BMJ Paediatrics Open

Psychosocial and contextual risk factors of adolescent deliberate poisoning: a multicentre case–control study in Sri Lanka

Kavinda Dayasiri ,[1] Vijayakumary Thadchanamoorthy,[2] Achila Ranasinghe,[1] Nirosha Madhuwanthi Hettiarachchi,[3] Nayani Suraweera,[4] Tharuka Perera,[1] Gihan Gunarathna[1]

To cite: Dayasiri K, Thadchanamoorthy V, Ranasinghe A, *et al*. Psychosocial and contextual risk factors of adolescent deliberate poisoning: a multicentre case–control study in Sri Lanka. *BMJ Paediatrics Open* 2025;**9**:e003949. doi:10.1136/bmjpo-2025-003949

Received 5 August 2025
Accepted 14 October 2025

[1]Faculty of Medicine, University of Kelaniya, Kelaniya, Sri Lanka
[2]Eastern University Sri Lanka Faculty of Health-Care Sciences, Batticaloa, Sri Lanka
[3]Teaching Hospital Peradeniya, Peradeniya, Sri Lanka
[4]Rajarata University of Sri Lanka Faculty of Medicine and Allied Sciences, Saliyapura, Sri Lanka

Correspondence to
Dr Kavinda Dayasiri;
kavindadayasiri@gmail.com

ABSTRACT

Introduction Deliberate self-poisoning is a leading method of self-harm among adolescents globally. This study aimed to identify psychosocial, familial and contextual risk factors associated with deliberate self-poisoning among Sri Lankan adolescents.

Methods A multicentre prospective case–control study was conducted across selected tertiary care hospitals in Sri Lanka over a 2-year period. Adolescents aged 10–17 years admitted with deliberate poisoning were recruited as cases. Age- and sex-matched controls were recruited from the same study settings. Structured interviews were conducted using a pretested tool assessing sociodemographic, psychological, family and school-related factors. Conditional logistic regression was used to estimate adjusted ORs (AORs) and 95% CIs.

Results A total of 326 case–control pairs (n=652) were included. The majority of cases were female (74.5%) and aged 15–17 years. The most frequently ingested agents were paracetamol (45.1%) and oleander (10.7%). In multivariable analysis, personal history of psychiatric illness (AOR 2.76, 95% CI 1.92 to 5.41), previous self-injury (AOR 4.17, 95% CI 1.92 to 10.77), previous deliberate poisoning (AOR 4.02, 95% CI 2.86 to 5.19), non-heterosexual orientation (AOR 26.9, 95% CI 12.18 to 75.45), school dropout (AOR 4.01, 95% CI 2.06 to 6.57), home violence (AOR 8.93, 95% CI 3.27 to 26.47) and feeling depressed (AOR 2.08, 95% CI 1.49 to 3.20) were independently associated with deliberate poisoning.

Conclusion Deliberate self-poisoning among Sri Lankan adolescents is strongly associated with psychiatric comorbidity, family adversity, sexual identity-related distress and school disengagement. These findings highlight the urgent need for integrated, adolescent-friendly mental health services, school-based screening and psychosocial support mechanisms.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Deliberate self-poisoning is one of the most common forms of self-harm among adolescents worldwide and is rising in low- and middle-income countries (LMICs), including Sri Lanka.
⇒ Risk factors for adolescent self-harm have been broadly documented in high-income settings, including psychiatric disorders, family dysfunction and academic pressure.
⇒ However, there is a global and regional paucity of prospective, matched case–control studies examining risk factors specific to deliberate poisoning among adolescents, particularly in South Asia.

WHAT THIS STUDY ADDS

⇒ This is one of the first multicentre, prospective case–control studies in South Asia to identify risk factors for deliberate self-poisoning among adolescents using matched controls.
⇒ It highlights specific, independent risk factors such as psychiatric illness, previous self-harm, non-heterosexual orientation, home violence and school dropout.
⇒ The study identifies paracetamol as the most commonly used agent, underscoring the need for improved regulation of over-the-counter medications in this context.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Supports the development of school-based mental health screening and early intervention programmes targeting at-risk adolescents.
⇒ Informs policies on restricting access to common household poisons and pharmaceuticals frequently used in adolescent self-poisoning.
⇒ Provides a replicable model for future adolescent mental health and injury prevention research in LMIC settings using case–control methodology.

