



## Effective recognition and mitigation of self-harm and suicide among adolescents

Sadiyah Begum<sup>1</sup> ✉

<sup>1</sup>School of Nursing and Midwifery, University of Birmingham, Birmingham, United Kingdom

✉ [SBX1547@alumni.bham.ac.uk](mailto:SBX1547@alumni.bham.ac.uk)

### Abstract

Self-harm and suicide are related behaviours and there are circumstances where individuals may engage in self-harming behaviours without the intention of ending their life. Risk of suicide among adolescents is increasing (Bould et al., 2019; Iacobucci, 2020), warranting its focus in this paper. To tackle the issue of suicide, identifying risk factors is essential in practice to mitigate risk of harm. Risk factors among adolescents includes appetite loss, antidepressants, high impulsivity, low social support, and self-esteem, tobacco and any psychiatric illness, such as depression. A notable finding in existing literature is the interrelationship between self-harm and suicide, suggesting risk factors for self-harm can also help to identify those at risk of suicide in practice. A key challenge in the recognition of risk factors among adolescents relates to the stigma surrounding mental health, which is associated with reluctance to disclose behaviour that may signal concern. Adolescents may be reluctant to share concerns and there is a lack of research exploring the reasons for this and the ways this challenge can be addressed. Improving healthcare professional awareness about risk factors and specific challenges that adolescents experience in disclosing them can aid collaborative working between adolescents and healthcare professionals to improve outcomes. This paper discusses key issues related to the recognition of risk factors, which may aid mitigation for adverse outcomes.

**Keywords:** Suicide; Self-harm; Risk factors; Adolescents

## Introduction

Self-harm is the deliberate act of inflicting injury or damage to oneself. This can present in various ways such as cutting, burning and hitting oneself (Angelotta, 2015; Azam et al., 2017). Suicide is an act of intentionally causing one's own death (Azam et al., 2017; Harmer et al., 2023). Not all cases of suicide are intentional. There are situations where individuals may engage in self-harming behaviours without the intention of ending their life. Clinical features of self-harm can be visibly evident in cutting or burning or self-poisoning by overdose. In contrast, the clinical features of suicidal thoughts may be ominous or ambiguous with patients presenting with feelings of hopelessness, distract, lack of pleasure or preoccupation of death (Azam et al., 2017).

Identifying risk factors for both self-harm and suicide is essential in mitigating potentially fatal outcomes or harmful behaviours (Dovjak and Kukec, 2019). This is a particularly pertinent issue among adolescents because it is when children go through a lot of changes physically, emotionally, and socially and are at a period of risk (Best and Ban, 2021; Uccella et al., 2023). Adolescents can become vulnerable to mental health problems such as depression, eating disorders (ED) and psychosis (Blakemore, 2019), increasing the risk of self-harm or suicide.

Since 2012, the Department of Health has outlined a 'preventing suicide strategy' to save lives. Despite this, suicide and self-harm among young people is increasing (Garratt et al., 2024). Typically, suicidal thoughts become prevalent between 12-17 years (Nock et al., 2012) and suicidal deaths between 15-19 (Kolves and de Leo, 2017). Youth who self-harm tend to be younger and those who commit suicide tend to be older (Cybulski et al., 2021) suggesting a deterioration over time. While every case is unique, identifying risk factors that can be applied in healthcare practice may help mitigate further increase and prevent harm (Levi-Belz et al., 2019). Identifying risk factors should start early to ensure best possible treatment success so patients avoid further deterioration post-adolescence. Support and intervention from caregivers, such as parents and teachers, that is maintained and regular, can alleviate risk of negative outcomes to mental health (Dalton et al., 2020).

This paper critically discusses the evidence related to a number of risk factors among adolescents which may aid health professionals in the recognition and initiation of mitigation plans that ultimately prevent harm.

## Discussion of Evidence

Risk factors for both self-harm and suicide among adolescents are identified as appetite loss (Kitagawa et al., 2017), depression, any psychiatric illness and being prescribed antidepressants (Cybulski et al., 2021). Risk factors for self-harm are high impulsivity (Aldrich et al., 2018), suicidal ideation (SI), low social support and self-esteem (Huang et al., 2017). In contrast, specific risk factors for suicide include the use of tobacco (Huang et al., 2017) and history of self-harm (Cybulski et al., 2021).

### The relationship between self-harm and suicidal ideation

Self-harm may predict SI, but the interrelationship is complex. Evidence suggests there is a bidirectional relationship between self-harm and suicide. Engaging in self-harm increases likelihood of SI (Ribeiro et al., 2016; Asarnow et al., 2020) and having SI increases the likelihood to engage in self-harm (han et al., 201; Iorfino, 2020). This supports the claim that risk factors for either potentially apply to both self-harm and SI. Suicide is considered a type of self-harm because it is deliberate (Clarke et al., 2019). However, some

literature challenges this assumption. For example, personality traits such as high impulsivity is considered a predictor for self-harm (Aldrich et al., 2018) and some theory supports that suicidal individuals may have a tendency for high impulsivity (Klonsky and May, 2015; Ramezani, 2024). The reasoning is that impulsivity can transition and translate to suicidal behaviour, involving planning and executing suicidal actions (Paashaus et al., 2021). In contrast, studies such as Moore et al. (2022) and Hadzic et al. (2019) claim that there is a weak relationship between impulsivity and SI and that each situation is individual. This suggests that distinct factors and circumstances should be considered in the recognition of risk.

