

THE ANTI-SUICIDE SQUAD

A Contemporary Meta-Narrative Review of
Population-Level Suicide Prevention Strategies



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SUMMARY

- Systematic review of population-level suicide interventions
- 75 primary articles spanning >50 countries
- Aim to present my rationale, methodology, and findings
 - Also to reflect on what I've learned about public health

KEY AFPHM THEMES

Theme 3.1

Public Health Information and Critical Appraisal

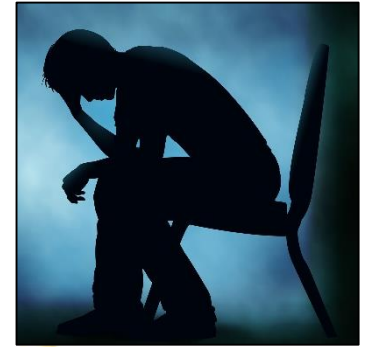
Theme 5.4

Chronic Disease, Mental Illness and Injury Prevention

STATE OF THE ISSUE

Suicide is **tragic**

- Annual incidence of **800 000** globally¹
- Estimated **8-10 million** attempted suicides per year²
- Causes extreme **grief** and **emotional stress**³
 - Significant risk factor for '**secondary**' suicide⁴



Suicide is **universal**⁵

- Affects all **nations** and **cultures**
- Affects all **genders** and **ages**
- Spans all **demographic classes**



BUT...

Suicide is also **preventable**

- Documented **dynamic** (changeable!) risk factors⁶
- Population-level interventions do **reduce mortality**⁷
- Could we do more???



RESEARCH QUESTION

“Are there evidence-based recommendations for governments and health policy makers to develop informed suicide prevention programs?”

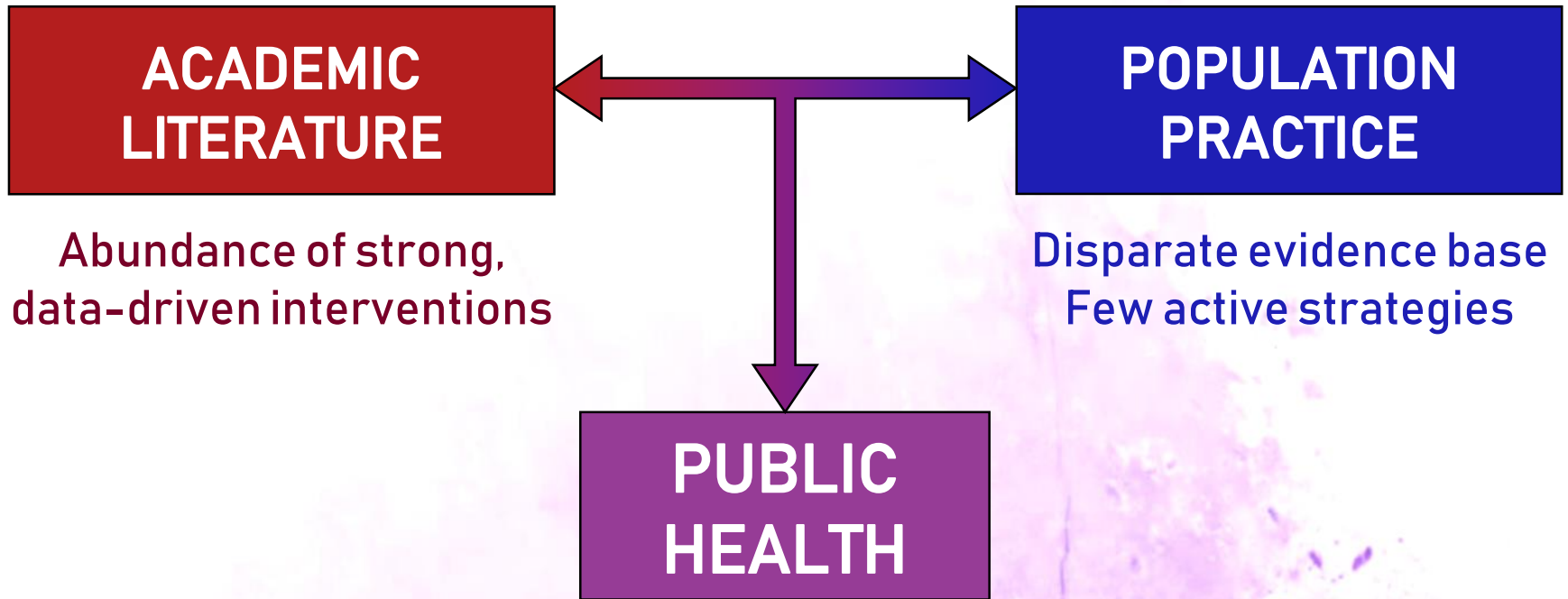
- Introductory survey of the literature: **resounding no**
- **0** meta-analyses and just **2** systematic reviews^{6, 8}
- Only **28** of 157 WHO-surveyed countries have a **national suicide strategy**¹

