Systematic Review

PHWU
SCHOOL OF PUBLIC HEALTH
WALAILAK UNIVERSITY

M.P.H. and Ph.D. in Public Health Research Program
School of Public Health, Walailak University

Prof. Dr. Charuai Suwanbamrung

RN; MSN; NP; APN (Pediatric); PhD. (Research for Health Development)
Excellent Center for Public Health Research: EC for PHR,
Head of M.P.H and Ph.D. (Public Health Research), School of Public Health,
Walailak University, Thailand 80160

Scharuai@wu.ac.th; yincharuai@gmail.com +66 814793034

Topic for discussion

1. Overview
1.1 Aim
1.2 Team
1.3 Key terms
1.4 Evidence based
1.5 Research Design
1.6 Type of review

Topic
1. Overview
2. Questions of Systematic Review
2.1 What is the systematic review?
2.2 Why do carry out the systematic review?
2.3 What is essential skills for a systematic review?
2.4 How do conducting the systematic review?
2.5 What is criteria of evaluating systematic review?

Phase 1: Getting Started
- 1.1 Is a review required
- 1.2 the review team
- 1.3 the advisory group

Phase 2: The Review Protocol
- 2.1 introduction
- 2.2 key areas to covers in a review protocol
- 2.3 Approval of the draft protocol
- 2.4 How to deal with protocol amendment during the review

Phase 3: Undertaking the Review
- 3.1 Identifying research evidence for systematic review
- 3.2 study selection
- 3.3 data extraction and monitoring progress
- 3.4 quality assessment
- 3.5 data synthesis
- 3.6 report writing

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1. Overview

1.1 Aim: Draft of Systematic Review Manuscript as a part of QE at the end of the semester [1-2024]

- **PHR64-521:** Seminar in Public Health Research 1
- **Course coordinators' names:** Assoc. prof. Dr. Charuai Suwanbamrung
- **Course Description**: This course focuses on seminar issues of systematic review includes searching evidence based data, critique reading skill, and scientific presentation skill.

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PHR Program 2026

PROGRAM STRUCTURE

Year	1st Semester			2nd Semester		
1	PHR69-511	Research Methodology for Creating Public Health Innovation I	2(2-0-4)*	PHR69-512	Research Methodology for Creating Public Health Innovation II	2(2-0-4)*
	PHR69-513	Global and Local Perspectives for Creating Public Health Innovation	2(2-0-4)*	PHR69-514	Advanced Data Analytic of Methods Mixed Methods in Public Health Research	2(2-0-4)*
	PHR69-941	Research Seminar I: Systematic Review for Creating Public Health Innovation	1(0-2-4)*	PHR69-942	Research Seminar II: Presentation and Publication for Creating Public Health Innovation	1(0-2-4)*
	PHR69-991	Thesis (Plan 1.1)	6 Crs.	PHR69-991	Thesis (Plan 1.1)	6 Crs.
	Total 15 Crs.			Total 15 Crs.		
2	PHR69-991	Thesis (Plan 1.1)	8 Crs.	PHR69-991	Thesis (Plan 1.1)	10 Crs.
	Total 8 Crs.			Total 10 Crs.		
3	PHR69-991	Thesis (Plan 1.1)	10 Crs.	PHR69-991	Thesis (Plan 1.1)	8 Crs.
	Total 10 Crs.			Total 8 Crs.		

PHR Program 2026

ACTION STEPS

Activity	Time (Semeter)						Credit
	1	2	3	4	5	6	
1. Thesis topic and Qualifying Examination.	■	★					6
2. Develop research proposal, instruments, design activity sets, create tools, proposal defense, submit research project for ethics approval, apply for research funding, and present progress.		■					6
3. Collect data, conduct preliminary data analysis according to the research plan, and present progress.			■	★			8
4. Continue data collection until complete, analyze data according to the research plan, present progress, prepare initial thesis draft, submit first publication.				■	★		10
5. Prepare initial thesis draft, present work orally at an academic conference, submit second publication, present progress					■		10
6. Thesis defense before the thesis examination committee, submit the complete final thesis report.						■	8

9

★ 2 Publications Q1 >85%

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Cultural Contexts Meet Clinical Precision : A Systematic Review and Meta-Analysis of Sarcopenia Screening Tools in Global Aging Communities

PHR-WU

JOURNAL OF POSTHUMANISM

Hien Thi Nguyen,Charuai Suwanbamrung,Apichai Wattanapisit ,Warapone Satheannoppakao,Thang Nguyen,Nam Thanh Truong,Giang Hai Ha,Dung Tam Nguyen Huynh,Cua Ngoc Le

Highlights

In an aging world population, prevention is essential because sarcopenia, a loss of muscular mass and function brought on by aging,significantly raises health risks and healthcare expenses. This PRISMA 2020-compliant systematic review (PROSPERO : CRD42024512949) evaluates the diagnostic performance of sarcopenia screening tools for community-dwelling older adults. Weanalyzed 27 studies (21,271 older adults) assessing eight tools. Databases were searched until February 20, 2024. While questionnaire-only tools performed worse (AUC: 0.68), tools that combined various approaches exhibited the highest accuracy (AUC: 0.89), and the performance of anthropometric instruments was good (AUC: 0.84). The Ishii tool showed the best performance (AUC: 0.89 [0.85–0.92]), and SARC-F the lowest (AUC: 0.68 [0.62–0.73]). Subgroup analysis revealed more studies and greater heterogeneity in Asia, likely due to cultural, lifestyle, and diagnostic criteria. Culturally adapted, multi-method strategies are needed to improve early detection and care.

Journal of Posthumanism
2025
Volume: 5, No: 5, pp. 1735–1769
ISSN: 2634-3576 (Print) | ISSN 2634-3584 (Online)
posthumanism.co.uk

https://orcid.org/0000-0002-3997-5943
Email: nthien@ctump.edu.vn

Q1

DIABETES SELF-CARE INTERVENTION STRATEGIES AND THEIR EFFECTIVENESS IN SUB-SAHARAN AFRICA: A SYSTEMATIC REVIEW

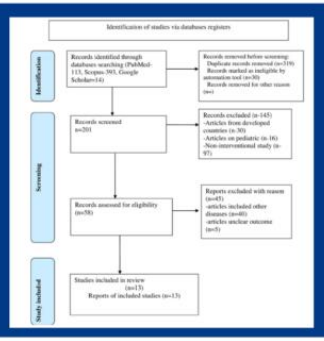
PHR-WU Thailand

Temesgen Anjulo Ageru
Cua Ngoc Le
Apichai Wattanapisit
Eskinder Wolka Woticha
Nam Thanh Truong
Muhammad Haroon Stanikzai
Temesgen Lera Abisol
Charuai Suwanbamrung

PLOS ONE |
https://doi.org/10.1371/journal.pone.0305860
October 15, 2024

Highlights:

- The review underscores the significance of diabetes self-care interventions in SSA, showing varying effectiveness levels across different strategies. It emphasizes the importance of tailored approaches and highlight interventions that have shown promising outcomes, providing insights for future research, policy, and healthcare strategies in the region..



Q1
1-2024

https://orcid.org/0000-0001-5431-5794
Email: Scharuai@wu.ac.th

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Scharuai@wu.ac.th

1.2 Team

EC for DACH
Excellent Center for Dengue and Community Public Health
Walailak University Thailand

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Congratulation
On A Your Publication

Assessment of Self-Determined Motivation in Exercise: A Systematic Review and Meta-analysis

Truong Thanh Nam,
Cua Ngoc Le,
Doan Hoang Phu,
Muhammad Haroon Stanikzai,
Shamarina Shohaimi,
Omid Dadras,
Sang-arun Isaramalai,
Charuai Suwanbamrung

FUTURE
ISSN: 2785-2997
Review Article

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Journal of
Human, Earth, and Future

Vol. 4, No. 2, June, 2023

Assessment of Self-Determined Motivation in Exercise:
A Systematic Review and Meta-analysis

Truong Thanh Nam [1, 2], Cua Ngoc Le [1, 3], Doan Hoang Phu [4], Muhammad Haroon Stanikzai [5], Shamarina Shohaimi [6], Omid Dadras [7,8], Sang-arun Isaramalai [9], Charuai Suwanbamrung [1, 3]*

[1] Public Health Research Program, School of Public Health, Walailak University, Nakhon Si Thammarat, 80160, Thailand
[2] Faculty of Public Health, Can Tho University of Medicine and Pharmacy, Can Tho City, Vietnam
[3] Excellent Center for Dengue and Community Public Health (EC for DACH), Walailak University, Nakhon Si Thammarat, 80160, Thailand
[4] Doctoral Program in Health Sciences, College of Graduate Studies, Walailak University, Nakhon Si Thammarat, 80160, Thailand
[5] Public Health Department, Faculty of Medicine, Kandahar University, Kandahar, Afghanistan
[6] Department of Biology, Faculty of Science, Universiti Putra Malaysia, Selangor, Malaysia
[7] Department of Global Public Health and Primary Care, University of Bergen, Bergen, Norway
[8] Faculty of Nursing, Prince of Songkla University, Songkla, 90110, Thailand

Received: 10 March 2023; Revised: 11 May 2023; Accepted: 18 May 2023; Published: 01 June 2023

Abstract

Self-determined motivation is measured on numerous scales as a predictor of long-term exercise. One study applied a systematic review and meta-analysis to assess associations between types of self-determined motivation in exercise with selected parameters of studies using Behavioral Regulation in Exercise Questionnaires (BREQs). Following PRISMA 2020 guidelines, we screened 244 studies from PubMed, ScienceDirect, and Scopus against criteria and selected 43 articles for qualitative synthesis. Of these, 40 studies reporting mean scores and standard deviations of six regulations of BREQs, representing self-determined motivation types, were selected for meta-analysis. The pooled mean scores were the highest in intrinsic regulation at 4.00 (95%CI: 2.92–5.09), followed by identified, integrated, introjected, external, and motivation regulations at 3.65 (95%CI: 3.06–4.24), 3.31 (95%CI: 2.46–3.95), 2.21 (95%CI: 1.88–2.53), 1.42 (95%CI: 0.95–1.92), and 0.94 (95%CI: 0.67–1.12), respectively. Findings indicated significant associations between longer exercise duration and introjected ($\beta = 0.014$, $p = 0.027$) and identified ($\beta = 0.014$, $p = 0.021$) regulations. An inverse relationship was found with a higher female participation rate ($\beta = -0.047$, $p = 0.042$), while exercise settings in sports and fitness centers exhibited a stronger association with intrinsic motivations ($\beta = 2.700$, $p = 0.039$). No significant differences were observed among the versions of BREQs in measuring self-determined motivation. This investigation of context invariance utilizing the particular validated scale contributes to furthering comprehension of the instrument in sports and fitness settings. Additionally, it is essential to take into account sex and the exercise environment concerning self-determined motivation when predicting long-term exercise adherence.