INTRODUCTION

Deliberate self-poisoning among adolescents is an increasingly recognised public health concern globally, particularly in low- and middle-income countries (LMICs), where access to mental healthcare is limited and stigma surrounding psychological distress is prevalent.[1 2] Adolescence is a critical developmental stage characterised by rapid emotional, cognitive and social changes,

which can increase vulnerability to impulsive and risk-taking behaviours.[3] In many LMICs, including Sri Lanka, the growing burden of adolescent mental health issues remains under-addressed, with deliberate poisoning emerging as a common form of self-harm due to the easy availability of household chemicals, medications and toxic plants.[4]

In Sri Lanka, previous hospital-based data suggest that self-poisoning accounts for a substantial proportion of adolescent medical emergencies, often involving pharmaceuticals such as paracetamol or plant toxins such as oleander.[5] However, most studies to date have been descriptive and lack in-depth exploration of underlying psychosocial, familial and environmental risk factors.[6]

Globally, research has identified a range of risk factors associated with adolescent self-harm, including psychiatric illness, substance misuse, family conflict, experiences of abuse, sexual identity concerns and school-related stress.[7 8] However, there is a notable paucity of case–control studies that examine deliberate self-poisoning among adolescents, particularly using matched controls and prospectively collected data. Further, the contextual relevance of these factors in South Asian settings is less well understood. Cultural attitudes towards mental health, gender norms and access to support services may shape the patterns and motivations behind self-harm differently in Sri Lankan adolescents compared with those in high-income countries. In this background, this multicentre, prospective, matched case–control study aimed to identify individual, familial and contextual risk factors associated with deliberate poisoning among adolescents aged 10–17 years in Sri Lanka.

Figure 1 Distribution of the study settings (cases, n=326; controls, n=326). DGH, District General Hospital; NCTH, North Colombo Teaching Hospital; NHSL, National Hospital of Sri Lanka; TH, Teaching Hospital.

METHODS

Study population and setting

This was a multi-centre, hospital-based prospective case–control study conducted over a 2-year period involving six tertiary care hospitals across Sri Lanka (figure 1). The study was designed to investigate individual, familial and contextual risk factors associated with deliberate self-poisoning among adolescents. Cases were defined as adolescents aged 10–17 years who were admitted to one of the selected study settings with deliberate self-poisoning and provided informed assent/consent to participate. For each case, a control was selected from the same setting (figure 1), matched individually for age and sex, and confirmed to have no history of self-harm or suicidal behaviour. Controls were recruited concurrently to minimise temporal confounding.

Sample size

A total of 326 matched case–control pairs (652 participants) were enrolled. The sample size was calculated to detect an OR of at least 2.0 for risk factors with a 15% prevalence in controls, assuming a power of 80% and a 95% CI. This is consistent with prior studies examining risk factors for self-harm attempts in adolescents.[6]

Inclusion criteria for cases were: adolescents aged 10–17 years, admitted to one of the selected tertiary care hospitals following deliberate ingestion of a potentially toxic substance, and deemed capable of providing informed assent within 72 hours of presentation. For controls, eligibility criteria included being within the same age range, having been admitted for minor medical ailments, not presenting with acute poisoning and providing informed assent. Both groups required written consent from a parent or legal guardian. Exclusion criteria included non-residency in Sri Lanka, significant cognitive or communication impairments that prevented participation, poisoning due to recreational or accidental ingestion, or refusal to consent.