AFPHM LEARNING OBJECTIVES

3.1.2

Assess and respond rapidly to urgent public health questions

RATIONALE



Develops and implements solutions to community-specific health needs
In doing so, requires efficient appraisal and synthesis of the evidence
Systematic review?

AFPHM LEARNING OBJECTIVES

3.1.2

Assess and respond rapidly to urgent public health questions

METHODOLOGY

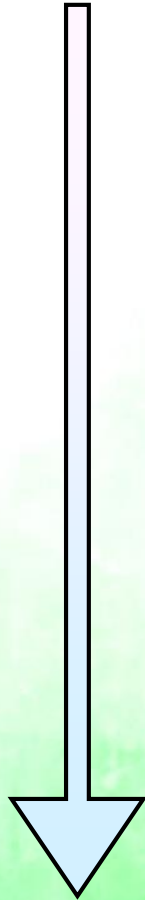
- **Meta-narrative** review design
 - Synthesis from **multiple backgrounds** and **paradigms**
 - Captures **multi-factorial** nature of suicide
- **Three-pronged** search strategy
 - **Suicide** (e.g. “suicide”, “suicidality”)
 - **Interventions** (e.g. “prevention”, “surveillance”, “means restriction”)
 - **Public health** (e.g. “global”, “community”, “population”)
- **Screening, evaluation and analysis**
 - Guided by inclusion and exclusion **eligibility criteria**
 - Primarily **qualitative** analysis

AFPHM LEARNING OBJECTIVES

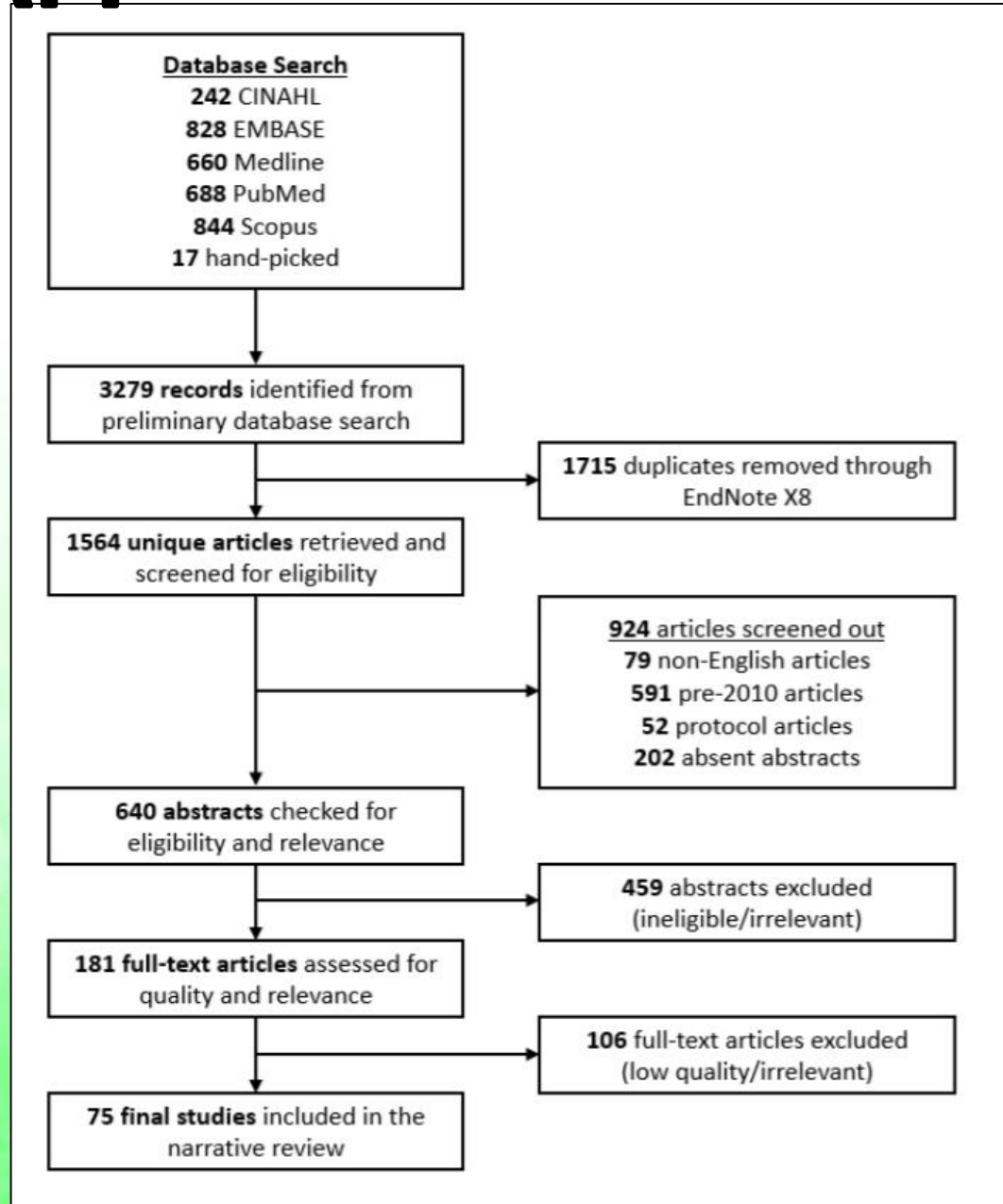
3.1.4	Conduct effective literature reviews
3.1.5	Critically assess published literature and other evidence