## **Antidepressants and risk of suicide**

The therapeutic use of antidepressants does not increase the risk of suicide. Cybulski et al. (2021) suggest that antidepressant use may predict self-harm and suicide, however numerous other studies do not support this finding. Critical appraisal of Cybulski et al. (2022) study reveals numerous shortfalls in the methodology which could explain differing findings. Cybulski et al. (2022) extracted data from electronic health records. While Weiskopf and Weng (2013) emphasise the quality of electronic health records in terms of their 'completeness' and 'correctness', the method of data collection relies on the accurate input of data and presents limitations when data may be missing. This is limited by the coding strategy used in the study. To gather case controls characteristics, the authors used Read Codes and International Classification of Disease coding version 10 (ICD-10). This strategy is common and a helpful way to categorise the conditions and traits of individuals, especially in hospital and emergency department statistics (Peng et al., 2018). However, the reliability of ICD-10 coding is questioned by numerous sources (Daniels et al., 2021; Asadi, Hosseini and Almasi, 2022) where its complexity led to significant uncertainties and lack of standardisation (Stausberg et al., 2008). Despite the potential limitations in the coding approach, the data recorded and gathered using the Clinical Practice Research Datalink (CPRD) enables a thorough analysis of several related factors through its rich and large data (Herrett et al., 2015)

Some antidepressants have warning labels to warn there is an increased risk of suicidality (Nydegger, 2014), but there is a lack of certainty in existing literature. A study by Coupland et al. (2015) showed no significant difference in the rate of self-harm and suicide with antidepressants. Health professionals must consider the circumstances of individuals and whether use of antidepressants could be a predictor. Regardless of the possible association with increased risk of suicide, the benefits offered by antidepressant use is well-documented and evidenced. A meta-analysis by Cipriani et al. (2018) accounts strongly for the efficacy of antidepressants through many randomised controlled trials with placebos. Given that depression and suicide are linked (Orsolini et al., 2020), antidepressants are beneficial once therapeutic effect is achieved and unlikely to increase risk of self-harm, SI and suicide.

## **Appetite, eating disorders, self-harm and suicide**

Changes in appetite and pre-existing psychiatric illness are associated with increased risk of self-harm, SI and suicide. Kitagawa et al. (2017) suggests appetite loss is a strong predictor for self-harm and suicide among adolescents but, there is not a casual long-term association reported as this research design was cross-sectional. While Kitagawa et al. (2017) concluded that appetite loss is a predictive factor, there may be other explanations for appetite changes. For example, Fujihira (2023) suggests appetite may change from season to season and Connelly (2016) implies that cross-sectional studies show inability to determine causality. This supports the notion that appetite may be variable and not predictive of self-harm or suicide in Kitagawa et al. (2017). Understanding individual appetite changes over time can better inform health professionals in recognising risk. EDs among adolescents may present with appetite loss (Witte et al., 2023).

Perkins et al. (2021) conducted a longitudinal study that highlighted both bulimia nervosa and anorexia nervosa may present with appetite loss among adolescents which is associated with self-harm and SI after 6 months. Ahn et al. (2019) found suicidal attempts were recorded in 20.8% of 899 patients with a diagnosed ED. In addition, a study by Patel et al. (2021) found that adolescents with anorexia nervosa exhibit a higher prevalence of suicidal ideation (45.8%) compared to those with bulimia nervosa (36.7%). More recently, a meta-analysis by Amiri and Khan (2023) found a high prevalence of both self-harm and suicide is associated with a diagnosis of ED. Overall, existing literature suggests that appetite changes are a recognised risk factor associated with self-harm, SI and suicide.

EDs and appetite loss is associated with psychiatric disorders, including mood disorders (Witte et al., 2023; Favril et al., 2023). Thirty-eight meta-analyses found that psychiatric disorders including mood-disorders and EDs can be responsible for a ten-fold increase in suicidal-related deaths (Favril et al, 2023). Suicide cases worldwide are predominantly psychiatric illness related (Bachmann, 2018) suggesting that any psychiatric illness, including depression among adolescents increases the risk of suicide (Kobeissy, 2019; Cybulski et al., 2022). Many researchers agree that depression is linked to suicidality (Bernaras et al., 2019; Cai et al, 2021; Grossberg and Rice, 2023) meaning it is a risk factor that can enable health professionals to recognise and mitigate self-harm, SI and suicide.

## **Social isolation, self-harm and suicide**

Social isolation and low self-esteem are associated with increased risk of self-harm and suicide. Huang et al. (2017) suggests that a lack of social support and low self-esteem are risk factors for self-harm, but not suicide. Huang et al. (2017) drew data from self-reported anonymous questionnaires. This was useful in knowing the participants short, quick and easy answers in relation to the questions. However, there is a risk of response bias. Referenced standard assessment tools were used in this study showcasing reliability and validity, but students may answer questions in a way that they think is socially desirable or that they believe aligns with what the researcher wants to hear (Althubaiti, 2016; Sadan, 2017), especially when it comes to sensitive topics like SI/Self-harm (Conelly, 2016). This can affect the accuracy and reliability of the data collected.

