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Coaching and Capacity Building Interventions for One Health Workforce in Southeast Asia: A Scoping Review

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ABSTRACT

The One Health approach emphasizes the interconnectedness of human, animal, and ecosystem health, advocating for cross-sector collaboration to combat zoonotic threats. Despite policy advances in Southeast Asia, little is known about coaching and capacity-building efforts for the region's One Health workforce. This review aimed to map such interventions, examine their methods and target groups, assess outcomes, and identify gaps. Using the Arksey and O'Malley framework and PRISMA-ScR reporting, a search across seven databases and gray literature from 2000- 2025 was conducted. Studies included addressed multiple sectors in Southeast Asia and described or evaluated coaching or capacity-building. Two reviewers screened records with a Cohen's kappa of 0.86. Twenty-nine studies met inclusion criteria; Thailand (27.6%) and Indonesia (24.1%) were most represented. Group training predominated (34.5%), and only one study employed executive coaching. Outcomes clustered at Kirkpatrick Levels 1–2, with 20.7% reaching Level 4. Environmental health professionals and five ASEAN countries remained absent from the evidence base. Coaching efforts remain regionally limited, modality-restricted, and outcomes shallow; gaps include executive coaching, organizational consulting, and environmental health inclusion. Future initiatives should combine personalized coaching with organizational strategies, emphasizing longitudinal research and coverage of ASEAN countries.

Keyword: one health; coaching; capacity building; workforce development; southeast asia

Introduction

The One Health approach, formally recognized by the World Health Organization (WHO), the Food and Agriculture Organization (FAO), and the World Organization for Animal Health (OIE), affirms that human health, animal health, and ecosystem integrity are fundamentally interdependent World Health Organization, (2021) and elaborated further by the Quadripartite One Health High-Level Expert Panel into an integrated, unifying approach optimizing the health of people, animals, and ecosystems (Pellet et al., 2020). Emerging and re-emerging zoonotic diseases, including avian influenza, Nipah virus, and most recently SARS-CoV-2, have repeatedly demonstrated that infectious threats do not respect disciplinary or sectoral boundaries. Jones et al., (2008) In response, global health governance frameworks such as the Global Health Security Agenda (GHSA) and the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED) have increasingly called for multi-sectoral workforce development as a core pillar of health system resilience (World Health, 2022).

Southeast Asia is crucial for One Health, with over 680 million people, rich biodiversity, and dense human-livestock-wildlife interfaces that risk zoonotic spillovers. The region struggles with outbreaks of avian influenza, rabies, and arboviral diseases amid rapid urbanization, agricultural growth, and deforestation, drivers of emerging diseases (Worsley-Tonks et al., 2022). The One Health workforce is fragmented, with professionals like

physicians, veterinarians, and ecologists working in silos with limited cross-sector collaboration (Adisasmito et al., 2022).

Strengthening the One Health workforce requires more than technical knowledge transfer. It demands the development of cross-sectoral competencies, including systems thinking, collaborative leadership, adaptive communication, and the capacity to function effectively within multi-professional teams operating under conditions of uncertainty (Laing et al., 2023). Coaching and structured capacity-building interventions have been widely applied in health professions education and organizational development to build precisely these higher-order competencies. Coaching, as defined by the International Coaching Federation (ICF), is a goal-oriented, person-centered process that facilitates professional growth, behavioral change, and enhanced performance through structured reflection and collaborative inquiry. In healthcare settings, coaching has demonstrated effectiveness in improving clinical leadership, interprofessional collaboration, and workforce resilience.(Dyrbye et al., 2019) Nevertheless, the extent to which coaching and capacity building interventions have been specifically designed for, or applied within, the One Health workforce remains poorly understood, particularly in the Southeast Asian context.

A preliminary search of major health databases and the Journal of Public Health and Development revealed no published scoping or systematic reviews synthesizing evidence on coaching and capacity building specifically targeting the One Health workforce in Southeast Asia. Existing reviews have addressed One Health workforce competencies in general terms Rabinowitz et al., (2017) or examined coaching effectiveness in single-profession healthcare contexts Grant & Theory, (2013), but none have mapped the intersection of these two domains within the ASEAN regional context. This evidence gap is significant: without a comprehensive understanding of which interventions have been implemented, for which professional groups, with what outcomes, and under what contextual conditions, program designers, health ministries, and international agencies lack the foundational evidence needed to develop effective, context-appropriate One Health capacity-building strategies.

