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Original Article

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Evaluating changes in global health and cultural competence among graduate students after a short-term field experience in Tanzania

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ABSTRACT

Background: Short-term international field experiences are increasingly used to develop global health competencies that are difficult to foster in classroom-based education. However, evidence on their impact among graduate-level public health students, particularly in East Asian contexts, remains limited.
Methods: We conducted a mixed-methods evaluation of a one-week field training program in Tanzania (June 22–28, 2025) with graduate students from Yonsei University. Pre-post surveys assessed global health and cultural competence using the Association of Schools and Programs of Public Health global health domains and the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals – Student Version. Wilcoxon signed rank tests compared pre-post scores. Qualitative data from daily reflective journals and a post-program group interview were analyzed thematically by 2 independent coders, with discrepancies resolved by consensus.
Results: All 7 students completed, and a subsample of 5 students also completed daily reflective journals and a post-program group interview. Quantitative analyses showed significant gains in understanding national healthcare system models ($P = 0.031$) and in applying interdisciplinary teamwork skills ($P = 0.031$). Several domains, such as understanding cultural practices, knowledge of major causes of and mortality, and equity and social justice, exhibited upward, near-significant trends. Qualitative findings indicated transformative learning in cultural understanding, appreciation of community-based interventions, system-level insight across multiple tiers of care, and strengthened professional confidence.
Conclusion: Even brief, well-structured international field experiences can support meaningful development of global health competencies among graduate public health students, particularly in health systems understanding, equity-oriented thinking, and collaborative practice. Further studies with larger cohorts and longitudinal designs are needed to examine the sustainability and broader transferability of these gains.

Keywords: Global health; Cultural competence; Experiential learning; Education, field-based; Interprofessional relations

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INTRODUCTION

In the face of increasing global interconnectivity, public health issues are becoming more complex, requiring health professionals to adopt globally informed competencies.[1] For these dynamic challenges, prompting a growing emphasis on integrating global health competencies into graduate-level public health programs.[2] Leading institutions in the United States, United Kingdom, and Canada have implemented short-term field-based programs that provide students with opportunities to engage directly with diverse health systems and cultural contexts.

Such experiences promote not only knowledge acquisition but also the development of adaptive attitudes, particularly cultural humility, a key educational outcome in global health training. The Global Health Competency Model proposed by the Association of Schools and Programs of Public Health (ASPPH) emphasizes the need for graduates to possess a comprehensive set of knowledge, skills, and attitudes applicable to real-world global health settings.[3] Prior work highlights that cultural adaptation is pivotal for trust-building and collaboration in international partnerships and that strengthening cultural sensitivity can improve the effectiveness of global health assistance.[4,5]

Global leadership and cultural sensitivity, which are essential competencies in global health practice, are particularly difficult to cultivate through traditional methods alone. Instead, they often emerge through real-world engagement, cross-cultural encounters, and reflective learning processes.[6,7] Recent work has further shown that the COVID-19 pandemic disrupted traditional travel-based models of global health education, particularly short-term field experiences from high-income to low- and middle-income countries, while creating pressure to develop more continuous and equitable forms of engagement.[8]

Previous studies, particularly in undergraduate nursing and public health education, have demonstrated that short-term international or community-based field experiences significantly enhance students' cultural competence and sensitivity.[9-12] However, such evidence remains scarce for graduate-level public health students. Existing studies have tended to focus on undergraduate cohorts, use single-method designs, or rely primarily on satisfaction surveys rather than systematic assessment of competency development. Moreover, graduate students occupy a distinct position in global health training: they are often more professionally experienced, more exposed to international or policy settings, and more oriented toward specific career trajectories. As a result, their learning needs, motivations, and patterns of competency development may differ substantially from those of undergraduates, but this distinction has received little empirical attention.

While some Korean universities have begun introducing similar field-based learning models, empirical evidence regarding their impact on student competencies remains limited. Most domestic reports have been anecdotal or based on satisfaction surveys, with little attention to measurable learning outcomes or reflective transformation, and there has been little discussion of how such programs might contribute to regional capacity building or future collaboration between Asian and African institutions. Furthermore, studies often rely on either quantitative or qualitative approaches in isolation, thereby failing to capture the layered and multidimensional nature of students' learning and growth. A mixed methods approach, integrating both quantitative assessment and qualitative reflection, is needed to better evaluate how short-term field programs influence learner development. A mixed

methods approach, integrating both quantitative assessment and qualitative reflection, is needed to evaluate how short-term field programs influence learner development more comprehensively.[13,14]

In this context, the Department of Global Health at Yonsei University designed and implemented a structured short-term field experience program in Tanzania in June 2025. The program was developed based on the educational Analysis–Design–Development–Implementation–Evaluation (ADDIE) model, a widely used instructional design framework in health professions education.[15] By applying this framework, the curriculum included pre-departure online lectures, in-country site visits and community engagement, and post-trip debriefing with reflective journaling. This study evaluates the educational effectiveness of the program by examining changes in students' global health competencies, cultural sensitivity, and leadership development.

