

食之有「衛」：馬拉威北部民眾飲食營養與非傳染性疾病初探

Eat Well, Live Well: Diet, Nutrition, and NCDs of Population in Northern Malawi



實習單位：路加國際 (Luke International, LIN)

學生姓名：翁咏聖

指導教師：吳宗樹老師



"The unforgettable journey to Malawi broadened my horizons, and sharpened my public health expertise, teamwork spirit, and communication skills in the resource-limited setting."

Location

Renowned for its beautiful weather, magnificent scenery, and genuine people, Malawi is nicknamed "the Warm Heart of Africa." 2023 marks a significant milestone as students from NTU DPH return to Mzuzu for the field practicum in global health after the COVID-19 pandemic. This collaborative partnership with LIN enables us to connect with staff from international organizations, for instance, WHO, UNICEF, World Vision, IFRC, and so on. We were involved in the polio campaign and malaria vaccination launched by Mzimba North and Nkhata Bay District Health Office (DHO). We also shadowed professionals at St. John of God Centre to appreciate their efforts dedicated to mental health issues, and served as teaching assistants at the Taiwan-Africa Nursing and Health Care Exchange Workshop. During our visit to Mzuzu Central Hospital (MCH), we went by various departments which encompass outpatient clinics, inpatient wards, laboratories, the gender-based One-Stop Centre, and other health facilities. What impressed me the most was the electronic medical record and health information system set up by Taiwanese technicians, together with the Rainbow Clinic providing HIV/AIDS prevention and treatment services.

Topic

Natural resources and social contexts shape people's food choices under certain spatiotemporal circumstances. Dietary patterns are also inextricably intertwined with agriculture, biotechnology, nutrition, and food safety. Nutrients ingested by the human body maintain physiological functions, playing a crucial role in physical, psychological, spiritual, and social well-being. Nowadays, cultivating nutrition literacy and forming a habit of healthy eating has become a global trend. Hence, concerted and holistic approaches should be incorporated into research, education, or services aimed at preventing and controlling non-communicable diseases (NCDs). Malawi has produced and exported lots of cash crops since the colonial period. The unfair trade practices ended up with a dependency on materials, finance, and workforce from foreign markets, which hindered the development of domestic infrastructures, governance mechanisms, and healthcare systems. What's even worse, global environmental change, coupled with frequent extreme weather events, wreaks havoc on the supply chain of bioresources, leaving them susceptible to fluctuating prices. In fact, Malawi now faces the double-edged challenge of undernutrition and overnutrition. Food insufficiency may result in protein-energy, vitamin, or mineral deficiencies. On the other hand, rapid urbanization and drastic lifestyle changes have transformed the dietary landscape. Examples include pickled, fried, and ultra-processed foods, or beverages rich in artificial flavors, colorings, and high-fructose corn syrup. These options often lead to excessive calorie, sugar, sodium, and saturated fatty acid consumption, or the unhealthy intake of refined starches and trans fats. WHO defines BMI > 30 as obesity, while $25 \leq \text{BMI} < 30$ as overweight. Both conditions are associated with NCDs such as hypertension, diabetes, cardiovascular diseases, cancers, and so forth, placing a substantial burden on public health and social economics. Despite having a lower proportion of overweight or obese populations compared to regions with higher HDI, many Sub-Saharan African countries have witnessed a surge in the prevalence of diet-related metabolic syndromes. How to eat well thereby promoting health, preventing disease, and prolonging life, is an issue that cannot be ignored. Throughout the internship program, not only did I explore daily life in Malawi, but I also learned from people with different backgrounds and championed the interconnected 17 Sustainable Development Goals.

Inquiry

Primary Prevention: Health Promotion and Specific Protection

1. We cherished gardening activities and nutrition education at Chiputula Primary School implemented by prominent SHANTU members in 2022. Nevertheless, the USR project temporarily came to a halt, and the schedule this year coincides with students' summer vacation, making it difficult to build the network. Hopefully, our future cooperation will continue smoothly to extend the successful model.

