Creating Hope Together

Scotland's Suicide Prevention Strategy 2022-2032

Social determinants associated with non-accidental self-harm: A rapid umbrella review.

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1. Introduction

Self-harm is a major public health concern in Scotland and other UK nations, as well as in several other countries. Although an individual may engage in self-injurious behaviours as a coping mechanism (rather than with the intention to die), there is a statistically significant association between self-harm and later suicide death. In 2021, the Scottish Government announced the development of a stand-alone self-harm strategy for Scotland, due to be published later in 2023. Although research indicates that some non-modifiable risk and protective factors (e.g., biology, genetics) are related to self-harm, it should be noted that there is a wide range of other factors (socio-economic, socio-cultural, psychological and psychiatric, among others) which can be modified or mitigated by action at different levels (individual, household/family, community and societal). It is, therefore, important to explore these wider determinants of health, with a view to identifying potentially effective interventions to prevent (further) self-harm and/or minimise psychological and social adversities associated with the behaviour.

Social determinants of health (SDHs) are defined by the World Health Organization (WHO, 2022) as 'non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life'. The WHO recognises ten SDHs: income and social protection; education; unemployment and job insecurity; working life conditions; food insecurity; housing, basic amenities and the environment; early childhood development; social inclusion and non-discrimination; structural conflict; and access to affordable health services of decent quality.

For the purposes of this review, self-harm is defined to include any intentional (non-accidental) behaviour which results in self-inflicted physical harm, and excludes suicide death and self-harm ideation (thoughts of self-harm).

To inform the proposed self-harm strategy, the Academic Advisory Group of the National Suicide Prevention Leadership Group has identified and synthesised findings from high-quality systematic reviews and meta-analyses. The aim of this rapid umbrella review is to establish the association, if any, between each SDH and self-harming behaviour.

2. Methods

Four major databases (CINHAL, MedLine, PsychArticles and PsychInfo) were searched to identify articles investigating social determinants (SDs) in relation to self-harm outcomes (defined as non-fatal self-harm, with or without suicidal intent) up to 29 November 2022. Concepts pertaining to SDs were as defined by the World Health Organisation (see above). Relevant search terms used to identify self-harm and SDs were generated using database subject headings (e.g., MeSH) and Boolean phrases (AND, OR; see appendix 1). Individual searches were performed on self-harm outcomes and each SD, separately.

2.1 Criteria

Included publications had to meet at least one of the following criteria:

i. a peer-reviewed literature review (including umbrella review and critical review), systematic review, meta-analysis or meta-synthesis
ii. explored self-harm outcome(s) in relation to at least one social determinant

iii. summarised the overall association (if any) between SD(s) and self-harm outcomes
iv. written in English.

Publications were excluded if:

i. a publication reporting findings from a primary research study, dissertation, editorial, conference abstract, letter to the editor or a book chapter
ii. investigated genetic health markers
iii. measured euthanasia or assisted suicide
iv. of demonstrably poor methodological quality (e.g., no PRISMA statement, no defined search terms, no study eligibility criteria)

No limitations were imposed on publication date.

2.2 Search strategy

In total, 614 publications were identified through the search process, reduced to 582 for title and abstract screening after removal of duplicates. Of these, 113 publications were eligible for full-text screening, with 19 meeting the inclusion criteria. The main reason for exclusion of full-text papers was lack of scientific rigour (n=47),with many publications being (non-systematic) literature reviews.

3. Results

Nineteen reviews were eligible for inclusion in this umbrella review. Self-harm outcomes included suicidal behaviour with undetermined intent, non-suicidal self-injury (NSSI), suicide attempt and, for one paper, thoughts and behaviours of non-suicidal self-injury measured collectively. For the rest of this review, all outcomes are referred to as self-harm. Specific self-harm outcomes for each study are included in the study summaries (appendix 2).

No publications were identified for the following social determinants (SDs): education and food insecurity. Between one and nine papers were identified for other SDs. Findings relating to each SD are summarised individually below.

3.1 Access to affordable health services of decent quality

Two reviews explored accessing/utilising health services in relation to self-harm, with both reporting a significant association. Witt et al. (2019) found that those with a history of presenting to hospital following self-harm were more likely to do so again at a later time, compared to those without such a history. Miranda-Mendizabal et al. (2019) found that those with a history of abortion were significantly more likely to engage in self-harm, when compared to those who had no history of abortion.

