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Decolonizing Global Health Education: Evaluating a Multi-Country Virtual Training Program on Female Genital Schistosomiasis

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Abstract

Medical education and professional development in infectious diseases have historically been shaped by resources from high-income countries, often overlooking conditions like Female Genital Schistosomiasis (FGS). In response, The Geneva Learning Foundation implemented a multi-country virtual training in 2023 using a peer-based learning-to-action approach, designed to fill this knowledge gap and strengthen the capacity of healthcare workers in endemic regions. The program unfolded in two stages. The first stage introduced participants to FGS and guided them in creating action plans to address it, while the second stage provided structured support for executing these plans. To assess the program's reach and effectiveness, we conducted a mixed-methods study grounded in connectivist theory, collecting both quantitative and qualitative survey data, which were analyzed independently and then synthesized. A total of 255 healthcare workers from 19 Francophone African countries participated in the initial phase, representing all tiers of the health system. Over two-thirds reported improvements in FGS knowledge, and collectively they trained 2,675 colleagues. Around 85% of participants highlighted the value of the peer review process in refining their action plans and generating innovative ideas. Notably, course completion rates were consistent across professional roles and organizational affiliations. The program fostered personal and professional growth through new networks and peer connections. These networks provided ongoing support, while certification enabled career advancement and expanded responsibilities. Across both phases, participants reached 49,088 community members with FGS education. By leveraging local knowledge exchange and peer collaboration, the virtual learning-to-action model successfully addressed immediate training needs, empowered healthcare workers to apply their learning in real-world settings, and offered a decolonized approach to FGS education that centered local perspectives and action.

Keywords: Schistosomiasis, Global health education, Infectious diseases, Virtual training

Introduction

Female Genital Schistosomiasis (FGS), first documented in 1899, is a chronic condition caused by the parasitic worm *Schistosoma haematobium* [1]. Schistosomiasis is contracted through contact with freshwater contaminated by schistosome larvae and can manifest as intestinal or urogenital disease. Without timely treatment, it may

cause long-term inflammation and progressive damage to women's urinary and reproductive tracts, resulting in severe complications such as ectopic pregnancy, infertility, and miscarriage [2]. FGS also increases susceptibility to infections like HIV and HPV and can contribute to stigma and social exclusion [3]. Importantly, FGS is preventable, and early interventions are low-cost and effective [4, 5].

Despite its prevalence, FGS is rarely addressed in medical and nursing education. When schistosomiasis is taught, the focus is usually on urinary or intestinal manifestations, leaving gynecological aspects largely unaddressed [6]. This omission reflects a broader neglect of gender-specific impacts of neglected tropical diseases (NTDs) [7]. FGS is similarly underrepresented in sexual

and reproductive health and HIV services across most endemic countries. The lack of integration and standardized guidelines leaves frontline healthcare workers without sufficient tools for accurate diagnosis, treatment, and referral [8, 9]. Although in-service and continuing professional development (CPD) programs can help close these knowledge gaps, they are often optional and limited by financial, infrastructural, and logistical constraints in low- and middle-income settings [10]. Consequently, misdiagnosis is common, with genital lesions, discharge, and infertility frequently mistaken for STIs or HIV-related conditions, exposing affected women to stigma and inappropriate treatments [6, 11].

One underlying issue is the dominance of medical curricula and clinical guidelines shaped by high-income countries (HICs) [12], which often marginalizes the perspectives and needs of endemic regions. In response, calls to decolonize global health have emphasized the importance of examining the power dynamics and assumptions inherent in global health partnerships [12, 13]. The intersection of FGS with Water, Sanitation, and Hygiene (WASH) interventions illustrates this need: many programs have historically relied on Western-centric models that fail to account for local realities, limiting their effectiveness and sustainability [14, 15]. A decolonial approach instead advocates for community-driven, context-specific strategies that draw on local knowledge and actively involve endemic communities in decision-making to ensure lasting impact [14, 16].

Peer-to-peer virtual support and training for FGS
Recognizing Female Genital Schistosomiasis (FGS) as a pressing social and gender equity challenge, The Geneva Learning Foundation (TGLF) partnered with Bridges to Development to develop a two-phase, peer-to-peer virtual training program. The initiative, implemented in 2023, targeted healthcare workers across Francophone Africa. The program included an initial training phase (Phase 1) and a follow-up Impact Accelerator (Phase 2), both structured around TGLF's peer learning-to-action model [17–20]. Designed by co-author RS, this model draws on informal and incidental learning principles [21] and leverages digital platforms to promote cross-disciplinary and interprofessional knowledge exchange [22].

The course content was guided by the FGS Competency Framework, jointly developed by Bridges to Development, global experts, and the World Health Organization. The framework defines 27 key competencies for training healthcare workers at all system levels, covering clinical and community-based aspects of FGS diagnosis, treatment, and prevention [23]. Participation was voluntary and cost-free. Selection prioritized candidates who could reliably engage online and aimed for diversity in gender, professional role, and health system representation, with special attention to high-priority regions such as the Democratic Republic of the Congo. Because male applicants outnumbered female applicants, a larger share of women was intentionally selected to achieve gender balance. Training sessions were delivered in French by TGLF, supported by Bridges to Development staff, over seven months, with subject matter experts providing core instruction and guidance (**Figure 1**).

In Phase 1, participants gained foundational FGS knowledge and developed action plans to improve local outcomes, which were assessed collaboratively by peers and SMEs using a rubric emphasizing feasibility, guideline alignment, integration with other programs, and community engagement. Phase 2 provided structured support for implementing these plans, encouraging ongoing exchange of resources and recommendations between participants and SMEs.

