Journal of Current Science and Technology, January-March 2026 Vol. 16 No. 1, Article 160

ISSN 2630-0656 (Online)

Cite this article: Bunsong, D., Chatchumni, M., Kaewsuk, U., & Boonkrong, P. (2026). Health promotion research at Rangsit University: A scoping review using the HURS framework for institutional policy development. *Journal of Current Science and Technology*, *16*(1), Article 160. https://doi.org/10.59796/jcst.V16N1.2026.160

Journal of Current Science and Technology

Journal homepage: https://jcst.rsu.ac.th

# Health Promotion Research at Rangsit University: A Scoping Review Using the HURS Framework for Institutional Policy Development

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Received 29 June 2025; Revised 8 September 2025; Accepted 18 September 2025; Published online 20 December 2025

## Abstract

Universities play a critical role in advancing public health, as behavioral risk factors adopted by young adults, such as smoking, alcohol consumption, physical inactivity, and unhealthy diets contribute to the development of non-communicable diseases (NCDs) later in life. The Healthy University Rating System (HURS), developed by the ASEAN University Network–Health Promotion Network (AUN-HPN), provides a structured framework to evaluate and strengthen health promotion in higher education. This study aimed to systematically map health promotion research at Rangsit University using the HURS framework to identify strengths, gaps, and opportunities for institutional policy development.

A scoping review was conducted following Arksey and O'Malley's methodology, with refinements by Levac and Peters. Publications in English and Thai (2015–2024) were retrieved from Scopus, ScienceDirect, CINAHL Plus, Thai Citation Index, ThaiLIS, and the Rangsit University Institutional Repository. Eligible studies addressed one or more of the 22 HURS domains. Twenty-seven studies were included, most of which were descriptive or exploratory. Research was concentrated in mental health, digital health, physical activity, and nutrition, while substance use prevention, sexual health, and environmental health were underrepresented. Limited policy translation was observed.

This review offers the first synthesis of health promotion research at Rangsit University aligned with the HURS framework. Findings highlight gaps and policy-relevant opportunities but should be interpreted cautiously, as this single-site case study has limited generalizability.

***Keywords***: *health promotion; HURS framework; Non-communicable diseases; University health research; scoping review; Southeast Asia; policy implications*

## 1. Introduction

Universities play a critical role in advancing public health, extending beyond their traditional missions of education and research. By embedding wellness principles into policies, curricula, and programs, universities serve as dynamic settings for health promotion, benefiting both their immediate communities and society at large (Chulalongkorn University News, 2023; Wattanapisit et al., 2022). Global frameworks such as the Okanagan Charter and regional initiatives like the ASEAN University Network–Health Promotion Network (AUN-HPN) (2024) highlight the responsibility of higher education institutions to promote health in a systematic and sustainable manner. Despite these initiatives, little synthesis exists on how health promotion research within Thai universities informs institutional policy development. Previous studies often focus on discrete topics such as student mental health, lifestyle risk factors, or campus wellness programs (Amornsriwatanakul et al., 2023; Yoopat et al., 2024; Sirikulchayanonta et al., 2022). While valuable, this

body of research is fragmented and has rarely been systematically organized using a comprehensive analytical framework. Importantly, no scoping review has yet applied the Healthy University Rating System (HURS) to classify and analyze research outputs in a Thai university setting. This gap is significant, as without structured synthesis, universities cannot fully translate research into actionable health promotion policies.

The present study addresses this gap by using Rangsit University as a case study. By systematically mapping health-related research against the HURS framework, we identify strengths, gaps, and opportunities that can guide institutional policy and practice. This focused lens provides contextual depth while offering a methodological model that other universities may adapt. Globally, non-communicable diseases (NCDs) including cardiovascular disease, cancer, chronic respiratory illness, and diabetes mellitus remain leading causes of morbidity and mortality (Ray & Pareek, 2023). The World Health Organization (2023) reports that NCDs account for 74% of all global deaths, with 17 million considered premature and disproportionately occurring in low- and middle-income countries. Key behavioral risk factors include smoking, physical inactivity, poor diet, alcohol misuse, and air pollution (United Nations General Assembly, 2012). Universities, as settings where young adults establish lifelong habits, are well positioned to mitigate these risks by promoting health early in life.

In Thailand, this potential is evident through initiatives such as the Healthy University Project (Rangsit University, 2019) and participation in the AUN-HPN network. Mapping the landscape of health promotion research at the institutional level can highlight contributions, identify underexplored domains, and ensure alignment with both national and regional priorities (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2020).

### 1.1 Significance of the Thai University Context

Thailand's health promotion system is strongly supported by the Thai Health Promotion Foundation (ThaiHealth), which uses earmarked excise taxes on tobacco and alcohol to fund national initiatives (Sopitarchasak et al., 2015). ThaiHealth's multisectoral approach including policy advocacy, knowledge mobilization, and community engagement positions universities as important actors in generating evidence and shaping policy.

For Rangsit University, assessing the extent to which its research portfolio aligns with national priorities is particularly critical. Such assessment ensures that academic outputs extend beyond scholarships to inform actionable campus-level policies and programs. By systematically mapping existing research, universities can better demonstrate their contributions to health promotion and identify areas requiring further development.

