

Sasakawa Nursing Fellow 2025 Report

Mari Kaneoka

Master of Science (M.Sc.) Family Medicine, Global Health
McGill University

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1. Overview and Study Objectives

I am currently studying in the Master of Science (M.Sc.) program in Global Health at the Department of Family Medicine, McGill University, Canada. This program aims to improve health equity from a primary healthcare perspective and to conduct research and provide education based on collaboration with local communities and a focus on person-centred care. My objective in studying in this program is to enhance my research capabilities in the fields of primary care by conducting academic research on the relationship between digital technology and people's health, with a view to applying these findings to nursing and public health (e.g., parenting support) initiatives in Japan in the future.

This interest stems from my work experience in the field of international cooperation. Having been involved in health-related activities in several developing countries, I have found myself in environments where internet access was severely restricted, and I have experienced the difficulties of accessing necessary information and communicating with others. On the other hand, upon returning to Japan, a country with highly developed digital infrastructure, I witnessed scenes of many people staring at their digital devices such as smartphones for a long time on metros and trains in urban cities. This made me aware of the excessive use of these digital devices and the impact that the proliferation of technology has on people's behaviour and psychology.

Through these contrasting experiences between the countries where I stayed and Japan, I have come to feel that, while digital technology is a vital means of supporting our lives, we need to consider more carefully the impact it has on people's lives and health, especially from a psychological perspective. Currently, I am particularly interested in how parents' digital device use relates to modern parenting, parent-child relationships, and parental psychological aspects, such as their sense of self-efficacy regarding parenting, and the warmth parents show towards their children; I am conducting quantitative research on this topic.

One of the reasons I chose McGill University as my study destination is its research environment, which excels in both primary care research and epidemiological research. The program is designed so that graduate students systematically learn the fundamentals of research methodology, epidemiology and statistical analysis in the first year, before devoting themselves entirely to their Master's research in the second year. Under this educational framework, students can define their own research topics based on their interests and develop their research plans through ongoing discussions with their supervisors. I believe this research environment is of great significance in enabling me to develop my data analysis skills while continuously reflecting on my research questions, thereby acquiring in-depth knowledge and research skills. It is important for those who are working in nursing and public health fields to gain more practical experience in statistical analysis and epidemiological research methods. My goal is to refine my skills in evaluating evidence and applying findings to policy and practice. By doing so, I hope to make contributions to the fields of nursing and public health in Japan.

2. The Knowledge and Skills I Learned During My First Year of Study Abroad

During my first year of study abroad, I focused on coursework for my Master's program, systematically acquiring foundational knowledge in research methodology, primary care and global health. In the epidemiology and data analysis modules, which are essential for undertaking my Master's thesis project, I learnt the fundamentals of epidemiological research design and statistical analysis. I also mastered data processing and analytical techniques using R statistical software. Through this learning, I developed the skills required to handle research data appropriately and interpret results critically.

In coursework on qualitative research methods and participatory research, I learnt about approaches in which researchers and local communities collaborate to co-create knowledge. I came to understand the importance of involving diverse stakeholders, such as patients, local residents and healthcare professionals, in research projects in culturally appropriate ways. I gained the perspective necessary to ensure that research findings are returned to communities where people are leading their lives.

In Canada, reflecting on the history of colonialism in North America, there is a strong emphasis on the importance of understanding health issues and inequalities from a broader perspective that encompasses social and political contexts. During the classes on Indigenous health and global health, I learnt about the structural causes of disparities due to the impact of historical colonialism. By critically examining the structural causes underlying modern health inequalities, I gained a key perspective for viewing health issues through the lens of equity. Through this learning process of my first year, I acquired the necessary knowledge, laying the foundations for my Master's research in the second year.

3. Progress and Outcomes of Master's Research

In my second year, I devoted myself entirely to my Master's thesis research project. Under the title "The Impact of Parental Technoference on Parenting Self-Efficacy and Parental Warmth: An Analysis Using the Quebec Birth Cohort Study", I conducted research into how parents' use of digital devices relates to parenting. Technoference refers to the phenomenon whereby parent-child interaction is disrupted when parents direct their attention to digital devices, such as smartphones, while engaging with their children. As digital technology becomes deeply embedded in daily life, this phenomenon has attracted increasing attention in recent years. However, while most research in this area currently focuses on the impact on children, particularly attachment formation and cognitive and language development of children, the relationship with parents' own psychological parenting resources has not been sufficiently examined.

For this reason, I obtained permission from the provincial statistical agency in Québec to use data from an ongoing longitudinal birth cohort study, the Québec Longitudinal Study of Child Development 2 (QLSCD2). Using this dataset, I examined the distribution of parental technoference among caregivers of infants and toddlers and statistically estimated how it is associated with parenting self-efficacy and parental warmth. The QLSCD2 cohort was carefully designed to allow population-level estimation for children born in Québec. This makes the

dataset particularly valuable for research because it enables findings to be interpreted with closer relevance to the provincial representative estimation.