Study variables

To ensure clarity and consistency, all study variables were defined a priori using standard definitions, adapted where necessary to the Sri Lankan context. Deliberate self-poisoning was defined as the intentional ingestion of a substance with the intent to cause self-harm. A psychiatric disorder was defined as a clinically diagnosed mental illness identified from prior medical records or

participant report. Frequent social media exposure was defined as average daily use exceeding 2 hours, as self-reported. School-related stress referred to academic pressures, bullying or disciplinary issues that were perceived by the participant to contribute to emotional distress. Home violence was defined as the presence of self-reported physical or emotional abuse within the household in the past year. A non-heterosexual orientation included adolescents identifying as gay, lesbian, bisexual or other. Financial difficulties were defined as self-reported struggles to meet essential household expenses such as food, education or medical care, often due to unemployment, debt or economic instability within the family. Feeling depressed referred to the adolescent's self-reported experience of persistent sadness, hopelessness or disinterest in usual activities lasting for at least two consecutive weeks within the past 6 months, regardless of clinical diagnosis. Use of illicit substances was defined as any reported use of illegal drugs in Sri Lanka (such as cannabis or heroin) or non-medical use of prescription drugs (eg, sedatives or stimulants) within the past year. School dropout was defined as the permanent discontinuation of formal education before completing secondary school, with no current enrolment in an alternative academic or vocational programme at the time of the interview.

Definitions of study variables were developed with reference to published literature and adapted for the Sri Lankan context to ensure cultural relevance. Where possible, internationally accepted or consensus-based definitions were applied. For example, psychiatric disorders were defined in accordance with ICD-10 and DSM-5 criteria,[9] while deliberate self-poisoning was defined following WHO guidelines.[10] Definitions of school dropout and exposure to home violence were adapted from national public health survey standards.[11] Deviations from global consensus definitions were explicitly noted in the text where context-specific adjustments were necessary. Most variables were self-reported, which was considered the most feasible and culturally sensitive approach given the multicentre study design and the sensitive nature of the information collected. For key variables such as personal history of psychiatric illness, data were obtained through a combination of self-report, caregiver report and review of available medical records.

Data collection

Data collection was carried out using a structured questionnaire developed for this study. The instrument was subjected to content and face validation through expert review by a panel consisting of a paediatrician, a psychologist and a specialist in public health. Expert feedback was used to refine the tool's content and ensure it adequately captured all relevant aspects of adolescent development and factors related to deliberate poisoning. The tool was pretested in a sample of 10 adolescents to ensure comprehensibility and cultural appropriateness. Data were collected by the investigators and the research assistants with experience in adolescent health and mental health assessments. Interviews were conducted in either Sinhala or Tamil, depending on the participant's preference, and were completed within 72 hours of the poisoning incident for cases. Data collected included socio-demographic information, medical and psychiatric history, family background, school attendance and performance, exposure to psychosocial stressors, and details of the poison types involved. Information on the toxic agents involved in each case was triangulated from direct self-report, caregiver reports, hospital admission records and toxicology screening where available. The specific poison type was classified into pharmaceutical agents, plant poisons, pesticides, or household and industrial chemicals, according to their origin and intended use. If a response was missing or unclear during interviews, it was clarified with the participant or caregiver whenever possible. When information could not be obtained, those items were recorded as missing and excluded from the relevant analyses.

Data analysis

Data were entered into a secure electronic database and analysed using SPSS V.26.0. Descriptive statistics, including means and frequencies, were used to summarise the characteristics of cases. Univariable comparisons were performed using conditional logistic regression to account for the matched design. All selected variables were then included in the multivariable conditional logistic regression models to estimate adjusted ORs with 95% CIs. A two-sided p value of less than 0.05 was considered statistically significant.

Patient and public involvement

Patients or the public were not involved in the design, or conduct, or reporting, or dissemination plans of our research.

RESULTS

A total of 326 adolescents with deliberate poisoning were included in the study. The majority were female (n=243, 74.5%), and most were aged 15 to 17 years (n=261, 80.1%). In terms of ethnicity, the cohort consisted mainly of Sinhalese adolescents (61.7%), followed by Tamils (24.2%) and Muslims (12.2%). Pharmaceutical agents were the most commonly ingested poison type, accounting for 65.3% (n=213) of cases, followed by household and other chemicals (18.4%), plant poisons such as oleander (11.3%) and pesticides (4.9%). Among specific poisons, paracetamol was the most frequently reported (n=147, 45.1%) (table 1).