Despite the limitations of Huang et al. (2017), theory by Joiner (2005) supports that low social support and low self-esteem is associated with self-harm as well as suicide. Joiner (2005) claims that this association can be explained by the interpersonal psychological theory of suicide. Joiner (2005) suggests some individuals may be more prone to suicidal thoughts and behaviours and there are three dominant factors that contribute towards increased risk of suicide: “perceived burdensomeness”, “thwarted belongingness”, and “acquired capability”. While ‘acquired capability’ relates to individuals taking action, ‘perceived burdensomeness’ and ‘thwarted belongingness’ relate to how low levels of social support might contribute towards social disconnection and lack of reciprocal experiences and self-esteem (Diamond, 2022). Motillon-Toudic et al. (2022) suggest this and explains how low social support and social isolation is associated with suicide. Furthermore, a study by Almansour and Siziya (2017) found that loneliness and lack of close friends contribute to SI which is linked to low social support. Social connectedness is closely related to self-esteem, and both have found to be associated with self-harm (Forrester et al., 2017; Junker et al., 2019). This connection is also strengthened in a systematic review by Dat et al. (2022) overall highlighting that literature consistently indicates low social support and low self-esteem are risk factors for self-harm, SI and suicide.

## **Tobacco, self-harm and suicide**

Tobacco use may be a risk factor for SI, suicide and self-harm. Tobacco is reported to be a predictor for

suicide but not self-harm among adolescents (Huang et al., 2017). In addition, Cho (2020) found that tobacco use is highly associated with SI in a cross-sectional study. These claims are further supported by Poorolajal & Darvishi (2016) who conducted a meta-analysis that found strong evidence that smoking is a risk factor for suicide. However, there are a few studies that have found an association between smoking as a risk factor for self-harm. Despite this, a study by Korhonen et al. (2018) found significant increased risk for self-injury among adolescents who regularly use tobacco. Smoking can increase perceived pleasure among young adults (Gubner et al., 2018) therefore the likelihood that adolescents consider smoking as self-harm is minimal. Some researchers argue that because tobacco use is evidenced to cause health problems, it should be considered a method of self-harm (Burešová, 2016). While there is some debate in this area, evidence suggests that tobacco use is a risk factor for SI and suicide and may be considered an act of self-harm itself.

## Implications for practice

Identifying risk factors for self-harm and suicide is important because it allows for a proper holistic assessment of adolescents to assess the likelihood they would engage in self-harm and suicide. Wright, Dave & Dogra (2017) suggest health professionals should question adolescents about risk factors sensitively and gently. If the questions lead to the notion of self-harm and the urge is present, the risk is high. However, many adolescents do not disclose their intent or seek help, even when known to suffer from a current mental health challenge (Divin et al., 2018). Disclosure is an ongoing issue which has been discussed in professional literature for over a decade. Rickwood et al. (2007) noted that youth are less likely to or do not seek professional help despite experiencing mental health problems. This raises questions about whether the issue lies with the youth or health services. Dillinger (2021) suggests disclosure may be limited due to stigma surrounding mental health problems. Some adolescent patients will avoid being vulnerable to healthcare providers because of difficulty in trusting health professionals (Schouten, 2017). This may result in dismissive behaviours from adolescents in response to questions asked about suicide or self-harm. Pearson & Hyde (2020) highlights that many adolescents with mental health problems prefer to seek help from informal sources such as friends and family. It may be that adolescents fear escalation of concerns which alters their engagement with professionals in both schools and clinical areas. Healthcare professionals and many young people are aware that there is a professional and legal duty to escalate situations if patients pose a threat to themselves and/or public as specified by the Department of Health & Social Care (2021) and The Care Act (2014). Parents generally require to be informed about their child's problems (Care Quality Commission, 2019) and the Department for Education (2024) encourages schools and colleges to share information about concerns relating to the welfare of children with parents or guardians. However, adolescents may fear escalation of concerns to their parents and other professionals, which may contribute towards their reluctance to discuss and share accurate information about risk factors. This can present barriers to mitigation efforts in clinical practice. More research is needed to understand how fear of escalation plays a role in why adolescents refrain from disclosing to professionals and pursuing professional assistance.

The concept of Gillick competence is important to consider in this discussion. Gillick competence is relevant in all situations, but particularly in cases where there are risk factors and competency is required for a child under the age of 16 to decide. If a child under 16, has capacity, they will be able to understand the evidence-based information provided by health professionals, they can weigh up risks and benefits and make a voluntary decision (Griffith, 2016). This means parents do not have to make any decisions or even be informed if there is a conflict with the child's decision. A qualitative study by Meinhardt et al. (2022) in New Zealand found that young people want a voice in the development of processes that affect them, specifically



in favour of student led decisions including the contents shared about their cases. This raises important questions about whether parents of Gillick competent children should be informed about potential or actual self-harming behaviours and increased risk of SI and suicide. The decision to share information with parents hinges on the disclosure and co-operation of adolescents with health professionals. More research would be valuable in other populations to see if they share similar concerns, and an attempt should be made to change ways in adolescent settings that are favourable to them.