Keywords: Exercise; Self-determined Motivation; BREQ; Systematic Review; Meta-analysis.

* Corresponding author: scharuai@wu.ac.th

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Example of Mentors

Shamarina Shohaimi

FOLLOW

Universiti Putra Malaysia
Verified email at upm.edu.my

Epidemiology Biostatistics Health Inequalities Social Epidemiology Infectious Disease

TITLE	CITED BY	YEAR
The prevalence of stress, anxiety and depression within front-line healthcare workers caring for COVID-19 patients: a systematic review and meta-regression N Salari, H Khazaie, A Hosseinian-Far, B Khaledi-Paveh, M Kazeminia, ... Human resources for health 18 (1), 1-14	339	2020
Residential area deprivation predicts smoking habit independently of individual educational level and occupational social class. A cross sectional study in the Norfolk cohort … S Shohaimi, R Luben, N Wareham, N Day, S Bingham, A Welch, S Oakes, ... Journal of Epidemiology & Community Health 57 (4), 270-276	231	2003

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Citations	2734	2007
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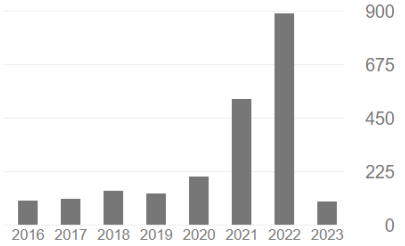
i10-index	46	43



Md. Siddikur Rahman, MSc, PhD

FOLLOW

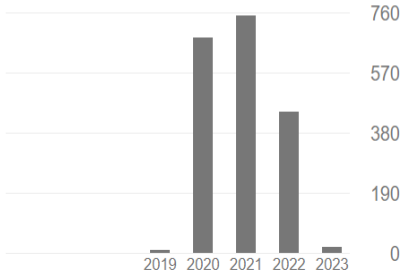
Department of Statistics, Begum Rokeya University, Rangpur, Bangladesh
Verified email at brur.ac.bd - Homepage

Global Health Climate Change and Health Health Informatics

TITLE	CITED BY	YEAR
The SARS, MERS and novel coronavirus (COVID-19) epidemics, the newest and biggest global health threats: what lessons have we learned? NC Peeri, N Shrestha, MS Rahman, R Zaki, Z Tan, S Bibi, ... International journal of epidemiology 49 (3), 717-726	1642	2020
Defending against the Novel Coronavirus (COVID-19) outbreak: How can the Internet of Things (IoT) help to save the world? MS Rahman, NC Peeri, N Shrestha, R Zaki, U Haque, SH Ab Hamid Health policy and technology 9 (2), 136	173	2020

Cited by

	All	Since 2018
Citations	1952	1945
h-index	7	7
i10-index	6	6



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Scharuai@wu.ac.th

1.3 Key terms: we need to understanding

Term	Definition
Critical appraisal	(Also 'quality assessment') A process by which methodological quality and risk of bias is assessed in individual studies.
Data extraction	Pulling out the useful data from individual studies.
Evidence-based practice	(Also 'EBP') "The conscientious use of current best evidence in making decisions about patient care" (Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000). Systematic and scoping reviews are two publication types that adhere to EBP principles.
Grey literature	Non published, or ephemerally released evidence, e.g. Government policy document / report
Meta-analysis	(Also 'forest plot') A form of data synthesis that typically appears as data table accompanying an SR. Shows the degree of effect of each included study, as well as an 'overall average'.
PICO / PIO / PICOT	The typical framework for breaking down a systematic review question. Stands for population, intervention, comparison, outcome. Can include timeline where relevant.

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Term	Definition
PRISMA	Preferred reporting guidelines for systematic reviews and meta-analysis (There is a also "PRISMA-P" for Protocol guidelines).
Prospero	An online registry for SR Protocols.
Protocol	The ‘recipe’ for how the review will be undertaken. Often published.
Scoping review	Like a systematic review, but a quality assessment is typically not done. (Note: not the same as "scoping out the literature")
Screening	A two part process where articles are assessed for their suitability for inclusion in the review.
Search filters	Pre-made search strategies you can incorporate into your search, saving you time.
Systematic review	(Also 'SR') 'A review that uses explicit, systematic methods to collate and synthesis findings of studies that address a clearly formulated question.'

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1.4 Evidence based

	Evidence base level	Research (study) design *Polit, and Beck, 2014*
Strength	1	Systematic review/Meta-analysis
	2	Single randomized control trial
	3	Single non-randomized trial (Quasi-experimental)
	4	Single prospective/Cohort study
	5	Single case-control study
	6	Single cross-sectional study
	7	Single in-depth qualitative study
Weakness	8	Expert opinion, case report

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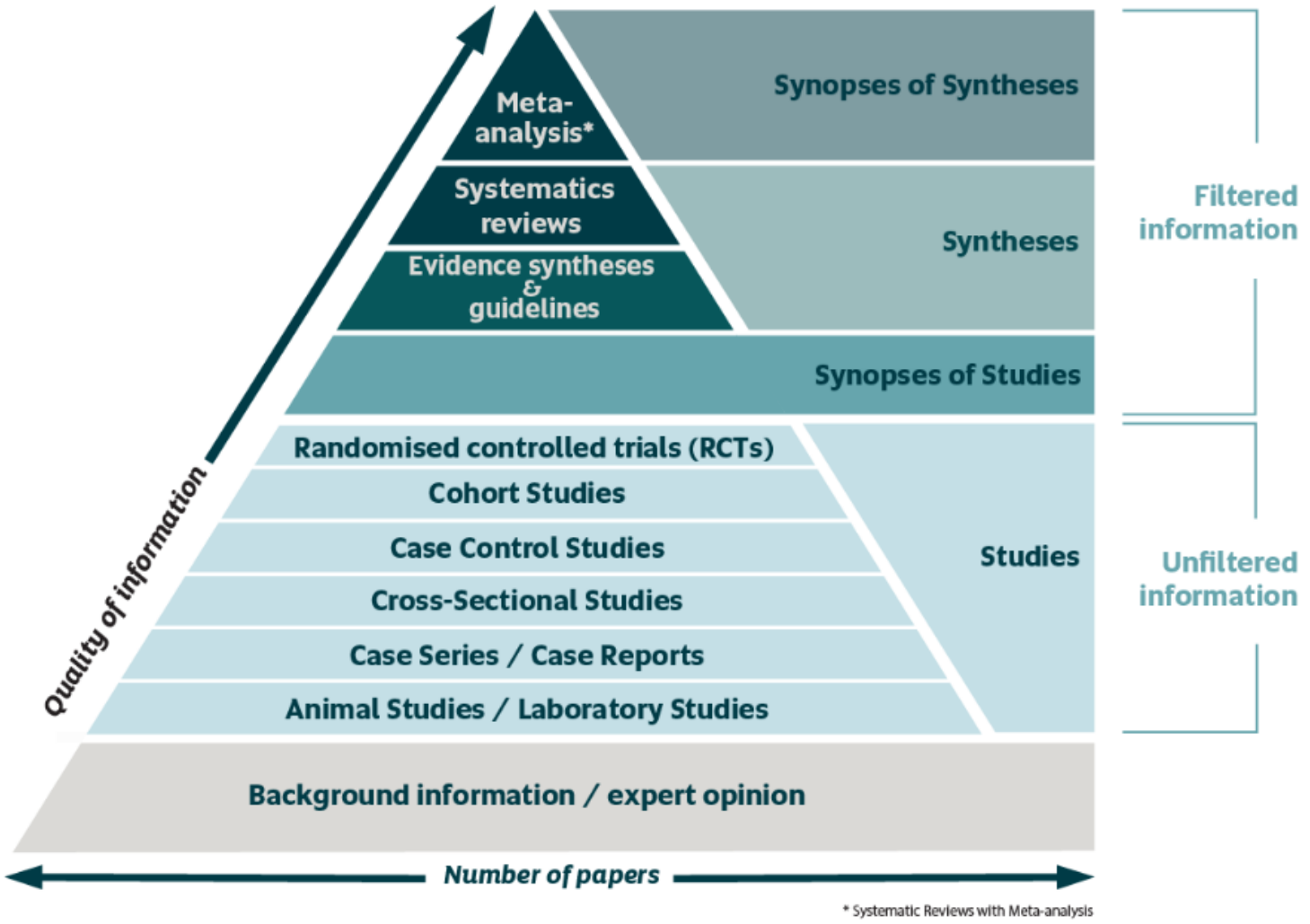
Hierarchy of Evidence Pyramid

https://guides.library.unisa.edu.au/SystematicReviews/Protocols



'Hierarchy of Evidence Pyramid' adapted from EBP & the Medical Librarian training manual, Duke University 2019, and Online EBM Page Generator, Dartmouth College and Yale University 2019, under the license CC-BY-NC and 113P.