This scoping review aims to systematically identify and characterize existing evidence on coaching and capacity-building interventions for the One Health workforce in Southeast Asia. Using the Arksey and O'Malley framework, refined by Levac et al., (2010)., and following the PRISMA-ScR guidelines for reporting, the review seeks to answer: (1) What coaching and capacity-building interventions have been carried out for the Southeast Asian One Health workforce? (2) Which professional groups and sectors are targeted? (3) What outcomes are measured, and what evidence supports their effectiveness? (4) What gaps in evidence and practice still exist? The results aim to guide future workforce development programs, support regional public health policy, and highlight areas for primary research.

A scoping review was selected in preference to a systematic review because the research questions are broad and exploratory in nature, the evidence base is heterogeneous in terms of study design, population, and intervention type, and the primary aim is to map the extent and nature of available evidence rather than to synthesize a homogeneous body of studies toward a specific clinical or policy question. This distinction is consistent with the criteria proposed by Munn et al. (2018) for selecting scoping review methodology (Munn et al., 2018), and has been applied similarly in recent One Health workforce studies in the region.

Method

This study employed a scoping review methodology guided by the five-stage framework proposed by Arksey and O'Malley Arksey & Research, (2005) and refined by Levac et al., (2010), which is the established approach for systematically mapping available evidence, identifying key concepts, and clarifying gaps within a defined field. Reporting followed the PRISMA-ScR checklist (Tricco et al., 2018). A comprehensive search was conducted across seven electronic databases: PubMed/MEDLINE, Scopus, CINAHL, Web of Science, EMBASE, Google Scholar, and the WHO IRIS. Grey literature was additionally searched through the ASEAN Secretariat repository, the FAO portal, and the institutional websites of ASEAN national public health agencies. The search string used three concept clusters combined with Boolean operators: (1) coaching OR *"capacity building"* OR *"training and development"* OR *"workforce development"*; (2) *"One Health"* OR *"zoonotic disease"* OR *"multi-sectoral health"* OR *"human-animal-environment interface"*; and (3) *"Southeast Asia"* OR *ASEAN* OR relevant country names.

Publications from January 2000 to December 2025 were included to capture evidence since the recognition of the One Health approach. Inclusion criteria: studies involving One Health professionals across at least two sectors; describing or evaluating workforce development interventions; relevant to Southeast Asia; and published in English, Bahasa Indonesia, Thai, or Vietnamese. Exclusions: opinion pieces, editorials without empirical data, single-profession workforces without a cross-sectoral focus, or only undergraduate training. Title and abstract screening, followed by full-text review, were independently conducted by two reviewers, with disagreements resolved through discussion. Inter-rater reliability was assessed using Cohen's kappa, with a threshold of 0.80 (ML McHugh, 2012).

Data were extracted from included studies using a standardized charting table developed by the research team and piloted on five articles. For each study, information such as design, country, year, target groups, intervention type, duration, facilitator credentials, theoretical framework, and outcomes was extracted. Outcomes were categorized according to the Kirkpatrick model into reaction, learning, behavior, and results to enable cross-study comparisons. A narrative thematic synthesis was used to analyze the findings because heterogeneity in study designs and measures precluded meta-analysis. Results were organized by coaching modality, target group, and sector; an evidence gap map visualized research density and gaps.

The synthesis identified factors that facilitate or hinder the implementation of coaching in Southeast Asia's One Health systems. No ethics approval was required as this review used only published data. It is acknowledged that this review protocol was not prospectively registered in a public registry such as the Open Science Framework (OSF) or PROSPERO prior to commencement of data collection. This represents a methodological limitation that may affect the transparency and reproducibility of the review process; future scoping reviews in this domain are encouraged to register protocols prospectively to strengthen methodological rigor and minimize reporting bias.

Results and Discussion

Study selection

The database and grey literature searches yielded 1,847 records in total. After removal of 644 duplicates, 1,203 records underwent title and abstract screening, of which 1,119 were excluded for failing to meet the inclusion criteria. The remaining 84 records proceeded to full-text assessment, and 55 were subsequently excluded: 21 addressed single-profession workforces without cross-sectoral components, 17 were opinion pieces or editorials without empirical data, 10 focused solely on undergraduate pre-service training, and seven were conducted outside the ASEAN region. A total of 29 studies were included in the final synthesis (Table 1). Inter-rater reliability between the two reviewers was strong, with a Cohen's kappa of 0.86, indicating substantial agreement (ML McHugh, 2012).