At times, additional barriers for disclosure exist. For example, culture may influence what is considered acceptable and whether mental health problems are stigmatised. Among ethnic minority groups, stigmatisation is more likely when compared with white ethnicity and this may influence whether adolescents from ethnic minorities disclose information (Misra et al., 2021). Cultural reluctance can further complicate the clinician's ability to engage with patients effectively and may lead to an underreporting of SI. This along with fear of escalation can express the necessity of a nuanced understanding of each adolescent's unique case. Health professionals require skills in recognition and screening for risk factors that appreciate the barriers to disclosure of information and can inform their assessment and decisions. Many clinicians do not routinely screen for suicide risk (Inman et al., 2019), despite the importance of recognition and plans for mitigation before situations escalate. Once recognised, suicidal interventions are more likely to be effective if they are collaborative and team based (Breslin et al., 2020) meaning every health professional in the multidisciplinary team plays a role in identifying risk factors and contributing towards mitigation.

This paper has discussed a range of risk factors that are evidence based. This may aid health professionals in recognising risks factors and making plans to mitigate self-harm, SI and suicide while also understanding the complexities of adolescents seeking help.

## Conclusion

There are a range of risk factors identified in this paper for self-harm, SI and suicide among adolescents. A notable finding highlighted in this paper is the interrelationship between self-harm, SI and suicide suggesting risk factors for self-harm and SI can also indicate increased suicide risk. Evidence suggests self-harm risk tends to occur among younger adolescents and suicide in older adolescents which can be useful for health professionals to consider in holistic assessments to prevent attempted suicide as they develop. This paper highlights that disclosure of risk factors is very sensitive and personal and that a fear of escalation may influence disclosure. Even when adolescents are Gillick competent, disclosure and seeking help may be influenced by several factors including stigma, cultural norms or expectations. This paper advocates for attempts to understand adolescents, so that risks factors can be identified, and collaborative approaches can be adopted for mitigation plans that improve their quality of life.

## Reference list

- Ahn, J., Lee, J. H. and Jung, Y. C. (2019) 'Predictors of suicide attempts in individuals with eating disorders'. *Suicide & Life-Threatening Behavior*, 49(3), pp. 789–797. <https://doi.org/10.1111/sltb.12477>
- Aldrich, J. T., Wielgus, M. D. and Mezulis, A. H. (2018) 'Low physiological arousal and high impulsivity as predictors of self-injurious thoughts and behaviors among adolescents', *Journal of Adolescence*, 62, pp. 55–60. <https://doi.org/10.1016/j.adolescence.2017.11.006>
- Almansour, A. M. and Siziya, S. (2017) 'Suicidal ideation and associated factors among school going adolescents in Swaziland'. *African Health Sciences*, 17(4), pp. 1172–1177. <https://doi.org/10.4314/ahs.v17i4.26>
- Althubaiti A. (2016) 'Information bias in health research: definition, pitfalls, and adjustment methods'. *Journal of Multidisciplinary Healthcare*, 9, pp. 211–217. <https://doi.org/10.2147/JMDH.S104807>