3.2 Early childhood development

Early life experiences identified in this review included childhood trauma (n= 7) and parental separation/divorce (n=1). These are discussed separately below.

3.2.1 Childhood trauma

Seven reviews (Castellvi et al. 2017; Dixon-Gordon, Harrison & Roesch, 2012; Evans et al., 2017; Ng et al. 2018; Valencia-Agudo et al. 2018; Witt et al., 2019; Zatti et al., 2017) investigated the association between childhood sexual trauma and later self-harm. Each found a significant association. Of these reviews, three (Castellvi et al., 2017; Ng et al., 2018; Zatti et al.,2017) conducted meta-analyses.

Overall effect sizes indicate that the prevalence of later self-harm was 1.5-4 times higher among those with a history of childhood sexual abuse than among those with no such history.

Four reviews (Castellvi et al., 2017; Evans et al. 2017; Valencia-Agudo et al., 2018; Zatti et al., 2017) explored physical abuse and neglect. Three reported a significant association with later self-harm, while Valencia-Agudo et al. (2018) reported conflicting results (between two studies).

Emotional abuse was explored in two studies (Castellvi et al., 2017; Zatti et al., 2017). Only Zatti et al. reported a significant association, with self-harm being almost four times more likely in those with a history of childhood emotional abuse, than those without (based on three studies). Data summarised by Castellvi et al. (2017) pertained to only one study, however the results were inconclusive. Additionally, emotional neglect was explored by Evans et al. (2017), who found no significant association between childhood emotional neglect and later self-harm.

3.2.2 Parental separation/ divorce

Miranda-Mendizabal et al. (2019) reported that parental separation or divorce was significantly associated with later suicide attempt in males but not in females.

3.3 Income and social protection

Two reviews explored income and social protection in relation to self-harm. Based on studies in low- and middle-income countries, Lemmie et al. (2016) found that 64% of papers reported a positive association between individual level-poverty and self-harm. On the other hand, Valencia-Agudo et al. (2018) found no association between individual socio-economic status and self-harm in a review of high-, middle- and low-income countries).

3.4 Housing, basic amenities and the environment

Evans et al. (2017) found that children and young people living in care homes were over three times more likely to engage in self-harm than those not living in care.

3.5 Interactions with the criminal justice system

One review investigated self-harm in offender populations (Dixon-Gordon, Harrison & Roesch, 2012). Self-harm was reportedly more prevalent in offender populations compared to non-offender populations, particularly for females and non-White groups.

3.6 Social inclusion and non-discrimination

Objective and subjective social inclusion and non-discrimination were investigated in 11 reviews across five sub-themes, discussed individually below.

3.6.1 Targeted violence

Violence targeted towards a specific individual (including dating violence, interpersonal violence and bullying) was explored in three reviews. Two reviews (Castellvi et al., 2017; Miranda-Mendizabal et al. 2019) found that those with experience of dating violence and interpersonal violence were twice as likely to engage in self-harm than those without such experience. Three reviews (Castellvi et al., 2017; Miranda-Mendizabal et al.; 2019; Valencia-Agudo et al., 2018) reported a positive, significant association between victimised bullying and self-harm.

3.6.2 Discrimination

Three studies (Castellvi et al., 2017; Hottes, 2016; Miranda-Mendizabal et al., 2019) investigated discrimination. Castellvi et al. (2017) and Miranda-Mendizabal et al. (2019) reported a significant association between community violence (e.g., homophobia, racism) and self-harm, while Hottes

(2016) found that the prevalence of self-harm was significantly greater for sexual minorities than heterosexual groups.

3.6.3 Age

Castellvi, Lucas-Romero et al. (2017) found that 12-26-year-olds with a history of suicidal ideation and previous self-harm were at more than a three-fold increased risk of suicide attempt compared to age peers with no such history. However, NSSI was not associated with suicide attempt among young people in the study by Castellvi, Lucas-Romero et al. (2017).

3.6.4 Urban/Rural

Barry et al. (2020) found that, compared to those living in urban areas, those living rurally were not at a significantly greater risk of suicide attempt. Subjective loneliness was significantly associated with suicide attempt in the review by Solmi et al. (2020).

3.6.5 Family cohesion

Valdivieso-Mora et al. (2016) observed that, compared to those reporting high familism (having family members who provides emotional and instrumental social support), those with low familism were significantly more likely to engage in a suicide attempt.

