

Elucidation of the area-specific factors implicated in the emergence of bacterial diarrhea

- A case study in Padang, West Sumatra, Indonesia -

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Place of fieldwork: Republic of Indonesia

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- Research background

Unlike in Japan, the most frequently occurring disease among inpatients in Indonesia is diarrhea, indicating that such diarrhea is of specific bacterial origin resulting in severe symptoms such as cholera, bacillary dysentery, and typhoid. The occurrence of bacterial diarrhea (BD) is related to area-specific factors such as natural, environmental, cultural, social, political, and/or economic factors in addition to microbiological factors. However, only a few studies have dealt with these factors in comprehensive and quantitative manners in Indonesia. Interestingly, very few patients with BD have been reported in Padang, the capital of West Sumatra Province, Indonesia [Oyofu et al., 2002]. This suggests a possibility that a comprehensive study focused on Padang may help find an area-specific factor(s) responsible for suppression of the occurrence of BD, and thus may be useful for prevention of BD in Indonesia.

- Research purpose and aim

The purpose of this study is to integrally reveal an area-specific factor(s) implicated in the occurrence of BD through the following investigations: 1) current status of BD in Padang based on the patient information, and 2) area-specific ecological/environment factors responsible for BD in Padang. My approach includes an experimental analysis-based method in addition to the conventional literature search- and interview-based fieldwork. This could be achieved by examining clinical and environmental (water, food, etc.) samples for particular pathogens with the most advanced biomedical detection methods that fully satisfy the standard of evidence-based medicine. This holistic approach requires collaboration with the locals and will serve as a good example for future studies in search for area-specific preventive measures against BD in other developing countries if the major purpose of this research is achieved.

- Results and achievements by the fieldwork

With respect to my research subject, my fieldwork was mainly carried out in the community health clinic, also known as “puskesmas” in Padang (Figure 1). My findings are summarized as follows:

- 1) Importance of a counterpart having many strong connections with the institutes and offices related to my fieldwork.
- 2) A close connection of puskesmas with the local people in Padang and its significance in the new national insurance system. I plan to include a survey on the relationship between the changes in the social role of

puskesmas and the occurrence of diarrhea in my next fieldwork.

3) Food habits of the Minangkabau people, a major ethnic group in Padang. They are known to be pious Muslims and maintain complete heat-cooking habits of the Islamic world. I noticed their food habits when I ate a snail called “langkitang” (Figure 2), the uppermost end of which seemed to have been intentionally broken. I presume this was intended for better heat-sterilization throughout the shellfish.

4) Execution of religion-related activities is probably stronger in Padang than in Java Island, as I observed that the women's hijab and Islamic greetings were used more often in Padang.

- Implications and impacts on future research

I will modify my research plan based on the above findings from my fieldwork. In addition, I learned two very important things through this fieldwork. I was unable to:

- 1) prepare all documents required for the visa application in time for my departure because the requirement had changed suddenly; and
- 2) obtain the necessary Indonesian language skills for me to conduct my research completely, even though I took Indonesian classes at Andalas University (Figure 3).

I will be more careful about the visa application and continue the ongoing language learning until the next fieldwork.



Figure 1. Signpost of *Puskesmas*



Figure 2. *Langkitang* (the uppermost end of the shell is broken intentionally)



Figure 3. A photograph of myself with Ms. Sri Wahyuni, a teacher of Indonesian language at Andalas University