### 1.2 The Role of the HURS Framework in Institutional Policy Development

The Healthy University Rating System (HURS), developed by AUN-HPN, provides a structured mechanism for evaluating and strengthening health promotion in universities. It comprises 22 domains, grouped under four components: Health, Universities, Research, and Society (ASEAN University Network–Health Promotion Network, 2024). These domains offer benchmarks that help institutions design, implement, and evaluate comprehensive health-related policies. Mapping Rangsit University's research against all 22 HURS domains allows for systematic identification of strengths and gaps. For example, domains such as mental health, physical activity, and digital health are relatively well represented, while areas including sexual health, substance use prevention, and environmental health remain underexplored. This structured alignment ensures that research evidence directly informs institutional policymaking.

Although this review is institution-specific, the HURS framework provides a transferable model. Its universal domains allow for comparison and replication across contexts, making the approach relevant to other universities in Thailand and ASEAN. Thus, the study offers both context-specific insights for Rangsit University and methodological contributions that can support broader regional efforts to develop health-promoting universities.

## 2. Objectives

The objectives of this study were to systematically map health promotion research conducted at Rangsit University using the Healthy University Rating System (HURS) framework in order to identify strengths, gaps, and opportunities for institutional policy development. Specifically, the review sought to:

1. Identify the types, characteristics, and publication trends of health promotion research conducted at Rangsit University.

2. Categorize existing studies across the 22 HURS domains to highlight areas of concentration and underrepresentation.

3. Examine internal and external factors influencing health behaviors and health promotion initiatives within the university context.

4. Explore strategies, interventions, and policy-oriented approaches reported in the literature and their relevance to institutional policy and program development.

5. Identify key gaps in research, particularly regarding the implementation and evaluation of institutional policies, and propose future directions to strengthen evidence-based health promotion at the university level.

Together, these aims ensure that health research evidence at Rangsit University is systematically connected to institutional policy formulation, while also offering a methodological model that can be adapted by other universities in Thailand and the ASEAN region.

## 3. Theoretical Framework: HURS Framework

The Healthy University Rating System (HURS) provides a comprehensive structure for evaluating the integration of health within higher education institutions. It consists of four overarching dimensions Health, Universities, Research, and Society, which together encompass 22 domains that guide institutions in developing and evaluating health promotion policies and programs (ASEAN University Network–Health Promotion Network, 2024).

- *Health* focuses on health behaviors and outcomes within the university population and the creation of health-supportive environments.
- *Universities* address institutional responsibilities and capacities in advancing health through education, policies, and community outreach.
- *Research* emphasizes the generation and application of evidence to inform strategies and decision-making.
- *Society* considers the broader external impacts of university-based initiatives on surrounding communities.

In this study, the HURS framework was used as the analytical lens to systematically map Rangsit University's health-related research outputs. By classifying studies across all 22 domains, the framework ensures that evidence is interpreted in a structured, policy-relevant manner. This approach provides both context-specific insights for strengthening health promotion at Rangsit University and a replicable model that can be adapted by other institutions in Thailand and across the ASEAN region.

Applying the HURS framework enables a holistic understanding of how academic research can contribute to sustainable health improvements. It also highlights areas of underrepresentation such as sexual health, substance use prevention, and environmental health where future research can better support institutional and national health promotion agendas. Ultimately, this framework positions universities not only as centers of learning but also as innovation hubs for health promotion and policy development (See Figure 1).