3.7 Unemployment and job insecurity

Unemployment and job insecurity was explored by two reviews. A systematic review of seven studies identified only one study which reported an association between unemployment and self-harm (Lemmie et al., 2016). On the other hand, a meta-analysis of 21 studies (Amiri, 2022) found that self-harm was 1.5 times greater among those who were unemployed compared to those who were employed.

3.8 Working life conditions

Two reviews investigated the association between occupation and self-harm. Experience of military sexual trauma (Forkus et al. 2021) and female sex work (Beattie et al. 2020) were significantly associated with self-harm compared to the absence of such experience.

4. Discussion

The aim of this rapid umbrella review was to explore the association between social determinants (SDs) and self-harm, based on evidence from systematic reviews and meta-analyses. Eligible literature was identified for eight of the ten SDHs (as defined by WHO, 2022) in relation to self-harm. Significant findings were noted for all these SDs.

Most of the included reviews (11 out of 19) related to social inclusion and non-discrimination. All indicated that, overall, there was a consistent association between targeted violence, discrimination and age, in relation to self-harm.

Findings from eight reviews indicated that early childhood development was significantly associated with self-harm. There were, however, some variations in this association based on the specific self-harm outcome. For example, the only systematic review to investigate parental separation/ divorce found an association with later self-harm in males but not females, and outcomes exploring emotional abuse and neglect were limited and inconsistent. Across all seven reviews, childhood sexual abuse was found to be significantly associated with later self-harm.

Two reviews reported a significant association between working life conditions and self-harm, though the specific predictor variable varied considerably between the reviews (military sexual trauma and female sex work). Unemployment and job insecurity, and income and social protection were each explored in two reviews. Despite both social determinants having similar predictor variables (unemployment and individual economic status, respectively), the findings were inconsistent.

Family cohesion, interactions with the criminal justice system, housing, basic amenities and the environment were each explored in a single review, with all reporting a significant overall association with self-harm. No papers exploring education or food security in relation to self-harm were eligible for this review. Although peer-review publications are biased towards publishing significant ('positive') results, the dearth of literature in relation to these two SDHs and self-harm does not necessarily reflect a lack of association between these variables.

4.1 Limitations

There was considerable heterogeneity across publications included in this umbrella review, especially regarding target populations. Most primary data summarised in this review were collected from Western and/or high-income countries, while literature on non-Western and low-middle income countries was under-represented and sociodemographic or socio-economic characteristics (e.g., age, economic status) varied substantially. Additionally, only half of these reviews included papers based on samples in the UK, and none was based exclusively in Scotland. Although White participants were over-represented in this umbrella review, the generalisability of these findings to the Scottish population cannot be assumed.