Table 1. PRISMA-ScR screening results

Screening stage	Records (n)
Records identified from databases	1,847
Records after duplicate removal	1,203
Records screened by title and abstract	1,203
Records excluded (not meeting inclusion criteria)	1,119
Full-text articles assessed for eligibility	84
Full-text articles excluded (with reasons)	55
Studies included in final synthesis	**29**

Source: Data Processed

Characteristics of included studies

The 29 included studies were published between 2004 and 2024, with a marked increase in publication volume observed after 2015, coinciding with the launch of the GHSA and the ASEAN One Health network. Thailand contributed the largest proportion of included studies (n=8, 27.6%), followed by Indonesia (n=7, 24.1%), Vietnam (n=5, 17.2%), the Philippines (n=4, 13.8%), and Myanmar (n=3, 10.3%); two studies were multi-country in design. Study designs were heterogeneous: quasi-experimental designs were most common (n=11, 37.9%), followed by mixed-methods studies (n=7, 24.1%), qualitative studies (n=5, 17.2%), pre-post designs without control groups (n=4, 13.8%), and one randomized controlled trial. Structured group training was the predominant coaching modality (n=10, 34.5%), followed by group coaching (n=9, 31.0%), peer coaching (n=5, 17.2%), blended online and face-to-face approaches (n=4, 13.8%), and individual or executive coaching (n=1, 3.4%). The most frequently targeted professional groups were public health officers paired with veterinarians (n=12, 41.4%) and physicians paired with environmental health officers (n=9, 31.0%); nine studies (31.0%) engaged multi-sector teams inclusive of all three One Health domains. A summary of study characteristics is presented in Table 2.

Table 2. Summary characteristics of included studies by representative country group

Country	Study design	Coaching modality	Target profession	Kirkpatrick level
Thailand (n=8)	Quasi-experimental	Group coaching	Public health officers + veterinarians	Level 2 (Learning)
Indonesia (n=7)	Cross-sectional	Structured training	Physicians + environmental health officers	Level 1 (Reaction)
Vietnam (n=5)	Mixed methods	Peer coaching	Veterinarians + ecologists	Level 3 (Behavior)
Philippines (n=4)	Qualitative	Blended (online + face-to-face)	Multi-sector teams	Level 2 (Learning)
Myanmar (n=3)	Pre-post design	Individual coaching	Public health managers	Level 4 (Results)
Multi-country (n=2)	RCT	Group + peer coaching	One Health task force members	Level 3–4

Note: n values are representative groupings. ● = study present; ○ = no study identified.

Intervention outcomes by Kirkpatrick level

Outcomes across included studies were mapped to the four Kirkpatrick evaluation levels (Kirkpatrick & Kirkpatrick, 2016). The majority of studies reported outcomes at Level 1 (Reaction) and Level 2 (Learning), with 18 studies (62.1%) measuring participant satisfaction or perceived relevance of the intervention, and 20 studies (69.0%) assessing knowledge gain, attitude change, or skill acquisition immediately post-intervention. Fourteen studies (48.3%) reported Level 3 (Behavior) outcomes, examining whether trained professionals subsequently demonstrated cross-sectoral collaboration behaviors, shared surveillance data, or applied One Health frameworks in their practice settings; among these, positive behavioral transfer was reported in 10 studies (71.4%), though most relied on self-reported measures.

Only six studies (20.7%) assessed Level 4 (Results) outcomes, including changes in zoonotic disease reporting rates, inter-agency coordination scores, or measurable improvements in community health indicators attributable to the intervention. Of these, four reported statistically significant improvements in at least one system-level indicator. Studies utilizing individual or executive coaching (n=1) and multi-country peer coaching designs (n=2) reported the highest Kirkpatrick levels attained (Levels 3 to 4), suggesting that more intensive, sustained coaching modalities were associated with bigger behavioral and organizational change, though the limited number of such studies precluded definitive conclusions.

Evidence gap map

The evidence gap map (Table 3) revealed marked asymmetries in research coverage across coaching modalities and One Health sectors. Structured training and group coaching directed at the human health and animal health sectors were most densely represented. By contrast, the environmental and ecological health sector was consistently underrepresented across all coaching modalities, with only three studies incorporating environmental health professionals as a primary target group. Individual and executive coaching, despite its established effectiveness in healthcare leadership development, Dyrbye & Shanafelt, (2019)

was identified in only one study within the One Health workforce context, representing the most critical evidence gap in the reviewed literature.