FLOW DIAGRAM

3279 records



75 full-text studies

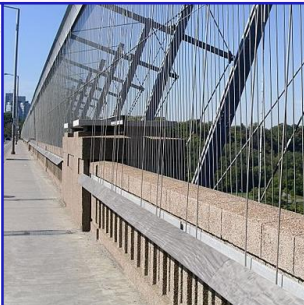


SEARCH STRATEGY

Database(s)	Search Terms
CINAHL Medline	(TI suicide OR TI suicidality) AND (TI prevent* OR TI education OR TI awareness OR TI screening OR TI surveillance OR TI promotion OR TI control OR TI strateg* OR TI method OR TI methodolog* OR TI identif* OR TI policy OR TI policies OR TI trial OR (TI restriction* AND TI means OR TI sale OR TI sales OR TI prescription OR TI prescriptions)) AND (global OR national OR community OR population) NOT (burden OR characteristic* OR demographic* OR epidemiolog* OR expla* OR gene OR genetic OR cross-sectional OR prevalence OR incidence)
EMBASE	(suicide:ti OR suicidality:ti) AND (prevent*:ti OR education:ti OR awareness:ti OR screening:ti OR surveillance:ti OR promotion:ti OR control:ti OR strateg*:ti OR method:ti OR methodolog*:ti OR identif*:ti OR policy:ti OR policies:ti OR trial:ti OR (restriction*:ti AND means:ti OR sale:ti OR sales:ti OR prescription:ti OR prescriptions:ti)) AND (global OR national OR community OR population) NOT (burden OR characteristic* OR demographic* OR epidemiolog* OR expla* OR gene OR genetic OR cross-sectional OR prevalence OR incidence)
PubMed	(suicide[MeSH] OR suicide, attempted[MeSH]) AND (prevent*[title] OR education[title] OR awareness[title] OR screening[title] OR surveillance[title] OR promotion[title] OR control[title] OR strateg*[title] OR method[title] OR methodolog*[title] OR identif*[title] OR policy[title] OR policies[title] OR trial[title] OR (restriction*[title] AND means[title] OR sale[title] OR sales[title] OR prescription[title] OR prescriptions[title])) AND (global OR national OR community OR population) NOT (burden OR characteristic* OR demographic* OR epidemiolog* OR expla* OR gene OR genetic OR cross-sectional OR prevalence OR incidence)
Scopus	(TITLE(suicide) OR TITLE(suicidality)) AND (TITLE(prevent*) OR TITLE(education) OR TITLE(awareness) OR TITLE(screening) OR TITLE(surveillance) OR TITLE(promotion) OR TITLE(control) OR TITLE(strateg*) OR TITLE(method) OR TITLE(methodolog*) OR TITLE(identif*) OR TITLE(policy) OR TITLE(policies) OR TITLE(trial) OR (TITLE(restriction*) AND TITLE(means) OR TITLE(sale) OR TITLE(sales) OR TITLE(prescription) OR TITLE(prescriptions))) AND (global OR national OR community OR population) AND NOT (burden OR characteristic* OR demographic* OR epidemiolog* OR expla* OR gene OR genetic OR cross-sectional OR prevalence OR incidence)