METHODS

Study design

This study applied a mixed methods design, combining quantitative surveys and qualitative analyses to assess changes in global health and cultural competence among participants in a short-term field training program in Tanzania. Quantitative components employed validated self-assessment tools administered pre-post programs, while qualitative components included reflective journals and group interviews. This study adopted an exploratory design, and the number of participants was limited by the requirement that students cover all travel and accommodation expenses themselves. As a result, a priori power analysis was not feasible.

Participants

A total of 7 graduate students enrolled in the Graduate School of Public Health at Yonsei University participated in the program and eligibility included enrollment in the Global Health Field Training course and either majoring in global health or demonstrating strong interest in the subject. These 7 students completed the pre- and post-program surveys. But only 5 students completed the daily reflective journals and took part in the post-program group interview. Participants contributed multiple data points over time, enabling a more nuanced examination of how individual insights, attitudes, and perceived competencies evolved during and after the field experience.

Program framework

The on-site field trip program was developed using the ADDIE instructional design model, ensuring competency-driven objectives aligned with the ASPPH Global Health Competency Model. Needs assessment and consultation with global health faculty and local partners informed the program design, which integrated academic and experiential components.[16] A conceptual framework diagram has been included to illustrate how both the ADDIE model and Kolb's experiential learning cycle guided the program's design and evaluation logic (**Fig. 1**). This framework visually demonstrates the connection between the structured phases of program development and the iterative processes of experiential learning.

Instruments and data collection

Global health competency was assessed using the Global Health Competency Tool developed by the Consortium of Universities for Global Health (CUGH), which comprises 8 domains