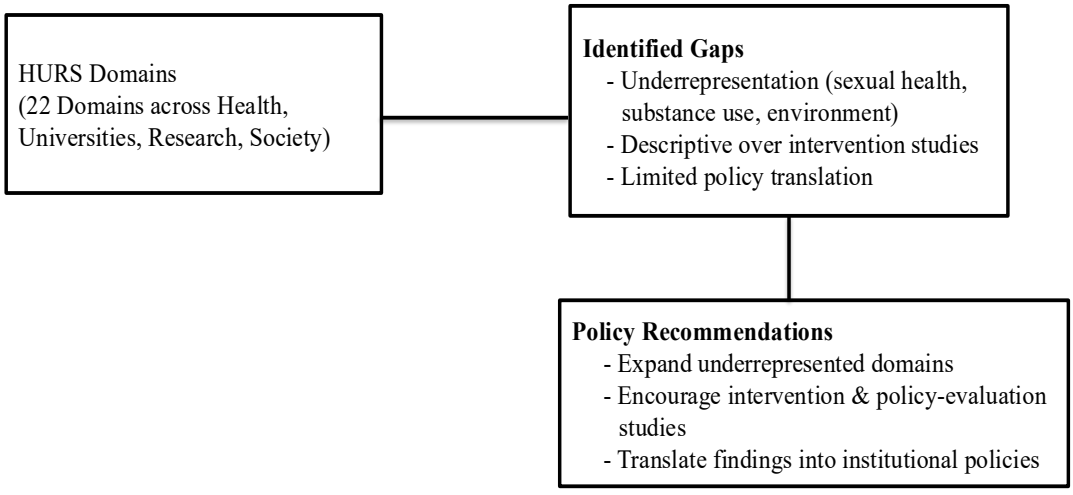


**Figure 1** Conceptual Diagram Linking HURS Domains, Identified Gaps, and Policy Recommendations

## 4. Materials and Methods

We conducted a scoping review to map the scope, characteristics, and gaps of health promotion research at Rangsit University, with the explicit purpose of informing institutional policy development. Scoping reviews are suited to broad, complex fields and prioritize comprehensive mapping over effect estimation (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2020). We followed Joanna Briggs Institute (JBI) guidance and implemented the standard stages: (1) formulating focused questions; (2) identifying studies; (3) applying predefined eligibility criteria; (4) charting data; and (5) synthesizing and reporting findings to show both breadth and gaps (Peters et al., 2020).

To ensure policy relevance, we used the Healthy University Rating System (HURS) as an analytic lens. HURS comprises 22 domains grouped within four components Health, Universities, Research, Society, and offers structured benchmarks for institutional health promotion. We also applied the Population, Concept, Context (PCC) framework (Peters et al., 2020):

- *Population*: Rangsit University students and staff.
- *Concept*: Health promotion research consistent with the Healthy University Framework/HURS domains.
- *Context*: The higher education setting at Rangsit University and its institutional policy implications.

HURS domains considered (22 total). *Health*: (1) health-promoting policies; (2) physical activity; (3) nutrition; (4) mental health; (5) sexual health; (6) substance-use prevention; (7) NCD prevention. *Universities*: (8) governance/leadership; (9) curriculum integration; (10) campus environment/facilities; (11) digital health/technology; (12) student support services; (13) staff wellness; (14) community and stakeholder engagement. *Research:* (15) knowledge generation; (16) knowledge translation; (17) research capacity building; (18) evidence-informed innovation. *Society:* (19) partnerships & networks; (20) social responsibility & equity; (21) alignment with national health priorities; (22) contributions to the SDGs. Each included study was mapped to one or more HURS domains during charting and synthesis.

### 4.1 Literature Search Strategy and Eligibility

To reduce language and indexing bias, we searched international and Thai sources. *International databases*: Scopus, ScienceDirect, CINAHL Plus. *Thai sources*: Thai Citation Index (TCI) and ThaiLIS. We also retrieved institutional grey literature (theses, dissertations, internal reports) from the Rangsit University Institutional Repository (RSUIR), which we treat as an institutional repository (not a formal database). Searches spanned 2015–2024 (conducted January–March 2024). Boolean operators and field limits (title/abstract/keywords) were applied; reference lists were hand-searched.

*Operational Definitions*

- *Health promotion research*: any empirical study that investigates determinants of health, health-related behaviors, health-supportive environments, or interventions that enhance individual, community, or institutional well-being in a university setting.
- *University context*: research conducted within Rangsit University involving students, academic or non-academic staff, or campus health/wellness services.

*Scope (PICO-style)*

- *Population*: Rangsit University students and staff.
- *Intervention/Exposure (conceptual)*: activities aligned with HURS health promotion domains (behavioral, educational, environmental, organizational, or policy-related).
- *Outcomes*: contributions to HURS domains (e.g., physical activity, mental health, digital health, substance-use prevention); purely clinical/biomedical outcomes without a health-promotion linkage were excluded.

Inclusion criteria were defined as empirical studies, quantitative, qualitative, mixed-methods, or applied experimental, conducted at Rangsit University between 2015 and 2024 that addressed at least one of the 22 HURS domains and were available through peer-reviewed publications, theses, or institutional reports. Exclusion criteria included studies that did not address health-promotion topics, research conducted outside the Rangsit University context, non-empirical publications such as editorials or commentaries, and records lacking sufficient information to map to the HURS framework; duplicates were removed, and items from the RSUIR repository were checked to ensure they were not counted twice. Consistency with reviewer requests: This section now (i) lists TCI explicitly and distinguishes RSUIR as an institutional repository; (ii) states language inclusion (English and Thai); and (iii) sets clear inclusion/exclusion criteria aligned to all 22 HURS domains.

### 4.2 Study Selection and Reviewer Agreement

Two independent reviewers screened titles/ abstracts and then full texts against the predefined criteria. Conflicts were resolved by discussion until consensus. Inter-rater agreement was 92% at full-text screening. The PRISMA-ScR flow diagram (Figure 1) details identification, screening, eligibility, and inclusion with reasons for exclusion (non-health promotion topic, not RU context, duplicate, non-empirical) (Tricco, et al., 2018). A total of 27 studies met all criteria and were included in the final synthesis. (Reasons and counts correspond exactly to Figure 2.)

These clarifications respond to the reviewer's request to report reviewer agreement and to show exclusion reasons transparently in the flow chart.

### 4.3 Data Charting and Synthesis

We used a standardized charting form to extract author/year, design, setting, population/sample, HURS domain(s), primary topic, main findings, and policy/practice implications. We then synthesized results by the four HURS components while preserving domain-level resolution (all 22 domains) to avoid over-aggregation. A full domain-level mapping for each study is provided in Appendix 1 to ensure transparency and reproducibility.