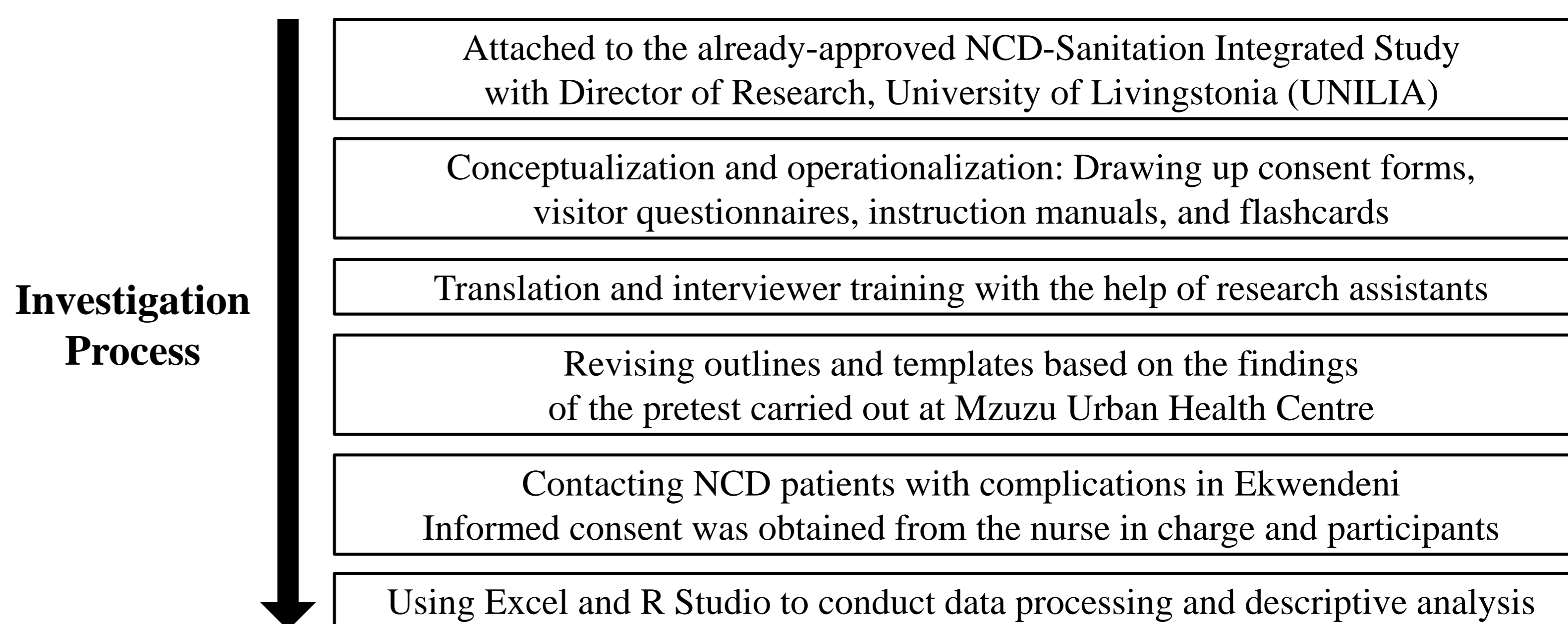
2. Discovering an exhibition at Mzuzu Mataifa Grounds, I stopped by street vendors selling affordable and seasonal whole foods. Some of the stalls offered seeds, tools, and livestock to foster community empowerment. The AFIKEPO Nutrition-Sensitive Agricultural Programme also participated. It disseminated informative pamphlets and recipes compiled in English and *Chichewa*. These materials were accompanied by physical items like common ingredients or utensils to illustrate the six major food categories and their recommended serving portions. Interestingly, the Malawian version of My Plate was visualized on fabrics, and traditional delicacies such as mice, rabbits, or insects were also recognized as sources of protein, highlighting the importance of cultural safety and food sovereignty. Inspired by the Community Nutrition Promotion Center in our country, I thought mobile food carts, cooking competitions, cross-generational meals, or mock markets, could be innovative strategies to proactively enhance the accessibility, availability, acceptability, and quality of nutritious diets. Additionally, guidelines should be easily understood by the general public, and regulations on nutrition labeling, food advertisements, and product traceability are suggested to be enacted.

