

A Three-Year Record of the COVID-19 Pandemic through the ‘Environment and Health Survey’

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This report summarises the ‘Environment and Health Survey’ conducted over three years (2020-2023), analysing the impact of the COVID-19 pandemic on junior high school students and their parents. Key findings highlight the shift in communication after school closures, importance of sharing emotions within the family for children’s mental health, and how routine stressors such as entrance examinations significantly influenced irritability. Although many families demonstrated resilience by adapting to new lifestyle habits, data reflect a complex process of balancing infection anxiety with a gradual return to social normalcy.

Key Words: COVID-19 Pandemic, Environment and Health Survey, Adolescents, cohort study

Introduction

Following the first confirmed case of COVID-19 in Japan on January,15, 2020, the virus gradually spread nationwide. On February 27, the government requested all schools to close temporarily beginning 2 March. Following the explosive ‘first wave’, a state of emergency was declared for seven prefectures on 7 April. After expanding the target areas to the entire country and extending the period, the nationwide lifting was announced on 25 May. Owing to these sudden closures, children began their first

academic term in an unprecedented environment. At the time of this lifting, the first ‘Environment and Health Survey’ was conducted.

The first academic term commenced with various infection control measures implemented within schools. By July, most schools had resumed daily classes, and the second survey was conducted during this period.

Although efforts were taken to restore normalcy—such as the implementing the ‘Go To Travel’ campaign from 22 July (lasting until late January 2021)—a second wave of infections emerged in August. In January 2021, a third wave occurred, leading to the re-declaration of a state of emergency from 8 January to 21 March. During this period, the third survey was conducted (targeting only guardians) as part of the regular survey schedule.

Although the situation temporarily subsided in March, a third state of emergency was declared in April (25 April – 20 June, the fourth wave), followed by a fourth declaration (12 July – 30 September, the fifth wave; in Okinawa, the emergency remained in effect between the third and fourth periods). Moreover, during the third and fourth states of emergency, ‘Priority Measures to Prevent the Spread of Disease’ were implemented to focus on specific target areas. Furthermore, the Tokyo Olympics were held from 23 July to 8 August, even as the fourth state of emergency remained in effect for Tokyo.

Vaccination for healthcare professionals commenced on 17 February, 2021, followed by the rollout for the general public in April. Although the increasing number of vaccinated individuals yielded certain positive outcomes, successive outbreaks occurred

from February 2022 (the sixth wave), August 2022 (the seventh wave), and from late 2022 through January 2023 (the eighth wave), driven by variants with high infectivity and immune-evasion capabilities.

In the spring of 2022, the fourth survey was conducted. Subsequently, the fifth survey was conducted at the end of that fiscal year during the regular survey period, followed by the sixth survey at the time of the scheduled annual survey the following year.

On 13 March 2023, the wearing of masks in daily life became optional. On 8 May, COVID-19 was reclassified as a ‘Class 5’ infectious disease, placing it under the same regulatory framework as seasonal influenza. Following this transition, the seventh survey was conducted, concluding the series of ‘Environment and Health Surveys.’

This study summarizes the analyses of the ‘Environment and Health Survey’—conducted between May 2020 and June 2023 during the COVID-19 pandemic—that have been presented at academic conferences.

Summary of Academic Presentations (2020–2026)

(1) Survey Report on the Living Conditions of Junior High School Students under the COVID-19 State of Emergency: Focusing on Communication ⁱ

This report focused on the actual state of communication among junior high school students. Once schools reopened and students were able to meet in person, the number of those engaging

in group interactions slightly decreased. Regarding the topics of conversation, while there was no significant change in discussions about studies, there was an increase in students discussing immediate subjects such as current classes and club activities. This suggests that after the resumption of face-to-face interaction, communication centered on sharing specific moments and physical spaces.

(2) Survey Report on the Living Conditions of Junior High School Students under the COVID-19 State of Emergency 2 ⁱⁱ

This presentation focused on the stress experienced by junior high school students in response to changes in their daily lives. Approximately one-third appeared to experience relatively low levels of stress related to environmental changes. Furthermore, although the number of male students reporting stress decreased after the resumption of school, a higher number of female students exhibited negative psychological changes.

(3) Survey Report on the Living Conditions of Junior High School Students under the COVID-19 State of Emergency 3: Relationship Between Home Life and QOL ⁱⁱⁱ

This presentation focused on home life during the period of school closures. Analysing the corresponding items on the PTSS-10 revealed a discrepancy in perceptions: parents believed their children had no issues with sleep, whereas the children were not sleeping well. Furthermore, a correlation was identified between the quality of family relationships and degree of disruption in daily routines (sleep-wake cycles) during the closure period.

(4) Impact of Information-Sharing Attitudes under Stress on Mental Health: Focusing on the Acquisition and Transmission of COVID-19 Related Information ^{iv}

This presentation examined how parents and children exchange information and whether these communication methods influence the psychological stress levels of children.

First, regarding the sources of COVID-19 information, television news programs were the most common, followed by online news. A notable difference between parents and children was that for children, the second most frequent source of information, after news programmes, was their family.

