

# The Teacher as First Responder: Evaluating A Task-Shifting Mental Health Literacy Program in Lao PDR

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## ABSTRACT

**Background:** Adolescent mental health is a growing global concern, yet access to professional care is severely limited in many low- and middle-income countries, including the Lao People's Democratic Republic (Lao PDR). With a profound shortage of school counselors and mental health professionals, teachers are often the de facto frontline for identifying and supporting students in distress. This study evaluates the effectiveness of a low-resource, task-shifting mental health literacy program for secondary school teachers in Vientiane Capital.

**Methods:** A quasi-experimental, mixed-methods design was employed. Eighty teachers from 20 secondary schools were recruited; 40 teachers from 10 schools received a culturally adapted, 5-module Mental Health First Aid (MHFA)-inspired training (intervention group), while 40 teachers from 10 matched schools served as a waitlist control. Quantitative data were collected at pre-test, post-test, and 3-month follow-up using validated scales to assess mental health knowledge, stigmatizing attitudes, and self-efficacy in providing support. Qualitative data were gathered through post-intervention focus group discussions to explore feasibility, acceptability, and perceived challenges. As a process measure, student disciplinary and referral records were tracked.

**Results:** The intervention group demonstrated statistically significant improvements in mental health knowledge, reductions in social distance stigma, and increased self-efficacy from pre-test to post-test, with effects sustained at the 3-month follow-up, compared to the control group. Qualitative analysis revealed three major themes: (1) Empowerment Through Knowledge and Skills, (2) Navigating Cultural Contexts and Systemic Barriers, and (3) The Emergence of a Supportive School Environment. School records indicated a 25% increase in documented student referrals for psychosocial or behavioral concerns in intervention schools in the three months post-training (a process outcome indicating increased detection), compared to a negligible 2% change in control schools over the same period. Direct student mental health outcomes were not assessed.

**Keywords:** mental health literacy, task-shifting, teacher training, adolescent mental health, school-based mental health, Lao PDR, low-resource settings

## INTRODUCTION

Adolescence is a critical period of development characterized by rapid physical, cognitive, and psychosocial changes, which also presents a heightened vulnerability to the onset of mental health disorders (Kessler et al., 2005). The World Health Organization (WHO) estimates that half of all mental health conditions start by age 14, yet most cases go undetected and untreated (WHO, 2021). This "treatment gap" is particularly pronounced in low- and middle-income countries (LMICs), where mental health systems are often underfunded, understaffed, and inaccessible (Saxena et al., 2007). In Southeast Asia, rapid socioeconomic transitions have been accompanied by new stressors for young people, yet mental health infrastructure has not kept pace, creating an urgent public health challenge (Lund et al., 2018).

The Lao People's Democratic Republic (Lao PDR) exemplifies this challenge. The country faces an extreme shortage of mental health professionals, with fewer than 0.05 psychiatrists per 100,000 population and a neartotal

absence of trained psychologists or school counselors (WHO, 2017). Within the education system, where adolescents spend a significant portion of their time, this human resource constraint means that students experiencing mental distress—from anxiety and depression to more severe conditions—are unlikely to receive timely or appropriate support. Consequently, teachers, by virtue of their daily contact and established relationships with students, are inevitably positioned on the frontlines of student well-being (Kutcher et al., 2016). However, without formal training, teachers may lack the knowledge to recognize signs of distress, feel unequipped to respond helpfully, or hold stigmatizing beliefs that can deter students from seeking help (Reinke et al., 2011).

Task-shifting, a strategy endorsed by the WHO, offers a pragmatic solution to such resource limitations. It involves delegating tasks from highly specialized professionals to less specialized but appropriately trained workers (WHO, 2008). In the context of school mental health, this means empowering non-specialists like teachers with the core competencies to act as "first responders." This approach focuses on improving mental health literacy—defined as knowledge and beliefs about mental disorders which aid their recognition, management, or prevention (Jorm, 2012). Programs like Mental Health First Aid (MHFA) have demonstrated success globally in equipping laypeople to identify individuals in distress, provide initial support, and guide them toward professional help (Hadlaczky et al., 2014).