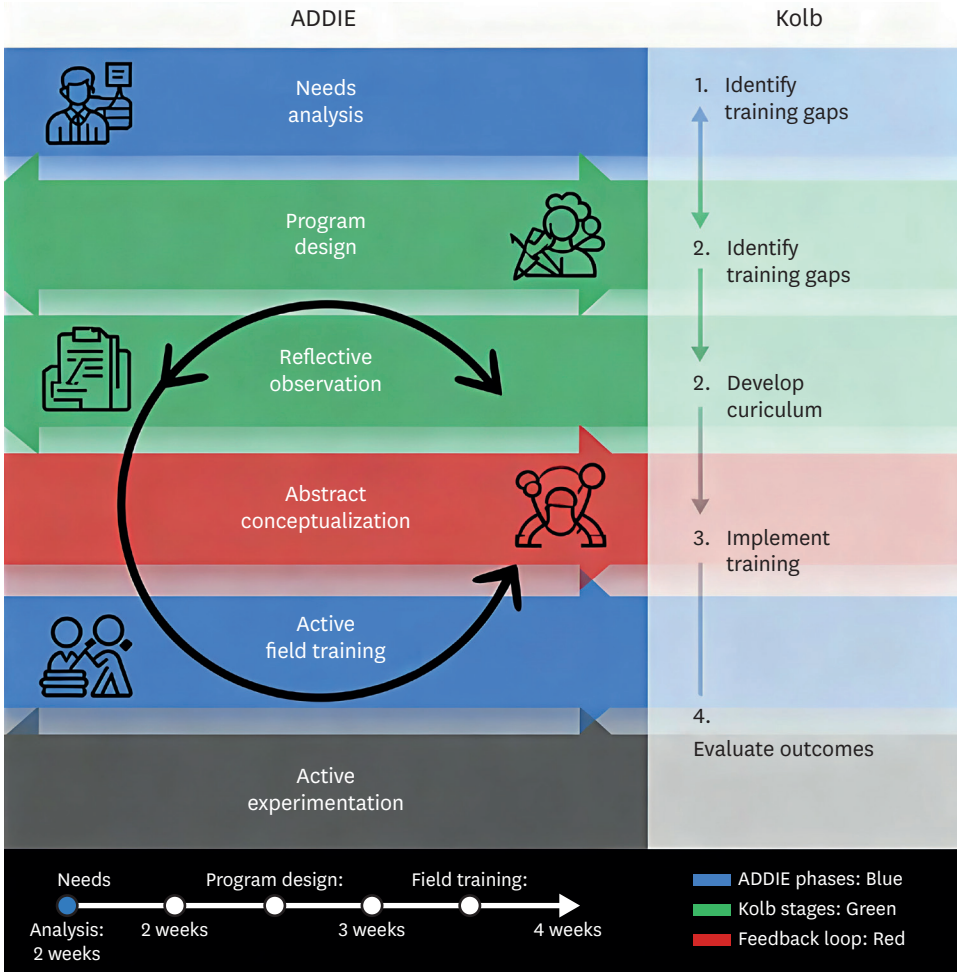

Fig. 1. Conceptual framework integrating the ADDIE model and Kolb's experiential learning cycle for global health field practicum design and evaluation.
Conceptual diagram illustrating how the ADDIE instructional design model was integrated with Kolb's experiential learning cycle to guide program design and evaluation. The upper row depicts the 5 ADDIE phases with key steps such as learner needs assessment, curriculum design aligned with ASPPH global health competencies, consultation with experts and local partners, one-week field training in Tanzania, and mixed-method evaluation. The lower section maps Kolb's cycle (Concrete Experience, Reflective Observation, Abstract Conceptualization, Active Experimentation) onto pre-departure preparation, field-based activities, daily reflective journals, and application of learning, with feedback arrows indicating how experiential learning informed ongoing program refinement.
ADDIE = Analysis–Design–Development–Implementation–Evaluation; ASPPH = Association of Schools and Programs of Public Health.

measured on a 4-point Likert scale. To evaluate cultural competence, the study employed the Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals – Student Version (IAPCC-SV) (Campinha-Bacote, 2002), encompassing 5 domains rated on 4–5 point Likert scales.[17,18] In addition to quantitative measures guided by prompts adapted from previous studies, in order to capture personal experiences, cultural encounters, and professional reflections. The journals were written primarily in Korean, with occasional English phrases, and were retained in the original language for analysis. Finally, post-program group interviews were conducted within one week after return, using semi-structured questions to explore changes in global health perspectives, challenges encountered in the field, and anticipated applications to future professional development.

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Data analysis

Quantitative data were analyzed using the Wilcoxon signed-rank test to compare pre- and post-program scores. In addition to *P*-values, effect sizes (*r*) and 95% confidence intervals were reported to provide additional insight into the practical significance of the observed changes. Although the sample was small, the mixed-methods design allowed quantitative and qualitative score changes to be interpreted alongside rich narrative accounts, providing depth and contextual understanding of participants' learning processes.

Qualitative data from journals and group interviews were analyzed in Korean by 2 bilingual coders who independently developed and applied a codebook; discrepancies were resolved through discussion until consensus was reached. When illustrative quotations were translated into English for reporting, translations were jointly reviewed to preserve the original meaning and context. Sub-themes were aggregated into themes and then organized into broader domains, ensuring transparency and trustworthiness in the analytic process.

Findings from the quantitative and qualitative strands were then triangulated by comparing patterns of score changes with emergent themes from the journals and interviews, and, where possible, by examining survey and narrative data at the individual participant level to enhance the rigor and coherence of interpretation.

Ethical considerations

The study protocol was approved by the Institutional Review Board (IRB) of Severance Hospital, Yonsei University (IRB No. 2025-1504-001). Written informed consent was obtained from all participants prior to data collection, and participation was voluntary.

For all study materials, including surveys, reflective journals, and interview transcripts, students generated their own identification codes and did not record their names, ensuring that individual responses could not be directly linked to personal identities. Because the field activities involved direct interaction with local communities, pre-departure orientations included explicit discussion of respectful engagement and potential power dynamics between visiting students and local partners. The course instructor also clarified that participation in the study was independent of course grading, so that students would not feel pressured to participate, and students were encouraged to share any emotional burden or discomfort arising from the field experience with the research team during and after the program.

RESULTS

Program implementation

The short-term field training program in Tanzania was conducted from June 22 to June 28, 2025. Based on framework combining the ADDIE model and Kolb's experiential learning cycle, the program included pre-departure preparation, field-based experiential learning, and post-program reflection. Major educational activities in the field involved health education booths for local elementary school students, collaborative health seminars with Tanzanian institutions, and site visits to primary health centers, district hospitals, regional referral hospitals, and a university teaching hospital. Participants also engaged with the Embassy of the Republic of Korea in Tanzania, the Korea Foundation for International Healthcare, and outreach activities in the Kilimanjaro and Zanzibar regions.

Participant characteristics

The demographic and academic background of participants are summarized. The cohort was composed most of whom were in their fourth semester of graduate study. Over half had prior experience in international health fieldwork or had lived abroad for more than 6 months (**Table 1**).

Quantitative outcomes

Pre- and post-program assessments indicated overall improvements across multiple domains of global health and cultural competence (**Table 2**). Mean scores increased consistently from pretest to posttest, suggesting that participants reported greater confidence in cultural awareness, knowledge, skills, encounters, and desire after the program. Although many of these changes did not reach statistical significance due to the small sample size, upward trends were observed particularly in understanding cultural practices, recognizing social determinants of health, and addressing health inequities.