- Amiri, S. and Khan, M. A. (2023) 'Prevalence of non-suicidal self-injury, suicidal ideation, suicide attempts, suicide mortality in eating disorders: a systematic review and meta-analysis'. *Eating Disorders*, 31(5), pp. 487–525. <https://doi.org/10.1080/10640266.2023.2196492>
- Angelotta, C. (2015) 'Defining and refining self-harm'. *The Journal of Nervous and Mental Disease*, 203(2), pp. 75–80. <https://doi.org/10.1097/nmd.0000000000000243>
- Asadi, F., Hosseini, M. A. and Almasi, S. (2022) 'Reliability of trauma coding with ICD-10'. *Chinese Journal of Traumatology*, 25(2), pp. 102–106. <https://doi.org/10.1016/j.cjtee.2021.08.005>
- Asarnow, J. R., Goldston, D. B., Tunno, A. M., Inscoc, A. B. and Pynoos, R. (2020) 'Suicide, self-harm and traumatic stress exposure: A trauma-informed approach to the evaluation and management of suicide risk'. *Evidence-Based Practice in Child and Adolescent Mental Health*, 5(4), pp. 483–500. <https://doi.org/10.1080/23794925.2020.1796547>
- Azam, M., Qureshi, M. and Kinnair, D (2017) *Psychiatry: A Clinical Handbook*. Bandbury: Scion Publishing
- Bachmann S. (2018) 'Epidemiology of suicide and the psychiatric perspective'. *International Journal of Environmental Research and Public Health*, 15(7), p. 1425. <https://doi.org/10.3390/ijerph15071425>
- Bernaras, E., Jaureguizar, J. and Garaigordobil, M. (2019) 'Child and adolescent depression: A review of theories, evaluation instruments, prevention programs, and treatments'. *Frontiers in Psychology*, 10, p. 543. <https://doi.org/10.3389/fpsyg.2019.00543>
- Best, O. and Ban, S. (2021) 'Adolescence: Physical changes and neurological development'. *British Journal of Nursing*, 30(5), pp. 272–275. <https://doi.org/10.12968/bjon.2021.30.5.272>
- Blakemore, S.J. (2019) 'Adolescence and mental health'. *The Lancet*, 393(10185), pp. 2030–2031. [https://doi.org/10.1016/S0140-6736\(19\)31013-X](https://doi.org/10.1016/S0140-6736(19)31013-X)
- Bould, H., Mars, B., Moran, P., Biddle, L. and Gunnell, D. (2019) 'Rising suicide rates among adolescents in England and Wales'. *The Lancet*, 394(10193), 116–117.
- Breslin, K., Balaban, J., and Shubkin, C.D. (2020) 'Adolescent suicide: What can pediatricians do?' *Current Opinions in Pediatrics*, 32(4), pp. 595–600. <https://doi.org/10.1097/MOP.0000000000000916>
- Burešová, I. (2016) 'Self-harm classification system development-theoretical study'. *Review of Social Sciences*, 1(4), pp. 13–20. <https://doi.org/10.18533/rss.v1i4.211>
- Cai, H., Xie, X. M., Zhang, Q., Cui, X., Lin, J. X., Sim, K., Ungvari, G. S., Zhang, L. and Xiang, Y. T. (2021) 'Prevalence of suicidality in major depressive disorder: A systematic review and meta-analysis of comparative studies'. *Frontiers in Psychiatry*, 12, 690130. <https://doi.org/10.3389/fpsyg.2021.690130>
- Care Act (2014) 'C42 & C45. Available at: <https://www.legislation.gov.uk/ukpga/2014/23/contents> Accessed: January 2024
- Care Quality Commission (2019) *Brief guide: Capacity and competence in under 18s*. London: Care Quality Commission
- Chan, M.K.Y., Bhatti, H., Meader, N., Stockton, S., Evans, J., O'Connor, R.C., Kapur, N. and Kendall, T. (2016) 'Predicting suicide following self-harm: systematic review of risk factors and risk scales'. *British Journal of Psychiatry*, 209(4), pp.277–283. <https://doi.org/10.1192/bjp.bp.115.170050>
- Cho M. S. (2020) 'Use of alcohol, tobacco, and caffeine and suicide attempts: Findings from a nationally representative cross-sectional study. *Journal of Primary Care & Community Health*, 11. <https://doi.org/10.1177/2150132720913720>
- Cipriani, A., Furukawa, T.A., Salanti, G., Chaimani, A., Atkinson, L.Z., Ogawa, Y., Leucht, S., Ruhe, H.G., Turner, E.H., Higgins, J.P.T., Egger, M., Takeshima, N., Hayasaka, Y., Imai, H., Shinohara, K., Tajika, A., Ioannidis, J.P.A. and Geddes, J.R. (2018) 'Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: A systematic review and network meta-analysis'. *The Lancet*, 391(10128), pp.1357–1366. [https://doi.org/10.1016/s0140-6736\(17\)32802-7](https://doi.org/10.1016/s0140-6736(17)32802-7)
- Clarke, S., Allerhand, L. A. and Berk, M. S. (2019) 'Recent advances in understanding and managing self-harm in adolescents'. *F1000Research*. 8(F1000 Faculty Rev), p. 1794 <https://doi.org/10.12688/f1000research.19868.1>
- Connelly, L.M. (2016) 'Cross-sectional survey research'. *Medsurg Nursing*, 25(5), pp. 369–370
- Coupland, C., Hill, T., Morriss, R., Arthur, A., Moore, M. and Hippisley-Cox, J. (2015) 'Antidepressant use and risk of suicide and attempted suicide or self harm in people aged 20 to 64: Cohort study using a primary care database'. *BMJ*, 350, h517. <https://doi.org/10.1136/bmj.h517>
- Cybulski, L., Ashcroft, D. M., Carr, M. J., Garg, S., Chew-Graham, C. A., Kapur, N. and Webb, R. T. (2021) 'Risk factors for nonfatal self-harm and suicide among adolescents: Two nested case–Control Studies conducted in the UK clinical practice research datalink', *Journal of Child Psychology and Psychiatry*, 63(9), pp. 1078–1088. <https://doi.org/10.1111/jcpp.13552>
- Dalton, L., Rapa, E. and Stein, A. (2020) 'Protecting the psychological health of children through effective