While the evidence for teacher-focused mental health literacy programs is growing in high-income countries, research in low-resource contexts like Lao PDR remains scarce. A scalable, culturally sensitive, and low-cost model is essential for sustainable impact. This study addresses this gap by evaluating a "training-of-trainers" program adapted from the MHFA framework for secondary school teachers in Vientiane Capital. The program's design as a task-shifting intervention directly confronts the systemic human resource deficit. The primary aim of this research was to assess the effectiveness of this program in improving teachers' mental health knowledge, reducing stigma, and enhancing their self-efficacy to support students. The study's research questions were:

1. Does the mental health literacy training program lead to significant improvements in teachers' knowledge of adolescent mental health issues compared to a waitlist control group?
2. Does the training program effectively reduce teachers' stigmatizing attitudes toward mental illness?
3. Does the training program increase teachers' self-efficacy in identifying, approaching, and providing initial support to students in distress?
4. What are the teachers' perceptions regarding the feasibility, cultural appropriateness, and challenges of implementing the learned skills in their school environment?

Based on previous literature (Hadlaczky et al., 2014; Jorm, 2012), we hypothesized that teachers in the intervention group would show significantly greater improvements in mental health knowledge and self-efficacy, and a significant reduction in stigma, compared to the control group, with these effects being maintained at a 3-month follow-up.

## METHODOLOGY

This study, conducted in 2023, employed a quasi-experimental, mixed-methods design to evaluate the impact and feasibility of the teacher mental health literacy program. The quantitative component utilized a pre-test, post-test, 3-month follow-up design with a non-equivalent control group, while the qualitative component involved focus group discussions with the intervention group.

### Participants and Setting

Participants were 80 full-time secondary school teachers from 20 public schools in Vientiane Capital, Lao PDR. Schools were selected through purposive sampling to ensure representation across different districts of the city. The 20 schools were matched into 10 pairs based on size, student-to-teacher ratio, and general socioeconomic status of the student population. Within each pair, one school was randomly assigned to the intervention group (n=10 schools, 40 teachers) and the other to the waitlist control group (n=10 schools, 40 teachers). Four teachers from each selected school were invited to participate on a voluntary basis. Inclusion criteria were: (1) being a

full-time teacher at a selected secondary school, (2) having at least one year of teaching experience, and (3) providing informed consent. There were no specific exclusion criteria.

## Intervention

The intervention was a 16-hour training program, delivered over four half-days, adapted from the international Mental Health First Aid (MHFA) curriculum (Kitchener et al., 2004). The adaptation process involved consultation with local education officials and senior teachers to ensure cultural and contextual relevance. The program utilized a 'training-of-trainers' philosophy, encouraging participants to share knowledge with colleagues, thereby promoting scalability.

The training was structured into five modules and delivered by two certified trainers (the researchers). The modules were:

**Module 1: Adolescent Mental Health in the Lao Context.** Covered common mental health challenges (depression, anxiety, stress), local idioms of distress, and the impact of mental health on learning.

**Module 2: Identifying Signs of Distress.** Focused on recognizing behavioral, emotional, and academic warning signs in students.

**Module 3: The ALGEE Action Plan.** Taught the core MHFA action plan: Approach, assess, and assist with any crisis; Listen non-judgmentally; Give support and information; Encourage appropriate professional help; Encourage other supports.

**Module 4: Navigating Referral Pathways.** Mapped out existing, albeit limited, support systems within the school (e.g., school nurse, trusted senior administrator) and community, and practiced how to make a supportive referral.

**Module 5: Teacher Self-Care and Peer Support.** Addressed the emotional impact of supporting others and strategies for maintaining personal well-being.

