

学位論文の要旨 (論文の内容の要旨)
Summary of the Dissertation (Summary of Dissertation Contents)

論 文 題 目

Dissertation title

Reconnecting Children with Nature:

Investigating the Importance of Parental Orientation toward Children's Nature Play and Its Affecting Factors

広島大学大学院国際協力研究科

Graduate School for International Development and Cooperation,
Hiroshima University

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Doctoral Program Division of Development Science

学生番号 D196011

Student ID No.

氏 名 TRUONG MAI VAN

Name

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Engaging with nature can be a profoundly transformative experience for children, with far-reaching implications for their physical, mental, intellectual, and spiritual well-being. Additionally, positive interactions with nature and close proximity to natural environments can help foster emotional bonds with the natural world, leading to environmentally responsible attitudes and behaviors later in life. When children interact with natural elements such as soil, water, rocks, and wild animals, in natural outdoor settings such as parks, forests, and rivers, it is referred to as nature play.

Despite the significant benefits of nature for children's growth, children's opportunities for nature play are gradually diminishing in many countries. This phenomenon, known as the extinction of nature experience, has negative consequences for children's well-being and public support for environmental protection. Identifying solutions to reconnect children with nature has been of a great concern of conservationists, naturalists, and educationists.

It is widely believed that the widening gap between children and nature is driven by the loss of opportunity and orientation. Loss of opportunity is linked to urbanization and urban lifestyle, which have led to a shortage of green spaces and time for children to be exposed to nature. Loss of orientation involves factors such as the allure of digital entertainment and parental restrictions on children's free play in nature. In modern society, parents' control over children's activities is increasing, making their orientation, including their perceptions and behaviors towards children's nature play, strongly influences children's interaction with nature. Thus, understanding parental orientation (i.e., perception and behaviors) towards children's nature play has become increasingly important.

However, so far, little is known about parental orientation toward children's nature play. Previous research suggests that children are more likely to spend time in nature and develop a preference for nature play when their parents show an interest in nature. However, it remains unknown how much parental orientation affects the frequency of children's exposure to nature and what are the factors that shape parents' orientation.

My thesis aims to address these knowledge gaps by examining how parental orientation influence children's engagement with nature in Japan where children's growing disconnection with nature has occurred over five decades and limited information regarding parents' orientation towards nature play exists. The study focuses on three sub-objectives, including:

- (1) understanding parents' orientation toward children's nature play and its affecting factors (Chapter 2),
- (2) validating the importance of parental orientation on the frequency of children's nature play (Chapter 3),
- (3) understanding underlying reasons affecting parental orientation through in-depth interview and proposing solutions for children's extinction of nature experience (Chapter 4).

My thesis comprises five chapters. Chapter 1 establishes the importance of nature in children's development and nature conservation and highlights the trend of the growing disconnection between children and nature worldwide. This thesis proposes a new approach to counter this trend by focusing on investigating parents' orientation towards nature due to their increasing parental control over children's activities. The general objective and sub-objectives are outlined in this chapter. To attain the objectives, the present study employs a mixed-methods approach, utilizing a quantitative questionnaire survey and semi-structured in-depth interviews

with parents of elementary school children in Japan.

Chapter 2 focuses on exploring parents' orientation (i.e., perceptions of the benefits and barriers, and their permission for children's free play in natural settings) towards children's nature play and its affecting factors. The influential levels of potential factors including parents' childhood nature experience, degree of urbanization, nature relatedness, and sociodemographic characteristics were compared. Results from an online questionnaire survey completed by 516 parents in Japan suggest that while parents generally recognize the importance of children's nature play, their concerns related to accidents and strangers hinder their willingness to allow their children to freely play in nature. By conducting an analysis of generalized linear models, our research reveals that despite childhood nature experience and nature relatedness significantly contributing to parents' understanding of the benefits of nature play, these factors do not diminish their fear of incidents involving their children. Incident concerns were the main contributors to parental restriction of children's free play in nature. On the other hand, actual incident rates have considerably reduced over decades in Japan. Therefore, it implies that the incident fear of parents and increased restriction by parents is resulted from complex social and cultural environments of the modern parents, rather than actual incident rates. These results underscore the need for identifying effective strategies to mitigate parents' safety concerns, and to encourage them to facilitate unsupervised nature play for their children, thereby augmenting children's connection with nature.