- communication about COVID-19'. *The Lancet Child & adolescent health*, 4(5), pp. 346–347. [https://doi.org/10.1016/S2352-4642\(20\)30097-3](https://doi.org/10.1016/S2352-4642(20)30097-3)
- Daniels, A., Muloiwa, R., Myer, L. and Buys, H. (2021) 'Examining the reliability of ICD-10 discharge coding in Red Cross War Memorial Children's Hospital administrative database'. *South African Medical Journal*, 111(2), pp. 137–142. <https://doi.org/10.7196/SAMJ.2021.v111i2.14686>
- Dat, N. T., Mitsui, N., Asakura, S., Takanobu, K., Fujii, Y., Toyoshima, K., Kako, Y. and Kusumi, I. (2022) 'The effectiveness of self-esteem-related interventions in reducing suicidal behaviors: A systematic review and meta-analysis'. *Frontiers in Psychiatry*, 13, 925423. <https://doi.org/10.3389/fpsyt.2022.925423>
- Department for Education (2024) *Information sharing: Advice for practitioners providing safeguarding services for children, young people, parents and carers*. London: Department for Education
- Department of Health & Social Care (2021) *Information sharing: Advice for practitioners providing safeguarding services for children, young people, parents and carers*. Available at: <https://www.gov.uk/government/publications/consensus-statement-for-information-sharing-and-suicide-prevention/information-sharing-and-suicide-prevention-consensus-statement> Accessed: 19 February 2025
- Diamond, G., Kodish, T., Ewing, E. S. K., Hunt, Q. A. and Russon, J. M. (2022) 'Family processes: Risk, protective and treatment factors for youth at risk for suicide'. *Aggression and Violent Behavior*, 64, 101586. <https://doi.org/10.1016/j.avb.2021.101586>
- Dillinger R. L. (2021) 'Addressing the stigma surrounding serious mental illness in adolescents: A brief intervention'. *The Psychiatric Quarterly*, 92(1), pp. 161–167. <https://doi.org/10.1007/s1126-020-09787-6>
- Divin, N., Harper, P., Curran, E., Corry, D. and Leavey, G. (2018) 'Help-seeking measures and their use in adolescents: A systematic review'. *Adolescent Research Review*, 3(1), pp. 113–122. <https://doi.org/10.1007/s40894-017-0078-8>
- Dovjak, M. and Kuček, A. (2019) *Creating healthy and sustainable buildings: An assessment of health risk factors*. Cham: Springer.
- Favril, L., Yu, R., Geddes, J. R. and Fazel, S. (2023) 'Individual-level risk factors for suicide mortality in the general population: An umbrella review'. *The Lancet Public Health*, 8(11), pp. e868–e877. [https://doi.org/10.1016/S2468-2667\(23\)00207-4](https://doi.org/10.1016/S2468-2667(23)00207-4)
- Forrester, R. L., Slater, H., Jomar, K., Mitzman, S. and Taylor, P. J. (2017) 'Self-esteem and non-suicidal self-injury in adulthood: A systematic review'. *Journal of Affective Disorders*, 221, pp. 172–183. <https://doi.org/10.1016/j.jad.2017.06.027>
- Fujihira, K., Takahashi, M., Wang, C. and Hayashi, N. (2023) 'Factors explaining seasonal variation in energy intake: a review'. *Frontiers in Nutrition*, 10, 1192223. <https://doi.org/10.3389/fnut.2023.1192223>
- Garratt, K., Kirk-Wade, E. and Long, R. (2024) *Children and young people's mental health: Policy and services (England)*. London: House of Commons Library. Available at: <https://researchbriefings.files.parliament.uk/documents/CBP-7196/CBP-7196.pdf>
- Griffith R. (2016) 'What is Gillick competence?'. *Human Vaccines & Immunotherapeutics*, 12(1), pp. 244–247. <https://doi.org/10.1080/21645515.2015.1091548>
- Grossberg, A. and Rice, T. (2023) 'Depression and suicidal behavior in adolescents'. *The Medical Clinics of North America*, 107(1), pp. 169–182. <https://doi.org/10.1016/j.mcna.2022.04.005>
- Gubner, N. R., Thrul, J., Kelly, O. A. and Ramo, D. E. (2018) 'Young adults report increased pleasure from smoking cigarettes when drinking alcohol but not when using marijuana'. *Addiction Research & Theory*, 26(1), pp. 71–76. <https://doi.org/10.1080/16066359.2017.1311877>
- Hadzic, A., Spangenberg, L., Hallensleben, N., Forkmann, T., Rath, D., Strauß, M., Kersting, A. and Glaesmer, H. (2019) 'The association of trait impulsivity and suicidal ideation and its fluctuation in the context of the Interpersonal Theory of Suicide'. *Comprehensive Psychiatry*, 98, 152158. <https://doi.org/10.1016/j.comppsych.2019.152158>
- Harmer, B., Lee, S., Duong, T. V. H. and Saadabadi, A. (2023) *Suicidal ideation*. Treasure Island (FL): StatPearls Publishing. Available at: <https://pubmed.ncbi.nlm.nih.gov/33351435/>
- Herrett, E., Gallagher, A. M., Bhaskaran, K., Forbes, H., Mathur, R., van Staa, T. and Smeeth, L. (2015) 'Data resource profile: Clinical practice research datalink (CPRD)'. *International Journal of Epidemiology*, 44(3), pp. 827–836. <https://doi.org/10.1093/ije/dyv098>
- Huang, Y.-H., Liu, H.-C., Sun, F.-J., Tsai, F.-J., Huang, K.-Y., Chen, T.-C., Huang, Y.-P. and Liu, S.-I. (2017) 'Relationship between predictors of incident deliberate self-harm and suicide attempts among adolescents', *Journal of Adolescent Health*, 60(5), pp. 612–618. <https://doi.org/10.1016/j.jadohealth.2016.12.005>
- Iacobucci, G. (2020) 'Suicide rates continue to rise in England and Wales'. *BMJ*, 370, m3431. <https://doi.org/10.1136/bmj.m3431>