The program utilized a "training-of-trainers" philosophy, encouraging participants to share knowledge with colleagues, thereby promoting scalability. The waitlist control group received the same training after the 3-month follow-up data collection was completed.

**Cultural Adaptation Process:** The MHFA curriculum was adapted through a multi-step process to ensure cultural and contextual relevance. First, consultations were held with five senior teachers, two school principals, and a representative from the Ministry of Education and Sports to review the original content. Key adaptations included

- **Language and Idioms:** Incorporating local expressions of distress for calmness and agitation, and using culturally resonant metaphors in role-plays.
- **Case Examples:** Replacing Western vignettes with scenarios reflecting Lao adolescent experiences, such as academic pressure from national exams, family migration for work, and social anxiety in group settings.
- **Referral Pathways:** Mapping locally available resources (e.g., temple monks, school nurses, village elders) rather than clinical services often absent in Laos.
- **Role-Play Activities:** Designing scenarios where teachers practiced approaching students in ways consistent with Lao norms of respect and hierarchical communication.

The adapted materials were pilot-tested with four teachers not involved in the study, and feedback was used to refine clarity and relevance.

**Training Fidelity and Standardization:** To ensure consistent delivery across all training sessions, a detailed facilitator manual and standardized PowerPoint slides were developed in the Lao language. Both trainers

participated in a joint planning session to review the manual, practice delivery, and align on key messaging and interactive components. Fidelity was assessed through two methods: (1) a session checklist completed by the trainers after each module to confirm coverage of all core components, and (2) random observation of two training sessions by an independent education officer, who verified adherence to the manual and engagement strategies. Minor deviations were noted in timing but all core content was delivered as planned. All training sessions followed the same structured manual and slide deck. Fidelity was confirmed through trainer-completed checklists and independent observation of randomly selected sessions, ensuring consistent delivery of core content and interactive components across all groups.

## Measures

### Quantitative Measures

A survey booklet was administered at pre-test (T1), post-test (T2, immediately after the intervention), and 3-month follow-up (T3).

**Mental Health Knowledge:** The Mental Health Knowledge Schedule (MHKS) (Evans-Lacko et al., 2010) was adapted for the Lao context. The adaptation process involved translation and back-translation by bilingual experts, followed by a review with three local educators to ensure conceptual and linguistic equivalence. Minor modifications were made to two items referencing treatment options to reflect locally available resources (e.g., general health center consultations rather than specialist psychiatric care). The final adapted scale consisted of 12 items assessing knowledge of common mental health conditions, treatments, and stigma-related facts.

**Stigma:** The Social Distance Scale (SDS) (Bogardus, 1933), adapted for mental health contexts, was used. The standard 7-item scale was translated into Lao. To enhance contextual validity, the vignette describing the person with a mental illness was modified from the original (e.g., "a person with schizophrenia") to "a person with a *severe and recurring mental health problem*," a phrasing determined through pilot testing to be more comprehensible and less stigmatizing in the local context. The scale measures participants' willingness to engage in relationships of varying intimacy (e.g., as a neighbor, as a teacher to their child). Lower scores indicate less desired social distance (i.e., lower stigma).

### Qualitative Measures

Semi-structured focus group discussions were conducted with the intervention group teachers (n=40, organized into 5 groups of 8) within two weeks of the training completion. The discussions, lasting approximately 90 minutes each, were guided by a protocol exploring the training's perceived utility, cultural appropriateness, challenges to applying the skills, and suggestions for improvement.

### Secondary Outcome Data

Anonymized data on student disciplinary incidents and referrals for health or behavioral support were collected from school administrative records for the three months prior to the intervention and the three months following it for all 20 participating schools.

## Procedure

This study received formal ethical approval from the Kiettisack International School Institutional Review Board (KIS-IRB-2023-015). The study protocol adhered to the principles of the Declaration of Helsinki. All participants provided written informed consent after receiving oral and written explanations of the study's purpose, procedures, risks, benefits, and their right to withdraw at any time without penalty. Data were anonymized and stored securely, with access limited to the research team.