### 4.4 Data Analysis

We combined descriptive quantitative summaries (e.g., distribution by design, population, and HURS domains) with qualitative thematic synthesis organized by the HURS components/domains. Consistent with scoping methodology, we did not perform formal critical appraisal; our aim was to map and characterize the evidence (Arksey & O'Malley, 2005; Peters et al., 2020). Where relevant, we note common design limitations and strengths to guide future intervention and policy-evaluation work.

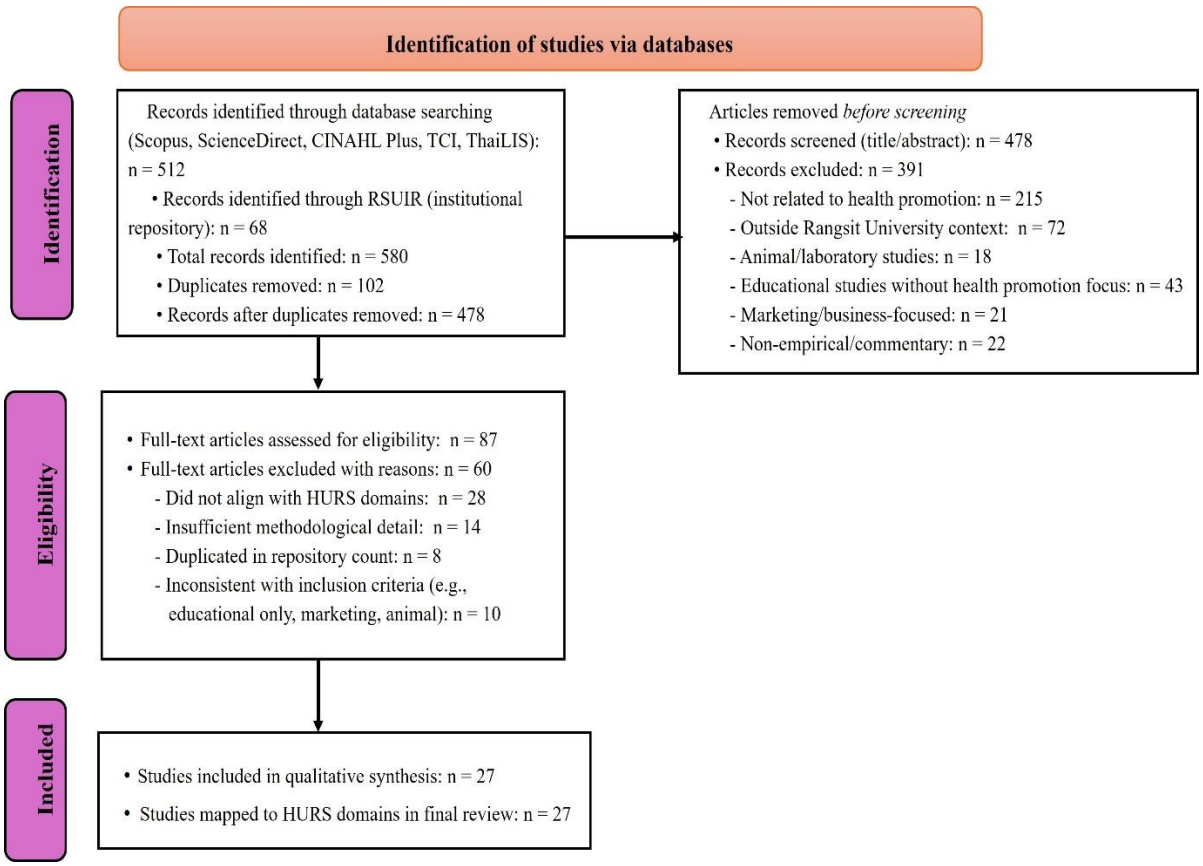


**Figure 2** PRISMA-ScR flow diagram showing the identification, screening, eligibility assessment, and inclusion of studies in the scoping review