Previous studies suggested that children's exposure to nature is influenced by their interest, parental orientation, and the availability of free time and nearby greenspaces. Thus, in chapter 3, I aimed to understand the comparative importance of parental orientation for their children's frequency of nature play, compared to other factors, such as degree of urbanization, availability of time, and children's time spent on digital entertainments. Based on the structure equation modeling using data obtained through an online questionnaire survey, the results indicate that parental orientation is a more significant determinant than the availability of time and space in enhancing children's frequency of visits to greenspaces. Despite recognizing the benefits of nature, parents prefer taking their children to supervised green spaces over allowing unsupervised play in nature due to their safety concerns. This situation has led children to become reliant on their parents for engagement in nature play. The findings of this chapter reinforce the notion of chapter 2 that to increase children's frequency of visits to greenspaces, it is essential to encourage parents to let their children play unsupervised in nature. In order to understand the causes of increased parents' restriction for children's nature play in the broader context (including social and cultural backgrounds), I conducted in-depth interviews with parents in the next chapter.

Chapter 4 seeks to comprehend the historical shifts in children's nature play and the underlying causes for parents' growing restrictions. Semi-structured in-depth interviews were conducted with 22 parents of elementary school students in Japan to gain insight into this phenomenon. Analysis of the interviews revealed that, childhood nature play has undergone significant transformations in five key domains, namely play places, playtime, play partners, play activities, and freedom. Unlike the spontaneous nature play experienced by parents during their own childhood, nature play of today's children has become heavily dependent on parental supervision regarding these aspects. The increase in parental supervision is not exclusively attributed to their heightened anxiety regarding children's safety, as triggered by media coverage and warning messages of incidents involving children. Rather, it is also be attributed to the growing lack of trust within the community, increased unfamiliarity with their natural surroundings, and social pressure that emphasizes parental responsibility for children's safety. The parental restriction has become increasingly prevalent after historical events, such as the COVID-19 pandemic or severe earthquakes, which have necessitated people to remain indoors. This leaves parents in a dilemma where they desire their children to spend more time to play freely in nature, but their fear of outside dangers and societal criticism discourage them from doing so. To address this issue, we proposed the employment of safeguarding personnel in green spaces, which was well-received by parents interviewed in our study. In addition, the findings from this study align with prior research that has recommended strategies for promoting child safety (e.g., better street lighting and more pedestrian-friendly roads) and enhancing community's support for children free play in nature (e.g., neighborhood watch campaigns, creating inclusive green spaces for people of all ages). The implementation of these measures will potentially reduce parents' apprehensions about children's safety and fear of societal criticism, thereby enhancing parental willingness to let their children play independently in natural environments.

In Chapter 5, I discuss the main findings of our study, which demonstrate the significant influence of parental orientation on enhancing children's connection with the natural world, and highlight key factors that shape their orientation. The chapter presents recommendations aimed at enhancing parental motivation to involve children in free play in nature. The study also underscored the importance of community-wide support for nature play, which emerged as a potent strategy for boosting parents' willingness to allow their children's free play in nature, thereby fostering children's reconnection with nature. Moreover, this chapter highlights certain limitations of the results, including the way we defined and measured certain concepts when comparing the relative significance of orientation and opportunity factors, and the potential challenges of applying these findings to a global context.

In addition, the chapter presents recommendations for improving the limitations and expanding the scope of this research.

In conclusion, this study provides both statistical and interview-based evidence of the importance of parental orientation towards children's nature play and the factors shaping their orientation in Japan. Given the growing extinction of children's experience in nature worldwide, further studies are urgently needed in other countries, particularly in developing nations, to identify effective solutions for reconnecting children with nature on a global level.