense of competence and parent–child relationship dimensions. These analyses were intended to examine the relationships among study variables following program participation rather than to establish causal effects.

Qualitative data were analyzed using a thematic approach, following the principles outlined by Braun and Clarke (2006). Qualitative interview data were examined to support interpretation of the quantitative findings and to provide contextual insight into participants' experiences. The qualitative analysis focused on identifying recurring patterns related to perceived changes in parenting practices and family interactions.

Procedure and Ethical Considerations

Data collection followed a pre–post intervention design. Parents completed the Parenting Sense of Competence Scale (PSOC) and the Parent–Child Relationship Inventory (PCRI) prior to the start of the program and again at its conclusion. The same parent from each participating family completed both assessments. In addition to quantitative measures, semi-structured interviews were conducted with participating parents following the completion of the program to gather qualitative insights into their experiences and perceived changes in parenting practices and family interactions.

Participation in the study was voluntary. Parents were informed about the objectives of the research, the structure of the program, and the use of collected data for research purposes. Informed consent was obtained from all participants prior to data collection. Participants were assured of the confidentiality and anonymity of their responses, and data were analyzed and reported in aggregated form.

Results

To examine changes in parents perceived competence following participation in the program, paired-samples *t*-tests were conducted on pre-intervention and post-intervention scores of the Parenting Sense of Competence Scale (PSOC). As shown in Table 1, parents reported significantly higher levels of parenting efficacy and parenting satisfaction at post-intervention compared to pre-intervention ($p < .05$). Paired-samples *t*-tests were also conducted to assess pre-intervention and post-intervention differences on selected subscales of the Parent–Child Relationship Inventory (PCRI). Results indicated statistically significant post-intervention differences in parent–child communication, emotional support, and limit setting ($p < .05$). Descriptive statistics and test values are presented in Table 1.

Measure	Pre-Intervention Mean (SD)	Post-Intervention Mean (SD)	t	p
Parenting Efficacy (PSOC)	3.1 (0.5)	3.7 (0.4)	6.42	< .001
Parenting Satisfaction (PSOC)	3.0 (0.6)	3.5 (0.5)	5.89	< .001
Communication (PCRI)	3.2 (0.5)	3.8 (0.4)	6.10	< .001
Emotional Support (PCRI)	3.1 (0.6)	3.6 (0.5)	5.67	< .001
Limit Setting (PCRI)	2.9 (0.7)	3.4 (0.6)	5.05	< .001

Table 1. Descriptive statistics for pre- and post-intervention scores on PSOC and PCRI

Pearson correlation analyses were conducted using post-intervention scores to explore associations between parenting sense of competence and parent–child relationship dimensions. Higher levels of parenting efficacy and satisfaction were positively associated with parent–child

communication, emotional support, and limit setting. Correlation coefficients are presented in Table 2. (N=40)

Variables	Communication	Emotional Support	Limit Setting	p-value
Parenting Efficacy	.62	.58	.55	< .001
Parenting Satisfaction	.59	.63	.52	< .001

Table 2. Correlations between parenting competence and parent-child relationship dimensions post-intervention

Discussion

The present study examined changes in parental perceptions following participation in a six-week non-formal education program integrating outdoor experiential activities and multimedia-based workshops. Overall, the findings indicate positive within-participant changes in parenting sense of competence and perceived parent–child relationship quality following program participation. These results are consistent with the study's hypotheses and support the relevance of experiential and reflective approaches within adaptive parenting education.

In relation to the first hypothesis, parents reported higher levels of parenting efficacy and satisfaction after completing the program. This finding aligns with previous research suggesting that experiential learning and reflective group-based activities can enhance parental confidence by providing opportunities for active engagement, feedback, and shared problem-solving. The combination of outdoor activities and guided multimedia discussions may have contributed to parents' increased awareness of their parenting strategies and emotional responses in everyday interactions with their children. (Beames, Higgins, & Nicol, 2012; Gill, 2014).

Regarding the second hypothesis, post-intervention improvements were observed in key dimensions of the parent–child relationship, including communication, emotional support, and limit setting. These findings suggest that structured opportunities for joint parent–child activities, coupled with guided reflection, may facilitate more constructive interaction patterns within the family. The experiential nature of the program allowed parents to practice communication and boundary-setting skills in context, potentially reinforcing their application beyond the program setting. (Gray, 2013; Waite, 2017).

