Report of the International Workshop on Medical ZAIRAICHI, A Medical-Local Knowledge on Research Network

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The purpose of the workshop was to introduce the Medical ZAIRAICHI Network, which we are establishing as an international interdisciplinary collaboration to understand how local people prevent, treat, and take care of patients with diseases, and maintain health while embracing both modern biomedical and local practices that encompass knowledge, resources (healing, treating, and caring) and skills. The keynote speakers and oral presenters spoke about their perspectives on medical ZAIRAICHI and their research studies in Ethiopia, Tanzania, Uganda, and Malawi. Discussions included Medical ZAIRAICHI’s multiple aspects in health care, such as biomedical sciences, interaction with animals and the environment, health-care systems and ethical issues, and socio-cultural environment. In each research field, we need to make sure that we consider the question of how people perceive the body and the causes of health problems, prevention, and caring modalities. Based on this knowledge and resources, we can create a balanced knowledge base for safe, feasible, and sustainable health options through interdisciplinary collaboration. We need to remain open to consultation and feedback from local perspectives. Only then can we develop health education content for communities, schools, and patients and consider the effective distribution of health education using Information and Communication Technology (ICT).
Introduction

On February 7, 2021, we held the International Workshop on Medical ZAIRAICHI, medical-local knowledge research network. The workshop included a keynote speech, oral presentations, poster presentations, and discussions. In this report, we provide an overview of the content and illustrate our ongoing efforts to describe what we want to achieve through the activities of medical ZAIRAICHI. The purpose of the workshop was to introduce the Medical ZAIRAICHI Network, which we are establishing as an international interdisciplinary collaboration to understand how local people prevent, treat, take care of patients with diseases, and maintain health while embracing both modern biomedical and local practices. We have not finalized a concrete definition of medical ZAIRAICHI yet, but the concept is based on the definition of ZAIRAICHI (local knowledge in Japanese), which is a type of knowledge formed through people’s practices and experience in their daily interactions with their natural and social environments (Shigeta, 2020: i). We want to address issues related to health and medical care from this perspective.

Our journey started as a project for a contest for multidisciplinary research ideas at Kyoto University. At the time, our main question was, “What midwifery care leads to the healthiest birth for women in Africa?” and developed a research idea with researchers from different backgrounds in midwifery, anthropology, medicine, and physics. We won the second prize and expanded the idea to multidisciplinary research. We discussed the use of ICT for education, data collection, and the distribution of the findings of medical ZAIRAICHI so that we could share our knowledge not only with people in Africa, but also international audiences. In the first stage of the project, we agreed to start by collecting medical and local knowledge and behaviors in African countries to identify effective health practices by collaborating with health-related researchers and anthropologists. As the researchers in the team conduct research on medical ZAIRAICHI in different parts of Africa and ultimately, we’d like to accumulate knowledge related to local perspectives of “better health” and establish a network of researchers who investigate local knowledge and health practices. We would like to call it the Medical ZAIRAICHI Station.

Due to the global COVID-19 pandemic, we needed to change most of our plans to online alternatives. In 2020, we conducted monthly online research meetings and accumulated case studies in diverse fields. At the international workshop, we presented these cases in oral and poster presentations (Tables 1 and 2). We are also developing an online platform to showcase these case studies (Figure 1).

1. Keynote speech

The first keynote speaker was Dr. Mirgissa Kaba from Addis Ababa University. He presented, “My health is part of my way of life,” a local perspective on understanding health.

### Table 1  Keynote and oral presentations

| Titles                                                                 | Presenters                  | Affiliations                        |
|-----------------------------------------------------------------------|-----------------------------|-------------------------------------|
| “My health is part of my way of life”: Local understanding of health and health problem in Ethiopia | Mirgissa KABA               | Addis Ababa University              |
| ZAIRAICHI in Women’s health: A Tanzanian context                      | Beatrice MWILIKE            | Muhimbili University of Health and Allied Sciences |
| An Ecology of Care Approach to Nodding Syndrome in Northern Uganda    | Makoto NISHI                | Kyoto University                     |
| Development of a Smartphone App for the Improvement of Midwifery Care: Incorporating Medical ZAIRAICHI into Modern Medicine | Yoko SHIMPUKU               | Hiroshima University                |
| Life skills education in Malawian primary schools                     | Kyoko TANIGUCHI             | Hiroshima University                |
| ZAIRAICHI [Local Knowledge] of Health Care in Africa and the Potential of Engaged Area Studies: Comparing the features of potters’ bodies that live “healthier” in communities to the features of their hands and fingers while making pots | Morie KANEKO and Noriko SUZUKI | Kyoto University                     |
| Anthropometric analysis for low back pain in Tanzania                 | Tomoki Aoyama               | Kyoto University                     |
### Table 2 Poster presentations