**Table 1** Summary of Key Health Promotion Studies at Rangsit University

| Author(s) & Year | Study Design & Sample | Key Findings | Policy/Practice Implications |
|---|---|---|---|
| Kanchanapathum (2021) | Qualitative, art-based VR design research | VR color-based environments evoked emotional responses and represented symptoms of mental distress. | Promote low-cost, accessible VR-based tools for mental health; encourage collaboration between mental health professionals and designers. |
| Yang (2021) | SEM model + interviews | Loneliness negatively impacted mental health & academic performance; resilience and optimism mitigated effects. | Integrate resilience/optimism training into student programs; strengthen counseling and peer networks. |
| Mahakaew (2022) | Questionnaire survey, stratified sampling | Students mainly relied on bilingual dictionaries; limited use of advanced strategies. | Teach diverse vocabulary strategies in health sciences curriculum; integrate digital learning apps. |
| Puttametha (2021) | Descriptive correlational, n = 101 staff at risk of diabetes | High perceived benefits, moderate barriers, moderate self-efficacy, moderate health behaviors. | Develop tailored interventions focusing on diet & exercise; address barriers and boost self-efficacy. |
| Deerod (2020) | Quasi-experimental (e-book learning), n = 50 | Post-test scores higher than pre-test; high satisfaction with e-book. | Adopt multimedia e-learning in health courses; enhance flexibility in student learning. |
| Petchtam, 2019 | Qualitative, interviews & PTSD diagnostic | 91.7% of participants met PTSD criteria; linked to poverty, gender-based violence. | Provide trauma-informed care, resources, and public awareness campaigns. |
| Boongerd & Sripraphan (2023) | Descriptive fitness testing, n = 400 students | Moderate overall physical fitness; gender differences observed. | Promote regular fitness assessments; enhance awareness of physical activity programs. |
| Sujaritthanarugse (2022) | Cross-sectional survey of faculty & students, n = 2,061 | High iPad/Zoom use, strong satisfaction with digital learning. | Strengthen blended learning strategies; support faculty digital pedagogy training. |
| Zhang (2022) | Mixed-methods, product prototyping | Music visualization enhanced mood & environment. | Apply sound-art tools in education & therapy; integrate into campus wellness programs. |
| Vincent (2022) | Scoping review + field data | High prevalence of avoidable blindness in refugee populations. | Develop eye care guidelines; advocate funding for refugee health programs. |
| Li (2021) | Mixed-methods, marketing analysis | Low brand awareness, weak promotional strategies. | Improve marketing/branding in health-related products; expand sales channels. |
| Praditsangthong (2023) | Experimental VR + EEG, n = 14 staff | VR reduced anxiety during venipuncture; EEG differentiated stress states. | Integrate VR into health screening procedures; improve patient experience. |
| Leksuksri (2024) | Retrospective case-control, n = 764 | No significant link between obesity & CSU; ESR elevated in obese group. | Consider inflammatory markers in clinical practice; further studies needed. |
| Churatchapobtanatorn (2023) | Mixed-methods, animation project | 2D animation "LOST" raised awareness of youth ignorance issues. | Use animation as educational media for youth development. |
| Klanarong (2024) | Cross-sectional survey, n = 257 nursing students | Adequate health literacy; predictors = study year & social support. | Embed health literacy in curriculum; target early-year students. |
| Suwannachat (2023) | Predictive research, n = 126 obese students | Low health-promoting behaviors; self-efficacy and barriers predicted behavior. | Implement targeted health campaigns for obese students; increase social support. |
| Laksanaphuk et al. (2021) | Cross-sectional, n = 36 volleyball players | Cognitive skills correlated with spike accuracy; physical skills did not. | Integrate cognitive training in athletic programs. |
| Yoopat et al. (2022) | Developmental research (stress app) | KV-SWI app effectively classified stress levels. | Promote mobile stress-monitoring tools; expand with AI features. |

**Table 1** Cont.

| Author(s) & Year | Study Design & Sample | Key Findings | Policy/Practice Implications |
|---|---|---|---|
| Jenchitr et al. (2023) | Retrospective chart review, n = 1,452 elderly | Common conditions: refractive error, cataract, glaucoma; age/sex differences noted. | Expand elderly eye-screening programs; train optometrists in early detection. |
| Kanokpipat (2021) | Design-based research, biophilic prototype | Modular, nature-inspired design improved well-being. | Incorporate biophilic design in campus environments. |
| Jaroenrungsup et al. (2021) | RCT, n = 46 students | Exercise improved posture, flexibility, neck pain. | Introduce posture correction programs for students. |
| Kochsiripong & Pitirattanaworranat (2021) | Cross-sectional survey, n = 415 | 21.7% e-cigarette use; social influence & misconceptions were predictors. | Revise health science curricula; create targeted anti-vaping campaigns. |
| Jenchitr & Jaradaroonchay (2021) | Retrospective review, n = 3,468 patients | Glaucoma prevalence linked to refractive error & age. | Prioritize screening for high-risk groups; promote early intervention. |
| Damrongthai et al. (2021) | RCT, n = 26 young adults | 10-min running improved mood, executive function, brain activation. | Promote short exercise breaks as mental health strategy. |
| Damjuti et al. (2024) | Experimental pharmacological, n = 192 mice | Cannabis-based Thai remedy showed sedative & anxiolytic effects. | Explore regulatory-controlled clinical applications; conduct safety trials. |