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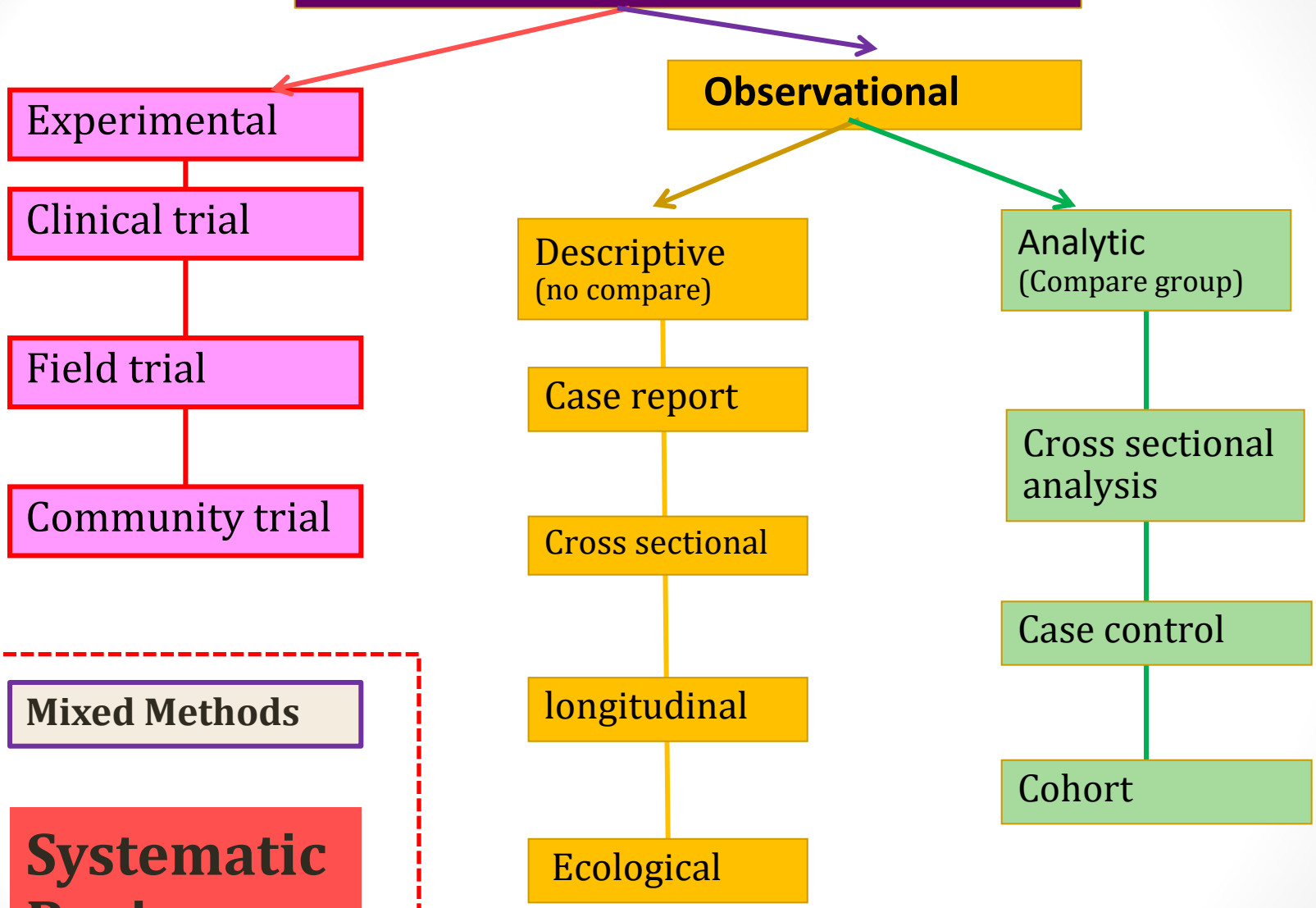
1.5 Research Design



Mixed Methods

Systematic Review

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1.6 What type of review: Is right for you?

Literature (narrative) review

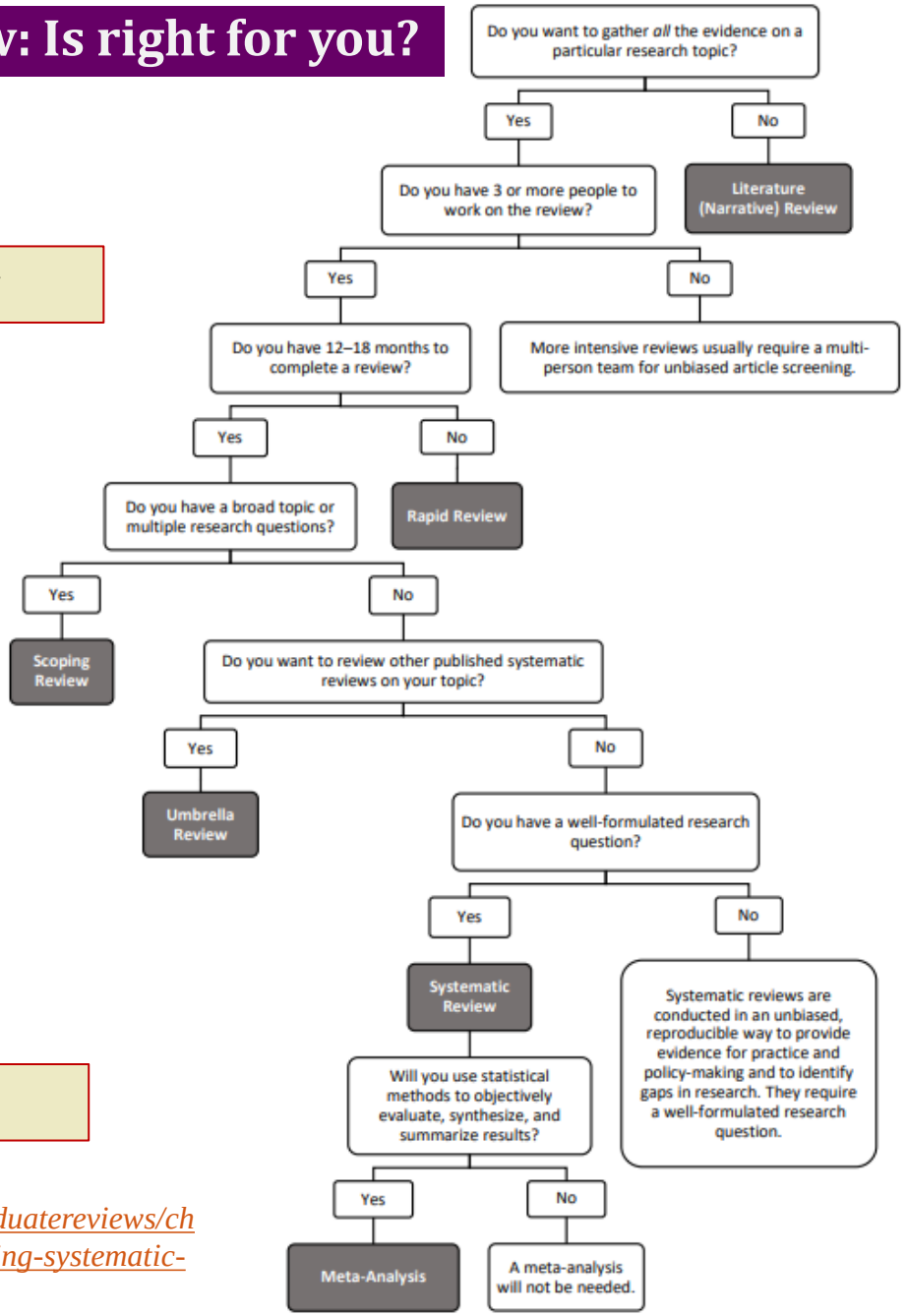
Rapid review

Scoping review

Umbrella review

Systematic review

Meta-Analysis



https://pressbooks.library.torontomu.ca/graduatereviews/chapter/things-to-keep-in-mind-when-conducting-systematic-reviews/

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Systematic Review: SR

https://www.elsevier.com/connect/authors-update/why-systematic-reviews-matter

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2. Questions of Systematic Review:

Q1: What is the systematic review?

Q2: Why do carry out the systematic review?

Q3: What is essential skills for a systematic review?

Q4: How do conducting the systematic review?

Q5: What is criteria of evaluating systematic review?

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Q1. What is the Systematic Review?

Definition :

‘review of a clearly formulated question that uses systematic and **explicit methods** to identify, select and critically appraise relevant research and to collect and analyse data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyse and summarise the results of the included studies’

Clark M and Oxman AD 2003. Cochrane Reviewers’ Handbook 4.2.0 Oxford: The Cochrane Library

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Systematic Review

- Involves the application of **scientific strategies**, in ways that limit bias, to the assembly, critical appraisal, and synthesis of all relevant studies that address a specific clinical question.

Deborah Cook et al. Systematic Reviews: Synthesis of Best Evidence for Clinical Decisions. Annals of Internal Medicine 1997;126:376-380.

Concluded:

- A systematic review attempts to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question.

- It uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made *(Antman 1992, Oxman 1993)*.

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Q2: Why do carry out the systematic review?

Advantages of Systematic Reviews

- Explicit methods **limit bias** in identifying and rejecting studies
- Conclusions are hence more **reliable and accurate**
- Large amounts of information can be **assimilated quickly** by health care providers, researchers and policymakers.
- **Results** of different studies can be formally compare to establish generalisability of findings and consistency, and so on.

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The key characteristics of a systematic review are:

- a clearly stated set of objectives with pre-defined eligibility criteria for studies;
- an explicit, reproducible methodology;
- a systematic search that attempts to identify all studies that would meet the eligibility criteria;
- an assessment of the validity of the findings of the included studies, for example through the assessment of risk of bias; and
- a systematic presentation, and synthesis, of the characteristics and findings of the included studies

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History of Systematic Review:

Year	History
1952	The history of systematic efforts to identify empirically-validated treatments for mental disorders is a short one. Only in the 1950s, coincident with Eysenck's influential article, "The effects of psychotherapy: an evaluation" (Eysenck, 1952) *https://www.sciencedirect.com/topics/social-sciences/history-of-systematics*
1972	The Cochrane Collaboration opened its centre in Oxford and is now an international network of researchers, academics, practitioners and users committed to the principles of managing healthcare knowledge in such a way that it is quality assured, accessible, and cumulative.
1975	under the term 'meta analysis' by Glass who conducted syntheses in the areas of psychotherapy (Smith, Glass and Miller 1980) *https://eppi.ioe.ac.uk/cms/Resources/EvidenceInformedPolicyandPractice/HistoryofSystematicReviews/tabid/68/Default.aspx*

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Q3. Who uses of systematic reviews

- Help decision makers cope with the volume of studies by summarising them

- Provide ‘new' knowledge which may not be apparent from individual studies where the effects under investigation are small

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Who are inundated with unmanageable amounts of information, including evidence from healthcare research such as:

- Healthcare providers,
- consumers, researchers, and
- policy makers

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Mungall-Baldwin
International Journal for Equity in Health (2022) 21:140
https://doi.org/10.1186/s12939-022-01726-0

International Journal for Equity in Health

REVIEW Open Access

Women's participation in the prevention and control of dengue using environmental methods in the global south: a qualitative meta-synthesis

Cathy Mungall-Baldwin[1,2*]