Furthermore, although the information deemed important differed for parents and children, the underlying structure of information-sharing attitudes under stress was similar for them. However, no direct correlation was found between the two. Interestingly, children whose parents transmitted information that included emotional aspects exhibited lower levels of psychological stress. Considering that children obtain a significant amount of information from within the household, sharing feelings along with information—rather than merely conveying factual data with caution—is more critical for a child’s mental health.

(5) Transitions in Perceived Restrictions of Daily Life and Stress Under COVID-19: Based on Responses from Parents of Adolescents ^v

This study examined the relationship between stress and changes in the perceived restrictions of daily life reported by

parents of junior high and high school-aged children.

Although a high percentage of respondents reported feeling restricted during the first survey, responses from the second survey onward indicated either no change or that new habits had become established. From the third survey onwards, these trends generally stabilized. However, even by the fifth survey, respondents continued to feel significant restrictions regarding leisure activities and meeting friends—activities that, while not directly impacting daily survival, are essential for life satisfaction. Regarding hygiene practices and avoiding the ‘Three Cs’ (closed spaces, crowded places, and close-contact settings), many respondents reported being highly cautious during both the first and second surveys, however, gradually, these practices became established as routine habits from the third survey onwards.

Furthermore, during the early stages of the pandemic, activities such as shopping and transportation were particularly associated with increased stress levels.

(6) An Exploratory Study of Attitudes Toward Mask-Wearing After the Reclassification of COVID-19 as a Class 5 Infectious Disease ^{vi}

Regarding the status of mask-wearing, 56.89% of parents and 50.00% of children selected the option ‘I generally wear a mask when going out’. Conversely, only 2.75% of parents and 13.46% of children responded with ‘I almost never wear a mask’. Furthermore, although the underlying structure of attitudes towards mask-wearing differed between parents and children, it appeared that anxiety regarding infectious diseases was shared

within the household.

(7) A Study on the Impact of COVID-19 on Daily Emotions: A Three-Year Follow-up of Subjective Irritability ^{vii}

The transitions in subjective irritability across four time points were analysed. Although some participants indicated almost no change over the four periods, the majority exhibited significant fluctuations.

Upon classifying the qualitative descriptions of worries and anxieties at each stage, few mentions were directly related to COVID-19; instead, concerns regarding interpersonal relationships and entrance examinations were frequently noted. This suggests that entrance examinations were one of the primary factors contributing to the significant fluctuations in subjective irritability.

(8) Changes in Parental Work Status and Family Communication: A Three-Year Report on the Impact of COVID-19 ^{viii}

This report examined changes in parental work status, stress levels, and children's communication partners over a three-year period marked by significant environmental shifts, such as the 2020 school closures and states of emergency.

Regarding work status, many respondents reported teleworking or reduced working hours during the first survey, as it coincided with the end of the initial state of emergency. However, these numbers decreased relatively soon after the emergency was lifted. When comparing stressful life events with data from the same participants when the children were in the second grade of

elementary school, a higher frequency of ‘career changes’ was observed, particularly in the fourth and sixth surveys. Conversely, ‘marital issues’ were reported less frequently across all survey rounds compared with the second-grade period. Regarding children’s communication partners, ‘parents’ was the most common choice in the first survey. However, as schools reopened and time progressed, ‘friends’ overtook ‘parents’ as the primary confidants. These findings suggest that the increased time spent together owing to school closures and teleworking led to significant shifts in family communication.

Conclusion and Acknowledgments

Although many participants demonstrated remarkable resilience and adapted well to these unprecedented changes, notably the data do not represent 100% of the population. Many were unable to respond possibly owing to significant hardships.

Moving forward, we aim to continue analyzing the remaining variables to further clarify the long-term impacts of the pandemic. Finally, we would like to express our deepest gratitude to all the participants who supported this study by providing their valuable insights during such a challenging period.

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- ⁱⁱ 難波久美子・河合優年・田中滋己 (2021). COVID-19 による緊急事態宣言下における中学生の生活実態に関する調査報告 2.ー生活の変化に対するストレスを中心にー. 日本発達心理学会第 32 回大会論文集, P.114. (オンライン大会, 3 月)
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- ^{iv} 難波久美子・河合優年・田中滋己 (2022). ストレス下の情報伝達態度が精神的健康に及ぼす影響について：COVID-19 に関する情報の入手と伝達に注目して. 日本心理学会第 86 回大会論文集, P.681. (日本大学 (ハイブリッド大会・ウェブ発表), 9 月)
- ^v 難波久美子・河合優年・田中滋己 (2023). COVID-19 下での日常生活における不自由さの推移とストレス 青年期の子どもを持つ保護者の回答から. 日本カウンセリング学会第 55 回大会 (33). (東北福祉大学 (Web 大会), 8・9 月)
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- ^{vii} 難波久美子・河合優年・田中滋己 (2025). COVID-19 が生活感情に与える影響に関する検討 主観的イライラ感の 3 年間の追跡. 日本発達心理学会第 36 回大会論文集. (明星大学, 3 月)
- ^{viii} 難波久美子・河合優年・田中滋己・小川昌宏 (2026). 親の勤務状況と家庭内コミュニケーションの変化 COVID-19 の影響を受けた 3 年間の報告. 日本発達心理学会第 37 回大会論文集, P.289. (九州大学, 3 月)