Laos, Cambodia, Brunei, Singapore, and Timor-Leste were entirely absent from the included studies, highlighting significant geographic gaps in the evidence base. Facilitators commonly reported across studies included institutional endorsement from national health ministries, the presence of an established inter-agency memorandum of understanding, and the involvement of trained facilitators with dual professional backgrounds spanning at least two One Health sectors. Barriers included high staff turnover, absence of protected time for coaching participation, inconsistent use of competency frameworks across sectors, and limited financial resources for sustained program delivery.

Table 3. Evidence gap map: coaching modality by the One Health sector

Coaching modality	Human health	Animal health	Environmental health	Cross-sector	Total
Group coaching	●●●	●●	●	●●●	**9**
Structured training	●●●	●●●	●●	●●	**10**
Peer coaching	●●	●	○	●●	**5**
Individual/executive coaching	●	○	○	○	**1**
Blended (online + face-to-face)	●●	●	○	●	**4**
Total	**11**	**7**	**3**	**8**	**29**

Note: ● = one study identified; ○ = no study identified. Multiple ● symbols indicate the number of studies per cell.

DISCUSSION

Volume and distribution of evidence

The identification of 29 eligible studies from an initial pool of 1,847 records confirmed the anticipated scarcity of empirical literature at the intersection of coaching, capacity building, and the One Health workforce in Southeast Asia. This finding was not unexpected given that the One Health approach was only formally institutionalized within ASEAN health governance frameworks after 2010, and that coaching as a professional discipline remains relatively nascent in public health workforce development contexts across the region. The post-2015 concentration of publications aligned with the establishment of the GHSA and the subsequent ASEAN One Health Joint Plan of Action, suggesting that international policy momentum served as a meaningful driver of research activity in this domain. This pattern is consistent with findings reported by Rabinowitz et al., who similarly observed that One Health workforce research in low- and middle-income countries accelerated markedly following major global health security policy milestones (Rabinowitz et al., 2017), a pattern further corroborated by the OHHLEP's call for integrated One Health action to advance health security and equity (Pellet et al., 2020).

The geographic concentration of studies in Thailand and Indonesia, which together accounted for more than half of the included studies, reflected the comparative maturity of One Health institutional infrastructure in these countries, including established inter-ministerial

coordination mechanisms and longer-standing investment in public health workforce training programs. The complete absence of studies from Laos, Cambodia, Brunei, Singapore, and Timor-Leste was, however, more pronounced than anticipated and signals that the evidence base is not merely sparse but structurally uneven in ways that may limit the regional applicability of current findings.

Dominance of structured training over individualized coaching

The predominance of structured group training (34.5%) and group coaching (31.0%) over more individualized modalities was broadly consistent with the wider health professions education literature, which has historically favored didactic and cohort-based approaches to workforce development due to their cost-effectiveness and scalability. However, this distribution was somewhat surprising in the One Health context, specifically, where the competencies most critical to cross-sectoral effectiveness, including adaptive communication, systems thinking under conditions of ambiguity, and collaborative leadership across professional cultures, are precisely those that individualized coaching has been shown to develop most effectively (Dyrbye & Shanafelt, 2019). Demonstrated in their systematic review of health coaching that group-based formats produced consistent improvements in knowledge and attitude but were significantly less effective than individual coaching in sustaining behavioral change at three and six months post-intervention, findings further corroborated by a recent mixed-methods systematic review showing that individualized coaching was associated with stronger leadership development outcomes among healthcare managers (Hu et al., 2024).

The finding that the single study employing individual executive coaching achieved Kirkpatrick Level 3 to 4 outcomes compared to a median of Level 1 to 2 across group training studies, therefore reinforced this pattern and suggested that the field's reliance on group modalities may represent a structural constraint on the depth of professional transformation achievable through current programs. This is particularly consequential for senior One Health leaders and managers, for whom the capacity to navigate institutional politics, broker cross-sectoral trust, and sustain collaborative momentum under resource pressure constitutes the primary competency need.

Outcome depth and the Kirkpatrick gap

The concentration of reported outcomes at Kirkpatrick Levels 1 and 2, with only 20.7% of studies reaching Level 4, was consistent with broader patterns observed in health workforce training evaluations globally and was therefore not unexpected in itself. Kirkpatrick & Kirkpatrick, (2016) What was more notable was the near-absence of longitudinal follow-up designs among the included studies: fewer than five studies collected outcome data beyond three months post-intervention, and none tracked system-level health indicators such as inter-agency zoonotic disease notification rates or cross-sectoral outbreak response times for longer than twelve months. This methodological shortcoming is significant because One Health competencies, by their nature, manifest at the system level over time rather than in individual post-training assessments.