Secondary Prevention: Early Detection and Prompt Intervention

- DHO works hand-in-hand with UNICEF to establish outreach stations in remote areas and distribute ready-to-use therapeutic or supplementary foods, in order to fill a gap in the national emergency medical services. Door-to-door immunization helps identify acute or chronic malnourished residents, yet systematic risk assessment (e.g., nutrition screening) is still necessary to ensure immediate transfer to essential healthcare services. It is also recommended to expand the coverage for nutrition surveys to monitor and evaluate population health on a routine basis. Besides, creating food exchange lists and nutrition databases would allow citizens to look up dietary composition and share epidemiological information with researchers to calculate reference intakes.
- During the meeting with registered dietitians (who are authorized to prescribe dietary advice for patients as a part of nutritional therapy) and nutritionists (who can only provide clinical or community nutritional counseling) at MCH, I gained insight into what the procedures are like, where the greatest needs are, and how to probe and solve the problems. It was observed that most patients hold positive health beliefs, showing a willingness to follow dietary guidance and thus enjoying beneficial outcomes. Experts have weekly conferences to keep abreast of the key messages. However, heavy reliance on memory and paperwork is noted. There is also a limited variety of disease-specific formulas for oral or tube feeding, and no parenteral nutrition support is available. Moreover, the hospital doesn't design a balanced menu for healthy individuals or prepare texture-modified meals for elderly people. Combined with a lack of initiatives to convey food and health-related information, the above-mentioned aspects are those I believe are worthy of improvement.

Practice

Tertiary Prevention: Disability Limitation and Rehabilitation

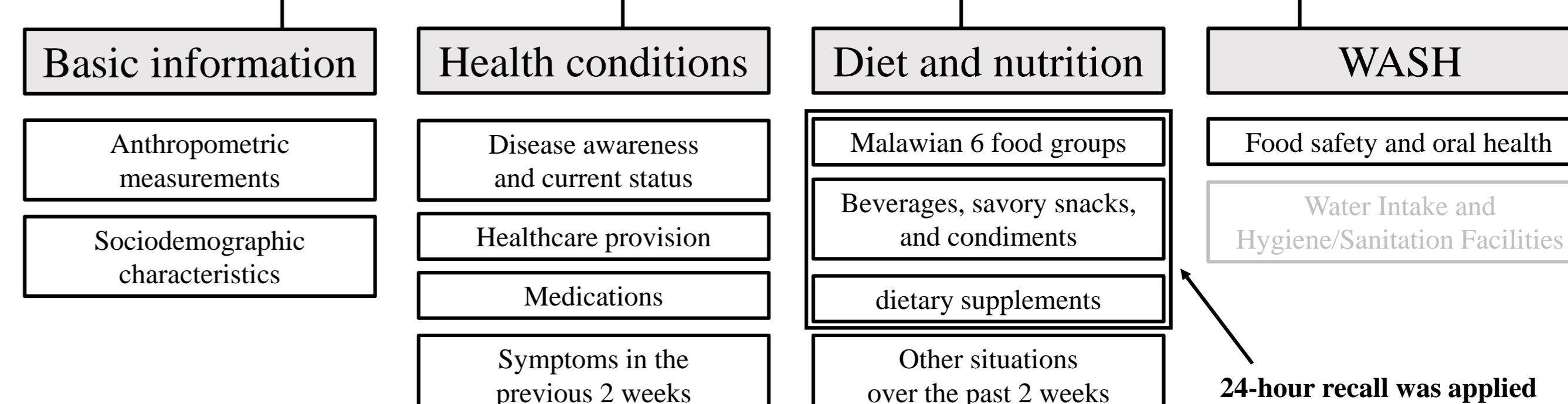


More info



Scan me !

Questionnaire Framework



Preliminary Results

Purposive and snowball sampling were employed

A total of 32 individuals were interviewed from August 16th to 18th, 2023

The data reflect complete responses from 25 patients living in different households (after excluding two patients who were unable to complete the questionnaire on the first day)