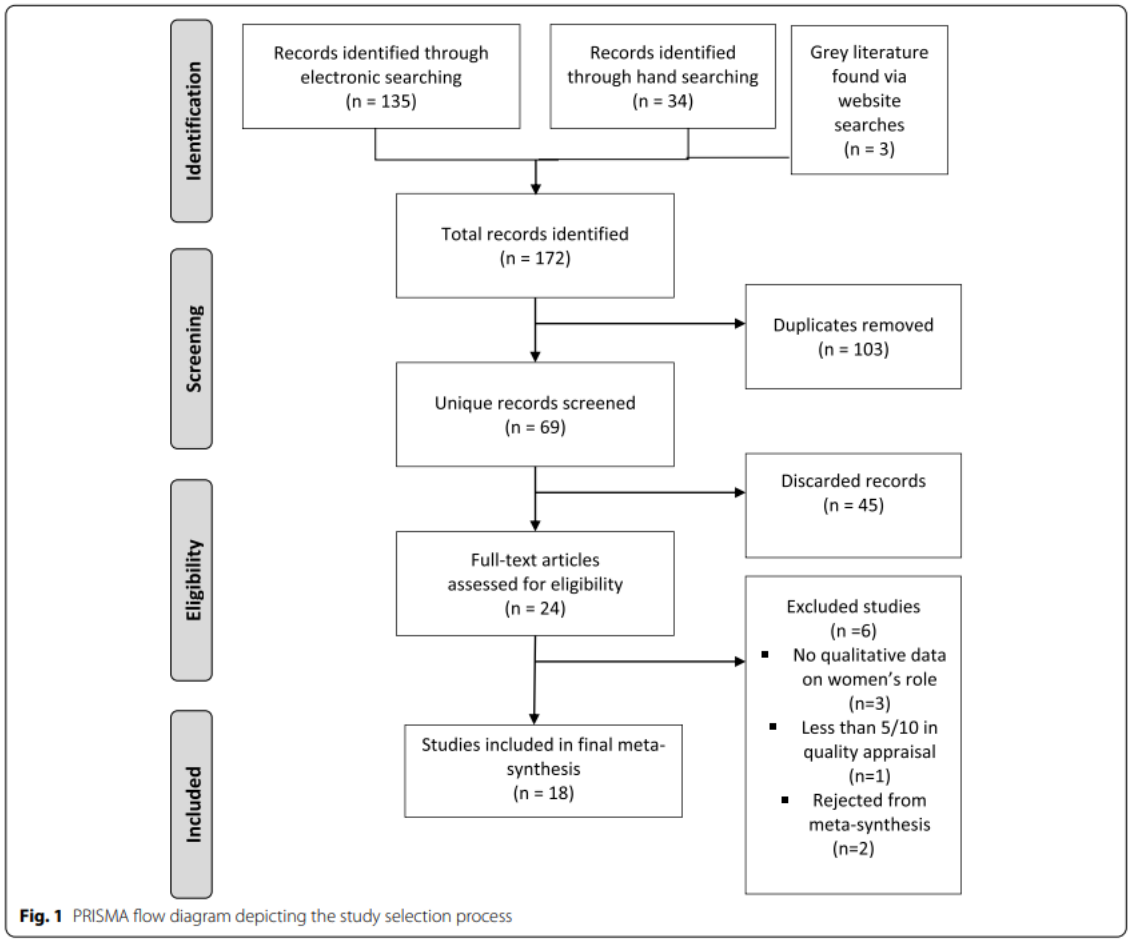

Fig. 1 PRISMA flow diagram depicting the study selection process

Example:

https://doi.org/10.1186/s12939-022-01726-0

Women demonstrated specific qualities aiding successful implementation.

Corrective action is urgently needed to shift unhelpful gender norms, and empower women into leadership and decision-making roles.

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Q4. What is essential skills for a systematic review?

Essential skills for a Systematic Review

- The ability (and facilities) to carry out a thorough literature search
- Awareness of sources of bias
- The ability to critically appraise the quality of included trials and to check for consistency in the effects across trials (i.e., homogeneity)
- Understanding how to measures the significance of observed effects

Who are authors?

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Example:

International Journal of Infectious Diseases 124 (2022) 240–247

Contents lists available at ScienceDirect

International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid

Review

Epidemiology (2012-2019) and costs (2009-2019) of dengue in Malaysia: a systematic literature review

Sazaly AbuBakar[1], Sharifa Ezat Wan Puteh[2], Randee Kastner[3], Louisa Oliver[4], Shi Hao Lim[5,#], Riona Hanley[6,*], Elaine Gallagher[6]

[1] *Tropical Infectious Disease Research and Education Centre (TIDREC); World Health Organization Collaborating Centre for Arbovirus Reference and Research (Dengue and Severe Dengue), Universiti Malaya, Kuala Lumpur, Malaysia*
[2] *Faculty of Medicine, National University of Malaysia, Selangor, Malaysia*
[3] *Takeda Vaccines Inc., Cambridge, USA*
[4] *Adelphi Values, Bollington, Macclesfield, UK*
[5] *Takeda Malaysia Sdn Bhd, Selangor, Malaysia*
[6] *Takeda Pharmaceuticals International AG, Zurich, Switzerland*

7 authors

Conducting the systematic review

https://www.elsevier.com/connect/authors-update/why-systematic-reviews-matter

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Q5: How do conducting the systematic review?

About this guide to conducting Systematic Reviews

Image credit: Examining Clouds by Kate Ter Haar, via Flickr.com, https://flic.kr/p/bLTw9n, CC BY 2.0

https://guides.library.cmu.edu/c.php?g=586398&p=4050790

Higgins J, Green S. Cochrane handbook for systematic reviews of interventions version 5.1. 0 [updated March 2011]: The Cochrane Collaboration; 2011

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5.1 : There are seven steps for preparing and maintaining a systematic review, as outlined in the *Cochrane Handbook*:

http://en.wikipedia.org/wiki/Systematic_review 01-09-2009

1. Formulating a problem
2. Locating and selecting studies
3. Critical appraisal of studies
4. Collecting data
5. Analyzing and presenting results
6. Interpreting results
7. Improving and updating reviews

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Scharuai@wu.ac.th

5.2 Core Principles and Methods for Conducting a Systematic Review of Health Interventions

(CRD's guidance for undertaking reviews in health care, 2009)

- **Phase 1: Getting Started**
  - **1.1 Is a review required**
  - **1.2 the review team**
  - **1.3 the advisory group**

- **Phase 2: The Review Protocol**
  - **2.1 introduction**
  - **2.2 key areas to covers in a review protocol**
  - **2.3 Approval of the draft protocol**
  - **2.4 How to deal with protocol amendment during the review**

- **Phase 3: Undertaking the Review**
  - **3.1 Identifying research evidence for systematic review**
  - **3.2 study selection**
  - **3.3 data extraction and monitoring progress**
  - **3.4 quality assessment**
  - **3.5 data synthesis**
  - **3.6 report writing**

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Scharuai@wu.ac.th

Phase 1: Getting Started

Guideline	You study
1.1 Is a review required ❑ Review question?	❒
1.2 The review team The highest quality reviews will have input from experts in ❖ the subject being reviewed ❖ systematic review methodology ❖ information retrieval ❖ statistics ❖ other aspects e.g. health economics if required	❒
1.3 The advisory group ❑ The meeting speaker ❑ Expert in your country	❒

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Phase 2: The Review Protocol (outline of systematic review)

•The protocol sets out in advance the methods to be used in the review with the aim of minimising bias.

•The background section of the protocol should communicate the key contextual and conceptual factors relevant to the review question and provide the justification for the review.

•The protocol should specify the review question.

•Study inclusion and exclusion criteria should be clearly defined using the relevant PICOS elements.

•The protocol should also specify the methods which will be used to:

- •Identify research evidence
- •Select studies for inclusion
- •Data extract included studies
- •Quality assess included studies
- •Synthesise results
- •Disseminate the review findings

•In cases when it becomes apparent that a modification to the protocol is required, protocol amendments should be clearly documented and justified.

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Protocol

Topic	Your plan
2.1 Title ❑ Identify the report as a systematic review in the title.	❑
2.2 Introduction Review question Objective	❐
2.3 Key areas to covers in a review protocol	❐
2.4 Approval of the draft protocol	
2.5 How to deal with protocol amendment during the review	❐

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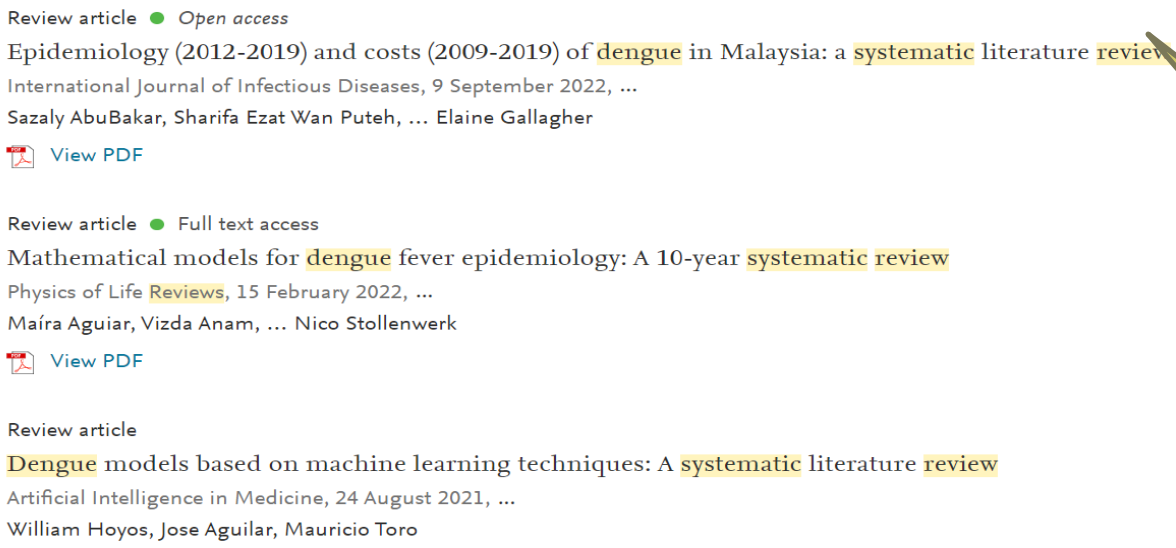
2.1 Title

Title

- ❑ Identify the report as a systematic review in the title.
- ❑ Report an informative title that provides key information about the main objective or question that the review addresses (for reviews of interventions, this usually includes the population and the intervention(s) that the review addresses).



