
Book Reviews

The Structure of Healthy Life Determinants: Lessons from the Japanese Aging Cohort Studies

Hoshi, T., & Kodama, S. (eds.). (2018). Springer (169 pp.).
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The Structure of Healthy Life Determinants (*Determinants* hereafter) was written by a group of three Japanese researchers and three Chinese researchers using structural equation modeling (SEM) statistics to obtain a picture of **how we can grow old better with better health and well-being**. Their answer is in their Final Model of Causal and Structural Relationships to a Healthy Life (Figure 1). The figure consists of the five contributing elements, or determinants, to a better and longer life, which are socio-economic status (SES), environmental conditions, and the psychological, physical, and social health.

Determinants starts with a 3-page preface by the editors with Figure 1 capturing the causal relationships that they argued exists between the five determinants. The 11 chapters that follow examined in detail one or more of these determinants. Kodama, in chapter 9 for example, described correlations between SES, dietary quality, emotional well-being, and five years of subjective life in middle age. Chapter 11, by Hoshi, researches an elderly group in Okinawa, brings much of the other research together to support their Model which shows that while environmental conditions have a big impact on psychological health, SES conditions impact physical health. They concluded that both physical and

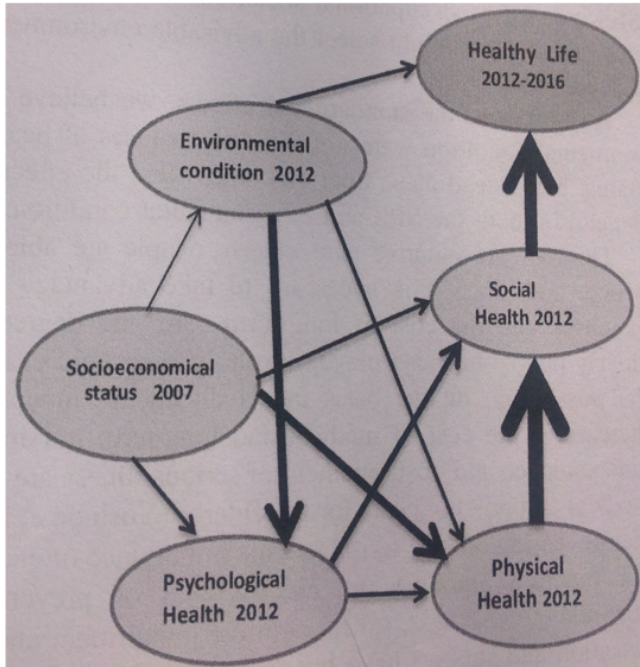


Figure 1. Final model of causal and structural relationships to the healthy life.

social health have the biggest impact upon longevity and a healthy life.

Shuo Wang wrote well about the connections between SES, Social Interaction and Health Status in chapter 6 showing how they are statistically interrelated. Wang found “the mediating influence of social interaction performed more pronounced among elderly women” (p. 96) and concluded that social interaction was heavily influenced by SES. She pointed out that “people with an advantageous SES are more inclined to interact with others, for several reasons”, for instance, “contact[ing] friends, participat[ing] in community volunteering and leisure activities require adequate financial support” (p. 97).

Wang argued, based on previous studies, that being active socially protected against physical function decline, cognitive decline. Thus, she indicated that the key towards higher achievement of self-rated health (SRH) was increasing opportunities for more exercise and access to information about health and health-related behaviors, providing emotional support for coping with stress,

and offering tangible help. In her study, it was noted that “social interaction had a great effect on health status, suggesting that people with better social interaction have better SRH and high-level performance ability” (p. 97).

While the editors start *Determinants* by telling us what we already know: Japan has the highest life expectancy and healthy life expectancy in the world (World Health Organization, 2016). They caution this good news with the gap between the two. It appears that women can expect the last 12.5 years of their lives to be not healthy and men the last 9 years of their lives, with women typically living to be 80 and men to 74 (p.1).

While many of us have suspected it, the research in *Determinants* shows clearly that having a healthy SES (think enough money, education, and work-status) in Japan can greatly determine your health over time and your longevity. *Determinants* should be taken seriously by the Japanese government, but it is also a wake up call for any government that cares about the well-being of its aging population. The editors cite *Social Determinants of Health*, (Marmot and Wilkinson, 2006) and call social determinants of health “solid facts” (p. v) which should be taken as seriously in the same manner as nutrition and exercise. They then proceed to introduce other factors, such as “the three health-related dimensions, i.e. physical, mental and social well-being, [which] are key elements as intermediary determinants into the causal relationships between SES and healthy life expectancy” (p.2-3) . Social well-being is different from SES in that it depends on close family, friends, and colleagues rather than enough money and work status.

Finally, the editors have a short afterword in *Determinants* in which they basically do away with our mothers’ simplistic order to eat our veggies, allowing us to see that things are much more complex than they seem, but at the same time much more controllable than we have previously imagined. A long life is not dependent just on the food you eat, it depends more on who you might be eating with (loved ones), where (in a backyard garden or by a lake), your ability to play with your grandkids, and to giggle like a 4-year old. The authors encourage us (and make it possible for us to) make “desirable smart lifestyle choices” (p. 193). This short Afterward is worth quoting:

The main characteristic of this work is the revelation of ... the cause and effect structure of more fundamentally important socio-economic factors.

In particular, this study points out that it is not the case that lifestyle habits including and ideal diet directly provide for healthy life expectancy, but that there is the possibility that major socio-economic factors, environmental conditions, and the three essential health factors [mental, physical, and social] are, in fact, confounding factors.

The essence of the results of this study is that, as a plan for extending life expectancy in Japan, we cannot expect that our research will have a direct effect on healthy life expectancy; however, we sincerely hope this might influence a more positive lifestyle to occur as a result by progress in work, physical, psychological and social health, as well as the necessity to emphasize the preservation of income and environmental conditions.

Those who wish to unreasonably control lifestyle habits, with their resulting factors, should take note of prior research concerning younger deaths. Consequently, to improve lifestyle habits—including a desirable diet—is to recognize that these are the resulting factors of socio-economic causes and three essential health factors of socio-economic causes and three essential health factors. To push for the initiation of better overall health education that focuses on setting up a health supporting environment can definitely help people's lives by making smart lifestyle choices. (Hoshi & Kodama, 2018, p. 193)

There are a few awkward phrases that I think could be smoothed out, but this happens even with native speakers. One aspect that I would recommend to the editors is an acronym list on a few pages in the back. Thus, when reading, for example, *the direct effect of EWB on DQ*, we do not have to go back many pages looking for the original words (EWB = emotional well being; DQ = dietary quality).

For general purpose teaching, the information given in this book review may be enough for many students to read and talk about. It should be of special interest to medical students and those studying sociology through CLIL/CBI type courses in their later and graduate school years. I regularly share it with students in my positive sociology classes and other classes when the topics of the

elderly and social good come up. Finally, for graduate students taking statistics courses and interested in learning about structural equation modeling (SEM), concrete examples can be seen in this book.

References

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Author bio

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