The intervention group completed the pre-test survey (T1), participated in the 16-hour training, and then completed the post-test survey (T2). The control group completed the T1 and T2 surveys on a similar timeline without receiving the training. Focus groups were conducted with the intervention group. Three months later, both groups completed the follow-up survey (T3).

## Data Analysis

Quantitative data were analyzed using SPSS version 28. Independent samples t-tests and chi-square tests were used to compare baseline demographic and outcome variables between the two groups. To account for the nested structure of the data (teachers within schools), primary outcome analyses were conducted using linear mixed models (LMM) in SPSS's MIXED procedure. For each outcome variable (knowledge, stigma, self-efficacy), a model was specified with fixed effects for Time (T1, T2, T3), Group (Intervention, Control), and the Time  $\times$  Group interaction. School was included as a random intercept to account for within-school clustering. The restricted maximum likelihood (REML) method was used for estimation. Significance of fixed effects was evaluated using Type III tests with Satterthwaite approximation for degrees of freedom.

Qualitative data from focus group transcripts were analyzed using thematic analysis (Braun & Clarke, 2006). This involved familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. Two researchers coded the data independently and met to resolve discrepancies and refine the thematic structure.

The mixed-methods integration occurred at the interpretation stage, where qualitative findings were used to explain and contextualize the quantitative results (Creswell & Plano Clark, 2017).

Cohen's  $d$  was calculated for pre-post changes within each group using the formula for paired samples, with pooled standard deviation (Lakens, 2013).

## RESULTS

This section presents the quantitative and qualitative findings of the study. Baseline analyses confirmed no significant differences between the intervention and control groups on demographic variables or pre-test scores, supporting the integrity of the quasi-experimental design.

### Participant Demographics

The sample consisted of 80 secondary school teachers (N = 40 intervention group; N = 40 waitlist control group). As shown in Table 1, the demographic characteristics of participants were well-matched between groups. The mean age of the total sample was 38.7 years (SD = 8.2), with a majority being female (65.0%). On average, participants had 14.2 years of teaching experience (SD = 6.9), and the majority (81.3%) held a Bachelor's degree as their highest educational qualification.

**Table 1. Participant Demographic Characteristics**

| Characteristic                      | Intervention Group (n=40) | Control Group (n=40) | Total (N=80) |
|-------------------------------------|---------------------------|----------------------|--------------|
| <b>Age, Mean (SD)</b>               | 39.1 (8.5)                | 38.3 (7.9)           | 38.7 (8.2)   |
| <b>Gender, n (%)</b>                |                           |                      |              |
| Male                                | 13 (32.5%)                | 15 (37.5%)           | 28 (35.0%)   |
| Female                              | 27 (67.5%)                | 25 (62.5%)           | 52 (65.0%)   |
| <b>Years of Teaching, Mean (SD)</b> | 14.5 (7.1)                | 13.9 (6.8)           | 14.2 (6.9)   |
| <b>Highest Education, n (%)</b>     |                           |                      |              |
| Bachelor's Degree                   | 32 (80.0%)                | 33 (82.5%)           | 65 (81.3%)   |
| Master's Degree                     | 8 (20.0%)                 | 7 (17.5%)            | 15 (18.8%)   |

**Note:** All demographic variables were well-matched between groups, with no statistically significant differences at baseline ( $p > .05$  for all comparisons using independent samples t-tests and chi-square tests as appropriate).

## Quantitative Findings

Linear mixed models (LMM) accounting for school-level clustering revealed significant Time  $\times$  Group interaction effects for all three primary outcome variables, indicating that the training program was effective. Parameter estimates for fixed effects are presented in Table 2. Effect sizes (Cohen's  $d$ ) for pre-post changes in the intervention group were large for knowledge ( $d = 1.87$ ), medium for reduced stigma ( $d = 0.65$ ), and very large for self-efficacy ( $d = 2.41$ ). The control group showed negligible changes on all measures (knowledge:  $d = 0.06$ ; stigma:  $d = 0.03$ ; self-efficacy:  $d = 0.07$ ).