**Table 2** Characteristics of Included Studies

| Author(s) & Year | Study Type | Publication | Source/Journal | Sample Size |
|---|---|---|---|---|
| Kanchanapathum (2021) | Qualitative, design research | Thesis | Not published | N/A |
| Yang (2021) | Mixed-methods (SEM + interview) | Thesis | Not published | n = 1,069 + 7 |
| Mahakaew (2022) | Quantitative survey | Thesis | Not published | n = 115 |
| Puttametha (2021) | Quantitative, descriptive correlational | Thesis | Not published | n = 101 |
| Deerod (2020) | Quasi-experimental | Thesis | Not published | n = 50 |
| Petchtam (2019) | Qualitative | Thesis | Not published | n = 12 |
| Boongerd & Sripraphan (2023) | Quantitative descriptive | Thesis | Not published | n = 400 |
| Sujaritthanarugse (2022) | Cross-sectional survey | Thesis | Not published | n = 2,061 |
| Zhang (2022) | Mixed-methods | Thesis | Not published | n = 20 |
| Vincent (2022) | Scoping review | Journal | Indexed | Aggregate (refugee data) |
| Li (2021) | Mixed-methods | Thesis | Not published | n = 307 |
| Praditsangthong (2023) | Experimental + EEG | Thesis | Not published | n = 14 |
| Leksuksri (2024) | Case-control | Thesis | Not published | n = 764 |
| Churatchapobtanatorn (2023) | Mixed-methods | Thesis | Not published | n = 30 |
| Klanarong (2024) | Cross-sectional survey | Thesis | Not published | n = 257 |
| Suwannachat (2023) | Predictive research | Thesis | Not published | n =126 |
| Laksanaphuk et al. (2021) | Cross-sectional | Report | Not published | n = 36 |
| Yoopat et al. (2022) | Developmental | Thesis | Not published | n = 439 |
| Jenchitr et al. (2023) | Retrospective review | Report | Not published | n = 1,452 |
| Kanokpipat (2021) | Design-based | Thesis | Not published | Prototype (no fixed n) |
| Jaroenrungsup et al. (2021) | RCT | Journal (Songklanakarin J. Sci. Tech) | SJR ~0.14 | n = 46 |
| Kochsiripong & Pitirattanaworranat (2021) | Cross-sectional | Journal (Songklanakarin J. Sci. Tech) | SJR ~0.14 | n = 415 |
| Jenchitr & Jaradaroonchay (2021) | Retrospective review | Report | Not published | n = 3,468 |
| Damrongthai et al. (2021) | RCT | Journal (Scientific Reports) | SJR ~1.0 | n = 26 |
| Damjuti et al. (2024) | Experimental pharmacological | Journal (JAPTR) | SJR ~0.47 | n = 192 mice |

In the following section, the mapped findings are reported across the 22 HURS domains, with emphasis on their significance for institutional policy development.

## 5. Results

A total of 27 studies were included, covering diverse health topics and research designs within the Rangsit University context. Most studies addressed issues directly relevant to university populations, including mental health, lifestyle-related risk factors (diet, physical activity, smoking), and health-promoting behaviors among students and staff. Innovative interventions such as virtual reality (VR) applications, mobile stress-assessment tools, and digital health education platforms were frequently tested. Facilitators of healthy behaviors included psychological resilience, self-efficacy, and peer or mentor support, while barriers commonly involved lack of awareness, perceived obstacles to behavior change, and environmental or cultural influences.

Across the HURS domains, the distribution of research showed several notable imbalances. Mental health, digital health, and physical activity accounted for 37% of all studies, while sexual health, substance use prevention, and environmental sustainability together represented <15%. Most studies were descriptive cross-sectional surveys (59%), while quasi-experimental and randomized controlled trials accounted for 26%. Only a small proportion (15%) explicitly evaluated policy or program-level interventions. These patterns indicate a concentration on student-focused exploratory research, with fewer staff-oriented or policy-driven studies.

### 5.1 Health: Common Concerns and Behaviors

Studies most frequently targeted mental health, stress, anxiety, and trauma. For example, VR interventions reduced anxiety and promoted emotional release, while resilience and optimism were protective against loneliness and poor academic outcomes. Two staff-focused surveys linked higher self-efficacy with improved diet and exercise behaviors, reinforcing the role of behavioral determinants in NCD prevention. By contrast, studies on smoking and e-cigarette use revealed gaps in awareness, with peer influence and alcohol use increasing risks, underscoring the need for targeted prevention campaigns. Physical activity and fitness studies demonstrated gender- and year-level differences, with a decline in fitness among older students, highlighting the need for sustained campus wellness initiatives.

### 5.2 Universities: Institutional Roles and Innovations

Several studies evaluated curricular and institutional strategies, such as interactive e-books, 2D animation for youth health awareness, and VR-based learning platforms. These interventions consistently improved knowledge, engagement, or satisfaction, showing the potential of digital tools for health promotion. Campus wellness programs emphasized staff fitness testing and student support services, but the findings revealed uneven implementation. Social support, peer networks, and mentorship emerged as consistent enablers of health literacy and resilience. Digital health technologies, such as stress-monitoring apps and VR prototypes, further illustrated Rangsit University's role in developing innovative health-promotion tools. However, most projects were pilot scale with limited evaluation of policy translation or sustainability.

### 5.3 Research: Approaches, Frameworks, and Gaps

Quantitative methods predominated, with surveys using Pender's Health Promotion Model, Bandura's self-efficacy theory, or Sorensen's health literacy framework. Some experimental designs such as RCTs on exercise and quasi-experimental digital health interventions offered stronger causal insights, but they were limited in number. Sample sizes varied widely, and several studies relied on self-reports with no long-term follow-up. Cross-study comparison showed that while mental health studies often integrated theory, research on lifestyle behaviors (nutrition, physical activity) rarely applied frameworks beyond descriptive models. Importantly, only a small subset of studies explicitly mapped their findings to institutional policy needs, indicating a gap between evidence generation and policy application.