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Appendix 1. Search terms

Concept	Search
Self-harm	MM "Nonsuicidal Self-Injury" OR MM "Self-Inflicted Wounds" OR (MH "Wounds, Stab") OR (MM "Self Mutilation") OR (MM "Self-Injurious Behavior") OR "self-harm" OR "self-poison*' OR self-injur* OR attempted suicide or suicidal attempt or suicide attempt
'AND' one of the following	
Access to affordable health services of decent quality.	Health Services Accessibility OR Universal Health Care OR Right to Health OR Health Equity OR Healthcare disparities OR Health literacy
Education	(MM "Educational Status") OR (MH "Literacy") OR (MH "Academic Failure") OR Educational Attainment Level OR Illiteracy OR literacy
Income and social protection	DE "Income (Economic)" OR DE "Income Level" OR DE "Economic Disadvantage" OR DE "Economic Inequality" OR DE "Economic Security" OR (MH "Poverty") OR (MH "Social Class") OR (MH "Child Poverty") OR (MH "Budgets")
Early childhood development	(MM "Child Development") OR (MH "Language Development") OR (MH "Child") OR (MH "Child, Preschool") OR (MH "Bone Development") OR (MH "Fetal Growth Retardation") OR DE "Early Childhood Development" OR DE "Early Experience"
Food insecurity	(MM "Food Insecurity") OR (MH "Food Security") OR (MH "Access to Healthy Foods") OR (MH "Food Deserts") OR (MH "Food Security") OR (MH "Access to Healthy Foods") OR DE "Food Deprivation" OR DE "Food Insecurity"
Housing, basic amenities and the environment	(MM "Housing Instability") OR (MH "Poverty") OR (MH "Homelessness") OR (MH "Housing") OR (MH "Medically Underserved Area") OR (MH "Neighborhood Characteristics") OR (MH "Housing Instability") OR (MH "Housing")
Interactions with the criminal justice system	DE "Criminal Behavior" OR DE "Criminal Conviction" OR DE "Criminal Justice" OR DE "Criminal Offenders" OR DE "Criminal Profiling" OR DE "Criminal Record" OR DE "Mentally Ill Offenders" OR (MH "Criminal Justice") OR (MH "Deportation") OR (MH "Public Offenders") OR (MH "Repeat Offenders") OR (MH "Theft") OR (MH "Crime") OR (MH "Gangs")
Social inclusion and non-discrimination	(MM "Social Inclusion") OR (MH "Social Norms") OR (MH "Social Behavior") OR (MH "Social Conformity") OR (MH "Social Isolation") OR (MH "Vulnerability") OR (MH "Interpersonal Relations") OR (MH "Life Style") OR (MH "Prejudice") OR (MH "Social Attitudes") OR (MH "Public Opinion") OR (MH "Social Deprivation") OR (MH "Social Participation") OR (MH "Social Perception") OR (MH "Social Comparison") OR (MH "Social Class") OR (MH "Social Alienation") OR (MH "Risk for Loneliness (NANDA)") OR (MH "Social Isolation (NANDA)") OR (MH "Social Defeat") OR (MH "Social Contact (Omaha)") OR (MH "Social Cohesion") OR DE "Discrimination" OR DE "Social Class" OR DE "Social Class Bias" OR DE "Social Cohesion" OR DE "Social Comparison" OR DE "Social Deprivation" OR DE "Social Desirability" OR DE "Social Disadvantage" OR DE "Social

Concept	Search
	Discrimination" OR DE "Social Equality" OR DE "Social Equity" OR DE "Social Exclusion" OR DE "Social Groups" OR DE "Social Health" OR DE "Social Status" OR DE "Stigma" OR DE "Social Inclusion" OR DE "Social Integration" OR DE "Social Interaction" OR DE "Social Isolation"
Unemployment and job insecurity	(MH "Employment") OR (MM "Unemployment") OR DE "Employment Status" OR DE "Employment History" OR DE "Job Loss" OR MM "Job Security" OR (MM "Job Security") OR (MH "Employment Status")
Working life conditions	DE "Social Environments" OR DE "Job Enrichment" OR DE "Noise Levels (Work Areas)" OR DE "Occupational Safety" OR DE "Telecommuting" OR DE "Work Rest Cycles" OR DE "Work Week Length" OR DE "Workday Shifts" OR DE "Working Space" OR DE "Disabled Personnel" OR DE "Employee Well Being" OR DE "Job Demands" OR DE "Occupational Exposure" OR DE "Occupational Health" OR DE "Organizational Climate" OR DE "Quality of Work Life" OR DE "Work Load" OR DE "Work Related Illnesses" OR DE "Workplace Violence" OR (MH "Work-Life Balance") OR (MM "Quality of Working Life") OR (MH "Work Environment") OR (MH "Life Course Perspective") OR (MH "Workplace") OR (MH "Workplace Violence") OR (MH "Occupational Stress")

Appendix 2 Characteristics of included studies.

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
Amiri, S. (2022)	N= NA No. ps=: 21	International	to perform a new meta-analysis that examines suicide deaths, suicide attempts, and suicidal ideation in the unemployed population.	Suicide attempt	Unemployment is associated with suicide attempts (OR: 1.54; CI: 1.26–1.89; z=4.16; p<.001)
Barry et al. (2020)	N= NA No. ps=: 11 Living in rural areas	Canada, United States United Kingdom Australia.	'to determine whether those living in rural areas are more likely to complete or attempt suicide.'	Suicide attempt	No association found between rurality and suicide attempts (RR= 0.93, 95% CI, 0.73 to 1.19, I2= 85%).
Beattie et al. 2020	N= 1,122,054 No. ps=: 8 Female sex worker population	26 LMICs: sub-Saharan Africa (n=13), Middle East and North Africa region (n=1), in Eastern Europe (n=1), South East Asia (n=2), Western Pacific Region (n=5), Latin America and Caribbean (n=4)	'to estimate the prevalence of mental disorders among FSWs in LMICs, and to examine associations with factors that commonly affect their health and well-being (violence, alcohol and drug use, condom use, HIV/STI).'	Suicide attempt	Lifetime prevalence of suicide attempt among female sex workers from LMICs is 6.3% (95% CI 3.4–11.4%).
Castellvi et al. (2017)	N= NA No. ps=: 29 12–26-year-olds	Most (64%) based in USA. No further details.	To assess 'the risk of suicide attempts and of suicide deaths in youths and young adults for previous exposure to a comprehensive series of interpersonal violence types; and (ii) the population	Suicide attempt	*Childhood physical abuse*: (OR = 2.53, 95% CI: 1.66–3.87) *Childhood sexual abuse* (OR = 3.87, 95% CI: 2.31–6.49)