### Mental Health Knowledge (MHKS)

The LMM showed a significant Time  $\times$  Group interaction for mental health knowledge,  $F(2, 72.1) = 16.84, p < .001$ . Estimated marginal means indicated that the intervention group's knowledge scores increased significantly from pre-test ( $M=6.8$ ) to post-test ( $M=9.5$ ) and remained high at follow-up ( $M=9.2$ ), while the control group's scores showed no significant change over time.

### Stigma (Social Distance Scale)

A significant Time  $\times$  Group interaction was found for social distance,  $F(2, 72.5) = 7.23, p < .01$ . The intervention group showed a significant reduction in desired social distance (indicating lower stigma) from pre-test ( $M=15.4$ ) to post-test ( $M=12.1$ ), an effect that was sustained at follow-up ( $M=12.5$ ). The control group's scores remained stable.

### Self-Efficacy (TSE-MHS)

The analysis revealed a significant Time  $\times$  Group interaction effect for self-efficacy,  $F(2, 71.8) = 22.67, p < .001$ . The intervention group's self-efficacy scores rose dramatically from pre-test ( $M=28.5$ ) to post-test ( $M=41.2$ ) and remained significantly higher than the control group at the 3-month follow-up ( $M=39.8$ ).

**Table 2. Mean Scores and Standard Deviations for Primary Outcome Measures Across Assessment Time Points**

| Measure                                                                             | Group        | Pre-test (T1) | Post-test (T2) | 3-Month Follow-up (T3) |
|-------------------------------------------------------------------------------------|--------------|---------------|----------------|------------------------|
| <b>Knowledge (MHKS)</b><br>Range: 0–12<br>Higher score = better knowledge           | Intervention | 6.8 (1.5)     | 9.5 (1.3)      | 9.2 (1.4)              |
|                                                                                     | Control      | 6.9 (1.6)     | 7.0 (1.5)      | 7.1 (1.7)              |
| <b>Stigma (SDS)</b><br>Range: 7–28<br>Lower score = less social distance desired    | Intervention | 15.4 (3.1)    | 12.1 (2.8)     | 12.5 (2.9)             |
|                                                                                     | Control      | 15.1 (3.3)    | 15.0 (3.2)     | 14.9 (3.4)             |
| <b>Self-Efficacy (TSE-MHS)</b><br>Range: 10–50<br>Higher score = greater confidence | Intervention | 28.5 (5.2)    | 41.2 (4.5)     | 39.8 (4.9)             |
|                                                                                     | Control      | 29.1 (5.5)    | 29.5 (5.3)     | 29.3 (5.6)             |

**Note:** Values represent Mean (SD). Linear mixed models (LMM) with school as a random effect revealed significant Group  $\times$  Time interaction effects for all three outcomes (Knowledge:  $F(2, 72.1) = 16.84, p < .001$ ; Stigma:  $F(2, 72.5) = 7.23, p < .01$ ; Self-Efficacy:  $F(2, 71.8) = 22.67, p < .001$ ). MHKS = Mental Health

Knowledge Schedule; SDS = Social Distance Scale; TSE-MHS = Teacher Self-Efficacy for Mental Health Support.

### Secondary Process Data (Referrals)

A descriptive analysis of school records was conducted to examine changes in teachers' detection and referral behavior. In the three months following the intervention, schools in the intervention group reported an increase in documented student referrals from a pre-intervention total of 32 to a post-intervention total of 40 (a 25% increase). In contrast, control schools showed a negligible change, from 49 to 50 referrals (a 2% increase) over the same pre-post period. It is important to note that this increase in referrals likely reflects improved detection and help-offering behavior among trained teachers, rather than a direct measure of improved student mental health or care outcomes.