Further investigation is needed to evaluate the program's effectiveness in engaging diverse healthcare workers and addressing gaps in FGS curricula and preparedness.
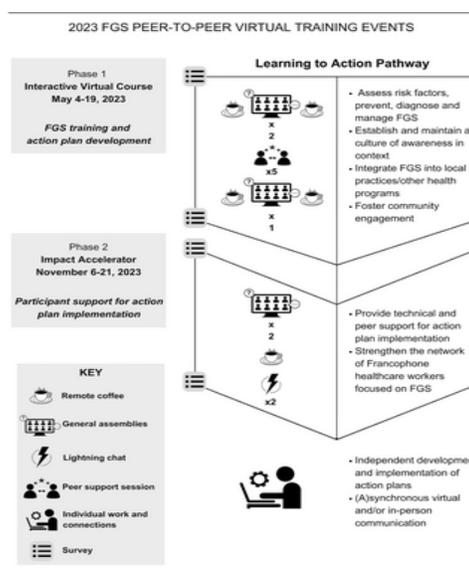

Figure 1. 2023 Training event information and schedule

Theoretical framework

Connectivism has been instrumental in informing online education [24] and provides a useful framework for assessing digital learning strategies such as TGLF's peer learning-to-action model [17–20]. As shown in **Figure 2**, this theory conceptualizes learning as a networked process, where individuals interact with each other and with diverse information sources. Its focus on knowledge development across three interconnected layers—individual, conceptual, and social/external [24, 25]—offers a lens to understand how participants in the 2023 FGS peer-to-peer virtual training accessed essential information and collaborated to tackle complex health challenges. At the individual or neural level, learning occurs as biological networks form memories and attach meaning to new concepts. At the conceptual layer, knowledge emerges through sharing ideas and connecting information that resonates across learners. At the social and external level, the networks individuals are part of influence access to resources, shape collaborative opportunities, and determine the reach of learning outcomes [26, 27].
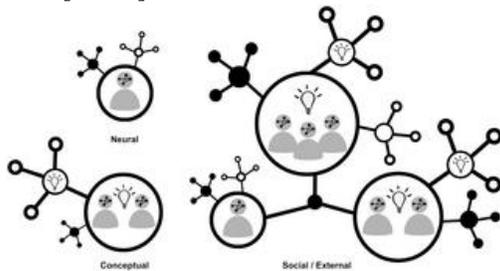

Figure 2. The three levels of connectivism.

Research questions and purpose

This research seeks to investigate the learning methods, record, and assess the execution and results of the 2023 Female Genital Schistosomiasis (FGS) virtual peer-to-peer training initiative targeted at Francophone Africa. In particular, it examines the following central question: from the perspective of connectivism, in what ways did the 2023 FGS virtual peer-to-peer training program (Phase 1) and its Impact Accelerator (Phase 2) engage diverse participants, generate benefits for them, and lead to localized initiatives?

To evaluate benefits and effects, the study formulated these supporting sub-questions:

Quantitative sub-questions

1. Which elements affected the probability of participants finishing one or both phases?

2. To what degree did the training phases meet their planned goals, and how did the peer learning-to-action framework of The Geneva Learning Foundation (TGLF) support those successes?

Qualitative sub-questions

1. Which aspects of learning, relationships, and resources delivered benefits to participants or specific participant subgroups?

2. What specific technical knowledge and abilities did participants indicate they acquired?

3. How did participants explain the role of peer-based learning and interactions with colleagues in enhancing their action plans?

4. In what manner did participants' descriptions of varied relationships and resources contribute to their individual development and broader professional achievements?

5. How did the narratives of those who successfully executed their action plans differ from those who did not, in terms of their overall experiences?

Materials and Methods

Ethics statement

The investigation utilizes previously gathered data from The Geneva Learning Foundation (TGLF), managed under the ethical review of its internal Commission on Research Ethics (CRE). TGLF's CRE complies with standards from the Cantonal Commission for Research Ethics (CCER), Switzerland's Federal Act on Research involving Human Beings (RS 810.30), the Human Research Act (HRA), and the related Ordinance on Organisational Aspects of the Human Research Act (OrgO-HRA). These rules cover data acquisition, storage, protection, and approval of research activities.

In June 2024, co-author KE secured ethics clearance from the TGLF CRE for a larger study named "Enstorying Global Health Landscapes of Learning," which explores the effectiveness of TGLF's peer-learning strategy. This particular analysis is nested within that endorsed project.

In July 2024, the University of Georgia's Institutional Review Board evaluated the work and categorized it as exempt from human subjects regulations (reference PROJECT00009825).

Research design

This study adopts a convergent parallel mixed-methods approach [28, 29], in which quantitative and qualitative data are given equal emphasis (QUAN+QUAL). Secondary datasets from both phases of the 2023 FGS peer-to-peer virtual training were collected at the same time, analyzed independently, and later combined for interpretation [30]. To fully address the study objectives, findings from both strands were triangulated, allowing for a richer and more nuanced understanding of the program's outcomes **(Figure 3).**

Figure 3. Procedural diagram of research.

Data collection

Data for this study were gathered using pre- and post-training online surveys developed by TGLF for both phases of the 2023 FGS peer-to-peer virtual training program. Survey invitations, built on the TypeForm platform [31], were emailed to all participants, who were French-speaking healthcare professionals representing diverse roles and levels within the health system. Before completing the surveys, participants received written explanations detailing the purpose of the data collection and how their responses might be used, such as in research, reports, or presentations. Written consent for research use of their data was obtained within the surveys. Participation was entirely voluntary, uncompensated, and respondents could skip any questions they preferred not to answer. During and after data collection, co-authors JJ, NV, RS, and CM had access to personally identifying information. Additionally, videos and text contributions from participants, including lightning chat exchanges, were publicly accessible. Pre-course survey responses were collected on June 27, 2023, while post-course survey data were collected on December 12, 2023.

Each survey included both quantitative and qualitative items to capture participants' self-reported changes in FGS knowledge, access to resources and tools, and network engagement related to FGS. The Phase 1 pre-survey gathered participants' sociodemographic and professional information, program expectations, and readiness to participate. The Phase 2 pre-survey updated these data and additionally captured participants' collaborative activities within the program and progress on action plans, including current needs and steps taken. Post-surveys for both phases focused on action plan outcomes and participants' experiences, exploring challenges faced and perceptions of support for both personal growth and professional development.

Data analysis

De-identified survey datasets were provided to all co-authors on January 12, 2024, to support reporting to the program's funder. The secondary analysis of these data for research purposes commenced on July 12, 2024. Qualitative and Quantitative analyses were conducted independently before being combined in an integrative analysis.

Quantitative analysis

Quantitative analysis involved descriptive statistics alongside multiple logistic and Bayesian regression approaches. The dataset was filtered to include only variables relevant to the study, and covariates such as gender, professional role, type of organization, and prior experience were included to account for confounding factors. To improve statistical robustness, categorical variables like profession and organization were consolidated, while certain numeric variables—such as self-reported social impact—were converted into categorical formats for clarity and consistency.

Descriptive statistics were calculated to summarize participants' pre- and post-training knowledge and self-assessed competencies, which were measured on a 0-to-5 scale. These metrics provided an indication of learning improvements resulting from the training. Multiple logistic regression models were then used to identify factors predicting completion of training and to estimate the likelihood of knowledge gains based on individual characteristics. Model selection employed a backward stepwise procedure using the stats package in R (version 4.4.2), removing variables sequentially according to p-values and the Akaike information criterion (AIC). Variables with undefined or unstable p-values were excluded, and multicollinearity was assessed using variance inflation factors (VIF); variables with VIF > 5 were removed to ensure model stability. A p-value threshold of 0.005 was applied to determine statistical significance in the final models.