PCC
P: Problem, Population
I:identfy study design

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Example: Title

Title; PCC Population/ problem, Concept, context

Team; 7 authors, more than 3 person

PLOS NEGLECTED TROPICAL DISEASES

RESEARCH ARTICLE

Epidemiology and costs of dengue in Thailand: A systematic literature review

Usa Thisyakorn[1], Surasak Saokaew[2,3,4], Elaine Gallagher[5], Randee Kastner[6], Rosarin Sruamsiri[7], Louisa Oliver[8], Riona Hanley[5]*

1 Tropical Medicine Cluster, Chulalongkorn University, Bangkok, Thailand, **2** Center of Health Outcomes Research and Therapeutic Safety (Cohorts), School of Pharmaceutical Sciences, University of Phayao, Phayao, Thailand, **3** Unit of Excellence on Clinical Outcomes Research and IntegratioN (UNICORN), School of Pharmaceutical Sciences, University of Phayao, Phayao, Thailand, **4** Division of Social and Administrative Pharmacy, Department of Pharmaceutical Care, School of Pharmaceutical Sciences, University of Phayao, Phayao, Thailand, **5** Takeda Pharmaceuticals International AG, Zurich, Switzerland, **6** Takeda Vaccines Inc., Cambridge, Massachusetts, United States of America, **7** Takeda (Thailand) Ltd., Bangkok, Thailand, **8** Adelphi Values, Bollington, Macclesfield, United Kingdom

* Riona.hanley@takeda.com

Check for updates

•Epidemiology and costs of dengue in Thailand: A systematic literature review | PLOS Neglected Tropical Diseases https://doi.org/10.1371/journal.pntd.0010966

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2.2 Introduction

Describing the rationale should help readers understand why the review was conducted and what the review might add to existing knowledge.

Essential elements

•Describe the current state of knowledge and its uncertainties.
•Articulate why it is important to do the review.
•If other systematic reviews addressing the same (or a largely similar) question are available, explain why the current review was considered necessary (for example, previous reviews are out of date or have discordant results; new review methods are available to address the review question; existing reviews are methodologically flawed; or the current review was commissioned to inform a guideline or policy for a particular organisation).
• If the review is an update or replication of a particular systematic review, indicate this and cite the previous review.
•If the review examines the effects of interventions, also briefly describe how the intervention(s) examined might work.

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Example: Review objective

Research title	Research objective
What do community-based dengue control programes achieve? A systematic review of published evaluations *(Heintze, C., Velasco Garrido, M., and Kroeger, A., 2007)*	**To provide a systematic and comprehensive overview of available evidence for the effectiveness of community-based interventions in reducing vector populations for dengue control**
Effectiveness of peridomestic spraying with insecticide on dengue transmission; systematic review *(Esu, E., Lenhart, A., Smith, L., and Horstick., O, 2010)*	**To review the evidence on effectiveness of peridometic space spraying of insecticides in reducing wild *Aedes* populations and interrupting dengue transmission**
Epidemiology and costs of dengue in Thailand: A systematic literature review *(Thisyakorn, Usa, Saokaew, Surasak, Gallagher, Elaine, Kastner, Randee, Sruamsiri, Rosarin, Oliver, Louisa, & Hanley, Riona. (2022).*	**To assess and describe published data on the epidemiological and economic burden of dengue in Thailand and to update a previous literature review**

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2.3 Key areas to covers in a review protocol

Eligibility criteria is what you plan to include and exclude from your review. It needs to:

•match each of your PICO elements

•be agreed upon by all reviewers before screening starts

The key areas for your criteria are:

Demographic factors	e.g. age, sex, ethnicity
Study design and duration	e.g. what types of studies do you need to answer your question?
Measure	e.g. are you looking at a particular type of measure?
Date range	e.g. only apply a date range if you are updating a previously published systematic review

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2.4 Approval of the draft protocol

PRISMA-P (Preferred Reporting Items for Systematic review and Meta-Analysis Protocols) 2015 checklist: recommended items to address in a systematic review protocol

https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/2046-4053-4-1

Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
ADMINISTRATIVE INFORMATION					
Title					
Identification	1a	Identify the report as a protocol of a systematic review	☐	☐	
Update	1b	If the protocol is for an update of a previous systematic review, identify as such	☐	☐	
Registration	2	If registered, provide the name of the registry (e.g., PROSPERO) and registration number in the Abstract	☐	☐	
Authors					
Contact	3a	Provide name, institutional affiliation, and e-mail address of all protocol authors; provide physical mailing address of corresponding author	☐	☐	
Contributions	3b	Describe contributions of protocol authors and identify the guarantor of the review	☐	☐	
Amendments	4	If the protocol represents an amendment of a previously completed or published protocol, identify as such and list changes; otherwise, state plan for documenting important protocol amendments	☐	☐	
Support					
Sources	5a	Indicate sources of financial or other support for the review	☐	☐	
Sponsor	5b	Provide name for the review funder and/or sponsor	☐	☐	
Role of sponsor/funder	5c	Describe roles of funder(s), sponsor(s), and/or institution(s), if any, in developing the protocol	☐	☐	
INTRODUCTION					
Rationale	6	Describe the rationale for the review in the context of what is already known	☐	☐	
Objectives	7	Provide an explicit statement of the question(s) the review will address with reference to participants, interventions, comparators, and outcomes (PICO)	☐	☐	

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Section/topic	#	Checklist item	Information reported		Line number(s)
			Yes	No	
METHODS					
Eligibility criteria	8	Specify the study characteristics (e.g., PICO, study design, setting, time frame) and report characteristics (e.g., years considered, language, publication status) to be used as criteria for eligibility for the review	☐	☐	
Information sources	9	Describe all intended information sources (e.g., electronic databases, contact with study authors, trial registers, or other grey literature sources) with planned dates of coverage	☐	☐	
Search strategy	10	Present draft of search strategy to be used for at least one electronic database, including planned limits, such that it could be repeated	☐	☐	
STUDY RECORDS					
Data management	11a	Describe the mechanism(s) that will be used to manage records and data throughout the review	☐	☐	
Selection process	11b	State the process that will be used for selecting studies (e.g., two independent reviewers) through each phase of the review (i.e., screening, eligibility, and inclusion in meta-analysis)	☐	☐	
Data collection process	11c	Describe planned method of extracting data from reports (e.g., piloting forms, done independently, in duplicate), any processes for obtaining and confirming data from investigators	☐	☐	
Data items	12	List and define all variables for which data will be sought (e.g., PICO items, funding sources), any pre-planned data assumptions and simplifications	☐	☐	
Outcomes and prioritization	13	List and define all outcomes for which data will be sought, including prioritization of main and additional outcomes, with rationale	☐	☐	
Risk of bias in individual studies	14	Describe anticipated methods for assessing risk of bias of individual studies, including whether this will be done at the outcome or study level, or both; state how this information will be used in data synthesis	☐	☐	
DATA					
Synthesis	15a	Describe criteria under which study data will be quantitatively synthesized	☐	☐	
	15b	If data are appropriate for quantitative synthesis, describe planned summary measures, methods of handling data, and methods of combining data from studies, including any planned exploration of consistency (e.g., I^2, Kendall's tau)	☐	☐	
	15c	Describe any proposed additional analyses (e.g., sensitivity or subgroup analyses, meta-regression)	☐	☐	
	15d	If quantitative synthesis is not appropriate, describe the type of summary planned	☐	☐	
Meta-bias(es)	16	Specify any planned assessment of meta-bias(es) (e.g., publication bias across studies, selective reporting within studies)	☐	☐	
Confidence in cumulative evidence	17	Describe how the strength of the body of evidence will be assessed (e.g., GRADE)	☐	☐	

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Protocol example

https://guides.library.unisa.edu.au/SystematicReviews/Protocols

PROSPERO
International prospective register of systematic reviews

NHS National Institute for Health Research

Rapid diagnostic tests for bacterial meningitis applicable in sub-Saharan Africa [Cochrane Protocol]

Thomas Waite, Lilanganee Telisinghe, Maya Gobin, Olivier Ronveaux, Ana-Katya Fernandez, James Stuart, Rob Scholten

Citation

Thomas Waite, Lilanganee Telisinghe, Maya Gobin, Olivier Ronveaux, Ana-Katya Fernandez, James Stuart, Rob Scholten. Rapid diagnostic tests for bacterial meningitis applicable in sub-Saharan Africa [Cochrane Protocol]. PROSPERO 2015 CRD42015026179 Available from: http://www.crd.york.ac.uk/PROSPERO/display_record.php?ID=CRD42015026179

Review question

Primary objectives: 1. To determine the sensitivity and specificity of each identified RDT for each organism it can detect.
Primary objectives: 2. To determine the sensitivity and specificity by serogroup of each identified N. meningitidis RDT.(We will separately analyse each of these for tests performed under laboratory or field conditions.)
Seconday objectives: 1. To assess differences between the accuracy of tests performed when prevalence is low and high and in high-income or low-income countries, which are potential sources of heterogeneity.
Secondary objectives: 2. We will also assess differences in index test performance according to the reference standard used (CSF culture or PCR) and compare different tests with one another.

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SR Protocol example *https://guides.library.unisa.edu.au/SystematicReviews/Protocols*

Searches

All references to appendices are to those in the full protocol on the Cochrane Library.

Electronic searches

We will attempt to identify all relevant studies regardless of publication status, without language or publication date limit. We will only consider studies conducted exclusively in humans. We will consult experts from the WHO to identify research that may not yet be published.
We will search the following electronic literature databases without publication date limit:

1. Cochrane DTA Register
2. MEDLINE/Ovid
3. EMBASE
4. African Index Medicus
5. CAB/Global Health
6. Grey literature, including (a) product information from manufacturers for RDTs that are identified during the review and (b) Google searches with country filters (e.g. meningitis site:gov.nb)

We will not impose any language restrictions. See Appendix 1 for search terms.

Searching other resources

In addition to this search strategy, we will check the reference lists of the included studies. We will use SCOPUS to identify any other potentially relevant papers, which have cited an identified paper. Once the search has been completed, we will consult experts in the field of bacterial meningitis to identify any studies that may have been missed or are unindexed (for example, studies awaiting publication).

Types of study to be included

We will include studies that assess the accuracy of RDTs for diagnosing bacterial meningitis in the laboratory or in field conditions, in which all patients are given both the index test and a reference standard. These studies may be cohort studies or randomised comparisons of tests in which patients are randomised to one of several index tests with all receiving the reference standard test. We will exclude case-control studies.

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SR Protocol example https://guides.library.unisa.edu.au/SystematicReviews/Protocols

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International prospective register of systematic reviews

National Institute for Health Research

Condition or domain being studied

The target condition is acute bacterial meningitis due to *N. meningitidis*, *S. pneumoniae* or *H. influenzae*. In the case of *N. meningitidis*, it is important also to identify the serogroup because this may have implications for starting mass vaccine campaigns.