Wilcoxon signed-rank tests revealed statistically significant improvements in 2 items: understanding national healthcare system models within the domain of globalization of health ($P = 0.031$) and applying interdisciplinary teamwork skills within the domain of professional practice and leadership ($P = 0.031$). Several other items, such as understanding of culture in health practices, recognition of global health disparities, and knowledge of leading causes of morbidity and mortality, demonstrated marginal improvements with *P*-values approaching significance (0.063). These findings suggest that the program contributed to positive shifts in participants' self-assessed competencies, particularly in system-level understanding and collaborative practice, even though most domains showed non-significant changes attributable to the limited number of participants.

At the domain level, the results showed a consistent pattern of improvement, with all global health and cultural competence domains demonstrating positive mean changes from pre- to post-program (**Table 3**). Among the ASPPH Global Health Competency domains, the most notable improvements were observed in globalization of health and professional practice and

Table 1. Characteristics of participants (n = 7)

Characteristics	Categories	Values
Sex	Female	6 (85.7)
	Other	1 (14.3)
Affiliation	Yonsei University Graduate School of Public Health	7 (100.0)
Current semester	1st semester	1 (14.3)
	4th semester	4 (57.1)
	5th semester	2 (28.6)
Birth year		1989.6 (1980–1996)
Experience in international health fieldwork	Yes	4 (57.1)
	No	3 (42.9)
Experience of living abroad for more than 6 months	Yes	4 (57.1)
	No	3 (42.9)
(If yes) Country of residence (among those with experience, n = 4; multiple responses allowed)	Canada	1 (14.3)
	Cameroon	1 (14.3)
	Senegal	1 (14.3)
	Rwanda	1 (14.3)
	USA	1 (14.3)
	Mexico	1 (14.3)
	Argentina	1 (14.3)

Values are presented as number (%) or median (range).

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Table 2. Pre- and post-training scores on global health and cultural competence (n = 7)

Variables	Code	Pre-test	Post-test	Statistic	*P*-value
		Mean ± SD	Mean ± SD		
Cultural Awareness					
- Awareness of own cultural values and beliefs	C1_1	3.00 ± 0.81	3.57 ± 0.53	5	0.313
- Recognition of cultural influence on health behaviors	C1_2	2.71 ± 0.75	3.42 ± 0.78	5.5	0.250
Cultural Knowledge					
- Understanding of culture in health practices	C2_1	2.14 ± 0.69	3.42 ± 0.53	7.5	0.063
- Familiarity with community cultural norms	C2_2	2.57 ± 0.53	3.28 ± 0.75	3	0.250
Cultural Skill					
- Performing culturally sensitive assessments	C3_1	2.42 ± 0.78	3.28 ± 0.75	5	0.125
- Adapting care to diverse populations	C3_2	2.28 ± 0.75	3.14 ± 0.69	5	0.125
Cultural Encounters					
- Seeking opportunities for intercultural interaction	C4_1	2.42 ± 0.97	3.14 ± 0.37	5.5	0.250
- Frequent contact with different cultures	C4_2	2.42 ± 1.13	2.85 ± 0.89	3	0.500
Cultural Desire					
- Motivation to learn about other cultures	C5_1	3.00 ± 0	3.42 ± 0.53	3	0.250
- Valuing cultural diversity in healthcare	C5_2	2.42 ± 0.53	3.42 ± 0.53	5	0.125
Global Burden of Disease					
- Leading causes of morbidity/mortality	G1_1	2.00 ± 0.57	3.14 ± 0.37	7.5	0.063
- Differences across income levels	G1_2	2.14 ± 0.69	3.00 ± 0.57	5	0.125
Globalization of Health					
- Impact of trade and travel on diseases	G2_1	2.14 ± 0.37	3.00 ± 0.81	5	0.125
- National healthcare system models	G2_2	1.42 ± 0.53	3.00 ± 0.81	10.5	0.031*
Social and Environmental Determinants					
- Social factors affecting health outcomes	G3_1	2.42 ± 0.53	3.14 ± 0.69	5	0.125
- Environmental determinants of health	G3_2	1.85 ± 0.69	2.85 ± 1.06	5	0.125
Capacity Strengthening					
- Strategies for sustainable health systems	G4_1	1.71 ± 0.75	2.85 ± 0.89	3	0.250
- Importance of local capacity building	G4_2	2.00 ± 0.81	3.14 ± 1.06	5	0.125
Collaboration, Partnering, Communication					
- Cross-cultural collaboration skills	G5_1	2.28 ± 0.95	3.57 ± 0.53	5	0.125
- Principles of equitable partnerships	G5_2	2.42 ± 0.53	3.28 ± 0.75	3	0.250
Ethics					
- Common ethical challenges in fieldwork	G6_1	1.85 ± 0.89	2.85 ± 1.06	3	0.250
- Community consent and autonomy	G6_2	2.28 ± 0.75	3.14 ± 0.69	3	0.250
Health Equity and Social Justice					
- Global health disparities and injustice	G7_1	2.14 ± 0.69	3.14 ± 0.69	7.5	0.063
- Commitment to equity in access	G7_2	2.28 ± 0.48	3.00 ± 0.81	5	0.125
Professional Practice and Leadership					
- Leadership in global health settings	G8_1	2.14 ± 0.69	3.00 ± 0.81	5.5	0.250
- Role of interdisciplinary teamwork	G8_2	2.14 ± 0.37	3.57 ± 0.53	10.5	0.031*