Due to the smaller sample size in Phase 2, Bayesian logistic regression was applied to evaluate the influence of peer learning activities on outcomes such as knowledge acquisition. These models were run using the rstanarm package, which implements Hamiltonian Monte Carlo sampling for efficient posterior estimation. Posterior means and 95% credible intervals (CIs) were reported, with predictors deemed significant if their CIs excluded zero. Bayes factors were calculated to compare competing models, and convergence was verified using trace plots, which demonstrated stable chains and reliable posterior estimates.

Qualitative analysis
The qualitative component of the study was carried out using the six-phase approach to thematic analysis outlined by Braun and Clarke [32], with data managed in Excel. Open-ended survey responses, originally provided in French, were translated into English via a neural machine translation service [33]. To ensure fidelity and capture participants' intended meaning, TGLF and Bridges to Development staff fluent in both languages reviewed and corrected the translations.

In the first phase, the research team repeatedly read through all responses to gain familiarity and begin organizing the dataset. During the second phase, an inductive coding process was applied, generating preliminary codes that were discussed collaboratively. In the third phase, codes were grouped into three main categories: challenges, strategies, and results. For example, 'addressing reluctance' and 'site safety and stability' were classified under 'implementation challenges,' while 'advocacy with key health leaders' and 'phasing financing/activities' were assigned to 'implementation strategies,' and 'outputs' and 'outcomes' were grouped as 'implementation results.' These categories were then interpreted with consideration of whether participants completed their action plans, using the framework of connectivism.

During phase four, the team reviewed the data to identify possible themes. Phase five involved defining two central themes and linking relevant participant responses to each theme. In the sixth phase, verbatim quotations illustrating different levels of connectivism were selected, and composite vignettes were developed to present healthcare workers' experiences in an accessible way [34, 35]. Initial drafts of the vignettes were generated with ChatGPT (25 February 2024) to randomly include quotations from the large pool of responses. These drafts underwent extensive refinement to emphasize key thematic elements while preserving sociodemographic diversity. The finalized vignettes provide synthesized narratives representing each theme.

Integrative analysis
The integrative analysis merged quantitative and qualitative datasets using joint matrices [30, 36] aligned with the study's research objectives. Descriptive statistics were presented alongside qualitative findings, including representative quotes tied to connectivism levels. The combined data were analyzed to explore areas where findings converged, diverged, or complemented one another, leading to the generation of meta-inferences. Finally, these meta-inferences were synthesized into a coherent narrative to provide an integrated interpretation of the study results [30, 36–39].

Reflexivity and positionality
As the collaborative research team from Bridges to Development and TGLF, we approach this study with a commitment to decolonizing global health. Our organizations center local expertise, foster diverse representation, and aim to empower healthcare professionals within their own settings. To support transparency and reflexivity, we adapted Khan's transparency matrix [40] to reflect the dimensions of our identities relevant to this work (S1 Data).

Our team brings together individuals of varied ethnicities, professional backgrounds, and levels of public health experience. Both organizations have extensive on-the-ground engagement with FGS in affected countries, and we share a common mission to equip healthcare workers to address local needs effectively. Our prior experiences with virtual training using TGLF's peer-learning model have been positive, and we recognize the value of the participant engagement and outcomes reported. At the same time, we acknowledged that our familiarity with the methodology and the FGS context could introduce potential bias. To address this, we held regular team discussions throughout all stages of analysis, critically interrogating interpretations, challenging assumptions, and ensuring that findings remained grounded in the data. To strengthen trustworthiness, we triangulated multiple data sources and incorporated verbatim quotes. We also conducted an audit of the results, inviting colleagues from the Global South—who play key roles as facilitators and team members—to review both content and

presentation. To enhance accessibility, an unofficial French translation of the accepted manuscript and its supporting information was prepared, ensuring that findings could be shared broadly and inclusively.

Results and Discussion

Quantitative findings
Study characteristics and participants
In total, 1,686 health professionals submitted applications for Phase 1. Of these, 786 were admitted, and 255 successfully completed the course. The applicant pool was predominantly male (1,115 men versus 564 women). To advance gender balance, the selection process resulted in 386 women and 397 men being accepted.

The majority of admitted participants were aged 35 or older (63.6%). Geographically, the highest share came from Central Africa (48.7%), encompassing countries such as Congo, the Democratic Republic of the Congo, Cameroon, the Central African Republic, Gabon and Equatorial Guinea.

The cohort included a wide variety of health roles, led by Doctors and Obstetrician-Gynecologists (43.4%), followed by Public Health Officers (21.8%) and Nurses, Midwives, or Nurse Practitioners (21.2%).

Participants were affiliated with diverse institutions, most frequently public hospitals and health centers (23.1%), national Ministries of Health (20.3%), and private sector organizations (20.8%).

For Phase 2 (the Impact Accelerator), 145 professionals applied, and all were admitted. Of these, 71 completed the program. Once again, male applicants outnumbered females, comprising 64.6% of the pool compared to 35.4% women.

Determinants of course completion
In Phase 1, despite efforts to enhance gender balance by admitting more women, female participants had less than half the likelihood of completing the course compared to male participants (p = 0.008, OR: 0.42, 95% CI: [0.22, 0.79]). Participants who did not encounter difficulties with the course content or the digital training platform were over three times more likely to finish Phase 1 than those who struggled with the material or technology (p = 0.027, OR: 3.45, 95% CI: [1.15, 10.34]). Moreover, individuals who personally covered training-related expenses, such as internet fees or costs associated with implementing their action plans, had more than double

the odds of completing the course relative to those whose costs were neither personal nor employer-covered (p = 0.008, CI: [1.26, 4.78] OR: 2.45, 95%).

For Phase 2, completion was higher among participants who had already begun putting their action plans into practice, showing increased log-odds compared with those who had not started (CrI: 0.13–2.35 coef: -1.19, 95%). By contrast, community health workers had lower log-odds of finishing Phase 2 compared to doctors (CrI: -3.58, -0.10 coef: -1.75, 95%), indicating professional role differences influenced participation outcomes.

Effectiveness of training: capacity development and knowledge
For Phase 1, among those admitted, 14% were completely unfamiliar with Female Genital Schistosomiasis (FGS) beforehand, and 62% lacked any hands-on experience with the condition. The primary goal of this phase was to build knowledge and skills.