Several psychosocial and clinical factors were significantly associated with deliberate poisoning among adolescents. Compared with controls, adolescents with a personal history of psychiatric disorders, previous self-injury, prior deliberate poisoning, non-heterosexual orientation, frequent social media exposure and feelings of depression were significantly more likely to present

Table 1 Demographic characteristics and types of poisons used among adolescents presenting with deliberate self-poisoning (n=326)

Variable	n (%)	Variable	n (%)
Age		Poison types	
10–12 years	11 (3.4%)	Pharmaceutical agents	213 (65.3%)
13–14 years	54 (16.5%)	Household and other chemicals	60 (18.4%)
15–17 years	261 (80.1%)	Plant poisons	37 (11.3%)
Sex		Pesticides	16 (4.9%)
Female	243 (74.5%)	Specific poisons	
Male	83 (25.5%)	Paracetamol	147 (45.1%)
Ethnicity		Oleander	35 (10.7%)
Sinhalese	201 (61.7%)	Antihypertensives	20 (6.1%)
Tamil	79 (24.2%)	Organophosphates	12 (3.7%)
Muslim	40 (12.2%)	Antidepressants and psychotropic drugs	10 (3.1%)
Burgher	6 (1.8%)	Petrol	9 (2.7%)

with deliberate poisoning (all p<0.05 in adjusted models) (figure 2). Factors such as illicit substance use, history of smoking, involvement in street fights and previous sexual abuse showed elevated odds but varied in statistical significance (table 2).

Several adverse socioeconomic and family-related factors were significantly associated with deliberate poisoning among adolescents. In adjusted analyses, adolescents who had dropped out of school, experienced school-related stress, home violence or had a deceased parent were at significantly higher risk (p<0.05 for all) (figure 3). Additionally, having a father diagnosed with a psychiatric illness was strongly associated with increased risk, despite being reported in only a few cases. Although financial difficulties showed a higher prevalence among cases than controls, the association did not remain statistically significant after adjustment. Other factors such as maternal employment abroad, homelessness and family history of psychiatric illness were not significantly associated with deliberate poisoning in multivariable analysis (table 3).

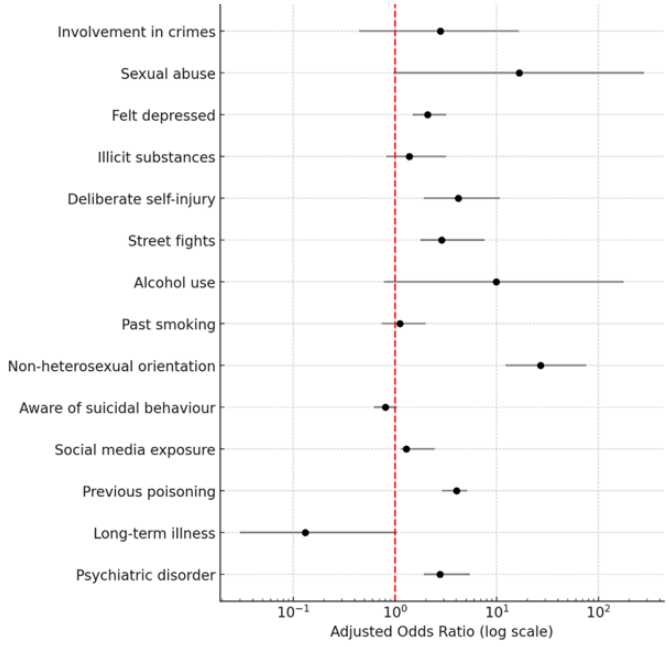

Figure 2 Forest plot of personal risk factors associated with deliberate self-poisoning among adolescents (cases, n=326; controls, n=326).