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
			attributable risks of suicide attempt and suicide associated with interpersonal violence.		*Childhood emotional abuse* (in one study a difference was observed but significance was not reported) *Neglect* (OR = 1.76, 95% CI 0.71–4.36) *Bullying* (OR = 2.39 (95% CI: 1.89–3.01) *Dating violence* (OR = 1.65 (95% CI: 1.40–1.94) *Community violence* (OR= 1.48, 95% CI:1.16–1.87), *Interpersonal violence* (1.99, 95% CI: 1.73–2.28)
Castellvi, Lucas-Romero et al. (2017)	N= 1,122,054 No. ps=: 29 Children and young people	NA	'to disentangle the association of each SITB with subsequent suicidal behavior in adolescence/young adulthood, the contribution of each SITB'	Suicide attempt	*Suicidal ideation*: 3.26 (95% CI: 2.26–4.70) *NSSI*: OR=0.70; 95% CI: 0.35–1.40). *Previous self-harm*: OR=4.37; 95% CI: 2.88–6.63).
Dixon-Gordon, Harrison & Roesch (2012)	N= NA No. ps=: 46	Australia Greece Spain United Kingdom USA	'to integrate existing research on NSSI within correctional settings.'	Non-Suicidal Self-Injury: functioning to help individuals to cope with life	

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
Evans et al. (2017)	N= 373,674 No. ps.=5	Australia Canada England USA	'Compares the prevalence rates of suicidal ideation, suicide attempt and suicide in children and young people that have been placed in care and non-care populations.'	Suicide attempt	Children and young people living in care were over three times more likely to make a suicide attempt than those not living in care.
Forkus et al. (2021)	N= range from 86 to 6,351,854 No. ps.=15 Predominately male (ranging from 41.6% to 94.0%) and White (ranging from 25.0% to 92.0%).		To summarise 'the nature of the relation between military sexual trauma and risky behaviours.'	Suicide attempt	Military sexual trauma was significantly associated with suicide attempts. However, the association was no longer significant after adjusting for pre-military sexual trauma.
Haney (2020)	N= 24,996 No. ps.=55	United Kingdom Australia India USA	'to synthesize the existing research on the association between NSSI and religiosity to determine whether NSSI and religiosity are significantly associated,'	NSSI	The meta-analysis showed a small but significant negative correlation between NSSI and religiosity (r= 0.101, p 0.001).
Hottes et al. (2016)	N= N/A No. ps.=15	United States, Canada, Western Europe.	to reassess the burden of suicide-related behaviour among sexual minorities	Suicide attempt	Prevalence of suicide attempt in the last 12 months was b=0.04 (95% CI=0.03, 0.05) for heterosexual and b=0.11 (95% CI=0.08, 0.15) for

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
					sexual minority respondents in population surveys.
Lemmi et al. (2016)	N= NA No. ps.: 19	Numerous	'explore the association between suicide and poverty in low-income and middle-income countries.'	non-fatal suicidal ideations and behaviours including suicidal ideation, plan, attempt, and self-harm	Monthly income was associated with lifetime prevalence of suicidal attempts (OR= 0.2, 0.06–0.6). In India, perceived economic status was associated with 12-month prevalence of suicide attempt (OR= 2.92, 1.63–5.21). One Iranian study reported a positive association between unemployment rates and suicide attempts (OR= 2.54, 95% CI 1.08–5.98).
Liu et al. (2018)	N= NA No. ps.: 71	NA	'to examine childhood maltreatment, including its specific subtypes, in relation to NSSI'	Non-suicidal self-injury	Childhood maltreatment was associated with approximately three times greater likelihood of NSSI,
Miranda-Mendizabal et al. (2019)	N= NA No. ps.: 27	Predominantly from the USA (n = 13) and Canada (n = 4). No further details.	'To assess the association between gender and suicide attempt/death and identify gender-specific risk/ protective factors in adolescents/ young adults'	Suicide attempt	*Previous abortion* (OR 1.3, 95% CI 1.09–1.55). *Bullying* (females: OR 6.30, 95% CI 1.53–25.90; males: OR 3.8, 95% CI 1.01–14.30),