Wilcoxon signed-rank test was used; exact *P*-values are reported due to the small sample size.
SD = standard deviation.
*$P < 0.05$ was considered statistically significant.

leadership ($P = 0.002$–0.004, $r = 0.88$–0.90), together with substantial gains in global burden of disease and health equity and social justice ($P = 0.006$–0.016, $r = 0.81$–0.86). Modest but positive trends were also found in recognizing social and environmental determinants of health ($P = 0.020$, $r = 0.79$), while ethics showed a positive but non-significant change ($P = 0.090$, $r = 0.64$). Within the IAPCC-SV framework, the largest gains were observed in the cultural knowledge, cultural skill, and cultural desire domains ($P = 0.009$–0.026, $r = 0.77$–0.84), suggesting enhanced appreciation for cultural diversity and self-reflection in practice. Although some changes did not reach conventional statistical significance due to the small sample size, all domains demonstrated positive directional improvement with medium to large effect sizes, indicating meaningful practical gains.

Table 3. Summary of ASPPH and IAPCC domain-level changes (pre- vs. post-program, n = 7)

Framework	Domain	Pre-Program Mean ± SD	Post-Program Mean ± SD	Δ (mean change)	Effect size (*r*)	95% CI for Δ	Significance (*P*)	Interpretation
ASPPH Global Health Competencies	Capacity Strengthening	1.86 ± 0.63	3.00 ± 0.91	1.08	0.75	0.14, 2.03	0.031	Significant improvement
	Collaboration, Partnering & Communication	2.36 ± 0.69	3.43 ± 0.61	1.08	0.71	0.01, 2.15	0.048	Significant improvement
	Ethics	2.07 ± 0.79	3.00 ± 0.87	0.92	0.64	−0.19, 2.03	0.090	No statistically significant change
	Global Burden of Disease	2.07 ± 0.61	3.07 ± 0.35	1.08	0.81	0.29, 1.88	0.016	Significant improvement
	Globalization of Health	1.79 ± 0.39	3.00 ± 0.76	1.42	0.90	0.74, 2.10	0.002	Significant improvement
	Health Equity and Social Justice	2.21 ± 0.49	3.07 ± 0.67	1.00	0.86	0.42, 1.58	0.006	Significant improvement
	Professional Practice and Leadership	2.14 ± 0.48	3.29 ± 0.57	1.17	0.88	0.53, 1.80	0.004	Significant improvement
	Social & Environmental Determinants	2.14 ± 0.56	3.00 ± 0.87	1.00	0.79	0.23, 1.77	0.020	Significant improvement
IAPCC Cultural Competence	Cultural Awareness	2.86 ± 0.69	3.50 ± 0.50	0.75	0.60	−0.25, 1.75	0.117	No statistically significant change
	Cultural Desire	2.71 ± 0.27	3.43 ± 0.53	0.83	0.77	0.14, 1.53	0.026	Significant improvement
	Cultural Encounters	2.43 ± 0.98	3.00 ± 0.50	0.75	0.60	−0.25, 1.75	0.117	No statistically significant change
	Cultural Knowledge	2.36 ± 0.48	3.36 ± 0.63	1.17	0.84	0.41, 1.92	0.009	Significant improvement
	Cultural Skill	2.36 ± 0.75	3.21 ± 0.70	1.00	0.77	0.17, 1.83	0.025	Significant improvement

ASPPH = Association of Schools and Programs of Public Health; IAPCC = Inventory for Assessing the Process of Cultural Competence among Healthcare Professionals; SD = standard deviation.

Qualitative outcomes from reflective journals

A total of 5 students' daily reflective journals were analyzed. Two independent researchers developed a codebook and conducted thematic analysis, and any discrepancies were resolved through consensus discussions. From this process, 5 overarching domains were identified: Experiential Highlight, Cultural Encounter, Knowledge Acquisition, Perspective Shift, and Value/Attitude Development (**Table 4**).