In low-income countries, the most commonly used approaches for detection and characterisation of bacterial meningitis pathogens include culture, Gram stain and latex agglutination. The reference standard for diagnosis of meningitis is culture and polymerase chain reaction (PCR) of cerebrospinal fluid (CSF), although in field settings the positive rate from culture is relatively low due to suboptimal storage and transportation conditions, culture practice and/or antibiotic treatment being administered before the specimen is collected (WHO 2011). For culture, CSF is drawn from suspected cases of meningitis by lumbar puncture and cultured on enriched media such as blood agar or chocolate agar. PCR detection of *N. meningitidis*, *H. influenzae* and *S. pneumoniae* can be achieved by amplification of several potential gene targets (Carvalho 2007; Mothershed 2004; Taha 2005; Wang 2011). Organism-specific assays have been developed and validated to be used on DNA extracted from clinical specimens (typically, blood and CSF) and bacterial isolates. The use of such techniques is limited to a small number of reference laboratories in sub-Saharan Africa, requiring transport for several days of samples stored at 4 or -20 degrees centigrade and is thus rarely useful for clinical decision-making.

Participants/population

Patients with suspected bacterial meningitis from whom a CSF sample has been obtained. In studies where only a particular subgroup is eligible for this review, we will include the study if it is possible to extract data relating specifically to that subgroup.

Intervention(s), exposure(s)

Any CSF RDT currently made by any manufacturer for the diagnosis of bacterial meningitis of any type which, as well as being suitable for use in laboratory conditions, can be performed in field conditions in sub-Saharan Africa.

RDTs that are directed to *N. meningitidis* must be able to detect at least both serogroups A and W and be able to distinguish between these two serogroups, as these are the most commonly encountered organisms, accounting for over 90% of *N. meningitidis* in sub-Saharan Africa annually (WHO 2014).

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SR Protocol example https://guides.library.unisa.edu.au/SystematicReviews/Protocols

Comparator(s)/control
Specified above.

Context

Main outcome(s)
Diagnostic test accuracy.

Additional outcome(s)
None.

Data extraction (selection and coding)

Selection of studies

Two review authors (TW and LS) will independently perform study selection in two phases: in phase one we will screen titles and then abstracts of identified studies. We will retrieve full texts in the absence of an abstract if the publication cannot be excluded based on title alone. We will exclude papers that clearly do not meet the inclusion criteria in this phase. In phase two, we will screen the full text of the remaining studies.

Data extraction and management

See Appendix 2 for data to be extracted for each paper included in the review. Two authors (TW and LT) will enter the extracted data into evidence tables. We will resolve disagreements by discussion or, if required, by referral to another review author (JS).

Risk of bias (quality) assessment

Assessment of risk bias in included studies

PROSPERO (International Prospective Register of Ongoing Systematic Reviews, http://www.crd.york.ac.uk/prospero)

2.5 How to deal with protocol amendment during the review *https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf*

Sticking rigidly to a protocol when it becomes apparent that a change of direction is required, can result in a review that is not useful to end users.

It is never appropriate to modify the protocol because of awareness of the results of individual studies, as this is likely to introduce bias and affect the validity of the review's conclusions.

In cases when it becomes apparent that a modification to the protocol is required, protocol amendments should be clearly documented and justified

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Discussion with your protocol

2.1 Title ❑ Identify the report as a systematic review in the title.	❑
2.2 Introduction Review question Objective	❐
2.3 Key areas to covers in a review protocol	❐
2.4 Approval of the draft protocol	
2.5 How to deal with protocol amendment during the review	❐

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What is undertaking the systematic review?

https://www.elsevier.com/connect/authors-update/why-systematic-reviews-matter

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Phase 3: Undertaking the Review

3.1 identifying research evidence for systematic review
3.2 study selection
3.3 data extraction and monitoring progress
3.4 quality assessment
3.5 data synthesis
3.6 report writing

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3.1 Identifying research evidence for systematic review

The first step of the systematic review process is to develop a clear, well-formed, and focused question. This will make it easier to apply the key concepts in your question to your search and will ultimately make searching for evidence more straightforward.

- **Your PICO breakdown (or the relevant framework you are using).**
- **Set key word for searching**

Quantitative research strategy

For quantitative research, consider using PICO to identify search concepts. PICO is used to answer clinical and healthcare questions that look at the effectiveness of interventions, eg "is drug x more effective than drug y?"

- **P:**Person/population
- **I:** Intervention
- **C:**Comparison
- **O:**Outcome

You do not have to use all four elements. Quite often, only P and I are used. Agree with the team which criteria are needed.

https://www.uwe.ac.uk/study/study-support/study-skills/research-skills/systematic-reviews

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For qualitative reviews, consider using SPIDER:

Sample	The group of people being looked at – because qualitative research is not easy to generalise – a sample is preferred over a patient
Phenomenon of Interest	Looks at the reasons for behaviour and decisions, rather than an intervention
Design	The form of research used, such as interview or survey
Evaluation	The outcome measures
Research type	Qualitative, quantitative and/or mixed methods

https://www.uwe.ac.uk/study/study-support/study-skills/research-skills/systematic-reviews

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The PICO framework outlined above works well for conventional systematic reviews of effectiveness using a single comparative study design. Other frameworks work better for other types of research question, including:

- PCC (useful for scoping reviews) - Population; Concept; Context.
- SPICE (useful for qualitative evidence synthesis) - Setting; Perspective; Intervention/Interest, of Phenomenon; [Comparison]; Evaluation.
- SPIDER (useful for mixed methods reviews) - Sample; Phenomenon of Interest; Design; Evaluation; Research type.

'What kind of systematic review should I conduct?'

See Munn et al. for ten review types with aims, question formats and question examples

Review Type	Aim	Question Format	Question Example
Effectiveness	To evaluate the effectiveness of a certain treatment/practice in terms of its impact on outcomes	Population, Intervention, Comparator/s, Outcomes (PICO) [23]	What is the effectiveness of exercise for treating depression in adults compared to no treatment or a comparison treatment? [69]
Experiential (Qualitative)	To investigate the experience or meaningfulness of a particular phenomenon	Population, Phenomena of Interest, Context (PICo) [13]	What is the experience of undergoing high technology medical imaging (such as Magnetic Resonance Imaging) in adult patients in high income countries? [70]

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Scharuai@wu.ac.th

3.2 Study selection /search strategy

- **Inclusion criteria**
  - **Keyword**
  - **Data source**
  - **Language,**
  - **Type of evidence**

- **Exclusion criteria**
  - **Time (5 years)**
  - **other**

Where you will search (databases and grey literature)

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Data sources and search strategy

To identify articles on the epidemiology and costs of dengue in Thailand, MEDLINE, Embase, and Evidence-Based Medicine reviews databases (Cochrane Database of Systematic Reviews, Cochrane Clinical Answers, Database of Abstracts of Reviews of Effects, and Health Technology Assessment) were searched via the OVID platform on 10 September 2019. Separate searches were conducted for epidemiological and cost burdens and restricted articles published in English and Thai languages. The publication year was limited to 2011–2019 for the epidemiology burden, as a systematic literature review had already been conducted from 2000–2011 [3]. However, studies reporting data prior to 2011 and not captured in the previous systematic literature review were included in this review. For cost studies, the publication year was restricted to 2009–2019 (S1 Table). To identify additional articles, reference lists and grey literature sources including international and national surveillance databases and major academic websites were searched (S2 Table).

Inclusion: article on the epidemiology, cost in Thailand, languages, type of article,
Exclusion: Study design criteria were not applied to grey literature

MEDLINE, Embase, Cochrane database of systematic review

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3.3 Data extraction and monitoring progress

https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf

- **The data extraction forms should contain only information required for descriptive purposes or for analyses later in the systematic review. Information on study characteristics should be sufficiently detailed to allow readers to assess the applicability of the findings to their area of interest.**
- **Data extraction needs to be unbiased and reliable, however it is prone to human error and often subjective decisions are required. Clear instructions and decision rules about coding data should be used.**
- **As a minimum, one researcher should extract the data with a second researcher independently checking the data extraction forms for accuracy and detail. If disagreements occur between assessors, they should be resolved according to a predefined strategy using consensus and arbitration as appropriate.**

Example

Data extraction and synthesis

Relevant data were collected from each included publication onto a structured data extraction form. Data were extracted by one reviewer and cross-checked by a second reviewer. Any discrepancies were resolved by a third reviewer. Extracted data were descriptively synthesised. Data from national and regional surveillance sources were prioritised and supplemented with those from peer-reviewed publications where needed. For this reason, quality assessment was not performed because most of the included publications were from surveillance sources, and such assessment will not influence the data synthesis or certainty of the quality of evidence. No meta-analyses were conducted due to heterogeneity in the reported data. Costs were converted to 2019 USD using Thai consumer price index (CPI) [22].

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Scharuai@wu.ac.th

3.4 Quality assessment

https://guides.library.unisa.edu.au/ld.php?content_id=48422542

- Critical appraisal is an important step because it helps the reviewers establish the methodological quality of the studies they have identified.
- In a critical appraisal, reviewers formally and systematically appraise the quality of included studies.
- This should consider the internal validity of the study (how well the study was conducted), the external validity (the generalisability of the study), and the risk of bias.
- Specific critical appraisal tools (CATs) are available to guide the appraisal process.
- This process will help you determine the value of the study and its results in your systematic review.

The Cochrane Common Mental Disorders group have produced 7 videos demonstrating the application of the CASP checklist to different study designs. *https://guides.library.unisa.edu.au/ld.php?content_id=48422542*

1. Introduction to critical appraisal
2. Systematic reviews and meta analysis
3. Randomised controlled trials
4. Cohort studies
5. Case control studies
6. Cross sectional studies
7. Diagnostic studies

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Scharuai@wu.ac.th

3.5 Data synthesis

https://guides.library.unisa.edu.au/ld.php?content_id=48422585

- Data synthesis is the process where data from included studies is analysed and synthesised to answer the systematic review question.
- It's about bringing together the findings from the included studies and telling a story about what your systematic review has found.
- A common method of data synthesis is meta-analysis. This approach requires included studies to be relatively homogenous.
- A meta-analysis is a statistical combination of the results from each included study to create one large study. They usually follow a consistent framework.
- If the studies are heterogeneous, they cannot be synthesised into a meta-analysis. In this case, you would use narrative or descriptive synthesis to describe the results from each study to provide an overall picture of the literature. This type of synthesis is more subjective.
- One method to synthesise heterogeneous data is to use the Form Guide/Framework to consider the quantity and quality, consistency, clinical impact, generalisability, and applicability of the evidence.
- Qualitative data can be synthesised using meta-synthesis.