| Titles                                                                 | Presenters                                                                 | Affiliations                                                                 |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Exploring issues related to obstetric fistula in developing countries | Ayako OGASAWARA                                                            | Hiroshima University                                                           |
| Health Extension Workers’ Role and Potentiality in Health and Hygiene Activities in Ethiopia’s Regional City | Noriko SUZUKI                                                              | Kyoto University                                                              |
| How should diseases be prioritized in health care?                    | Keiko NAKANO                                                              | Kio University                                                                |
| Contextualising psychotherapy: Development of a group therapy delivered by video-conferencing for substance use disorder in Indonesia | Chika YAMADA\(^1\), Kristiana SISTE\(^2\), Enjeline HANAFI\(^2\), Youdil OPHINDI\(^3\), Evanja BEATRICE\(^2\), Vania RAFELIA\(^2\), Peter ALISON\(^2\), Albert PRABOWO\(^3\), Toshikiho MATSUMOTO\(^4\), Ryota SAKAMOTO\(^1\) | 1 Kyoto University, 2 Universitas Indonesia, 3 Ragon Institute of MGH, MIT and Harvard, Harvard Medical School, 4 National Center of Neurology and Psychiatry |
| Anthropological Study on the Generation and Transformation of the Lifelong Relationships between Humans and Things | Makoto KURATA                                                             | Tokyo Medical University                                                      |
| To the creation of a study field of “Lifelong Sciences”: An anthropological study on the process of skill acquisition and biological processes in human development | Morie KANEKO                                                              | Kyoto University                                                              |
| The realities of sanitation workers service at the time of COVID-19 Pandemic | Haregewoin BEKELE                                                        | Kyoto University                                                              |
| Ethnic relations in urban Ethiopia: Trends, factors in and characteristics of interethnic marriages in Addis Ababa | Addisu MESERET                                                            | Addis Ababa University                                                        |
| Research Design of the Project of Development and Operation Model of Plant-derived Soil Additives for Road Disaster Reduction on Problematic Soil | Shunsuke MATSUKURA\(^1\), Makoto KIMURA\(^1\), Masayoshi SHIGETA\(^1\), Hideaki YASUHARA\(^1\), Ichiro KAMEI\(^1\), Yoshinori FUKUBAYASHI\(^1\), Morie KANEKO\(^1\), Yasuo SAWAMURA\(^1\), Hiromasa IWAI\(^1\), Yusuke MIYAZAKI\(^1\), Fumitaka WAKAMATSU\(^1\), Aino IKEDA\(^1\), and Takuya HAGIWARA\(^1\) | 1 Kyoto University, 2 Ehime University, 3 Miyazaki University, 4 Nagoya Institute of Technology |
| Study on the Usage of diatomite as reinforcing Calcined bauxite effect in stabilizing bentonite and its long-term durability analysis under cyclic and static loading | Alemshet Bekele TADESSE                                                   | University of Miyazaki                                                       |
| Sustainable soil stabilization techniques for problematic soils: The case of MNGD project in Ethiopia | Gidebo, Frehaileab ADMASU, Hideaki YASUHARA                                | Ehime University                                                             |
| Smallholder Farmers Vulnerability to Climate Change and variability and Adaptation Practices in South Ari Wereda, South Omo Zone | Kassahun YEMANE                                                           | Jinka University                                                             |
| Studies on the rural community road access and its effect to the staple crop production: Assessment of sustainability of enset production system in South Omo, Ethiopia | Argachew BOCHENA                                                          | Jinka University                                                             |
| The adoption, utilization and indigenization of triticale: Experiences of smallholders in Wollo, Ethiopia | Sisay LEUL                                                                | Addis Ababa University                                                       |
| The Inception and End-Use of Alien Crops: A Case of Triticale in the Gamo Highlands, Southern Ethiopia | Hana SHIMOYAMA                                                            | Kyoto University                                                             |

出所: 国際ワークショッププログラムより
and health problems in Ethiopia. He described health as a holistic concept that finds its niche within the social, cultural, economic, and political domains of a community, in addition to its biological profile. He stated that by building more on local knowledge and improving the interface between modern healing practices and local wisdom may improve the prevention, healing, and management of health problems that are complicated by urbanization, industrialization, and climate change in the twenty-first century.