Two-thirds (66%) of participants indicated a gain of at least two levels in their self-assessed knowledge and confidence (on a 0–5 scale). The share reporting thorough understanding of FGS rose substantially, from 18.0% to 47.2%. Confidence in diagnosing FGS jumped from 41% to 90%, in treating it from 37.1% to 86.4%, and in preventing it from 57.5% to 96.6%. Likewise, full confidence in talking about FGS with patients grew from 19.8% to 55.9%.

Community health workers were far less likely—showing 83% reduced odds—to reach this threshold than physicians or obstetrician-gynecologists (odds ratio: 0.17; 95% confidence interval: 0.04–0.67; p = 0.012). Those with previous experience managing FGS also had 83% lower odds of substantial knowledge gains compared to novices (odds ratio: 0.17; 95% CI: 0.04–0.71; p = 0.015).

About 39% of completers went on to diagnose or treat FGS cases, totaling around 638 patients. A strong majority (91%) trained 2,675 fellow professionals. Furthermore, 82% conducted community outreach, educating more than 49,000 people about the disease.

Effectiveness of training: action plan implementation and development
Out of the 232 action plans created in Phase 1, 82% incorporated approaches to integrate FGS efforts with existing initiatives, including HPV/cervical cancer screening, WASH programs, infertility services, STI management, HIV/AIDS prevention, school-based

interventions, perinatal care, neglected tropical disease (NTD) efforts, immunization campaigns, and migration-related health services.

Phase 2 emphasized supporting participants in executing their action plans. Among those who entered Phase 2, there was a slight rise in reported completions prior to the phase, but post-Phase 2, 23% had finished their plans and 71% had initiated implementation by the survey point.

The main types of operational plans from Phase 2 participants fall into three groups: Awareness and Prevention (centered on education and preventive actions); Diagnosis and Case Management (aimed at enhancing diagnostic capabilities, treating cases, handling referrals, and tracking registrations); and Comprehensive Management (encompassing a blend of awareness, prevention, diagnosis, treatment, referral, and monitoring).

Analysis of professional backgrounds revealed strong correspondences with plan types. Physicians, who made up about 25% of the group, were responsible for the majority of comprehensive management plans. All community health workers concentrated solely on awareness and prevention, whereas laboratory technicians focused exclusively on diagnosis and case management. This pattern was reinforced by participants' clinical responsibilities: 60% of those with diagnosis and case management goals performed pelvic exams in their roles, rising to 68.4% for comprehensive management objectives, compared to just 35.9% among those prioritizing awareness and prevention.

Impact of TGLF's peer learning-to-action model

Peer support positively affected knowledge gains, with participants who found it helpful showing substantially higher log-odds of knowledge acquisition than those who did not (coefficient: 1.97, 95% credible interval 0.80–3.30).

In the post-training survey for Phase 1, 61% of participants noted that peer reviews taught them more than expected. Furthermore, 86% reported that feedback from peers markedly strengthened their own action plans, 85% valued reviewing others' plans, and 85% experienced notable shifts in their professional practices due to the program.

A large majority (77.2%) maintained contact with peers after Phase 1 for collaboration. Of these, 61% attributed ongoing connections to the peer support framework. Such interactions involved co-creating projects, offering implementation help, contributing to existing efforts, and launching new joint initiatives.

Qualitative findings
Neural connections: FGS skills learned and technical knowledge

'Participants entered Phase 1 with differing levels of familiarity with FGS, including aspects of diagnosis, treatment, and prevention. Some, even those working at the frontlines or in policymaking roles, had little or no prior exposure to the disease. The training strengthened their understanding and enhanced their clinical diagnostic skills, equipping them to manage cases beyond mass drug distribution campaigns. Participants also highlighted that the course helped correct misunderstandings and previous misdiagnoses. They observed that this expanded knowledge had tangible benefits for their professional practice and for the patients they served, allowing the training's impact to reach a wider audience.'

"Over 500 individuals became aware of the disease, and 103 healthcare providers received training on case definitions and rapid detection across five facilities, including two private centers." – Doctor working with a nonprofit'

Peer learning and networking: enhancing action plans

The majority of participants found peer interaction to be a critical element of the training. For many, collaborating with peers was even more valuable than the official training materials. Both the formal peer review process and informal peer discussions contributed to refining participants' action plans. These exchanges clarified expectations, offered insights from others' experiences, and helped participants identify strategies to overcome challenges. Peer feedback was particularly important in improving the presentation and coherence of their plans.

"The peer review process helped me improve my action plan. A colleague reminded me that the title should begin with an action verb, while another suggested a clearer district map because my original one was not detailed enough. These examples highlight how essential peer input is." – Public health officer at a nonprofit

Participants emphasized that maintaining contact with peers after Phase 1 was crucial for implementing their action plans. Learning from the experiences of others on various platforms provided practical guidance for executing their plans. Successful participants noted that linking their action plans to existing programs was vital,

as it offered access to materials and data needed to coordinate across multiple initiatives. Those encountering challenges sought advice from peers to navigate obstacles.

"She encouraged me to adapt my plan to the circumstances and persist despite difficulties." – Doctor in a private hospital/health facility

Challenges such as medication shortages, limited funding, and the need for endorsement from health authorities were commonly reported. Participants addressed these barriers by advocating with officials and community leaders, sharing solutions within peer networks, and consulting mentors and experts. Peer-driven support networks in each country were instrumental in overcoming these implementation hurdles and achieving desired outcomes.

"When I could not implement my action plan due to financial constraints, I felt uncertain until I observed testimonials and discussions via Telegram, learning how others in similar situations reached at-risk populations. This inspired me to modify my approach. The Impact Accelerator exposed me to diverse perspectives and ideas from peers, which significantly influenced my work." – Community health worker at the district level

Social/external connections: networks and professional growth

Peer interactions significantly broadened participants' perspectives. They enabled participants to connect local challenges to wider regional patterns, such as water scarcity and its health impacts, and fostered a collaborative, ecosystem-based approach to tackling diseases like FGS. Many participants reported that these connections increased their confidence and reinforced their belief in their ability to create meaningful change within their communities and professional environments. The interactions not only encouraged participants to expand their knowledge of FGS but also inspired them to share it widely. Additionally, participants highlighted improvements in communication skills, including active listening, patience, and summarizing complex ideas succinctly, as well as growth in critical thinking, particularly in recognizing the benefits of cross-border collaboration in addressing public health challenges at scale.