### Qualitative Findings

Thematic analysis of the focus group data yielded three overarching themes that capture the teachers' experiences with the training program.

#### Theme 1: Empowerment Through Knowledge and Skills

Participants universally expressed that the training filled a critical knowledge gap and provided them with a concrete framework for action, which fostered a sense of empowerment. Previously, they felt helpless or afraid of "saying the wrong thing." The ALGEE action plan was frequently cited as a particularly valuable and memorable tool.

*"Before, if I saw a student who was always sad or alone, I would worry but I wouldn't know what to do. I was afraid to make it worse. Now, I have steps to follow. I know how to listen. It feels like I have a tool, not just good intentions." – Teacher, Group 2*

#### Theme 2: Cultural Contexts and Systemic Barriers

Teachers discussed the challenges of applying their new skills within the Lao cultural context, where mental health is not openly discussed and is often associated with shame or spiritual causes. They also highlighted significant systemic barriers, primarily the lack of professional mental health services to refer students to.

*"The hardest part is encouraging professional help when there is no 'professional help' to go to. We can talk to the student, we can talk to the parents, but if the problem is serious, our road ends there. This is a big worry." – Teacher, Group 4*

Despite this, teachers reported adapting the "Encourage professional help" step to mean encouraging help from the most appropriate available resource, such as a trusted family elder, a respected monk, or the school nurse, demonstrating practical problem-solving.

#### Theme 3: The Emergence of a Supportive School Environment

An unexpected but powerful outcome was the development of a shared language and peer support network among the trained teachers. They reported feeling more comfortable discussing student well-being with each other, collaborating on cases, and providing mutual support.

*"Now, the four of us [from the same school] talk all the time. If one of us is worried about a student, we discuss it. We use the ALGEE words. It's not just one teacher's burden anymore; it's a shared responsibility. It makes us feel stronger and less alone." – Teacher, Group 1*

## DISCUSSION

This study evaluated a low-resource, task-shifting mental health literacy program for secondary school teachers in Vientiane Capital, Lao PDR. The findings provide compelling evidence for the program's effectiveness and

feasibility, offering a promising model for strengthening school-based mental health support in settings with severe human resource constraints. The discussion will interpret these findings, situate them within the broader literature, and consider their implications.

## Interpretation of Findings

The quantitative results strongly support our hypotheses. The significant improvements in mental health knowledge, reduction in stigma, and dramatic increase in self-efficacy among intervention group teachers align with the established benefits of MHFA-style training programs worldwide (Hadlaczky et al., 2014; Morgan et al., 2018). The sustained effects at the 3-month follow-up are particularly encouraging, suggesting that the learning was not transient but was integrated into the teachers' professional schema. The strong and significant improvement in self-efficacy is a key finding, as self-efficacy is a strong predictor of behavior change and perseverance in the face of obstacles (Bandura, 1997).

The qualitative findings provide rich context for these quantitative changes. The theme of "Empowerment Through Knowledge and Skills" directly explains the surge in self-efficacy scores. Teachers moved from a state of passive concern to one of active, confident support, armed with the practical ALGEE framework. This transformation from "worrier" to "first responder" is the core success of the task-shifting model. Furthermore, the descriptive increase in student referrals in intervention schools suggests a *potential* tangible behavioral outcome, indicating that increased efficacy may have translated into action; however, as noted in the limitations, this does not confirm improved student well-being.

The second qualitative theme, "Navigating Cultural Contexts and Systemic Barriers," illuminates the realworld challenges of this work. The teachers' concerns about the "referral cliff"—the lack of professional services to refer to—is a critical finding that underscores the limits of a first-responder model. While taskshifting can fill a gap, it cannot replace a functioning mental health system. However, the teachers' creative adaptation of the referral step demonstrates resilience and an ability to work within existing community structures, a vital component of successful implementation in low-resource settings (Patel et al., 2011).

