Saleh Mohammed Saleh. **Transdisciplinarity in Global Health in Africa**

Transdisciplinarity is an academic research approach that has its history and development among various concepts of knowledge acquisition. The evolution of an analytical, theoretical purely natural science to a practical ''real life'' approach, which includes non-academic institutions and social experience is considered essential in the health discourse, from a disciplinary, interdisciplinary, multi-disciplinary and transdisciplinary perspective (Mónica Berger-González *et al.* 2021: 58). That is, from the representation of stakeholders which can reach to the general representation. These representations reveal and spark consciousness of their makings, undoing, contingencies, and possibilities. In various ways these representations as social texts and knowledge-making practices portray the sites as open-ended; and as producing, as much as absorbing and mediating, forces, and power relations in healthcare.

Jeremy Greene *et al.* (2013: 34) address the historical perspective of the society to be considered, the original concept and objective of what so called "global health was coined to define health problems and interventions extending beyond national boundaries, including those between developed and developing countries''.   Abdalla *et al.* cited Labonte and Spiegel who addressed a Global Health as ''the social, environmental, and economic contexts in which health, disease and healthcare interventions are embedded (Salma Abdalla, *Et al*, 2020: 7).

This paper aims to explore the Jigjiga University One Health Initiative (JOHI) research project based on Transdisciplinary process implemented in the Somali Regional State of Ethiopia, will serve as a case sample that the same research approach can be used in Global Health projects in African context. 'The JOHI project creates innovative integrated health systems for improvement of health and well-being of pastoral communities. The jigjiga project provides the insights on how transdisciplinary approach can be implemented stepwise, several organized workshops of all stakeholders and an open-door strategy in African context. By an 'open door strategy'; the term was not used in the project, I just decided to use it in this paper because of the possibility provided by JOHI project in implementing transdisciplinary

approach provided an inclusive opportunity for research objectives and a possible involvement of new stakeholders (Mónica Berger, *Et al.* 2013: 67). For example the subject of pastoralist 'meat market' and the 'rangeland degradation' were not in the original JOHI project proposal. These two emerged subjects make JOHI to invite more stakeholders from Global North to participate in the project. The JOHI is a research and development partnership between Jigjiga University, Armauer Hansen Research Institute and Swiss TPH from 2015 to 2026. (Jakob Zinsstag, et al. 2022: 12). The project reveals on how the transdisciplinary approach had been practiced in one health discourse to study the human and animal health of the nomadic pastoralists in Gode, Adadle, Woreda District.

Transdisciplinary approach in JOHI project was not a first place to be applied, it was first applied by some of the same One Health experts from Swiss TPH including Jacob Zinsstag in studying the Chad nomadic pastoral communities in 2007, and in 2011 to 2014 together with Monica Berger to study Cancer healing systems between biomedicine and the Maya of Guatemala (Mónica Berger-González, 2016: 76). Therefore, it was a replicated research methodologies in African context through JOHI project. This technique can be used in Global Health projects in African context. I can rise a question how transdisciplinary approach can be used in Global Health projects in Africa to study and solve the societal health problems?

The previous research on the same area of study in Gode, Woreda District involved only two categories of state and non-state stakeholders. They applied a 'purely technical scientific intervention' (Jacob Zinsstag, 2022 :13) in studying and solving Rangeland degradation of Somali pastoralist, which resulted into failure of intended objectives. The JOHI project developed collective methodologies with stakeholders which include the community itself, whereby the community got an opportunity to share their local knowledge. The transdisciplinary approach managed the JOHI project to be successfully solved the Rangeland degradation at Adadle woreda. As it has been mentioned earlier that, the Rangeland was not an original JOHI objective, but was identified by local authority as one of the community's priorities. The transdisciplinary approach managed JOHI to interact closely with sociocultural aspects on traditional knowledge of Somali pastoralists in climatic changes. This traditional information filled the gap of missed scientific statistics on rainfall of the region under study.