"Through this training, I realized I am part of a global network, and even a single piece of advice I give can help a colleague tackle a public health issue or save a life in

another part of the world." – Public health officer at a nonprofit

Certification was also reported to create professional opportunities, including role expansion and promotions. Some participants took on additional responsibilities, such as monitoring FGS cases at the district level, while others experienced greater patient demand and community trust. They described becoming more proactive in their work, which improved overall performance. The training strengthened professional networks within and across countries, facilitating case consultations, rapid access to information, collaborative projects, and advocacy efforts with health authorities. These networks enhanced participants' ability to influence policy and practice, promoting broader access to FGS testing, treatment, and support services.

"When I discuss FGS, people listen, and women are eager to get screened." – Doctor working in a public hospital/health facility

Thematic findings.

Analysis of participants experiences revealed two major themes based on action plan completion. The first, "accelerating connections and integration," was prominent among participants who successfully implemented their plans, reflecting their ability to leverage networks and integrate actions effectively. The second theme, "connectivistic connections despite complexities," characterized participants who did not complete their plans, highlighting the challenges and barriers they faced in translating knowledge and peer connections into actionable outcomes.

Theme 1: accelerating integration and connections

Among participants who successfully completed their action plans, the primary strategy involved integrating FGS-related activities across existing programs and initiatives. This integration allowed them to access essential resources and data, facilitating coordinated and accelerated responses across multiple stakeholders. Participants attributed their ability to integrate activities to new and strengthened connections with peers, subject matter experts, and information networks established during the virtual FGS training. These connections enhanced advocacy efforts with healthcare leaders and enabled implementation of action plan activities regardless of budgetary constraints. Integration efforts spanned awareness campaigns, diagnostic services, and treatment, operating from local to national levels and

leveraging collaboration among community health agents. Activities were embedded within both public and private routine healthcare services, including maternal health programs, and aligned with neglected tropical disease initiatives. Participants reported that this integration improved the reach and effectiveness of their healthcare outreach and local-level actions.

Composite vignette (Theme 1)
During the training, I realized that FGS is *"a neglected disease."* Discussions with other scholars from "*FGS endemic and non-endemic areas*" *helped me gain* "*a global perspective on FGS epidemiology*" and understand how it has been "*previously overlooked despite its prevalence in our communities.*" Motivated by this, I developed "*PowerPoint presentations on FGS*" to share with colleagues, who were "*convinced that actionable steps could be taken to protect women and girls.*" Together, we engaged the zonal medical officer, hospital director, and data manager. Although resources were limited, we coordinated "*advocacy with partners supporting NTD initiatives to leverage existing resources.*" We conducted trainings during regular clinical meetings using the "*WHO Atlas*" as a guide, established a "*WhatsApp alert group*" for real-time case reporting, and organized "*radio communications,*" collaborating with community relays, NGOs, youth center agents, and the medical school. Guidance from experts and peer advice during the learning cycle was invaluable in "*choosing actions*" and strengthening our capacity "*to work effectively and efficiently.*" Our efforts led to observable "*behavioral changes in the population*" and broadened *"differential diagnosis hypotheses.*" "*Bilharzia (FGS) is an important parasitic infection globally,*" and the accelerator acted "*like a watchdog, motivating us to advance our plan on time.*"

Theme 2: connectivistic connections despite complexities
Participants who did not complete their action plans reported progress but required additional time to integrate activities at local and national levels. Delays were attributed to several factors, including the need to collect or access relevant data, awaiting funding decisions, obtaining authorization from health authorities, or adjusting timelines due to personal or community constraints. Some action plans were designed to cover multiple regions, extending their intended impact beyond the original implementation timeframe. In certain locations, the unavailability of medication for

FGS treatment hindered completion. In these situations, participants found it useful to seek guidance from health authorities, engage with peers for advice and solutions, and consult mentors or experts. By using a phased, stepwise approach, participants continued to advance their plans and identify alternative ways to enhance healthcare outreach and local-level impact.

Composite vignette (Theme 2)
I began "*as quickly as possible to implement*" my plan during the Impact Accelerator, but encountered multiple obstacles. Some "*data or usable documents*" were available, yet insufficient. Meetings with health and community leaders generated interest, but the proposal was often "*blocked at the authorization level.*" "*This accelerator greatly aided my planning.*" Peer interactions provided "*many other ideas*" and strategies. For example, I conducted surveys to determine the "*proportion of women affected*" and submitted "*a formal request to leadership for authorization to proceed*." The response included instructions "*to train staff on FGS and medication use.*" Collaborating with other health professionals, we presented "*FGS topics during morning meetings in health facilities,*" clarifying "*confusion between FGS and STIs*" and engaging in debates where everyone contributed based on experience and scientific knowledge. To continue learning from peers, we scheduled future online training sessions. Health leaders are beginning "*to support popularization and ownership of FGS initiatives.*" While "*requests are still being processed,*" we are managing with "*available resources.*" To date, "*10 FGS cases have been treated, 21 health workers trained, and 24 community workers oriented.*" "*Before this participation, I knew nothing about FGS; now I am a teacher and connected to a global network of experts who can help solve FGS problems.*" Though "*we will not finish within the planned deadline,*" "*the plan is in progress.*"

Integrated findings
Phases 1 and 2 of the 2023 FGS virtual peer-to-peer training demonstrated value for healthcare participants across genders, professions, roles in the health system, and other demographic factors. Trainees gained knowledge and awareness, and many took meaningful action even when their action plans were not fully implemented. Synthesizing these findings provides a more complete understanding of how the training fostered learning through networks.

This mixed-methods study describes the implementation and outcomes of FGS training using the TGLF peer learning-to-action approach [17–20]. The results show that the program successfully reached a heterogeneous group of healthcare workers, who reported meaningful benefits and applied their learning to influence broader practice and community health.

Peer-assisted or peer-to-peer learning has long been applied in healthcare education and is associated with improved social, behavioral, and cognitive outcomes [41, 42]. The TGLF approach combines peer learning with principles of action learning. According to McGill and Brockbank [43], action learning involves iterative cycles of reflection and practical application to solve real-world problems. In TGLF's model, peer support is central, complementing reflective and practical learning, rather than relying solely on facilitators or experts [17, 18, 44, 45]. Our findings show that participants gained confidence in discussing, diagnosing, and managing FGS and developed skills in listening, critical thinking, communication, proactive engagement, professional performance, and advocacy, consistent with Stone *et al.* [46].

The model reflects connectivist theory, which emphasizes that learning emerges from the diversity and strength of networks [24–26]. Participants formed authentic connections during the training, creating inclusive environments for reflection, feedback, and collaboration [47–49]. Networks spanning national and international levels enabled peer support, faster access to knowledge, and collective advocacy, illustrating that knowledge is distributed across networks rather than residing in any single individual.