The observed associations between parenting sense of competence and parent–child relationship dimensions further underscore the interconnected nature of parental self-perceptions and family interaction quality. Parents who reported higher levels of efficacy and

satisfaction also tended to perceive more positive relationships with their children, highlighting the importance of addressing parental confidence within parenting education initiatives.

Analysis of post-intervention interviews revealed several recurring themes related to parents' experiences in the program. Parents described increased awareness of their parenting behaviors, improved emotional regulation during interactions with their children, and enhanced communication within the family. Participants also emphasized the value of experiential outdoor activities in facilitating reflection and joint problem-solving, as well as the usefulness of multimedia resources in addressing contemporary parenting challenges.

From a practical perspective, the results suggest that non-formal education programs integrating experiential outdoor learning and multimedia resources may represent a valuable approach for supporting adaptive parenting in contemporary contexts. Such programs may be particularly relevant in addressing challenges associated with technological change, emotional regulation, and family communication. The flexible and participatory structure of non-formal education allows for contextual adaptation to diverse family needs, including those in both urban and rural settings.

Future research should address these limitations by employing controlled or randomized designs, larger and more diverse samples, and longitudinal follow-up to assess the durability of observed changes. Further investigation into specific program components, such as the relative contribution of outdoor experiential activities versus multimedia-based elements, would also enhance understanding of effective mechanisms in adaptive parenting interventions.

Furthermore, the multimedia-based components of the intervention provided an innovative extension of the learning process. As supported by Livingstone and Blum-Ross (2020), integrating technology in a structured and reflective way can strengthen parental guidance skills, especially in a context where digital engagement is inevitable. Parents participating in this study reported greater confidence in managing technology use and promoting emotional regulation within their families, reinforcing the idea that digital tools, when properly mediated, can complement experiential education (Coyne et al., 2021).

An important theoretical implication is the demonstration that adaptive parenting is not merely a personal trait but a skillset that can be developed through structured educational programs. This supports the developmental perspective on resilience proposed by Masten and Barnes (2018), emphasizing that resilience-building in parenting requires environmental support and intentional interventions.

From a practical standpoint, the integration of outdoor and multimedia strategies into parenting programs offers a scalable and flexible model adaptable to various socio-cultural contexts. Educational policies aiming to strengthen family resilience in the digital age should consider embedding such non-formal approaches into broader support frameworks.

Several limitations of the present study should be acknowledged. First, the absence of a control group limits the ability to draw causal conclusions, as observed changes cannot be attributed exclusively to the intervention. Second, the reliance on self-report measures may have introduced response bias, including social desirability effects. Third, the relatively small sample size and the geographical focus on Arad County, Romania, restrict the generalizability of the findings. In addition, psychometric properties of the instruments within the present sample were not examined in detail.

Future research should address these limitations by employing controlled or randomized designs, larger and more diverse samples, and longitudinal follow-up to assess the sustainability of observed changes. Further investigation into the relative contribution of outdoor experiential activities and multimedia-based components would also enhance understanding of effective mechanisms in adaptive parenting interventions.

Conclusion

This study examined changes in parental perceptions following participation in a six-week non-formal education program integrating outdoor experiential learning and multimedia-based workshops. The findings indicate positive within-participant changes in parenting sense of competence and perceived quality of the parent–child relationship, suggesting that such integrated approaches may support adaptive parenting in contemporary family contexts.

By combining experiential outdoor activities with reflective multimedia-based learning, the program provided opportunities for active engagement, shared reflection, and skill practice within real-life parenting situations. The results highlight the potential value of non-formal education frameworks in addressing parenting challenges related to communication, emotional regulation, and limit setting.

Despite methodological limitations, including the absence of a control group and reliance on self-report measures, the study contributes empirical evidence from a local Romanian context to the growing literature on adaptive parenting interventions. Future research employing controlled designs, larger samples, and longitudinal follow-

up is needed to further evaluate the effectiveness and sustainability of such programs.

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