This knowledge is much more distinctive to a particular community than generality (Jacob Zinsstag. *Et al*. 2022: 14). The Global Health projects like Tuberculosis, malaria and even HIV/AIDs programs in Africa can apply the same research approach in understanding the community priorities and their traditional experience in diseases and healing. Due to the existence of inherited community knowledge, to achieve an adequate understanding, scientific research must excavate indigenous community knowledge in diseases and healing (Anthony Cole, 2017: 127-28). The JOHI project through transdisciplinary process managed to excavate the pastoralists knowledge in treating their animals and their own health problems.

The Transdisciplinary process in JOHI project was based on Common Understanding among the stakeholders. It is a fundamental principle in implementing a collective approach in one project. The common understanding in setting the research objectives, and methodologies. The researchers, administrators and conversely depend on scientific knowledge system while the community depends on local knowledge system. (Jacob Zinsstag. *Et al*. 2022: 13-14).

In the case of Global Health HIV/AIDS projects in Africa, the Global Health practitioner's knowledge is centered on individual disciplines, and they involved the state administration whereby their knowledge is confined on biomedical treatments and the knowledge of society is highly based on traditional perspective. The main challenge for natural science researchers in practicing Global Health in Africa is the limited practical societal knowledge in diseases and healing. Based on my personal experience, there is no any African family which is safe from cultural traditional medical beliefs.   The critical studies in Global Health programs in Uganda by Susan Reynolds Whyte on 'Therapeutic Clientship' (Susan Whyte Et al. 2013) depicts the way Ugandan soldiers have been infected by HIV/AIDs by presenting the case Saddam who spent plenty of money to visit witch doctors in treating his health problems, whereby finally taking a blood test, and finding with HIV positive (Susan Whyte *Et al*. 2013: 140). The Antiretroviral therapy (ART) projects in Uganda are mainly practiced only in providing the drugs medicaments without making critical societal study on general living condition and beliefs of Ugandans HIV/AIDS victims. Susan's study depicts the life and beliefs of Ugandans in diseases and healing are much more in traditional ways especially during the early period of feeling sick (Susan Whyte *Et al*. 2013: 148-9). When the time the patient realized what is

exactly he/she is suffering the body is now fragile for biomedical treatments and financially weak.

The African indigenous knowledge about diseases and healing is an 'inherited treasure' (Anthony Cole, 2017: 127), and it is continuous practices and beliefs to their peoples. JOHI researchers put the pastoralists traditional knowledge into consideration. In 2018 JOHI made a first decisions on proposed interventions in the field site of Adadle woreda based on the research in tuberculosis control, integrated surveillance and response adapted to pastoralists and water and sanitation (Monica Berger. Et al. 2021: 67). The direct participation of nonacademic and local authorities and knowledgeable elder people attended the workshops to share their traditional knowledge on TB. The researchers met a point to understand that Tuberculosis is well known by the pastoralists with different language, causal effect, and its treatments based on traditional healing (Monica Berger. Et al. 2021: 67). In applying transdisciplinary process Monica described preliminary discussions among the stakeholders, which set the emic categories for surveillance (Monica Berger. Et al. 2021: 67), this was the same model of transdisciplinary process applied in Maya of Guatemala. At first, they formulate the real context on Science partners pushing to replicate previous models. That is the lack of awareness of importance of local validation of system. Whereby the main goal at this stage was a sensitive community-based disease surveillance system. The discussion was under three main conditions, first was hierarchies impeding equal team member participation (prior inter-ethnic dilemmas). Second, No knowledge of local emic categories, and the third, implicit superiority of biomedical emics. (Monica Berger. *Et al*. 2021: 67).

Transdisciplinarity is concerned with the discovery of social problems presented in different languages. Language itself represents the divergent nature of existing community cultures, which it is not a material object and its vocabulary, rather presenting meaning, and concepts (Anthony Cole, 2017: 127). Most importantly, the majority African traditional languages are nonlogical languages, that is, there is a gap between the object, the vocabulary, and the intended meaning. Thus, each aspect of language represents the reality. A transdisciplinary approach requires traditional language competency in African context, incorporating the sociology, anthropology, ethnography, etc. approaches as collective methodologies.