Action learning has benefits for both individuals and institutions [43]. In this study, the training enabled participants to translate learning into local impact: patients were reached, colleagues trained, and communities engaged. Participants gained credibility and trust, demonstrating that the program facilitated equitable access to resources while empowering participants to lead health initiatives appropriate to their contexts.

Makau-Barasa *et al.* [50] emphasize that NTD interventions often fail due to limited context-specific understanding and low community involvement. By contrast, this training emphasized local agency, recognizing the expertise of participants and supporting locally driven action. Kwete *et al.* [51] critique assumptions that healthcare workers in LMICs cannot address their own health challenges. Our results challenge this notion and align with prior evidence showing that LMIC professionals can develop culturally appropriate and sustainable solutions [52–55]. Nevertheless, most global health campaigns, including for malaria, HIV/AIDS, and tuberculosis, remain dominated by institutions from the Global North. Scholars also caution that technology-driven interventions may produce short-term gains without long-lasting impact [56]. This training instead emphasized systems strengthening, local capacity development, and sustainable approaches, with participants teaching and supporting one another rather than relying on external authority.

Integrating disease-specific interventions into broader health services has been recommended to enhance coverage and efficiency, as seen with HIV, WASH, and cervical cancer services [4, 23, 57, 58]. Participants frequently prioritized such integration in Phase 1, identifying over ten opportunities spanning HPV/cervical cancer, WASH, infertility, STIs, and HIV/AIDS programs, with NTD program integration ranking eighth. This highlights the importance of diverse participation across professions, institutions, and health system levels in identifying innovative integration opportunities.

Challenges encountered by participants included resource limitations, delayed authorization, and shortages of essential medications, reflecting broader barriers to NTD elimination [59]. The WHO NTD 2021–2030 Roadmap [60] recommends multisectoral, systems-thinking approaches to overcome these obstacles. By collaborating with peers, exchanging strategies, and applying learning to local contexts, participants strengthened both individual and collective capacity, sometimes achieving outcomes beyond their initial plans. Although the training reached learners across multiple countries, women and community health workers were less likely to participate or complete the program. Time constraints due to additional responsibilities may explain some of these disparities, consistent with historical trends showing lower program completion among women [53, 61–63]. Community health workers, critical frontline personnel [52], were also less likely than doctors to complete either phase or achieve reported learning gains. Their underrepresentation limits the diversity of insights shared about FGS awareness, diagnosis, referral, treatment, and routine surveillance. Better understanding and support for these groups could improve the training model and strengthen participation.

Limitations

This study has several notable limitations. The reliance on self-reported responses introduces the potential for bias. Although the response rates—31% overall, 42% for Phase 1, and 49% for Phase 2—provided sufficient data for analysis, higher participation could have allowed a more complete understanding of the training's outcomes. Our design did not enable an in-depth exploration of why women and community health workers were less likely to complete the program. Moreover, we could not assess the downstream effects of participants' action plans on patient health, community well-being, or the broader health system. While the context of Francophone Africa provided a diverse sample, caution is warranted in applying these findings to other regions. Nonetheless, the results offer insights that may be relevant and adaptable to similar programs elsewhere.

Conclusion

The 2023 FGS virtual peer-to-peer training demonstrates the potential of digital peer learning to enhance professional knowledge and strengthen networks among healthcare workers across different regions and roles. By decentralizing expertise, fostering collaborative peer engagement, and prioritizing context-specific knowledge, the program addressed urgent educational gaps and advanced a more equitable model for global health training. For Bridges to Development and TGLF, this represents progress toward decolonizing global health practices by empowering local practitioners and valuing their insights. The program facilitated practical skills, improved confidence in discussing, diagnosing, and managing FGS, and nurtured networks that support ongoing collaboration and advocacy. As one participant reflected, *"(When we) bring together more than twenty nationalities in an interactive way on a virtual platform…we can influence the world."*

Recommendations

Based on the findings, several strategies are recommended for infectious disease training programs. First, participatory methods and digital platforms should be leveraged to challenge historical power imbalances and support sustainable local solutions. Second, evaluations should include the real-world impact of action plans on communities, health systems, and patient outcomes. Third, participants should be assisted in designing strategies to integrate their action plans into existing services and initiatives. Fourth, engaging participants in collaborative research can help identify barriers to engagement and optimize program design. Considering the evolving nature of global health threats, such as climate change, training approaches must be flexible and responsive [61]. TGLF's peer learning-to-action model, delivered digitally, provides a scalable framework for addressing emerging health challenges [17–20]. By bringing together diverse expertise, local experience, and lived perspectives, such programs enhance problem-solving, foster accountability, and improve outreach [44, 64–67]. Specifically for neglected diseases like FGS, peer-supported digital learning promotes equitable partnerships, strengthens community-level interventions, and enhances the responsiveness of health systems to locally defined priorities.

References

1. Madden F, Eng CS. A case of bilharzia of the vagina. Lancet. 1899;153(3956):1716.
2. World Health Organization [WHO], Joint United Nations Programme on HIV/AIDS [UNAIDS]. No more neglect–female genital schistosomiasis and HIV: integrating sexual and reproductive health interventions to improve women's lives [Internet]. Geneva: UNAIDS; 2019. Available from: https://www.who.int/publications/i/item/UNAIDS-JC2979
3. Shukla JD, Kleppa E, Holmen S, Ndhlovu PD, Mtshali A, Sebitloane M, et al. The association between female genital schistosomiasis and other infections of the lower genital tract in adolescent girls and young women: a cross-sectional study in South Africa. J Low Genit Tract Dis. 2023;27(3):291–6. pmid:37379442
4. Umbelino-Walker I, Wong F, Cassolato M, Pantelias A, Jacobson J, Kalume C. Integration of female genital schistosomiasis into HIV/sexual and reproductive health and rights and neglected tropical

diseases programmes and services: a scoping review. Sex Reprod Health Matters. 2023;31(1):2262882. pmid:37850814

5. Mazigo HD, Samson A, Lambert VJ, Kosia AL, Ngoma DD, Murphy R, et al. "We know about schistosomiasis but we know nothing about FGS": a qualitative assessment of knowledge gaps about female genital schistosomiasis among communities living in Schistosoma haematobium endemic districts of Zanzibar and Northwestern Tanzania. PLoS Negl Trop Dis. 2021;15(9):e0009789. pmid:34591872