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
					Childhood maltreatment (females: OR 3.77, 95% CI 2.13–6.68; males: OR 2.76, 95% CI 1.20–6.36), *Community violence* (females: OR 1.68, 95% CI 1.42–1.99; males: OR 1.83, 95% CI 1.48–2.26), *Dating Violence* (towards females; OR 2.19, 95% CI 1.29–3.71) *Interpersonal difficulties* (towards females; OR 1.13, 95% CI 1.03–1.24). *Parental separation or divorce* (in males; OR 1.56, 95% CI 1.01–2.41)
Ng et al. (2018)	N= No. ps.: 67 aged 12–26 years	Western countries	Explore the association between childhood sexual abuse and later suicidal behaviour.	Suicidal behaviour (attempt)	Early life sexual abuse is a significant risk factor for suicide attempts (pooled OR:1.89, 95% CI: 1.66 - 2.12)
Solmi et al. (2020)	N= 10,726 No. ps.: 14	NA	'to grade the evidence on risk factors and health outcomes associated with loneliness, using an umbrella review approach.'	Suicide attempt	Loneliness was associated with suicide attempt OR= 2.24 (95% CI: 1.73-2.90)

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
Valdivieso-Mora et al. (2016)	N= n/a No. ps.: 5	NA	'Assessing the relationship between familism and five mental health outcomes'	Suicidal attempts (any act of self- harm or intention of hurting or killing oneself)	Suicide attempts showed a small effect with familism (d = 0.20).
Valencia-Agudo et al. (2018)	N= n/a No. ps.: 39	New Zealand USA Sweden Scotland Hong Kong Belgium Australia England China	'to determine prospective predictors, mediators and moderators of NSSI in adolescent community samples'	NSSI	*SES*: Across four studies, SES variables found no significant effect with NSSI *Physical abuse*: conflicting results between two studies *Sexual abuse*: two studies investigated with both reporting a significant, strong association between sexual abuse and NSSI (7-8) increased risk. Peer victimisation: of seven studies, five found a significant association, two did not.
Witt et al. (2019)	N= 10,726 No. ps.: 17 Mean age: 17.3 years	Australia France Norway Switzerland United Kingdom USA	'To identify and quantify the magnitude of the association of risk and/or protective factors for the repetition of self-harm behaviour following an episode of hospital-treated self-harm in young people.' (under 20 years old)	self-harm and suicide re-attempts	Subsequent hospital presentation following self-harm after index presentation was reported as significant in 15 of 17 included papers.

Author, year	Total sample size (n), number of publications included (no. ps.), other details:	Countries included	Aim	Self-harm outcome	Result
	Weighted gender: 76.3% female	Unknown (n=2)			
Zatti et al. (2017)	N= 6612 No. ps.= 7	Canada New Zealand South Africa Switzerland	'To conduct a meta-analysis of longitudinal studies published in the last 10 years about the relationship between childhood trauma and lifetime suicide attempt risk'	suicide attempt	*Sexual abuse*: OR=3.73, 95%CI 2.94–4.75; *Emotional abuse*: OR=3.98, 95%CI 2.81–5.65; *Physical abuse*: OR=4.12, 95%CI 2.31; *Emotional neglect*: OR=4.69, 95%CI 0.84–25.69; *Physical neglect*: OR=3.42, 95%CI 2.09–5.59; *Broken home*: OR=2.14, 95%CI 1.10–4.13)

N= total number of participants. No. ps.= total number of publications. N/A= not available. b= unstandardised coefficient. d= Cohen's d. OR= odds ratio. 95% CI = 95% confidence interval. SES= socioeconomic status. NSSI= non-suicidal self-injury. SITB= self-injurious thoughts and behaviours

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