- Inman, D. D., Matthews, J., Butcher, L., Swartz, C. H. and Meadows, A. L. (2019) 'Identifying the risk of suicide among adolescents admitted to a children's hospital using the ask suicide-screening questions'. *Journal of Child and Adolescent Psychiatric Nursing*, 32(2), pp. 68-72. <https://doi.org/10.1111/jcap.12235>
- Iorfino, F., Ho, N., Carpenter, J. S., Cross, S. P., Davenport, T. A., Hermens, D. F., Yee, H., Nichles, A., Zmicerevska, N., Guastella, A., Scott, E. and Hickie, I. B. (2020) 'Predicting self-harm within six months after initial presentation to youth mental health services: A machine learning study'. *PloS One*, 15(12), e0243467. <https://doi.org/10.1371/journal.pone.0243467>
- Joiner, T.E. (2005) *Why people die by suicide*. Cambridge, Massachusetts: Harvard University Press.
- Junker, A., Nordahl, H.M., Bjørngaard, J.H. and Bjerkeset, O. (2019) 'Adolescent personality traits, low self-esteem and self-harm hospitalisation: A 15-year follow-up of the Norwegian Young-HUNT1 cohort'. *European Child & Adolescent Psychiatry*, 28(3), pp. 329-339. <https://doi.org/10.1007/s00787-018-1197-x>
- Kitagawa, Y., Ando, S., Yamasaki, S., Foo, J.C., Okazaki, Y., Shimodera, S., Nishida, A., Togo, F. and Sasaki, T. (2017) 'Appetite loss as a potential predictor of suicidal ideation and self-harm in adolescents: A school-based study', *Appetite*, 111, pp. 7-11. <https://doi.org/10.1016/j.appet.2016.12.026>
- Klonsky, E. D. and May, A. M. (2015) 'Impulsivity and suicide risk: Review and clinical implications'. *Psychiatric Times*, 32(8).
- Kobeissy, F.H. (2019) *Psychiatric disorders: Methods and protocols*. 2<sup>nd</sup> ed. New York: Humana Press.
- Kolves, K. and de Leo, D. (2017) 'Suicide methods in children and adolescents'. *European Child and Adolescent Psychiatry*, 26, pp. 155-164.
- Korhonen, T., Sihvola, E., Latvala, A., Dick, D. M., Pulkkinen, L., Nurnberger, J., Rose, R. J. and Kaprio, J. (2018) 'Early-onset tobacco use and suicide-related behavior - A prospective study from adolescence to young adulthood'. *Addictive Behaviors*, 79, pp. 32-38. <https://doi.org/10.1016/j.addbeh.2017.12.008>
- Levi-Belz, Y., Gvion, Y. and Apter, A. (2019) 'Editorial: The psychology of suicide: From research understandings to intervention and treatment'. *Frontiers in psychiatry*, 10, p. 214. <https://doi.org/10.3389/fpsy.2019.00214>
- Meinhardt, I., Cuthbert, S., Gibson, K., Fortune, S. and Hetrick, S.E. (2022) 'Young people and adult stakeholders' reflections on how school staff should support students who self-harm: A qualitative study'. *Journal of Adolescence*, 94(7), pp. 969-980. <https://doi.org/10.1002/jad.12078>
- Misra, S., Jackson, V. W., Chong, J., Choe, K., Tay, C., Wong, J. and Yang, L. H. (2021) 'Systematic review of cultural aspects of stigma and mental illness among racial and ethnic minority groups in the United States: Implications for interventions'. *American Journal of Community Psychology*, pp. 68(3-4), 486-512. <https://doi.org/10.1002/ajcp.12516>
- Moore, F. R., Doughty, H., Neumann, T., McClelland, H., Allott, C. and O'Connor, R. C. (2022) 'Impulsivity, aggression, and suicidality relationship in adults: A systematic review and meta-analysis'. *eClinicalMedicine*, 45, 101307. <https://doi.org/10.1016/j.eclinm.2022.101307>
- Motillon-Toudic, C., Walter, M., Séguin, M., Carrier, J. D., Berrouguet, S. and Lemey, C. (2022) 'Social isolation and suicide risk: Literature review and perspectives'. *European Psychiatry: The Journal of the Association of European Psychiatrists*, 65(1), e65. <https://doi.org/10.1192/j.eurpsy.2022.2320>
- Nock, M.K., Borges, G. and Ono, Y. (2012) *Suicide: Global perspectives from the WHO World Mental Health Surveys*. Cambridge: Cambridge University Press.
- Nydegger, R.V. (2014) *Suicide and mental health*. Santa Barbara: Greenwood
- Orsolini, L., Latini, R., Pompili, M., Serafini, G., Volpe, U., Vellante, F., Fornaro, M., Valchera, A., Tomasetti, C., Fraticelli, S., Alessandrini, M., La Rovere, R., Trotta, S., Martinotti, G., Di Giannantonio, M. and De Berardis, D. (2020) 'Understanding the Complex of Suicide in Depression: from Research to Clinics'. *Psychiatry Investigation*, 17(3), pp. 207-221. <https://doi.org/10.30773/pi.2019.0171>
- Paashaus, L., Forkmann, T., Glaesmer, H., Juckel, G., Rath, D., Schönfelder, A. & Teismann, T. (2021) 'From decision to action: Suicidal history and time between decision to die and actual suicide attempt. *Clinical Psychology & Psychotherapy*, 28(6), pp. 1427-1434. <https://doi.org/10.1002/cpp.2580>
- Patel, R. S., Machado, T. and Tankersley, W. E. (2021) 'Eating disorders and suicidal behaviors in adolescents with major depression: Insights from the US hospitals. *Behavioral Sciences*, 11(5), p. 78. <https://doi.org/10.3390/bs11050078>
- Pearson, S. and Hyde, C. (2020) 'Influences on adolescent help-seeking for mental health problems'. *Journal of Psychologists and Counsellors in Schools*, 31(1), pp.110-121. <https://doi.org/10.1017/jgc.2020.28>
- Peng, M., Eastwood, C., Boxill, A., Jolley, R. J., Rutherford, L., Carlson, K., Dean, S. and Quan, H. (2018) 'Coding reliability and agreement of International Classification of Disease, 10th revision (ICD-10) codes in emergency department data'. *International Journal Of Population Data Science*, 3(1), p. 445. <https://doi.org/10.23889/ijpds.v3i1.445>