RESULTS

- Three broad groups of suicide interventions
- Means restriction⁹
 - Reduces access to common suicide methods
 - e.g. firearm bans¹⁰, pack size limits¹¹, jumping barriers¹²
- Education and surveillance⁶
 - Identifies and provides guidance to at-risk individuals
 - e.g. screening programs¹³, awareness campaigns¹⁴
- Therapeutic intervention⁸
 - Directly reduces suicidality in vulnerable individuals
 - e.g. antidepressants¹⁵, psychotherapy¹⁶, ketamine¹⁷



REFLECTION

- Process was an excellent introduction to public health
 - Three main learning points to discuss

KEY AFPHM THEMES

Theme 3.1

Public Health Information and Critical Appraisal

Theme 5.4

Chronic Disease, Mental Illness and Injury Prevention

LOOK PAST THE NUMBERS

learning point one

- **Firearms** are a leading cause of suicide mortality¹⁰
- However, gun bans are undermined by **means substitution**¹⁸
 - Banning one method -> rise in other methods
- **Jumping** is a much smaller cause of suicide mortality¹²
- BUT **bridge barriers** generally have **low** means substitution¹⁹
 - Proactive elements? Demographic profile?

- Can't interpret numbers in a vacuum



Learning Objective 3.1.5

Critically assess published literature and other evidence

Level 2

- interpret results of trials and measures of effectiveness
- understand strengths and weaknesses of research designs
- present well-reasoned conclusions.

UNDERSTAND YOUR TARGET

learning point two

- **Gatekeepers** are key to community suicide prevention²⁰
 - Recruited from specific **communities**
 - e.g. veterans²¹, schools²², LGBT²³ and ethnic minority²⁴ groups
 - Identify, support, and refer **at-risk individuals**²⁰



- Failing to consider one's demographic can be **DANGEROUS!**
 - e.g. some studies link AD to **increased suicidality** in adolescents^{25, 26}

Learning Objective 5.4.2	Advise on the determinants of chronic disease, mental illness and injury and their public health management	Level 2
<ul style="list-style-type: none">• understand the role of tobacco, inactivity, poor nutrition, deprivation, denial and abuse of human and Māori and Pacific Islander (NZ) and Aboriginal/Torres Strait Islander (Australia) rights, absence of social and emotional well-being, environmental hazards and other risk factors and determinants• understand how these factors can be mitigated.		

TOGETHER IS BETTER

learning point three

- Concurrent interventions are highly broad and sustainable
 - Can build on strengths and mitigate weaknesses^{22, 26}



- Inter-sectoral recruitment is a key aspect of prevention⁶
 - Health and allied health professionals
 - Governments and media outlets
 - Policy makers and administrators
 - Schools and workplaces
 - Community leaders (LGBT, social groups, ethnic minorities)

Learning Objective 5.4.6

Develop and implement effective intersectoral strategies for prevention of chronic diseases and mental illness

Level 1

- analyse prevention options
- use health protection and promotion strategies
- engage other sectors.

CONCLUSION

- Three broad groups of suicide interventions
 - Means restriction
 - Education and surveillance
 - Therapeutic intervention
- The best-performing strategies follow several principles
 - Look past the numbers
 - Understand the target demographic
 - Combine synergistic interventions

Theme 3.1

Public Health Information and Critical Appraisal

Theme 5.4

Chronic Disease, Mental Illness and Injury Prevention

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