### 5.4 Society: Broader Impacts and Policy Relevance

Although fewer in number, some studies extended beyond campus boundaries. For instance, trauma-focused research among vulnerable groups addressed social determinants of health and linked findings to the UN Sustainable Development Goals (SDGs). Eye health research in refugee populations advocated for global guidelines, while biophilic design projects contributed to sustainable campus environments. Other work addressed vaping prevention in alignment with national tobacco control policies, and studies on herbal medicine linked

university research to Thailand's health policy reforms. Collectively, these demonstrate that while Rangsit University research can influence broader policy agendas, societal engagement remains underdeveloped relative to internal campus-focused studies.

Summary of Domain Alignment Overall, 27 studies were mapped to the 22 HURS domains. The health component was most represented (n = 15), primarily mental health, physical activity, and nutrition. The Universities component included digital innovations and student support programs (n = 7). The Research component was addressed in studies emphasizing knowledge generation and small-scale innovation (n = 3). The Society component was least represented (n = 2), focusing on community engagement and sustainability. Appendix 1 provides detailed study-level mapping to all 22 domains, ensuring transparency and consistency with the framework.

## 6. Discussion

This review applied the HURS framework to systematically map health promotion research conducted at Rangsit University, providing the first institutional case study of its kind in Thailand. Findings highlight the areas of strength, underrepresentation, and policy relevance across all 22 HURS domains. The discussion integrates these results into five themes: (1) interpretation of findings through HURS; (2) implications for institutional policy and practice; (3) theoretical contributions of the framework; (4) methodological reflections and future directions; and (5) regional collaboration opportunities.

### 6.1 Interpretation of Findings through the HURS Framework

Research activity was unevenly distributed across the 22 HURS domains. Over one-third of studies addressed mental health, digital health, and physical activity, reflecting institutional priorities and the influence of the COVID-19 pandemic. In contrast, domains such as substance use prevention, sexual health, and environmental sustainability were underrepresented (<15%). This imbalance suggests that while Rangsit University has built a strong portfolio in psychosocial health and technological innovation, broader determinants of health remain less systematically studied (Kimsoongnern et al., 2023).

Across studies, psychological resilience and self-efficacy consistently emerged as enabling factors for healthy behaviors, whereas perceived barriers (e.g., time, awareness, cultural norms) limited engagement (Zhang, 2022; Bhatarasakoon et al., 2024). These findings align with prior scoping reviews of university health promotion internationally (Wattanapisit et al., 2022; WHO, 2023). Methodologically, most studies were descriptive cross-sectional surveys; fewer used experimental or longitudinal approaches, limiting causal inference and long-term impact assessment.

### 6.2 Implications for Policy and Institutional Practice

For institutional policy, several key implications emerge. Mental health initiatives should transition from reactive care to preventive approaches, including resilience workshops, peer support networks, and stress-reduction programs. Physical activity and non-communicable disease (NCD) prevention efforts may be strengthened through regular health screenings, personalized health coaching, and accessible fitness programs supported by flexible scheduling and healthier food policies (Puttametha et al., 2022). Digital health innovations should be advanced by piloting VR-based interventions (Ray & Pareek, 2023) and mobile health applications, accompanied by robust evaluation frameworks to ensure scalability and long-term sustainability (Siripongsaporn et al., 2024; Puttametha et al., 2022). Governance and integration strategies should include the establishment of cross-faculty health promotion committees to embed health considerations within governance structures, curricula, and campus services, aligned with the Okanagan Charter (2015) and AUN-HPN guidelines. By explicitly linking findings to institutional policies, universities can strengthen their role as health-promoting institutions and benchmark progress through HURS assessments.

### 6.3 Theoretical Contributions and the Value of the HURS Framework

This review demonstrates the analytic value of the HURS framework in categorizing health promotion research. Unlike frameworks that emphasize either settings or interventions, HURS integrates four components and 22 domains, enabling a systems-oriented analysis that reflects ecological models of health. The findings confirm that universities contribute to health not only by delivering interventions but also by producing knowledge that informs policy and practice (Okanagan Charter, 2015). The structured application of HURS at Rangsit illustrates a transferable model for other Thai and ASEAN universities to systematically evaluate and strengthen their research portfolios.

### 6.4 Methodological Reflections and Future Research Directions

This review is the first to apply HURS systematically to an institutional case study in Thailand. It revealed breadth across domains such as mental health, physical activity, and digital health, but also highlighted gaps in substance use prevention, sexual health, and environmental sustainability. Future research agendas should explicitly target these underrepresented domains using stronger designs (e.g., RCTs, longitudinal studies) and should disseminate findings in peer-reviewed journals to improve visibility.

Reflexivity is important: as researchers affiliated with Rangsit University, we acknowledge the potential for institutional perspectives to influence interpretation. This was mitigated by applying transparent eligibility criteria, dual independent review, and structured domain mapping. While insider perspectives can introduce bias, they also enable contextual interpretation that is directly relevant for institutional policy.