The JOHI project identified five stepwise in implementing transdisciplinary approach in Rangeland degradation. The described transdisciplinary approach shows ultimate benefit to pastoral health by combining essential information from both the academic and local knowledge sides. It formed the framework for integrating indigenous and scientific knowledge systems for innovative integrated rangeland resource monitoring in several steps. (Jacob Zinsstag. 2016. Et al. 2016: 15). These steps in application of collective approach are very crucial in African context to make a comparative assessment between the scientific and traditional knowledge. I found very interesting to mention all the five steps which may also be applicable in any Global health projects in African context. These steps included the first was identification of indicators herders use for rangeland resource status and trend assessment (herder's observation). Second was to Identification of herders' perception on the status and trends of rangeland resources (herder's interpretation, based on their observation). The third was to identification of herders' responses to perceived state and trends of resources and changes in herders' responses (herder's interventions and changes in their interventions, based on their interpretation). Fourth was to identification of matches and mismatches between indigenous and scientific knowledge systems in types of indicators used for rangeland assessment, interpretations of observations and preferred interventions to address degradation problems. The last step was development of a tool for joint rangeland assessment, dissemination of jointly gathered data to all rangeland stakeholders in a timely manner and refining the tool iteratively based on the user feedback. (Jacob Zinsstag *Et al* 2016: 15). According to Zinsstag, collective methodologies managed the historical scientific knowledge on Rangeland has been enriched by traditional knowledge. Above all the implementation was based on switching both, the scientific and the herders' community historical knowledge on Rangeland degradation. (Jacob Zinsstag *Et al* 2016: 15).

Based on African societies the way they conceptualize disease and healing, whether traditional or biomedical healing, is highly impacted by taboos, norms, values and beliefs and their discourse on the ecologies of people and culture (Julie Thompson, 2013: 196). Let me cite some examples from Swahili societies, there was and still is, in part, the belief that ''a pregnant woman does not eat eggs'', which for health scientists may think is awkward, but the Swahili people meant to prevent the child from becoming too fat, which could hinder the

mother during delivery; another example is, ''a widow doesn't east too much protein food'', it aimed just to prevent her from sexual desire that could fascinate her into adultery, the former, knowledge belief was mainly limited confined to elderly people. In this kind of African cultural practices and beliefs require a ''New hybrid modes of inquiry, practice, and learning also have the capacity to overcome past schisms of theory/history and practice, critical theory, and projective design''. This concept can be applied not only to Global Health methodologies incorporated with social sciences methods, but also to the societal level as a research object with academic and non-academic institutions (Doucet and Janssen 2011 in Julie Thompson 2013: 197). Transdisciplinary as a ''new hybrid'' can overcome the social problems in the Global Health programs in African.

The Global Health research credibility in Africa context is based not only on the research results or final report but also on the earliest stage of framing the research design. Most health projects are full packed baggage with only experts from the health and academic institutions and the findings are only validated in the academic milieu. To maintain the trust, codes, ethics and respect of conducting transdisciplinary research in Africa, the community must be involved in corroborating the research findings in all stages of the project. Following the lack of transparency and democracy, it is very prudently to let the community speak soundly *let them speak* in their own privacy. I put two comments on the JOHI projects. One, the JOHI researchers mixed the political leaders and community in the same venue is an obstacle for the community to have free flow of expression. In an African context, transdisciplinary research needs a wide range of communication between the community and researchers. Two, the number of community representatives must also be systematic, a single elderly man representing the whole community is possible to deceive the project. The JOHI report shows the picture of stakeholders with only two elder people, a man and a woman who represent the entire community.

In summing up, global health in Africa has a long history and is not the same as international, or colonial health. It has peculiar characteristics that has been molded by its history of interaction with external world, the Global south (Asia and Middle East) and Global North (Europe and America). The transdisciplinary approach to global health projects in Africa must develop the ground rules to have an effective balancing of interests among the social and natural sciences, stakeholders, and the community. Researchers and stakeholders should

consider that Africans are not like a white paper with no even single dot on it, or a premature to the Africans as tabula rasa, but that they possess the knowledge to fill the gap of global health development. Transdisciplinarity provides a bridge between community, social science, and natural scientific research. From this perspective, I can predict that the future will be iterative world of knowledge.

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