

# Evidence of suicide prevention: effectiveness, knowledge gaps and lessons learned

**CONCLUSION** Suicide prevention is multi-disciplinary in nature and requires concerted action across sectors. The scientific literature on suicide prevention effectiveness collected and presented in this scoping review specifically suggests that:

- Restricting access to means and methods, telephone helplines and alcohol restrictions may be effective in reducing suicide
- School based suicide prevention may be effective in reducing suicide attempt
- Psychosocial interventions outside health care sector may be effective in reducing suicide ideation
- Evidence on intervention effectiveness is scarce or missing when it comes to certain risk groups such as elderly, unemployed or LGBT people

**BACKGROUND** Suicide is a public health concern in Sweden and globally with consequences extending beyond the individual tragedy and the health care sector. The Public Health Agency of Sweden is involved in the development of a new multisector governance structure to improve national and local level evidence-informed suicide prevention. This development process prompted the exploration of scientific literature on interventions with suicide, suicide attempts and suicide ideation as outcome measures.

**AIM** To assess intervention effectiveness of suicide prevention strategies carried out outside the health care sector and to identify target populations.

## PRELIMINARY RESULTS

- Categorization based on intervention strategy (figure 2) showed that reducing access to means and methods was the one intervention appearing most frequently in the literature followed by school based interventions. Evaluation of alcohol restrictions, suicide prevention centers and psychosocial interventions only appeared ≤2 reviews (categorized as “other”).
- The target populations (fig 3) most frequently included in the reviews were 1) the general population 2) students 3) veterans and military personnel and 4) persons with psychiatric problems or addictions. The reviews less frequently provided evidence on ethnic minority groups, prisoners, people who buys or owns weapons, rural populations and elderly (60+).

## KNOWLEDGE GAPS IDENTIFIED

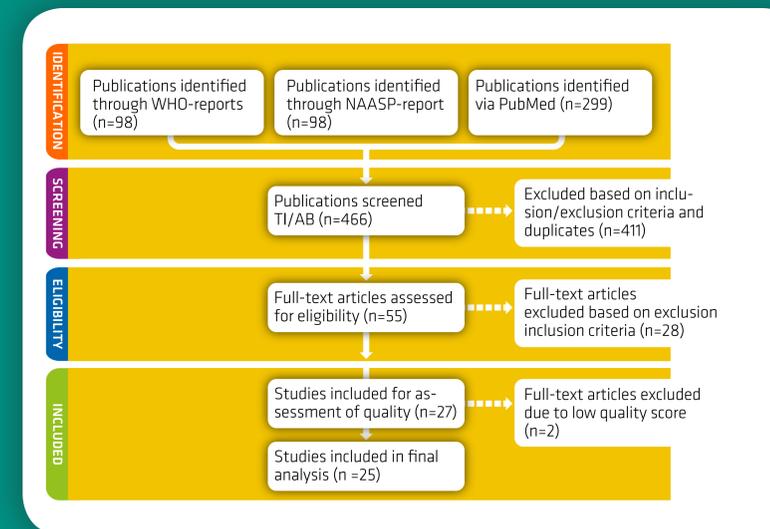
- No evidence was found for interventions targeting, unemployed, migrants and LGBT people who all are groups with an increased risk of suicide
- Very little evidence was found regarding the distribution of the intervention effect in different population sub-groups based on gender, socio-economic position, or a priori identified vulnerable populations
- No evidence was found regarding the potential consequences of an unequal distribution of intervention effectiveness on overall suicide related outcomes such as gender based differences.

**LESSONS LEARNED** The main challenges identified in the literature concerned difficulties achieving strong internal validity due to intervention complexity. It also concerned the difficulties of attaining sufficient effect size and ethical dilemmas.

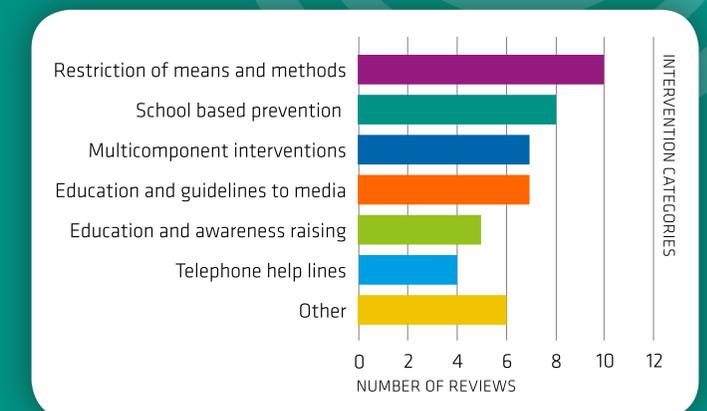
Evidence gathered through a review of reviews may not be enough to inform policy or practice since they do not provide sufficiently detailed descriptions of neither contextual factors, active elements nor casual pathways and principles of the intervention.

**METHODS** A scoping review of systematic reviews on intervention effectiveness, including assessment of quality, and equality, was carried out. Literature searches started in September 2014 and the final analyses were done in April 2015. Literature was identified through searches in PubMed and by applying inclusion and exclusion criteria on literature from two comprehensive reports on suicide prevention. The whole search process is illustrated in figure 1. The AMSTAR (Assessment of Multiple Systematic Reviews) tool was used for quality assessment which was done in by two independent pairs.

**FIGURE 1.** Search strategy illustrated through PRISMA flowchart (Moher et al.; 2009)



**FIGURE 2.** Number of reviews that have included studies about respective intervention category



**FIGURE 3.** Number of reviews that have included studies with respective target population