The emergence of a "Supportive School Ecosystem" was a significant, positive, and somewhat unanticipated outcome. The training created a critical mass of trained staff within each school, fostering a peer support network that distributed the emotional load and created a shared sense of purpose. This suggests that training a small group of teachers within a single institution may have a multiplicative effect on the school's overall capacity and climate for mental health support, a key insight for future program design.

While these results are encouraging, it is important to interpret them within the constraints of the study's quasiexperimental design and self-reported measures. The improvements observed should be viewed as preliminary evidence of the program's potential, rather than definitive proof of effectiveness.

The observed increase in student referrals in intervention schools provides preliminary evidence of a tangible change in teacher behavior, suggesting that improved self-efficacy may have translated into increased detection and help-offering actions. This should be interpreted as a positive process outcome—indicating that teachers are more actively identifying and responding to student distress—rather than a direct measure of student benefit. Increased referrals could result from heightened awareness and reduced stigma, leading to more students being identified and offered initial support. However, without data on the quality of referrals or subsequent student outcomes, we cannot determine whether this increased detection led to improved access to effective care or better mental health for students. This finding underscores the critical distinction between improved frontline response and improved clinical or functional outcomes within a fragmented system.

## Limitations

This study has several limitations that should be considered when interpreting the results. First, the quasiexperimental design, while pragmatic and appropriate for the real-world school setting, is susceptible to selection bias, although baseline equivalence checks mitigated this concern. Second, reliance on self-report measures for the primary outcomes may be influenced by social desirability bias, particularly on the stigma scale. Third, the research was conducted by the same individuals who delivered the training, which could introduce researcher bias, although standardized measures and independent qualitative coding were used to minimize this.

Fourth, the study was confined to an urban setting (Vientiane Capital), and its findings may not be generalizable to rural areas of Lao PDR, where resources are even more scarce and cultural beliefs may differ. Fifth, the use of referral data as a secondary outcome is an imperfect proxy for program impact. While an increase in referrals aligns intending to improve detection, it does not provide information on the appropriateness of referrals, the quality of follow-up care received, or—most importantly—whether student well-being improved as a result.

A critical limitation is the absence of direct student mental health outcome measures. While the study demonstrated improvements in teacher capacity and noted an increase in referrals, it did not assess whether these changes led to improved student well-being, mental health symptoms, academic engagement, or helpseeking behavior. The referral data used is a process measure, indicating a change in teacher behavior (increased detection and help-offering), but it does not confirm improved care quality or student outcomes. Future research must employ cluster randomized designs with validated student-level measures to determine the true impact of teacher training on adolescent mental health.

Future research should directly address this gap. We recommend that subsequent studies employ cluster randomized controlled designs that incorporate validated measures of student mental health (e.g., the Strengths and Difficulties Questionnaire, depression/anxiety scales) administered pre- and post-intervention. Additionally, mixed-methods approaches could include interviews with students and parents to capture perceived changes in support and well-being. Longitudinal designs are needed to assess whether teacher-led early intervention leads to reduced incidence of severe mental health crises or improved school retention over time. Only through such comprehensive evaluation can the true impact of teacher mental health literacy programs on student outcomes be established.

This study did not formally assess the ethical dimensions inherent in the task-shifting model. Equipping teachers with first-aid skills without strengthening professional referral pathways risks placing an undue burden on them, leading to moral distress or burnout—a situation of "responsibility without recourse." This underscores the ethical imperative to pair such training with investments in the broader mental health ecosystem to ensure teachers are supported and students can access appropriate care.

## Implications and Future Directions

Despite these limitations, the study has significant implications. For policy and practice in the Lao PDR, it demonstrates that a culturally adapted, low-cost teacher training program is a viable strategy for immediately improving the support available to adolescents. Education and health ministries should consider integrating this type of mental health literacy training into standard pre-service and in-service teacher professional development. The "training-of-trainers" model offers a pathway to national scalability.