6. Christinet V, Lazdins-Helds JK, Stothard JR, Reinhard-Rupp J. Female genital schistosomiasis (FGS): from case reports to a call for concerted action against this neglected gynaecological disease. Int J Parasitol. 2016;46(7):395–404. pmid:27063073

7. Theobald S, MacPherson EE, Dean L, Jacobson J, Ducker C, Gyapong M, et al. 20 years of gender mainstreaming in health: lessons and reflections for the neglected tropical diseases community. BMJ Glob Health. 2017;2(4):e000512. pmid:29177100

8. Iqbal U, Rabrenovic M, Li Y-CJ. Health care quality challenges in low- and middle-income countries. Int J Qual Health Care. 2019;31(3):165. pmid:30920621

9. Martinez SG, Mbabazi PS, Sebitloane MH, Vwalika B, Mocumbi S, Galaphaththi-Arachchige HN, et al. The WHO atlas for female-genital schistosomiasis: co-design of a practicable diagnostic guide, digital support and training. PLOS Glob Public Health. 2024;4(3):e0002249. pmid:38498490

10. Merry L, Castiglione SA, Rouleau G, Létourneau D, Larue C, Deschênes M-F, et al. Continuing professional development (CPD) system development, implementation, evaluation and sustainability for healthcare professionals in low- and lower-middle-income countries: a rapid scoping review. BMC Med Educ. 2023;23(1):498. pmid:37415150

11. Mazigo HD, Samson A, Lambert VJ, Kosia AL, Ngoma DD, Murphy R, et al. Healthcare workers' low knowledge of female genital schistosomiasis and proposed interventions to prevent, control, and manage the disease in Zanzibar. Int J Public Health. 2022;67:1604767. pmid:36188750

12. Hussain M, Sadigh M, Sadigh M, Rastegar A, Sewankambo N. Colonization and decolonization of

global health: which way forward? Glob Health Action. 2023;16(1):2186575. pmid:36940174

13. Eichbaum QG, Adams LV, Evert J, Ho M-J, Semali IA, van Schalkwyk SC. Decolonizing global health education: rethinking institutional partnerships and approaches. Acad Med. 2021;96(3):329–35. pmid:32349015

14. Mehjabeen D, Patel K, Jindal RM. Decolonizing global health: a scoping review. BMC Health Serv Res. 2025;25(1):828. pmid:40598071

15. de Wit S, Luseka E, Bradley D, Brown J, Bhagwan J, Evans B, et al. Water, sanitation and hygiene (WASH): the evolution of a global health and development sector. BMJ Glob Health. 2024;9(10):e015367. pmid:39366708

16. Lue J-M, Bah S, Grant K, Lee J, Nzekele L, Tidwell JB. Principles for increasing equity in WASH research: understanding barriers faced by LMIC WASH researchers. BMJ Glob Health. 2023;8(4):e010990. pmid:37068849

17. Umbelino-Walker I, Szylovec AP, Dakam BA, Monglo A, Jones I, Mbuh C, et al. Towards a sustainable model for a digital learning network in support of the Immunization Agenda 2030 -a mixed methods study with a transdisciplinary component. PLOS Glob Public Health. 2024;4(12):e0003855. pmid:39739699

18. Watkins KE, Sandmann LR, Dailey CA, Li B, Yang S-E, Galen RS, et al. Accelerating problem-solving capacities of sub-national public health professionals: an evaluation of a digital immunization training intervention. BMC Health Serv Res. 2022;22(1):736. pmid:35655276

19. Sadki R. What learning science underpins peer learning for Global Health? [Internet]. RedaSadki.Me; 2023. Available from: https://doi.org/10.59350/wmnja-epd48

20. Sadki R. How can we reliably spread evidence-based practices at the speed and scale modern health challenges demand? [Internet]. RedaSadki.Me; 2024. Available from: https://doi.org/10.59350/cqxmj-3bd96

21. Watkins KE, Marsick VJ, Wofford MG, Ellinger AD. The Evolving Marsick and Watkins (1990) theory of informal and incidental learning. New Dir Adult Contin Educ. 2018;2018(159):21–36.

22. The Geneva Learning Foundation. The Geneva Learning Foundation [TGLF] [Internet]; 2024. Available from: https://www.learning.foundation/

23. Jacobson J, Pantelias A, Williamson M, Kjetland EF, Krentel A, Gyapong M, et al. Addressing a silent and neglected scourge in sexual and reproductive health in Sub-Saharan Africa by development of training competencies to improve prevention, diagnosis, and treatment of female genital schistosomiasis (FGS) for health workers. Reprod Health. 2022;19(1):20. pmid:35073965

24. Corbett F, Spinello E. Connectivism and leadership: harnessing a learning theory for the digital age to redefine leadership in the twenty-first century. Heliyon. 2020;6(1):e03250. pmid:31993523

25. Kathleen Dunaway M. Connectivism. RSR. 2011;39(4):675–85.

26. Siemens G. Connectivism: a learning theory for the digital age [Internet]. Elearnspace; 2004. Available from: https://elearnspace.org/Articles/connectivism.htm

27. UGA Mary Frances Early College of Education. Learning through complexity: George Siemens [Internet]. YouTube; 2021. Available from: https://youtu.be/KZjqtU_Fgc8?feature=shared

28. Creswell JW, Plano Clark VL. Designing and conducting mixed methods research. 3rd ed. Thousand Oaks: Sage; 2018.

29. Creswell JW, Klassen AC, Clark VLP, Smith KC. Best practices for mixed methods research in the health sciences. Office of Behavioral and Social Sciences Research. Bethesda: National Institutes of Health; 2011. Available from: https://obssr.od.nih.gov/research-resources/mixed-methods-research

30. Guetterman TC, Fetters MD, Creswell JW. Integrating quantitative and qualitative results in health science mixed methods research through joint displays. Ann Fam Med. 2015;13(6):554–61. pmid:26553895

31. Typeform [Internet]. 2023. Available from: https://www.typeform.com

32. Braun V, Clarke V. Using thematic analysis in psychology. Qual Res Psychol. 2006;3(2):77–101.

33. DeepL [Internet]; 2023. Available from: https://www.deepl.com/en/translator

34. Fader N, Legg E, Ross A. Finding a sense of community in youth soccer: a composite vignette of the refugee experience. JPRA. 2020;38:2–20.

35. Jasinski L, Nokkala T, Juusola H. Reflecting on the value of vignettes in higher education research:

toward a preliminary typology to guide future usage. Eur J High Educ. 2021;11(sup1):522–36.