3.6 Report writing: general structure

Title

- Content list
- Abbreviations/glossary

Executive summary or structured abstract

- Background
- Objectives
- Methods (data sources, study selection, data extraction, quality assessment, data synthesis)
- Conclusions

Main text

- **Background/Introduction**
- **Reviews question (s)**
- **Review methods**
  - Identification of studies
  - Study selection (inclusion and exclusion criteria; methods)
  - Data extraction
  - Quality assessment
  - Data synthesis
- **Results of the review**
  - Detail of inclusion and exclusion studies
  - Findings of the review
  - Secondary analyses
- **Discussion** (Interpretation of the results)
- **Conclusions**
- Recommendations/Implementation (practice and further research)
- Acknowledgements or list of contributors and contributions
- Funding
- Conflicts of interest
- Reference
- Appendices

https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf

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PRISMA flowchart

From article example

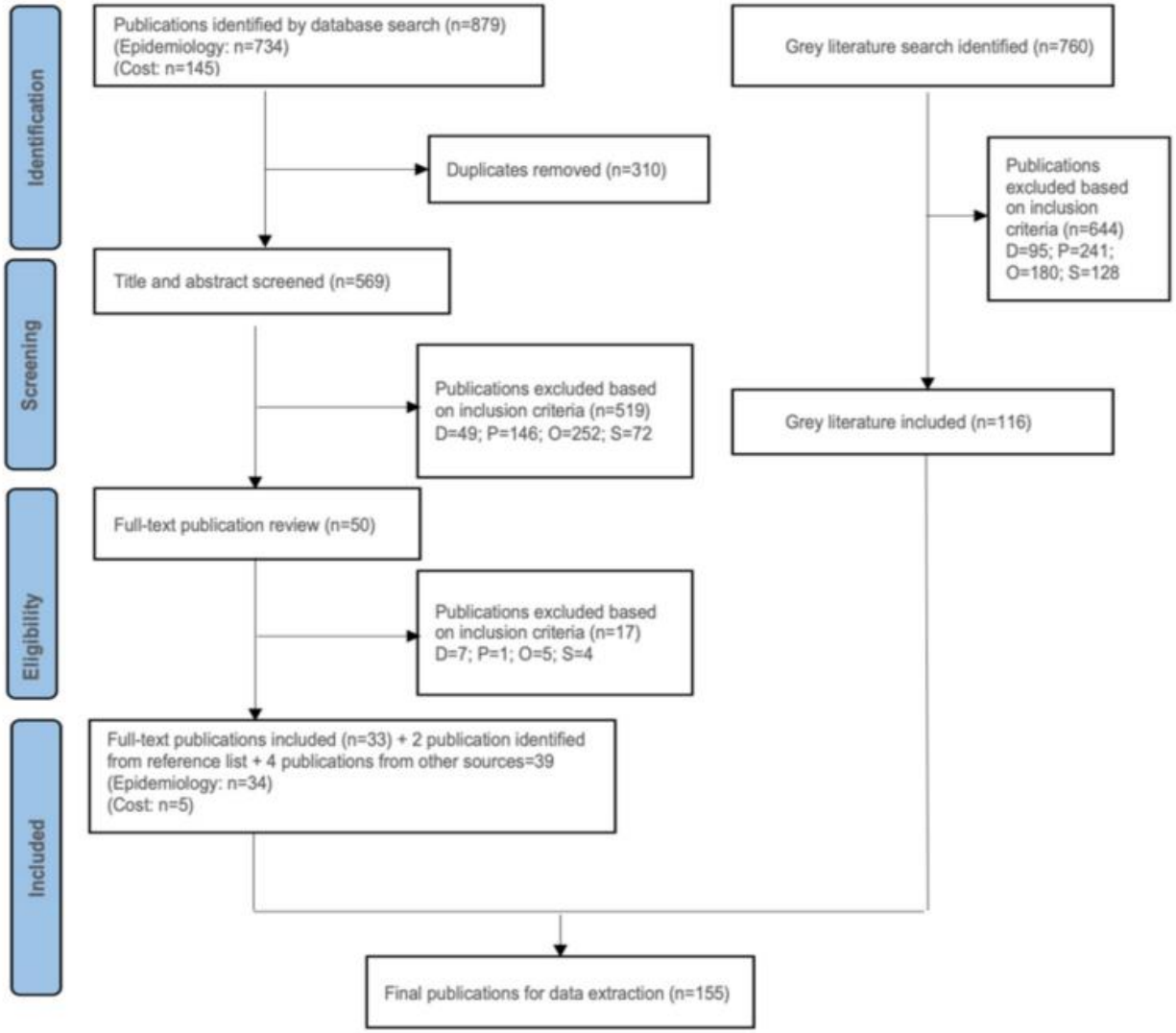

Fig 1. PRISMA flowchart for epidemiology and cost studies. D: duplicate; O: outcome; P: population; S: study design.

https://doi.org/10.1371/journal.pntd.0010966.g001

PHR program, WU;
Scharuai@wu.ac.th

What is criteria of evaluating systematic review?

https://www.elsevier.com/connect/authors-update/why-systematic-reviews-matter

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Q5: What is criteria of evaluating systematic review? *(Greenhalgh, 1997)*

- Can you find an important clinical question that the review examined?
- Was a thorough search done of the appropriate database and were other potentially important sources explored?
- Was methodological quality assessed and the trial weighted according?
- How sensitive are the results to the way the review has been done?
- Have the numerical results been interpreted with common sense and due regard to the broader aspect of the problem?

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Scharuai@wu.ac.th

Evaluation the article following PRISMA checklist

Epidemiology and costs of dengue in Thailand: A systematic literature review | PLOS Neglected Tropical Diseases

RESEARCH ARTICLE

Epidemiology and costs of dengue in Thailand: A systematic literature review

Usa Thisyakorn[1], Surasak Saokaew[2,3,4], Elaine Gallagher[5], Randee Kastner[6], Rosarin Sruamsiri[7], Louisa Oliver[8], Riona Hanley[5]*

1 Tropical Medicine Cluster, Chulalongkorn University, Bangkok, Thailand, **2** Center of Health Outcomes Research and Therapeutic Safety (Cohorts), School of Pharmaceutical Sciences, University of Phayao, Phayao, Thailand, **3** Unit of Excellence on Clinical Outcomes Research and IntegratioN (UNICORN), School of Pharmaceutical Sciences, University of Phayao, Phayao, Thailand, **4** Division of Social and Administrative Pharmacy, Department of Pharmaceutical Care, School of Pharmaceutical Sciences, University of Phayao, Phayao, Thailand, **5** Takeda Pharmaceuticals International AG, Zurich, Switzerland, **6** Takeda Vaccines Inc., Cambridge, Massachusetts, United States of America, **7** Takeda (Thailand) Ltd., Bangkok, Thailand, **8** Adelphi Values, Bollington, Macclesfield, United Kingdom

* Riona.hanley@takeda.com

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Editor: Hannah E. Clapham, National University Singapore Saw Swee Hock School of Public Health,

Abstract

Background

Dengue is the fastest-spreading vector-borne viral disease worldwide. In Thailand, dengue is endemic and is associated with a high socioeconomic burden. A systematic literature review was conducted to assess and describe the epidemiological and economic burden of dengue in Thailand.

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	

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Section and Topic	Item #	Checklist item	Location where item is reported
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	

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Section and Topic	Item #	Checklist item	Location where item is reported
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	
Study characteristics	17	Cite each included study and present its characteristics.	
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	

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Section and Topic	Item #	Checklist item	Location where item is reported
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	
	23b	Discuss any limitations of the evidence included in the review.	
	23c	Discuss any limitations of the review processes used.	
	23d	Discuss implications of the results for practice, policy, and future research.	
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	
Competing interests	26	Declare any competing interests of review authors.	
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	

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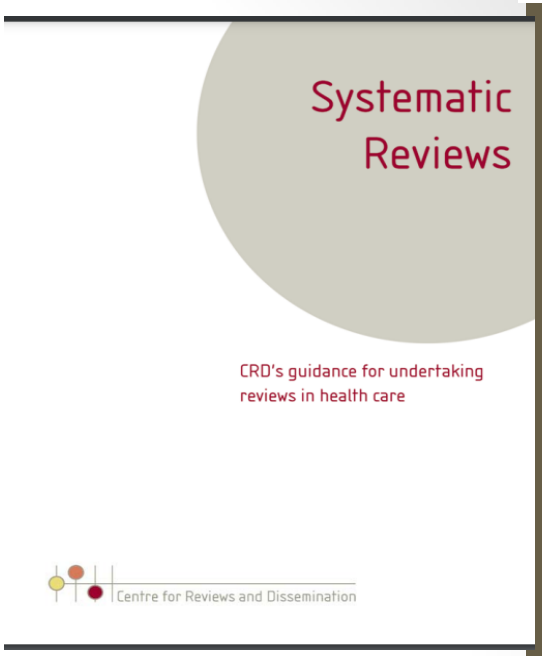
References of main outline



https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf

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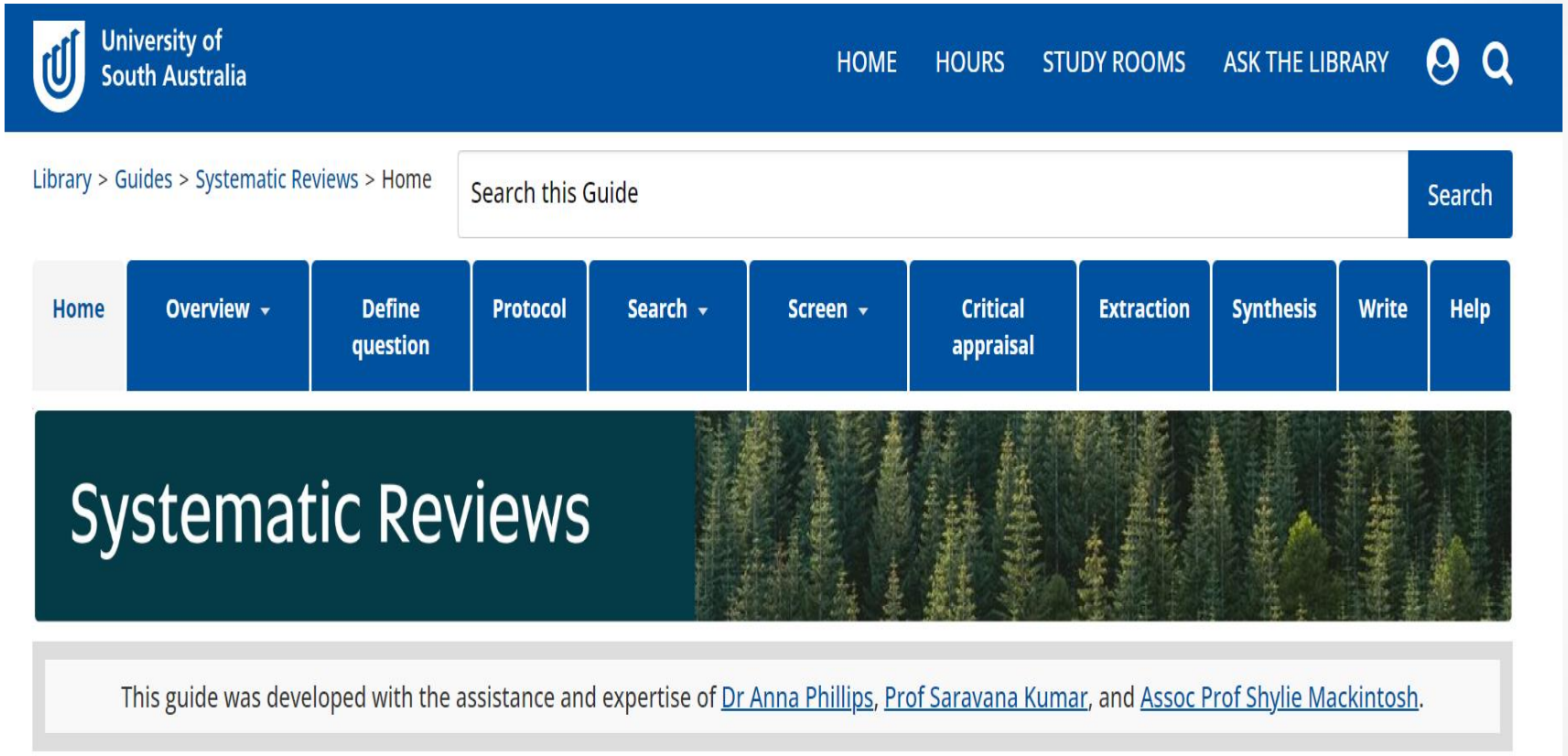
References