DISCUSSION

This study examined a wide range of individual, familial and contextual factors associated with deliberate self-poisoning among adolescents in Sri Lanka, using a matched case–control design. The findings demonstrate that multiple psychosocial vulnerabilities—particularly those related to mental health, school disengagement and family adversity—are associated with increased risk of deliberate poisoning in this population. In line with international literature, a personal history of psychiatric illness emerged as a strong predictor of deliberate self-poisoning.[12] Adolescents with such a history were nearly three times more likely to engage in self-poisoning compared with controls. This is consistent with findings from high-income settings, where depression, anxiety and emotional dysregulation are key drivers of adolescent self-harm.[13] Similarly, prior episodes of self-harm or suicidal behaviour significantly increased risk, emphasising the importance of early identification and follow-up for at-risk youth.[14]

Non-heterosexual orientation was one of the strongest predictors in this cohort, with affected adolescents being 27 times more likely to engage in self-poisoning. In Sri Lanka, where same-sex relationships remain criminalised and open discussion about LGBTQ+ identities is highly restricted, sexual and gender minority youth face significant barriers to support.[15] This highlights the urgent need for inclusive mental health services and school-based support systems that recognise the heightened

Table 2 Personal risk factors associated with deliberate self-poisoning among adolescents: conditional logistic regression analysis (n=652)

	Cases (n=326)	Controls (n=326)	OR	95% CI	P value	Adjusted OR	95% CI	P value
Personal history of a psychiatric disorder	52 (15.9%)	17 (5.2%)	3.58	2.02 to 6.04	<0.001	2.76	1.92 to 5.41	0.001
Personal history of a long-term physical illness	22 (6.7%)	38 (11.7%)	0.54	0.31 to 0.94	0.032	0.131	0.03 to 1.04	0.07
Previous deliberate poisoning	24 (7.3%)	5 (1.5%)	4.34	3.07 to 5.47	<0.001	4.02	2.86 to 5.19	0.001
Frequent social media exposure	158 (48.4%)	135 (41.4%)	1.98	1.46 to 2.67	<0.001	1.29	1.14 to 2.47	0.03
Aware of suicidal behaviour in other youth	187 (57.4%)	206 (63.2%)	0.78	0.57 to 1.07	0.12	0.80	0.62 to 1.04	0.18
Non-heterosexual orientation	90 (27.6%)	4 (1.3%)	30.69	11.16 to 84.7	<0.001	26.9	12.18 to 75.45	<0.001
History of smoking	25 (7.7%)	21 (6.5%)	1.20	0.66 to 2.21	0.54	1.12	0.74 to 2.01	0.64
Alcohol use	5 (1.5%)	0 (0%)	11.17	0.61 to 202.68	0.10	9.86	0.78 to 176.52	0.12
Involvement in street fights	17 (5.2%)	4 (1.3%)	4.42	1.47 to 13.32	0.008	2.86	1.78 to 7.62	0.03
Previous deliberate self-injury	40 (12.3)	7 (2.1%)	6.60	2.91 to 14.98	<0.001	4.17	1.92 to 10.77	0.001
Used illicit substances	14 (4.3%)	9 (2.6%)	1.58	0.67 to 3.67	0.29	1.38	0.82 to 3.15	0.36
Felt depressed	168 (51.5%)	94 (28.9%)	2.62	1.89 to 3.64	<0.001	2.08	1.49 to 3.20	0.001
Previous history of sexual abuse	9 (2.7%)	0 (0%)	19.53	1.13 to 337.2	0.04	16.54	0.97 to 279.4	0.06
Involvement in crimes	3 (0.9%)	1 (0.3%)	3.01	0.31 to 29.17	0.33	2.79	0.44 to 16.53	0.52

ORs represent univariable conditional logistic regression analyses, while adjusted ORs are derived from the multivariable conditional logistic regression model including all selected variables.

vulnerability of sexual and gender minority youth. These findings align with global evidence that LGBTQ+ adolescents are at disproportionately higher risk of self-harm due to social stigma, bullying and lack of acceptance.[16]

Social media exposure and perceived school-related stress were also significantly associated with self-poisoning. While social media can foster peer support, excessive exposure may increase vulnerability to online harassment, social comparison and exposure to self-harm content.[17] Academic stress is a known contributor to emotional distress among South Asian adolescents, where high parental expectations and competitive examination pressures prevail.[18]