Within Experiential Highlight, students frequently reflected on hospital visits and outreach activities, recognizing differences in healthcare environments and emphasizing the importance of context-specific support. They noted firsthand the limitations in healthcare access and highlighted the role of community-based support. Through participation in health booths and outreach programs, they engaged in diverse health education and service activities, often in collaboration with local healthcare providers and community members. Cultural and historical experiences—such as nursing school ceremonies, visits to historical sites, and safaris—were also described as meaningful opportunities to understand and respect local traditions, history, and nature. These experiences fostered an increased

Table 4. Content analysis of daily reflection journals (n = 5)

Domains	Themes	Sub-themes	Count
Experiential Highlight	Health resource assessment and multi-level interventions	- Field-based evaluation of health resource gaps and support strategies	4
		- Mechanisms for multi-level health interventions and community engagement	2
	Cultural context, health perception, and communication	- Interaction between cultural-historical context and health perceptions	3
		- Enhancing multicultural communication through awareness of health inequalities	3
Cultural Encounter	Interpersonal and community dynamics in health contexts	- Reciprocity and equality in interpersonal and hospitality culture	4
		- Regional characteristics of health, living infrastructure, and sociocultural systems	6
		- Patterns of interaction fostering relationship building and community solidarity	8
Knowledge Acquisition	Integrated local health system management and community engagement	- Multi-layered health system operations and quality management capacity	11
		- Comprehensive understanding of local health practices and health challenges	5
		- Health infrastructure disparities and dynamics of community participation	6
Perspective Shift	Transformative perspectives through experiential understanding	- Reframing perspectives through comparative insight	7
		- Experiential understanding of health, environment, and resources	4
Value/Attitude Development	Personal growth and capacity development	- Deepening emotional awareness and reflection	6
		- Concrete goal setting and implementation strategies	4
		- Expansion of capabilities and multidisciplinary skills	8

awareness of health inequities, communication diversity, and the necessity of adopting an international perspective when addressing health challenges.

The domain of Cultural Encounter captured students' impressions of Tanzanian residents' bright and egalitarian relationships, as well as their hospitality and sincerity, which left a strong impact despite language barriers. They also described clear differences in health infrastructure, sanitation, and everyday life compared to Korea, highlighting the unique socio-cultural characteristics of the local context. Patterns of interactions such as greeting customs, communal hospitality, and spiritual care—were experienced as more than simple exchanges of information; rather, they were seen as mechanisms for relationship building, solidarity, and the promotion of sustainable cooperation.

> "The way people in Zanzibar welcomed strangers without any sense of wariness was very different from what I am used to in Korea… it made me compare their openness with my own tendency to feel fear first when I encounter unfamiliar situations" (Participant A). "Another reflected that even a simple greeting has the power to break down barriers" (Participant B).

Under Knowledge Acquisition, students emphasized the multi-layered nature of the Tanzanian health system, noting both infrastructural limitations and ongoing efforts to improve quality across hospitals, specialized wards, and outreach programs. Activities such as kangaroo care, structured outreach support, and analysis of local disease patterns provided deeper insights into healthcare practices and challenges. Fieldwork revealed disparities in infrastructure but also demonstrated high levels of community health interest and engagement, underscoring the importance of health education and international knowledge exchange.

> "I realized that my assumptions about 'Tanzania' had been wrong. I had imagined it as a remote and underserved place, but in many respects, it was not like that… overall, the system was much more organized than I had expected" (Participant C).

Perspective Shift was another salient domain. Students reported that their previously fragmented or negative perceptions of Africa were reshaped, as they recognized many similarities between Tanzanian and Korean health systems and socio-cultural contexts. Even in rural hospitals, systematic management and diverse health indicators challenged prior assumptions. These experiences facilitated a reframing of perspectives and contributed to a more nuanced understanding of health and environment.

Finally, in the domain of Value/Attitude Development, students described how the field experience deepened their reflections on their roles and responsibilities as global health professionals. They articulated concrete goals such as providing context-sensitive support, workforce and family education, skill transfer, and the introduction of appropriate technologies. Moreover, the program was seen as a platform for expanding competencies, including technical expertise, education, language proficiency, and cultural understanding, thereby reinforcing the need for multidisciplinary skills in global health practice.

Qualitative outcomes from group interviews

Post-program interviews with 5 participants provided further insights into students' cultural understanding, professional development, and future intentions. Analysis identified 4 major

Table 5. Content analysis of post-program group interviews (n = 5)

Domains	Themes	Sub-themes	Count
Cultural Understanding and Perspective Shift	Pre-departure meetings and training experiences	- Building familiarity and preparing for activities through online meetings	2
	Local support and schedule management	- Strong collaboration from local staff	1
On-site Learning and Collaboration	Immersive learning through diverse field activities	- Experiencing a range of health interventions	5
		- Adapting skills to unfamiliar health contexts	4
	Building collaborative capacity with multi-professional and local teams	- Leveraging diverse professional backgrounds for program enrichment	4
		- Strengthening cross-cultural partnerships	5
Cultural Understanding and Perspective Shift	Confronting and reevaluating preconceived views on African health and culture	- Recognizing and addressing preconceived views	3
	Change in actions and perceptions	- Changes in interpersonal approach	1
		- Changes in professional perspective	1
Future Application and Participation Intent	Aspirations and considerations for future engagement	- Desire for longer-term participation	3
		- Practical and personal considerations	2

domains: Cultural Understanding and Perspective Shift, On-site Learning and Collaboration, Transformative Changes in Attitudes, and Future Participation Intent (**Table 5**).

