

COVID-19 Epidemics and Mobility: Toward New Healthy Living Space

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The relationship between human health and mobility, which underlies our daily lives, is one of the major research topics in health geography. Here, I intend to consider the impact of the COVID-19 epidemic in terms of human mobility. First, what spatial movements of people underlay and could control the epidemic of COVID-19? Various restrictions on movement (such as border control, requests for self-isolation, and lock-down) were implemented as measures to control the epidemic in various society; suppression of mobility to maintain health. With the wide-availability of mobile big data associated with the spread of smartphones, the relationship between human mobility, person-to-person contact and the trend of the COVID-19 epidemic has been discussed on an unprecedented scale throughout the world. The reduction size of the movement of people under the epidemic in Japan will be summarized from mobile big data sets. Second, how did the COVID-19 epidemic affect human health through reduced mobility and lifestyle change? A social survey conducted with my collaborators revealed that the worsening economic conditions of individuals were associated with fewer outings, fewer exercise, more sitting time, and worsening mental health, with disparities between occupational groups. Third, what impact do they have on the daily living space in the post-COVID-19 epidemic? Or how should our living space be changed? A new way of life that restricts access to public space and avoids human-to-human contact poses many challenges mainly to metropolitan areas that are highly dependent on public transport system and are extremely dense with the rich opportunities of contacts. On the other hand, health research in urban spaces related to human mobility (in particular, studies on walkability) has shown that maintaining infrastructure including public transport by keeping the density of people's dwellings and opportunities for activities has public health value as well as reducing environmental loads. Face-to-face contacts also have functions that cannot be substituted by telecommunication in building social relationships and creativity. With the development of positioning information services that contribute to both surveillance and mobility support, there is an unprecedented opportunity to reexamine the scope of mobility and social contact needed, and hence the space design that supports our health and reduces health disparities.

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