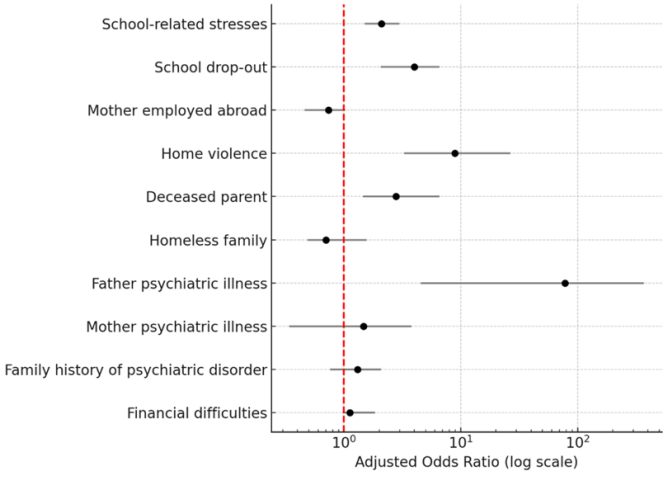

Figure 3 Forest plot of family and school-related risk factors associated with deliberate self-poisoning among adolescents (cases, n=326; controls, n=326).

Interestingly, home violence and parental loss were also independently associated with deliberate poisoning. Exposure to physical or emotional abuse may contribute to feelings of hopelessness and emotional turmoil, particularly in environments lacking protective adult figures.[19] These findings reinforce the role of adverse childhood experiences as cumulative risk factors for suicidal behaviour.[20]

The findings also demonstrate that despite the rural or urban setting, pharmaceutical agents—particularly paracetamol—remain the most common agents used, underscoring the importance of regulating access to over-the-counter medications.[21] Together, these results call for a multifaceted prevention approach, incorporating school-based mental health programmes, safe medication practices, family counselling and targeted support for vulnerable groups such as LGBTQ+ youth and children exposed to violence or trauma.[22]

This study has several limitations. As a hospital-based study, the study may not capture adolescents who engaged in deliberate poisoning but did not seek medical attention, leading to potential selection bias. Although controls were matched on age and sex, residual confounding by other sociodemographic factors (eg, socioeconomic status, rural–urban differences) may persist. Another important limitation relates to cultural

Table 3 Family and school-related risk factors for deliberate self-poisoning among adolescents: conditional logistic regression analysis (n=652)

	Cases (n=326)	Controls (n=326)	OR	95% CI	P value	Adjusted OR	95% CI	P value
Financial difficulties	154 (47.2%)	92 (28.1%)	1.44	1.05 to 1.96	0.02	1.12	0.97 to 1.84	0.06
Family history of psychiatric disorder	25 (7.6%)	17 (5.3%)	1.50	0.79 to 2.85	0.21	1.31	0.76 to 2.08	0.34
Mother diagnosed with psychiatric illness	7 (2.2%)	4 (1.3%)	1.76	0.51 to 6.79	0.36	1.47	0.34 to 3.78	0.68
Father diagnosed with psychiatric illness	5 (1.5%)	0 (0%)	110.4	6.09 to 478.4	0.002	78.1	4.54 to 371.4	0.01
Homeless family	14 (4.3%)	17 (5.3%)	0.81	0.39 to 1.68	0.58	0.70	0.49 to 1.56	0.67
Deceased parent	19 (5.8%)	6 (1.8%)	3.30	1.31 to 8.37	0.01	2.78	1.46 to 6.56	0.04
Home violence	36 (11.0%)	4 (1.3%)	9.98	3.51 to 28.41	<0.001	8.93	3.27 to 26.47	<0.001
Mother employed abroad as a house-maid	23 (7.1%)	41 (12.8%)	0.52	0.30 to 0.91	0.02	0.74	0.46 to 1.02	0.06
Dropped out from school	72 (22.1%)	20 (6.1%)	4.33	2.57 to 7.31	<0.001	4.01	2.06 to 6.57	0.001
School-related stresses	103 (31.6%)	51 (15.7%)	2.49	1.70 to 3.63	<0.001	2.10	1.51 to 2.98	0.002