The second keynote speaker was Dr. Beatrice Mwilike from the Muhimbili University of Health and Allied Sciences. She presented, "ZAIRAICHI in women’s health: a Tanzanian context." She spoke about systematic issues in Tanzania in terms of poor infrastructure, low education levels, poverty, and diseases that exacerbate the extent of these challenges. She mentioned that women need to access the health-care system more frequently than they currently do. She illustrated examples of ZAIRAICHI, such as the use of mlenda leaves. When applied to the uterus by hand, the leaves reportedly make it easier for the neonate to move through the birth canal. She said that the role of community-based actors, whether traditional birth attendants (TBAs) or relatives, cannot be underestimated in promoting women’s health. She argued that the problem of home deliveries will not be solved by focusing mainly on improving the formal health system and proposed to generate evidence on the local knowledge available through research, particularly ethnographic research, to understand the culture of people and gain the perspectives of local communities on how local knowledge can be used to impact women’s health positively.

2. Oral presentations

Dr. Makoto Nishi discussed nodding syndrome (NS), which is a form of epilepsy that affects previously healthy children, causing frequent seizures and a decline in cognitive and motor functions. His research aims to understand the problems NS patients and their families face through a set of contextual inquiries, which we refer to as the ecology of care: a transdisciplinary framework for understanding the knowledge, resources, and connections that determine the quality of life of persons in a particular milieu. His research project addresses
issues of NS patients who reach adolescence and adulthood, and issues concerning their social integration, including work and marriage.

Dr. Yoko Shimpuku discussed issues related to the shortage of health-care providers and a lack of medical tools and materials, which add to the heavy workload of midwives, resulting in a lower quality of care for women during pregnancy and childbirth. Her research in medical school entry and the number of meals consumed daily; in accumulated through individuals voices and their experience of a lack of care during childbirth in a low-resource context. The accumulation of this type of research has led to the recent World Health Organization’s recommendations on pregnancy and childbirth, which emphasize the importance of women’s positive experiences during pregnancy and childbirth. Her research in medical ZAIRAICHI aims to develop a smartphone app that could be used to collect ZAIRAICHI data and distribute knowledge about quality of care during pregnancy and childbirth.

Dr. Kyoko Taniguchi spoke of life-skills education that has been included as a subject in primary education in Malawi since 2004. Her study examined students’ knowledge of life skills taught in Malawian primary schools and attempted to identify the student factors that influence those skills. Her findings have shown that the students displayed low achievements in life skills related to gender and nutrition. In grade 5, the factors influencing life skills were age at first school entry and the number of meals consumed daily; in grade 7, the factors included gender, age at first school entry, number of meals consumed daily, and socioeconomic status. The study findings contribute to an understanding of the acquisition of life skills in Malawi.

Dr. Morie Kaneko and Noriko Suzuki introduced the concept of ZAIRAICHI (local knowledge) health care in Africa and examined whether engaged area studies could help Africans live “healthier” lives in their communities. African local knowledge is practical and experiential knowledge and accumulated through individuals’ daily interaction with their natural and social environment. This concept has been used to highlight how Africans refer to their experiences when adopting something new by examining two case studies, namely, the experiences of women potters in southwestern Ethiopia and the experiences of health extension workers at health posts, who had been practicing maternal and child health with mothers and children and taking care of other individuals by providing home visit services. The presentation also highlighted topics and perspectives on how engaged area studies can offer assistance in realizing a body that lives healthier,” while considering the limitations and possibilities of modern medical systems in rural cities.

Dr. Tomoki Aoyama described a study to investigate the prevalence and presentation of lower back pain and the relationship between anthropometric measurements in Tanzania. The study revealed that postural abnormalities play a role in the occurrence of lower back pain by creating concentrations of stress. In Tanzania, participants with symptomatic lower back pain had a large anteroposterior pelvic tilt and a thoracic kyphotic posture. These results contribute to a better understanding of the mechanism of lower back pain in Tanzania.

3. Poster presentations

We used LINC and Biz for the poster presentations. The abstracts and posters were uploaded a few days before the workshop and removed 14 days after the workshop so that participants could comment on each other’s posters. During the workshop, the presenters briefly introduced their posters in two minutes.

4. Discussion

The panelists, Dr. Mirgissa, Dr. Nishi, Dr. Kaneko, and Dr. Taniguchi participated in a discussion on the following topics, while Dr. Shimpuku moderated the discussion.