- Perkins, N. M., Ortiz, S. N., Smith, A. R. and Brausch, A. M. (2021) 'Suicidal ideation and eating disorder symptoms in adolescents: The role of interoceptive deficits'. *Behavior Therapy*, 52(5), pp. 1093–1104. <https://doi.org/10.1016/j.beth.2021.03.005>
- Poorolajal, J. and Darvishi, N. (2016) 'Smoking and suicide: A meta-analysis'. *PloS One*, 11(7), e0156348. <https://doi.org/10.1371/journal.pone.0156348>
- Ramezani, E. and Nourimoghadam, S. (2024) 'Suicidal tendency and impulsivity and integrative self-knowledge among the adult population'. *International Journal of High Risk Behaviors and Addiction*, 13(1), e137037. <https://doi.org/10.5812/ijhrba-137037>
- Ribeiro, J. D., Franklin, J. C., Fox, K. R., Bentley, K. H., Kleiman, E. M., Chang, B. P. and Nock, M. K. (2016) 'Self-injurious thoughts and behaviors as risk factors for future suicide ideation, attempts, and death: A meta-analysis of longitudinal studies'. *Psychological Medicine*, 46(2), pp. 225-236.
- Rickwood, D. J., Deane, F. P. and Wilson, C. J. (2007) 'When and how do young people seek professional help for mental health problems?'. *The Medical journal of Australia*, 187(S7), pp. S35–S39. <https://doi.org/10.5694/j.1326-5377.2007.tb01334.x>
- Sadan, V., (2017) 'Data collection methods in quantitative research'. *Indian Journal of Continuing Nursing Education*, 18(2), pp.58-63.
- Schouten, R. (2017) *Mental health practice and the law*. Oxford: Oxford University Press
- Stausberg, J., Lehmann, N., Kaczmarek, D. and Stein, M. (2008) 'Reliability of diagnoses coding with ICD-10'. *International Journal of Medical Informatics*, 77(1), pp. 50–57. <https://doi.org/10.1016/j.ijmedinf.2006.11.005>
- Uccella, S., Cordani, R., Salfi, F., Gorgoni, M., Scarpelli, S., Gemignani, A., Geoffroy, P.A., Gennaro, L.D., Palagini, L., Ferrara, M. and Nobili, L. (2023) 'Sleep deprivation and insomnia in adolescence: implications for mental health'. *Brain Sciences*, 13(4), p. 569. <https://doi.org/10.3390/brainsci13040569>
- Weiskopf, N. G. and Weng, C. (2013) 'Methods and dimensions of electronic health record data quality assessment: enabling reuse for clinical research'. *Journal of the American Medical Informatics Association: JAMIA*, 20(1), pp. 144–151. <https://doi.org/10.1136/amiajnl-2011-000681>
- Witte, M.A., Harbeck Weber, C., Lebow, J., LeMahieu, A., Geske, J., Witte, N., Whiteside, S., Loth, K. and Sim, L. (2023) 'Lifetime prevalence of psychiatric disorders in adolescents with unexplained weight loss, underweight, or poor appetite'. *Journal of Developmental & Behavioral Pediatrics*, 44(4), p. e277. <https://doi.org/10.1097/DBP.0000000000001173>
- Wright, B., Dave, S. and Dogra, N. (2017) *100 cases in psychiatry*. Boca Raton (FL): CRC Press