In relation to Cultural Understanding and Perspective Shift, participants reflected that pre-departure Zoom meetings and training sessions eased their adaptation in the field. However, they also noted that more specific preparation on health education procedures and situational responses would have been beneficial. During the latter part of the schedule, strong support from local staff was described as particularly meaningful. Students also reported that engaging in seminars and field interactions revealed unexpected advancements and diverse approaches to health in Africa, prompting them to reassess preconceived views. Positive interactions, such as warm greetings and everyday hospitality, inspired them to adopt a more welcoming interpersonal approach in their own professional settings. Moreover, exposure to holistic views on health and the genuine engagement of local professionals reinforced their motivation, strengthened their sense of purpose, and encouraged them to create similar opportunities for others.

The domain of On-site Learning and Collaboration highlighted the importance of immersive and diverse field activities. Students gained practical understanding of health service delivery and community living conditions through participation in sanitation facility construction, palliative care visits, and health education. For those with limited prior experience in Africa or international health work, these field assignments offered opportunities to apply existing knowledge in novel contexts and to develop professional confidence. Collaboration with colleagues from different disciplines and with prior international experience was described as enriching the program, as it enabled mutual skill sharing and expanded perspectives. Furthermore, joint work with local healthcare providers and educators deepened students' understanding of cultural and systemic health practices, while also fostering trust and communication across cultural boundaries.

Within the domain of Transformative Changes in Attitudes, participants described how these cumulative experiences reshaped their outlook on both cultural interaction and professional roles. They emphasized the shift from preconceived assumptions to a broader and more open perspective, as well as the realization that small but genuine interpersonal gestures could have lasting professional implications.

> "I realized, both during the palliative care home visits and the seminar, that I had been thinking about Africa almost exclusively in terms of primary care. The mere fact that a

> structured palliative care existed was surprising to me, and the seminar topics—focused more on health promotion and diet than I had expected—made me recognize how strong my own preconceptions still were. These experiences prompted me to adopt a more open way of thinking and to look at Africa, and other countries I may work with in the future, from a much broader and less stereotyped perspective" (Participant D).

Finally, in the domain of Future Participation Intent, many students expressed interest in returning for extended stays beyond the field program, emphasizing that a longer duration would allow deeper understanding of local health systems and cultural contexts. At the same time, they acknowledged practical and personal constraints, noting the challenge of balancing such opportunities with work commitments and life circumstances. Overall, the interview findings complemented the quantitative results by illustrating how perceived gains in system understanding, equity-oriented thinking, and collaborative practice were grounded in concrete field experiences and evolving professional identities.

DISCUSSION

This study evaluated the educational impact of a short-term field experience program in Tanzania, combining quantitative assessments with qualitative reflections. The results indicate that even a one-week program, when structured around the ADDIE instructional framework and the ASPPH Global Health Competency Model, can contribute to meaningful improvements in participants' professional competencies. Although most domains demonstrated non-significant changes due to the limited sample size, 2 competencies, understanding national healthcare system models and applying interdisciplinary teamwork—showed statistically significant gains. Effect sizes in several domains were in the moderate-to-large range, suggesting that the observed changes may be practically meaningful despite limited statistical power. Several other items approached significance, suggesting that short-term field experiences, even of modest duration, can provide valuable opportunities for system-level learning and collaborative skill development.

A key contribution of this study lies in the integration of quantitative and qualitative data. Domain-level score improvements in areas such as globalization of health, health equity and social justice, and collaboration and communication were mirrored in students' narratives describing expanded system-level understanding, heightened awareness of structural inequities, and strengthened confidence in working within interdisciplinary and cross-cultural teams. In parallel, significant gains in cultural knowledge, skills, and desire were reflected in journal and interview themes related to cultural encounters, perspective shifts, and value and attitude development.

Our findings are consistent with previous studies reporting that short-term field experiences enhance cultural humility and intercultural communication skills among health professions students, but they extend this evidence to graduate-level public health programs by demonstrating moderate-to-large improvements in cultural knowledge, skills and desire.

Qualitative findings offered important insights into the mechanisms underlying these changes. Reflective journals and post-program interviews highlighted that hospital visits, outreach programs, and cultural encounters fostered greater awareness of health inequities, the importance of context-sensitive support, and the role of community-based care.