In the analysis, the statistical distribution of parental technoference among caregivers was described, and both cross-sectional associations at each time point and longitudinal associations were examined using the R statistical software. In addition, in order to apply more advanced analytical approaches, I consulted with the biostatistician in the department and conducted exploratory analyses to examine whether parental stress might mediate the relationship and whether social or family support might modify the association. The results showed a consistent association between parental technoference and parenting self-efficacy and parental technoference may influence caregivers' psychological resources for parenting.

A key contribution of my research lies in its use of provincially representative data to examine how the everyday use of digital devices by parents may relate to their own psychological aspects of parenting. In a context where digital technologies are deeply embedded in daily life, these findings provide basic evidence for understanding how parents' device use may be linked to the quality of parenting. The results may therefore offer useful perspectives for discussions on parenting support and digital well-being.

Throughout the research process, I experienced the full range of steps involved in a master's research project. This included developing an analysis plan based on epidemiological research design, defining and operating variables, managing and cleaning data including the handling of missing values, conducting statistical analyses, interpreting the results, and writing the thesis.

Another challenge was the language environment of the research materials. Much of the dataset documentation and related materials used in this study were written in French, which required substantial effort to understand and organize. While enrolled in an English-language master's program, I needed to read and work with French materials at the same time. Conducting research on a relatively new topic using Québec-specific data in a bilingual environment unique within Canada became a valuable experience that strengthened my language skills, quantitative research abilities, and capacity to work in an international research setting.

At present, I am in the final stage of writing my master's thesis. Looking ahead, I plan to discuss with my supervisor how the findings of this research can be communicated and applied in society, particularly through appropriate approaches to knowledge translation.

4. Lesson Learned Through My Study Abroad

One of the most important things I gained from this study abroad experience was the ability to approach health issues in an empirical way. In particular, working with large-scale data using epidemiological methods and statistical analysis was a new and valuable experience for me. Rather than learning methods in theory alone, I was able to apply them in practice through my own research, which helped me understand how data can be used to examine real-world health issues. I believe this will serve as a useful foundation for my future work in nursing and public health.

In addition, my graduate studies provided opportunities to learn about broader public health issues, such as health inequalities, equity in multicultural societies, and the relationship between environmental factors, including climate change, and health. These topics made me aware of the importance of understanding health in relation to social conditions and living environments, rather than focusing only on individual behaviour.

Furthermore, my studies at McGill University deepened my understanding of the interconnection between individual health and social and environmental factors. I learnt that individual behaviours, such as parents' use of digital devices, are linked to several factors including the childcare environment, social support, stress and cultural background, and that health issues must be understood within a broader social context.

Moreover, as the research materials such as user guide and methodology was in French, I was required to engage with French as well as English in order to progress with my research. Although it took a great deal of time and effort to understand the material not only in English but also in French, this process allowed me to gain experience in overcoming linguistic difficulties to advance my research. I feel this was a vital experience in developing the ability to conduct research within a multilingual society.

Finally, studying in Canada made me more aware of the importance of equity, diversity, and cultural sensitivity. These perspectives were consistently emphasized in my coursework and have influenced how I think about health and research. I expect that these ideas will also become increasingly relevant in Japan. Based on this experience, I would like to continue examining health issues from multiple perspectives in both Japanese and international contexts.

5. Future Directions and Contribution to Japan

Moving forward, I intend to engage in research and practical work by building on the epidemiological perspective and research experience in statistical analysis gained through this study abroad program, while considering how such quantitative research methods can be utilized within Japanese society.

I would also like to continue working on initiatives related to digital technology and its relationship with human behaviour and health. Digital devices, especially smartphones, have become deeply embedded in everyday life and increasingly shape how people live and interact. Based on this, from the perspectives of nursing and public health, I would like to keep exploring the impact that digital technology is having on the lives of people today within the Japanese social context, and how this understanding can be applied to policies and practical initiatives aimed at promoting health.

In Japan, a wide range of data has been accumulated, including administrative statistics, census data and clinical data collected by medical facilities. Utilizing this data will help to examine social issues relating to the modern child-rearing environment, the social isolation of elderly people, and the relationship between the use of digital devices and people's health. Research based on such data could help generate evidence that supports community-based parenting support and health initiatives. I would also like to be involved in efforts within nursing and public health

practice that use data to better understand health challenges and to develop support strategies suited to local contexts.

In addition, I hope to share research findings through academic conferences, reports, and other forms of dissemination. Through these activities, I would like to contribute to discussions among researchers and practitioners on how people's health can be supported in an increasingly digital society. Ultimately, I hope to contribute, through empirical research, to a better understanding of how social changes relate to health and to support forms of nursing and public health practice that remain closely connected to people's everyday lives.

6. Acknowledgement

I would like to express my gratitude to the Sasakawa Health Foundation for providing me with the opportunity to engage in research activities through this study abroad program. Thanks to the support of this fellowship, I have been able to gain such a valuable opportunity to devote myself to research at a Canadian graduate school.

I would also like to express my deep gratitude to my supervisors and the professors who were involved in this research process at McGill University, as well as to the staff of the statistical agency of Québec. I have been supported by a lot of people in my academic journey and it was a significant learning experience for me. I will utilize the knowledge and research experience gained during this study abroad in my future academic and professional activities to contribute to the advancement of the nursing field in Japan.