### 6.5 Regional Comparisons and Collaborative Opportunities

The concentration of research on mental health and physical activity at Rangsit University mirrors trends observed across ASEAN universities (ASEAN University Network–Health Promotion Network, 2024). Gaps in sexual health and prevention of substance use are also regional concerns. Participation in HURS benchmarking and cross-university collaborations could enhance comparative learning and capacity building. Sharing innovations such as VR-based interventions may allow Thai universities to contribute to regional health-promotion leadership. Collaborations with universities in East Asia and Australia could further strengthen knowledge exchange and joint responses to shared challenges.

### 6.6 Integrative Summary

Overall, this review provides actionable evidence for institutional policy development at Rangsit University while offering a replicable HURS-aligned model for other higher education institutions. By systematically mapping 27 studies across 22 domains, the review identifies both achievements and gaps, emphasizing the need to bridge research and policy to advance the role of universities as health-promoting settings.

## 7. Conclusion

This scoping review highlights the significant role of university-based research in advancing evidence-informed health promotion, using Rangsit University as an institutional case study. Applying the HURS framework allowed systematic mapping of research outputs across 22 domains, demonstrating how findings align with institutional priorities, national health strategies, and global objectives such as the Sustainable Development Goals (SDGs). Strengths were evident in mental health, chronic disease prevention, physical activity, and digital health, while gaps persisted in substance use prevention, sexual health, and environmental sustainability.

The findings support adopting a whole-university approach, integrating health promotion into governance structures, curricula, campus services, and community engagement. By treating the campus as a *"living laboratory,"* universities can design and refine interventions that are contextually relevant, sustainable, and scalable. Aligning institutional strategies with frameworks such as HURS and the Okanagan Charter enhances both campus well-being and broader societal contributions.

While this study provides actionable insights for institutional policy development, several limitations must be acknowledged: (1) its single-institution scope limits generalizability, (2) most included studies were descriptive and cross-sectional, restricting causal inferences, and (3) although both English- and Thai-language publications were reviewed, non-indexed Thai or other-language studies may have been missed. Nevertheless, the structured HURS-based methodology offers a transferable model that other Thai and ASEAN universities can adopt to evaluate and strengthen their health promotion efforts.

## 8. Recommendations

Based on the synthesis, the following recommendations are proposed:

1. Prioritize underexplored HURS domains: Allocate resources to research in substance use prevention, sexual health, and environmental sustainability to address current gaps.
2. Strengthen intervention and evaluation studies: Move beyond descriptive surveys by developing and accessing intervention-based programs to provide an empirical foundation for policy.

3. Adopt multi-level policy approaches: Implement socioecological strategies that address both individual behaviors and broader institutional and environmental determinants of health.

4. Enhance knowledge translation: Establish mechanisms to ensure research findings are communicated effectively to institutional leaders and stakeholders, fostering policy uptake.

5. Advance digital health research: Build on Thailand's leadership in digital innovation by piloting and evaluating technology-driven interventions in university settings.

6. Use HURS for benchmarking: Employ HURS assessment to track institutional progress, identify weak areas, and guide continuous improvement in campus health promotion.

By integrating these recommendations, universities can evolve into health-promoting environments that not only enhance the well-being of students and staff but also contribute knowledge, innovation, and leadership to regional and global health agendas.

## 9. Abbreviations

| Abbreviation | Full Term |
|---|---|
| AUN-HPN | ASEAN University Network – Health Promotion Network |
| CINAHL | Cumulative Index to Nursing and Allied Health Literature |
| COVID-19 | Coronavirus Disease 2019 |
| EEG | Electroencephalography |
| HURS | Healthy University Rating System |
| JBI | Joanna Briggs Institute |
| LMICs | Low- and Middle-Income Countries |
| NCDs | Non-communicable Diseases |
| PCC | Population, Concept, Context (Scoping review framework) |
| PDA | Potato Dextrose Agar |
| PRISMA-ScR | Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews |
| PTSD | Post-Traumatic Stress Disorder |
| RCT | Randomized Controlled Trial |
| RSUIR | Rangsit University Institutional Repository |
| SDGs | Sustainable Development Goals |
| SEM | Structural Equation Modeling |
| TCI | Thai Citation Index |
| VR | Virtual Reality |
| WHO | World Health Organization |

## 10. CRediT Statement

**Manaporn Chatchumni:** Conceptualization, Methodology, Writing – Original Draft, Supervision, Funding Acquisition
**Duangnapha Bunsong:** Investigation, Data Curation, Writing – Review & Editing
**Umaporn Kaewsuk:** Resources, Formal Analysis, Writing – Review & Editing
**Pichit Boonkrong:** Visualization, Validation, Project Administration

## 11. Acknowledgements

The authors want to express their heartfelt appreciation to Rangsit University for their support and granting them access to institutional research repositories and resources essential for this review. Our appreciation goes to the faculty members, researchers, and students who contributed to the body of knowledge analyzed in this study. We would like to express our gratitude to the ASEAN University Network - Health Promotion Network (AUN-HPN) for their continuous efforts to promote regional collaboration and for providing the conceptual frameworks that guided this review. We would like to thank our peer reviewers and colleagues, whose insights helped enhance the quality and clarity of this work.

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