36. Guetterman TC, Fàbregues S, Sakakibara R. Visuals in joint displays to represent integration in mixed methods research: a methodological review. Methods Psychol. 2021;5:100080.

37. Schoonenboom J. Developing the meta-inference in mixed methods research through successive integration of claims. In: Hitchcock JH, Onwuegbuzie AJ, editors. The Routledge handbook for advancing integration in mixed methods research. London: Routledge; 2022. p. 55–70. https://doi.org/10.4324/9780429432828-6

38. Skamagki G, King A, Carpenter C, Wåhlin C. The concept of integration in mixed methods research: a step-by-step guide using an example study in physiotherapy. Physiother Theory Pract. 2024;40(2):197–204. pmid:36069530

39. Teddlie C, Tashakkori A, Johnson BR. Foundations of mixed methods research: integrating quantitative and qualitative approaches in the social and behavioral sciences. Thousand Oaks: Sage; 2009.

40. Khan SA. Decolonising global health by decolonising academic publishing. BMJ Glob Health. 2022;7(3):e007811. pmid:35301234

41. Guraya SY, Abdalla ME. Determining the effectiveness of peer-assisted learning in medical education: a systematic review and meta-analysis. J Taibah Univ Med Sci. 2020;15(3):177–84. pmid:32647511

42. Ross MT, Cameron HS. Peer assisted learning: a planning and implementation framework: AMEE Guide no. 30. Med Teach. 2007;29(6):527–45. pmid:17978966

43. McGill I, Brockbank A. The action learning handbook: powerful techniques for education, professional development and training. 1st ed. London: Routledge; 2003. https://doi.org/10.4324/9780203416334

44. Eller KF. Brackish connections: (digital) learning networks, (virtual) communities of practice, and the rich learning-to-action pathways of their combined and intersecting existence. Adv Dev Hum Resour. 2024;27(1):27–36.

45. Sadki R. Rethinking the "webinar": sage on screen, guide on side, or both [Internet]. RedaSadki.Me; 2019. https://doi.org/10.59350/j0qmx-stg25

46. Stone R, Cooper S, Cant R. The value of peer learning in undergraduate nursing education: a

systematic review. ISRN Nurs. 2013;2013:930901. pmid:23691355

47. Freire P. Pedagogy of the oppressed. New York: Continuum; 2005.

48. Mezirow J. Learning as transformation: critical perspectives on a theory in progress. San Francisco: Jossey-Bass; 2000.

49. Cope B, Kalantzis M. Towards a new learning: the scholar social knowledge workspace, in theory and practice. E-Learn Digit Media. 2013;10(4):332–56.

50. Makau-Barasa LK, Kamara K, Karutu C, Aderogba M, Leaning E, Bockarie M. Systems thinking in the prevention, control, and elimination of neglected tropical diseases (NTDs). Int J Infect Dis. 2025;152:107810. pmid:39884646

51. Kwete X, Tang K, Chen L, Ren R, Chen Q, Wu Z, et al. Decolonizing global health: what should be the target of this movement and where does it lead us? Glob Health Res Policy. 2022;7.

52. Afzal MM, Pariyo GW, Lassi ZS, Perry HB. Community health workers at the dawn of a new era: 2. Planning, coordination, and partnerships. Health Res Policy Syst. 2021;19(Suppl 3):103. pmid:34641912

53. Ahmed S, Chase LE, Wagnild J, Akhter N, Sturridge S, Clarke A, et al. Community health workers and health equity in low- and middle-income countries: systematic review and recommendations for policy and practice. Int J Equity Health. 2022;21(1):49. pmid:35410258

54. Affun-Adegbulu C, Adegbulu O. Decolonising global (public) health: from western universalism to global pluriversalities. BMJ Glob Health. 2020;5(8):e002947. pmid:32819916

55. Bua E, Sahi SL. Decolonizing the decolonization movement in global health: a perspective from global surgery. Front Educ. 2022;7:1033797.

56. Kumar R, Khosla R, McCoy D. Decolonising global health research: Shifting power for transformative change. PLOS Glob Public Health. 2024;4(4):e0003141. pmid:38656955

57. Lamberti O, Bozzani F, Kiyoshi K, Bustinduy AL. Time to bring female genital schistosomiasis out of neglect. Br Med Bull. 2024;149(1):45–59. pmid:38220571

58. Preston A, Vitolas CT, Kouamin AC, Nadri J, Lavry SL, Dhanani N, et al. Improved prevention of female genital schistosomiasis: piloting integration of services into the national health system in Côte d'Ivoire. Front Trop Dis. 2023;4:1308660.

59. Hudu SA, Jimoh AO, Adeshina KA, Otalike EG, Tahir A, Hegazy AA. An insight into the success, challenges, and future perspectives of eliminating neglected tropical disease. Sci Afr. 2024;24:e02165.

60. World Health Organization [WHO]. Ending the neglect to attain the sustainable development goals: a road map for neglected tropical diseases 2021–2030 [Internet]. Geneva: World Health Organization; 2020. Available from: https://www.who.int/publications/i/item/9789240010352

61. El-Sayed A, Kamel M. Climatic changes and their role in emergence and re-emergence of diseases. Environ Sci Pollut Res Int. 2020;27(18):22336–52. pmid:32347486

62. O'Donovan J, O'Donovan C, Kuhn I, Sachs SE, Winters N. Ongoing training of community health workers in low-income andmiddle-income countries: a systematic scoping review of the literature. BMJ Open. 2018;8(4):e021467. pmid:29705769

63. Raukar NP, Mishkin HM. An exploration of the influence of gender and domestic responsibilities on the trajectory of one's career. In: Stonnington CM, Files JA, editors. Burnout in women physicians: prevention, treatment, and management. Cham: Springer; 2020. pp. 69–76. https://doi.org/10.1007/978-3-030-44459-4_4

64. Eller K. Learning to (co)evolve: a conceptual review and typology of network design in global health virtual communities of practice. IJIKM. 2024;19:021.

65. Robertson P, Jorgensen M, Garrow CE. Indigenizing evaluation research: how lakota methodologies are helping "raise the tipi" in the Oglala Sioux Nation. Am Indian Q. 2004;28(3):499–526.

66. Call-Cummings M, Dazzo GP, Hauber-Özer M. Critical participatory inquiry: an interdisciplinary guide. Thousand Oaks: SAGE Publications; 2023. Available from: https://collegepublishing.sagepub.com/products/critical-participatory-inquiry-1-275385

67. Dazzo G. On restorative validity: reorienting inquiry toward peace, justice, and healing. TQR. 2024;29:403–21.