Comparable findings have been reported in the broader organizational consulting and leadership development literature, where P Bluckert, (2005) observed that coaching interventions evaluated at Level 1 and 2 frequently failed to predict Level 3 and 4 outcomes due to the absence of enabling organizational conditions, including supervisor support, role clarity, and organizational culture that rewards cross-boundary collaboration (Bluckert, 2005) The present findings suggested that future interventions in the One Health workforce context would benefit substantially from embedding coaching within a broader organizational consulting framework that addresses systemic enablers and barriers to behavioral transfer, rather than treating coaching as a standalone professional development event.

The critical gap in executive and organizational coaching

Perhaps the most significant finding of this review was the near-total absence of executive coaching and organizational consulting approaches within the One Health workforce development evidence base. Only one study employed individual coaching directed at a public health manager, and no study examined organizational consulting as a mechanism for strengthening inter-institutional One Health systems. This gap is theoretically important because the barriers most frequently cited in the included studies, high staff turnover, lack of protected time, inconsistent competency frameworks, and insufficient inter-agency trust, are organizational and systems-level problems that individual training or group coaching alone cannot resolve.

Grant and Hartley argued that embedding coaching competencies within organizational leadership is essential for sustaining behavior change at the system level, and that organizations that invest in leader-as-coach capabilities demonstrate significantly higher rates of cross-functional collaboration and adaptive capacity than those relying solely on external training programs Grant & Theory, (2013). Similarly, the organizational development literature has established that consulting interventions addressing structural alignment, role design, and institutional culture are prerequisites for coaching effectiveness in complex multi-stakeholder environments.(Bluckert, 2005) The absence of such approaches from the One Health workforce is evidence-based; therefore, it represented not merely a research gap but a strategic deficit in how the field currently conceptualizes workforce development, one that the present review was the first to formally document within the Southeast Asian context.

Underrepresentation of the environmental health sector

The systematic underrepresentation of environmental and ecological health professionals across all coaching modalities and coaching studies was a finding that warranted specific attention. Only three included studies incorporated environmental health officers or ecologists as a primary target population, and none addressed the interface between environmental health competencies and coaching-based capacity building in any depth. This is inconsistent with the ecological science literature, which has established that environmental drivers, including deforestation, biodiversity loss, and climate variability, are among the most significant determinants of zoonotic disease emergence in Southeast Asia (Allen et al., 2017).

The omission may partly reflect disciplinary boundaries in workforce development funding, which has historically been channeled through ministries of health and agriculture

rather than environment ministries, thereby excluding ecological professionals from the One Health training program scope. This structural exclusion is particularly concerning given that land-use change, intensive livestock production, and wildlife trade have been identified as key anthropogenic drivers of zoonotic disease emergence in tropical ecosystems (Lawler et al., 2021). It also reflects a broader pattern observed by Allen et al., who noted that One Health implementation in low- and middle-income countries remained predominantly biomedical in orientation, with environmental and ecological dimensions frequently relegated to secondary consideration (Allen et al., 2017). Addressing this gap through targeted coaching and capacity-building programs that explicitly engage environmental health professionals as equal partners in One Health systems represents a high-priority direction for both research and practice, and updated One Health core competency frameworks have explicitly called for the inclusion of ecological and environmental domains as foundational skills for the modern One Health practitioner (Laing et al., 2023).

Facilitators, barriers, and the role of organizational context

The facilitators and barriers identified across included studies were largely consistent with those reported in the implementation science literature on complex health system interventions. Institutional endorsement, inter-agency memoranda of understanding, and facilitators with dual professional backgrounds were the most commonly cited enablers, each reflecting the critical role of organizational legitimacy and boundary-spanning capacity in sustaining cross-sectoral programs (Damschroder et al., 2009). These factors align closely with what organizational consulting theory describes as structural preconditions for effective systems change: without formal authority and relational trust across institutional boundaries, even well-designed coaching interventions are unlikely to produce durable behavioral change at the team or organizational level (Grant & Theory, 2013).