https://guides.library.unisa.edu.au/SystematicReviews/Home



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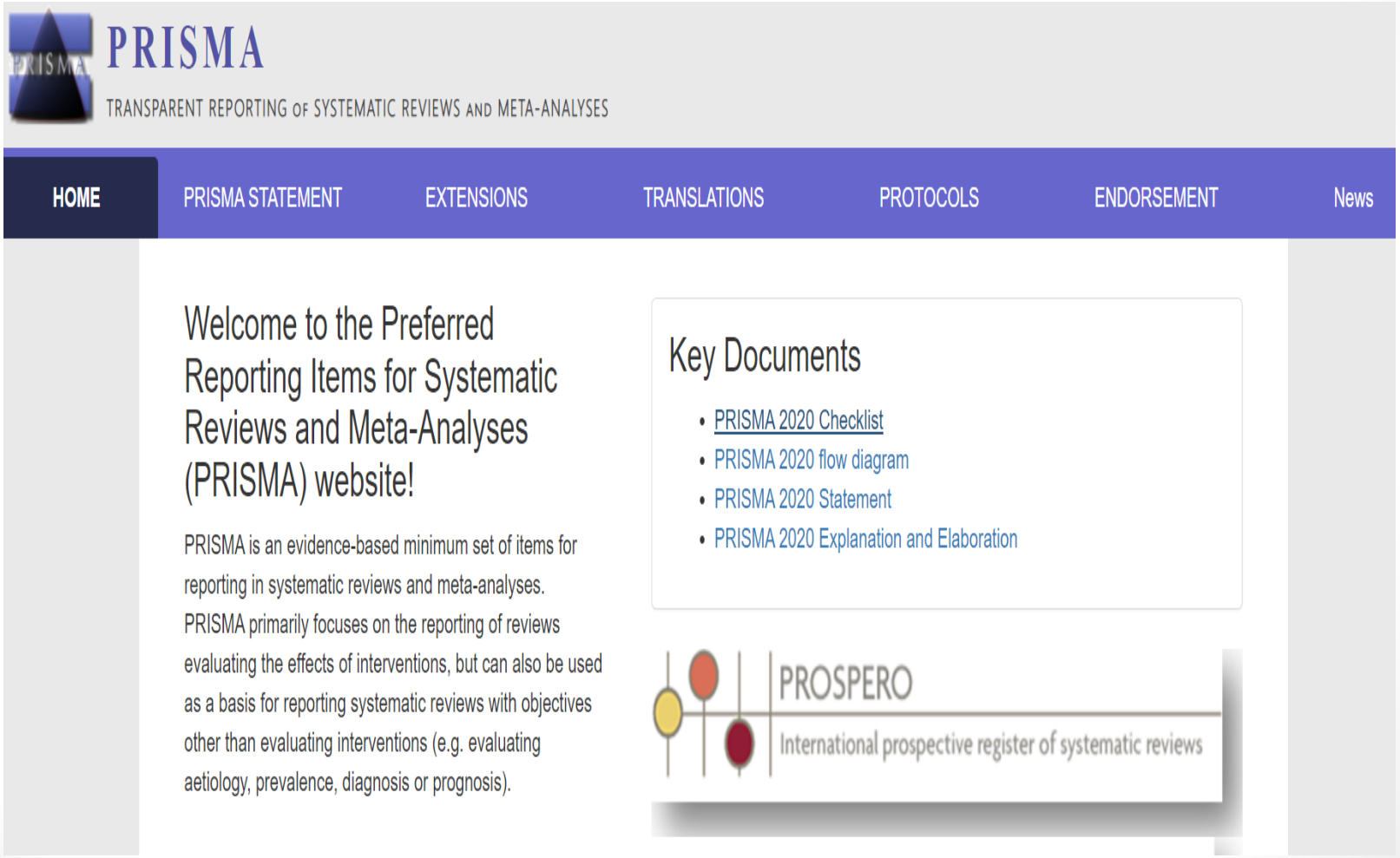
References: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)

https://www.prisma-statement.org//



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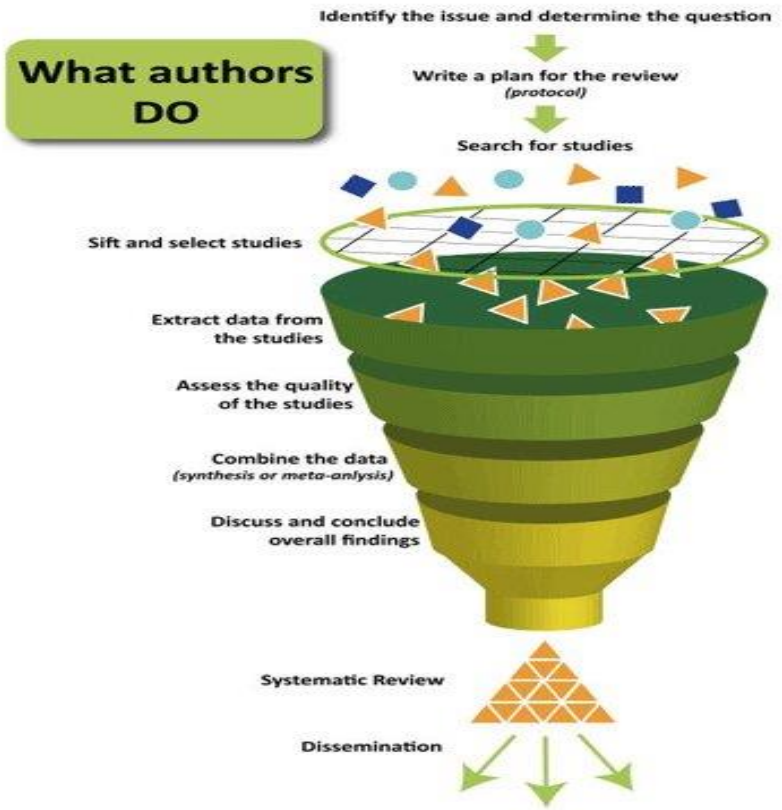
Systematic review process:



Systematic review product:

https://uj.ac.za.libguides.com/c.php?g=1001386&p=7250923

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About PROSPERO

PROSPERO is an international database of prospectively registered systematic reviews in health and social care, welfare, public health, education, crime, justice, and international development, where there is a health related outcome. Key features from the review protocol are recorded and maintained as a permanent record. PROSPERO aims to provide a comprehensive listing of systematic reviews registered at inception to help avoid duplication and reduce opportunity for reporting bias by enabling comparison of the completed review with what was planned in the protocol.

PROSPERO is produced by CRD and funded by the National Institute for Health Research (NIHR).

https://www.crd.york.ac.uk/prospero/

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Links

Knowledge Synthesis Decision Tool

- https://guides.hsict.library.utoronto.ca/ld.php?content_id=35310435

Health Sciences - Systematic Reviews & Meta-Analyses

- https://uj.ac.za.libguides.com/c.php?g=1001386&p=7250923

Systematic Reviews CRD's guidance for undertaking reviews in health care

- https://www.york.ac.uk/media/crd/Systematic_Reviews.pdf

PRISMATRANSPARENT REPORTING OF SYSTEMATIC REVIEWS AND META-ANALYSES https://www.prisma-statement.org//

. Systematic reviews of University of South AUS

https://guides.library.unisa.edu.au/SystematicReviews/OverviewofSR

PROSPERO (International Prospective Register of Ongoing Systematic Reviews, http://www.crd.york.ac.uk/prospero)

Books and Articles

Dissemination, Centre for Reviews and. (2008). *Systematic Reviews: CRD's guidance for undertaking reviews in health care: CRD University of York.* In.

Moher, David, Shamseer, Larissa, Clarke, Mike, Ghersi, Davina, Liberati, Alessandro, Petticrew, Mark, . . . Group, Prisma- P. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews, 4*(1), 1. doi:10.1186/2046-4053-4-1

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BMJ 2021; 372 doi: https://doi.org/10.1136/bmj.n160 (Published 29 March 2021)Cite this as: *BMJ* 2021;372:n160

Thisyakorn U, Saokaew S, Gallagher E, Kastner R, Sruamsiri R, Oliver L, et al. (2022) Epidemiology and costs of dengue in Thailand: A systematic literature review. PLoS Negl Trop Dis 16(12): e0010966. https://doi.org/10.1371/journal. pntd.0010966

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Scharuai@wu.ac.th

I am not expert, but I will support you to become an expert

How to become an expert:

1. **Identify** what you're interested in.
2. Focus on **one task at a time**.
3. **Start** with what's most **important**.
4. **Invest** time and effort.
5. Set **specific** goals.
6. **Engage** in deliberate practice.
7. Find or **create** an environment for practice.
8. **Look** for specific and accurate feedback.
9. Find a **mentor**.
10. **Test** yourself often.
11. Focus on **progression**.

https://www.indeed.com/career-advice/career-development/how-to-become-an-expert

Thank you for your discussion

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