Participants described how local hospitality and egalitarian relationships encouraged them to adopt a more welcoming professional demeanor in their own practice. They also emphasized the transformative effect of engaging with Tanzanian colleagues who embraced holistic views of health and demonstrated commitment to both clinical and community dimensions of care. These experiences reshaped participants' preconceived assumptions about Africa and led to renewed motivation to pursue careers in global health. Taken together, these patterns suggest that field-based education is particularly effective when it combines structured exposure to multiple levels of the health system with opportunities for guided reflection on cultural encounters and equity-oriented practice.

Beyond the individual level, the findings also have implications for regional and international collaboration. Although the present program was organized primarily as a short-term engagement led by a Korean institution, similar models could be further developed as platforms for more equitable, bi-directional partnerships between Asian and African universities and health organizations. The selected country for the global health field practicum has been a major recipient of Official Development Assistance projects conducted by the university over the past 15 years, and ongoing collaboration with local partners has been maintained through master's programs and short-term initiatives. While undergraduate field programs have typically received full financial support from Korea International Cooperation Agency, this model demonstrates the feasibility of extending comparable experiential learning opportunities to graduate students in international development and global health. Importantly, the program structure may be adapted by other Asian and developing-country universities and thus serve as a practical example for promoting regional capacity building and future South–South collaboration in global health education.

The study underscores several practical lessons for the design of field-based education. Pre-departure preparation was identified as valuable but in need of refinement; while online meetings helped ease the transition to fieldwork, participants expressed that more detailed guidance on health education procedures and situational responses would have been beneficial. Strong collaboration with local staff proved crucial in facilitating adaptation and maximizing the educational value of the program.

At the graduate public health curriculum level, these results support the deliberate integration of short-term field experiences as capstone or practicum components that are tightly aligned with competency frameworks, rather than as stand-alone exposure trips. Embedding structured pre-departure modules, clearly articulated learning outcomes, and post-program debriefing within existing courses may help institutions systematically cultivate global health leadership, cultural competence, and systems thinking among students. In this program, the use of the ADDIE model and Kolb's experiential learning cycle provided a clear scaffold for aligning objectives, learning activities, and evaluation, offering a replicable template for other graduate schools of public health.

These design features structured pre-departure preparation, guided reflection, and sustained collaboration with local partners—are also aligned with best-practice recommendations for field-based global health education, which emphasize intentional scaffolding rather than one-off exposure trips.

Some limitations must be acknowledged. The small number of participants constrained the statistical power of quantitative analyses and limits the generalizability of findings, so

this study should be interpreted as a pilot, exploratory evaluation of program feasibility and potential educational value rather than a definitive test of effectiveness. In addition, qualitative data were available only for a subsample of 5 participants, which may limit the transferability of the thematic findings. Self-reported measures may also be subject to social desirability bias, and the short duration of the program restricted the extent to which more profound or sustained changes could be observed.

Future research should seek to expand the sample through increased funding support and broader recruitment. And programs should consider extending the duration of field experiences to allow for deeper engagement with local systems and cultural contexts. Pre-departure preparation could be strengthened by incorporating simulation-based training and scenario-specific communication exercises. Program evaluation would also benefit from triangulating self-assessment with external assessments from faculty, local mentors, or structured observation tools. Finally, embedding local capacity-building activities and co-developing outcomes with host institutions would ensure that such programs contribute not only to student learning but also to mutual benefit and equity in international partnerships. These preparatory and evaluative processes could be further reinforced through collaboration with non-governmental organizations and local partner organizations.[19,20]

In conclusion, this study evaluated a short-term global health field training program in Tanzania through a mixed methods design. The findings suggest that even brief, well-structured programs can foster meaningful growth in global health competencies, particularly in understanding health systems and developing interdisciplinary teamwork skills. While most quantitative improvements did not reach statistical significance due to the small sample size, several domains demonstrated moderate-to-large effect sizes, and qualitative reflections revealed transformative learning experiences, including shifts in cultural understanding, enhanced professional confidence, and broadened perspectives on global health practice.

The results highlight both the potential and the limitations of short-term programs. They can serve as effective platforms for experiential learning, cultural humility, and professional development, but their impact is constrained by duration and scale. To maximize effectiveness, future programs should extend the length of field engagement, strengthen pre-departure preparation, and integrate longitudinal evaluation methods. At the same time, aligning program design with explicit competency frameworks and experiential learning principles, as in the present study, may help graduate public health programs systematically cultivate global health leadership and cultural competence. By embedding local capacity-building elements and fostering equitable partnerships, including longer-term collaborations between Asian and African institutions, such initiatives can contribute not only to the growth of participating students but also to the advancement of global health education and international collaboration.

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