- How can we accumulate knowledge and evidence of medical ZAIRAICHI?
- How should we consider safety issues related to medical ZAIRAICHI?
- How can we make the most of medical ZAIRAICHI for health of people?

5. How can we accumulate knowledge and evidence of medical ZAIRAICHI?

Dr. Mirgissa proposed the use of mixed methods in research to gain a comprehensive and holistic insight into the question at hand. This called for a more transdisciplinary work that brings different disciplines and the community together around the same research questions to provide a holistic response to questions and usable evidence that the community is happy with in addressing its problem. He emphasized the issues related to the connection between ethical clearance/ institutional review board (IRB) processes and local
knowledge (community interests).

Dr. Nishi posed the question of how to incorporate “local knowledge” into scientific knowledge, and how to situate community health issues in their political environmental and social contexts and examined the methodologies available for certain kinds of knowledge. For example, we could create scientific knowledge on “how they practice” in anthropology. However, methods are needed to access their knowledge and practice of care (elderly, children, people with mental/physical disabilities, etc.). In this aspect of knowledge, what kinds of inquiry could one make? In other words, we want to answer how people care for each other at a household level.

Dr. Taniguchi stated that teaching life skills in primary school is essential, but teachers have a shortage of knowledge on health. Support from health-care workers may be a solution.

Dr. Kaneko discussed difficulties in communication among researchers from different backgrounds and that there was no easy solution to this problem. She emphasized consideration for the local context and situated knowledge. She said she would like to focus on local people/patients themselves and mentioned that it was important to address how we can collaborate with them.

6. How should we consider safety issues related to medical ZAIRAICHI?

Dr. Mirgissa noted that the challenge in the domain of ethical clearance was mainly developed in medical science and neglected community perspectives. IRBs focus on safety and consent of participation, while there is a lack of clarity on a research outcome that contributes to the community, accountability of researchers, and responsiveness to the community. He emphasized that community members should be involved in the research process, and that IRBs should involve the community.

7. How can we make the most of medical ZAIRAICHI for health of people?

Dr. Nishi noted that as we cannot travel due to COVID-19 and we need to design our research within this context so that Ugandan counterparts can process the research. Dr. Taniguchi mentioned that joint research that includes health and education is important, so that research can be more comprehensive. Dr. Kaneko described the importance of
local context, interaction with local people, and paying attention to “not generalize” and “not universalize.” Dr. Mirgissa concluded that the overarching principle was that this initiative should be rolled out to engage the community and to ensure that the community owns the research and its outcomes. We should be as much a student and learner as a researcher. Based on the presentations and discussions, we illustrated Medical ZAIRAICHI in Figure 2.

Summary

The discussion revealed that Medical ZAIRAICHI includes multiple aspects of health, such as biomedical sciences, interactions with animals and the environment, health systems and ethical issues, and the socio-cultural environment. In each research, we need to ensure that we consider the question of how people perceive the body and health. Based on this knowledge, we can create balanced knowledge on safe, feasible, and sustainable options for health. We need to remain open to consultation and feedback from local perspectives. Only then we can develop appropriate content on health education for communities, schools, and patients and consider effective distributions of health education using ICT.

Acknowledgement

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References

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（要旨）

医療在来知研究会 国際ワークショップ報告

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本ワークショップの目的は、現代の近代医学的と、知識・資源（癒し、治療、ケア）・技術を内含する地域的実践の両方を取り入れながら、地域の人々がどのように病気を予防・治療・ケアし、健康を維持しているのかを理解するための学際的・国際的な連携として設立している「医療在来知ネットワーク」を紹介することであった。基調講演者と口頭発表者は、医療在来知についての自らの考察や、エチオピア、タンザニア、ウガンダ、マラウイでの研究について述べた。医療在来知は、人の生物医学要素と動物・環境との相互作用、健康システムと倫理的問題、社会文化的環境など、健康の多面的な側面を含んでいることが議論された。発表と議論によって、いずれの研究においても、人々が身体や健康問題の要因と予防、ケアの様式をどのように認識しているのか、という問いを考慮する重要性が示唆された。これらの知識や資源をもとに、学際的な連携を通じて、安全で実現可能で持続可能な健康の選択肢について、バランスのとれた知識を生み出すことができる。また、地域の視点について人々から知識やフィードバックを繰り返し得ることが必要である。その上で、地域、学校、患者への健康教育の内容を開発し、ICT を活用した健康教育の効果的な展開を考えることができると考察された。