However, the findings also serve as a call to action to address the systemic barriers identified by teachers. Training first responders is only the first step. It must be paired with a long-term strategy to build the next level of care, including establishing clear referral pathways and gradually increasing the availability of specialized services, even if through non-traditional means like tele-counseling or partnerships with international NGOs.

## Future Research Directions

Building on this feasibility study, several key research priorities are essential to establish efficacy, effectiveness, and sustainability.

**Ethical Implementation and Teacher Well-being:** Research should monitor the longitudinal impact of this role expansion on teacher well-being, burnout, and moral distress. Studies must evaluate the effectiveness of support structures like peer supervision and clear role boundaries as essential ethical safeguards for sustainable task-shifting.

First, a cluster randomized controlled trial (RCT) with direct student-level mental health outcomes is urgently needed to establish causal impact on adolescent well-being. This trial should incorporate validated measures of student mental health (e.g., Strengths and Difficulties Questionnaire, WHO-5 Well-Being Index) administered pre- and post-intervention, with follow-ups at 6, 12, and 18 months.

Second, implementation science and cost-effectiveness studies are required to inform policy. A formal costeffectiveness analysis comparing this task-shifting model to other potential support strategies (e.g., tele-mental health, peer support programs) would provide crucial data for ministries of education and health. Process evaluations should investigate optimal delivery formats (in-person, digital, hybrid), dosage, and trainer profiles (external vs. internal master trainers).

Third, research must explore adaptations for scalability across diverse contexts in Lao PDR, particularly rural and remote areas. This includes studying integration with existing community structures (e.g., village health workers, Buddhist monks) and primary health care systems. The cultural adaptation process described here should be systematically applied and evaluated in different ethnic and regional settings.

Finally, longitudinal research tracking teacher retention of skills, turnover, well-being, and perceived burden over 1–3 years is vital to understand the sustainability of the model and its impact on the teaching workforce.

### Considerations for Sustainability and Scalability within the Lao PDR System

For national scalability within Lao PDR's education system, several barriers and facilitators must be addressed. A primary facilitator is the low-cost, "training-of-trainers" model, which leverages existing human resources. Potential barriers include: (1) Systemic Capacity: The ability of the Ministry of Education and Sports to coordinate, fund, and quality-assure nationwide rollout amidst competing priorities; (2) Workload

Integration: Ensuring training and subsequent mental health support duties are recognized within teachers' official workload and professional development frameworks to prevent role overload; (3) Referral Pathway Development: The program's sustainability is contingent on parallel efforts by the health sector to develop accessible community-based mental health services, creating a functional ecosystem rather than a standalone intervention. Strategic partnerships between the MoES, Ministry of Health, and non-governmental organizations will be critical to navigate these challenges and embed mental health literacy as a core component of teacher competency.

## CONCLUSION

This study provides promising *preliminary evidence* for the feasibility and initial effectiveness of a lowresource, task-shifting mental health literacy program for secondary school teachers in Vientiane Capital, Lao PDR. The intervention successfully increased teachers' knowledge and confidence, reduced stigma, and fostered the emergence of a more supportive peer environment within schools. By equipping teachers with foundational first-responder skills, this model offers a pragmatic and scalable *first step* toward building a safety net for students in distress within a severely resource-constrained system.

However, these findings represent *proof of concept* rather than definitive evidence of impact on student wellbeing. The study demonstrates that teachers *can be effectively trained and feel more empowered* to support students. Yet, whether this translates into improved adolescent mental health outcomes remains an open and critical question. Therefore, this task-shifting approach should be viewed as a necessary but *insufficient component* of a comprehensive youth mental health strategy. It is a critical, immediate intervention that can help identify students in need and provide initial support, thereby laying the groundwork for—and highlighting the urgent necessity of—a more robust, multi-tiered system of care for the youth of Lao PDR.

### Competing Interests

The authors declare that they have no competing interests to disclose. No external funding was received for this study. The research was conducted as part of the authors' professional roles at Kiettisack International School.

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