The barriers identified, high turnover, absence of protected time, and resource constraints, are similarly well-documented in the health workforce development literature and are particularly acute in lower-middle-income ASEAN countries where health system financing remains constrained. Taken together, these findings reinforced the argument that coaching and capacity building for the One Health workforce cannot be designed or evaluated in isolation from the organizational and institutional contexts in which professionals operate. Future programs that integrate organizational consulting alongside individual and group coaching modalities are likely to demonstrate greater sustainability and broader systems-level impact.

Strengths and limitations

This review's strengths include being the first to systematically map coaching and capacity-building interventions for the Southeast Asia One Health workforce, filling a gap in the Journal of Public Health and Development and global health literature. A rigorous dual-reviewer screening with a Cohen's kappa of 0.86 improved study selection reliability. Using both the Kirkpatrick evaluation framework and an evidence gap map provided structured, accessible findings across diverse study designs. Including grey literature from ASEAN repositories reduced publication bias compared to database-only searches. However,

limitations include restricting studies to English, Bahasa Indonesia, Thai, and Vietnamese, potentially missing relevant research in other languages like Khmer, Lao, and Burmese.

The heterogeneity in study designs and measures prevented quantitative synthesis and limited comparability. Since this was a scoping review, the methodological rigor of individual studies wasn't formally assessed, so evidence strength can't be graded. This absence of formal quality appraisal is an inherent and recognized feature of scoping review methodology, which prioritizes breadth of coverage over depth of critical appraisal, as defined by Arksey and O'Malley and the Joanna Briggs Institute (JBI) scoping review manual. As a consequence, the findings represent a descriptive map of available literature rather than an evidence hierarchy, and recommendations cannot be graded by evidence quality alone. Future primary research in this domain would benefit from rigorous experimental or quasi-experimental designs that enable formal quality assessment. The evidence gap map's completeness depends on the literature identified, and relevant grey literature from ministries or organizations may be missing. Future research should focus on longitudinal evaluations, multilingual searches, and validating region-specific One Health coaching frameworks.

Policy implications for ASEAN

The findings of this review carry direct and actionable implications for health policy and workforce planning within the ASEAN region. First, the geographic concentration of available evidence in Thailand and Indonesia, and the complete absence of studies from Laos, Cambodia, Brunei, Singapore, and Timor-Leste, signals an urgent need for ASEAN-level coordination mechanisms that incentivize and fund One Health workforce development research in countries with lower institutional capacity. The ASEAN One Health Joint Plan of Action and the Global Health Security Agenda provide existing governance platforms through which such coordination could be operationalized, and recent implementation mapping confirms that sustained cross-sectoral collaboration remains unevenly distributed across the ASEAN sub-region (Milazzo et al., 2025). Second, the predominance of short-term, group-based training modalities and the near-absence of individual executive coaching or organizational consulting approaches indicate that current regional investments are structurally misaligned with the competency demands of senior One Health leadership.

National health ministries, the FAO Regional Office for Asia and the Pacific, and the WHO Regional Office for South-East Asia (SEARO) should consider incorporating executive coaching components into existing One Health capacity-building programs, particularly those targeting mid-career and senior professionals responsible for inter-sectoral coordination. Third, the systematic exclusion of environmental and ecological health professionals from the majority of included interventions reflects a structural gap in workforce development financing and program design that requires correction if the One Health mandate is to be genuinely fulfilled. Future investments in the ASEAN region should require the inclusion of environment ministry representatives and ecological scientists as equal stakeholders in One Health training program design, implementation, and evaluation.

Conclusion

This review mapped coaching and capacity building for the One Health workforce in Southeast Asia, based on 29 studies from 2004 to 2024. The evidence was geographically

limited, methodologically shallow, and dominated by short-cycle group training modalities that produced predominantly Level 1–2 outcomes on the Kirkpatrick scale. Three priority directions are recommended for researchers and policymakers in Southeast Asia. First, future One Health workforce programs should integrate executive and organizational coaching alongside existing group training, targeting mid-career and senior professionals whose cross-sectoral leadership competencies are most consequential for sustainable One Health systems but remain least supported by current evidence.

Second, longitudinal evaluation designs of at least twelve months' duration should be adopted as a standard requirement in future program funding frameworks, enabling the field to assess Kirkpatrick Level 3–4 outcomes and to demonstrate system-level impact on zoonotic disease prevention and inter-agency coordination. Third, ASEAN health governance bodies should prioritize closing the geographic and sectoral gaps identified in this review by directing research and program investment toward countries currently absent from the evidence base and by formally integrating environmental and ecological health professionals as core stakeholders in One Health capacity-building initiatives.

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