ORs represent univariable conditional logistic regression analyses, while adjusted ORs are derived from the multivariable conditional logistic regression model including all selected variables.

stigma surrounding sensitive issues such as mental illness, sexual orientation, substance use and experiences of family violence. In the Sri Lankan context, these topics are often associated with shame and secrecy, which may have led some adolescents or caregivers to underreport or withhold information during interviews. Despite assurances of confidentiality, this social desirability bias could have introduced underestimation of key psychosocial risk factors and affected data quality. In addition, some of the very high ORs observed in this study, particularly those related to non-heterosexual orientation and parental psychiatric illness, were derived from small sample sizes. While statistically significant, these estimates should be interpreted with caution, as they may be unstable and not fully reflective of the true strength of association in the wider population.

CONCLUSION

Deliberate self-poisoning among adolescents in Sri Lanka is a complex behaviour driven by multiple intersecting risk factors, including psychiatric illness, sexual minority status, school-related stress, family adversity and prior self-harm. The findings emphasise the urgent need for targeted, culturally sensitive mental health interventions that address both individual vulnerabilities and broader systemic issues such as stigma, academic pressure and family dysfunction. Integrating early identification mechanisms into school health programmes, promoting safe storage of medications and expanding access to adolescent-friendly mental health services are critical next steps in reducing the burden of self-harm in Sri Lankan youth.

Contributors Study conception and design: KD. Data collection and data cleaning: KD, NMH, NS, VT, TP and AR. Data analysis: KD and GG. Interpretation of the results: KD. Draft manuscript preparation: KD. Planning and supervising the work: KD. KD is responsible for the overall content as the guarantor. All authors provided critical feedback, helped shape the research, analysis and approved the final version of the manuscript. We have used AI technology only to improve the quality of English language.

Funding This study was partly funded by the 25th Anniversary Research Grant of the Sri Lanka College of Paediatricians. Grant number is not applicable.

Map disclaimer The depiction of boundaries on this map does not imply the expression of any opinion whatsoever on the part of BMJ (or any member of its group) concerning the legal status of any country, territory, jurisdiction or area or of its authorities. This map is provided without any warranty of any kind, either express or implied.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants. Ethical approval for this study was obtained from the Ethics Review Committee of the Postgraduate Institute of Medicine (PGIM), University of Colombo, Sri Lanka (ERC/PGIM/2024/017). All adolescents provided written informed assent, and parental or guardian consent was obtained for each participant. Confidentiality was ensured throughout the study by anonymising data and storing it on password-protected systems. Any adolescent identified as being at ongoing risk of self-harm or requiring mental health intervention was referred to a consultant psychiatrist for immediate evaluation and support.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. All data were de-identified for this research report. The datasets used or analysed during the current study are available from the corresponding author on reasonable request.

ORCID iD
Kavinda Dayasiri https://orcid.org/0000-0003-0438-9837

REFERENCES

1 Knipe D, John A, Padmanathan P, *et al*. Suicide and self-harm in low- and middle- income countries during the COVID-19 pandemic: A systematic review. *PLOS Glob Public Health* 2022;2:e0000282.
2 Axame WK, Kpodo L, Bilabam JK, *et al*. "It's better I kill myself and rest in peace": a qualitative study on suicide attempts among adolescents in Ghana [Erratum in: BMC Psychiatry. 2025 Jun 25;25(1):596. doi: 10.1186/s12888-025-06870-9. PMID: 39627750; PMCID: PMC11616288]. *BMC Psychiatry* 2024;24:877.
3 Jaworska N, MacQueen G. Adolescence as a unique developmental period [Erratum in: J Psychiatry Neurosci. 2015 Nov;40(6):386. PMID: 26290063; PMCID: PMC4543091]. *J Psychiatry Neurosci* 2015;40:291–3.
4 Doty B, Bass J, Ryan T, *et al*. Systematic review of suicide prevention studies with data on youth and young adults living in low-income and middle-income countries. *BMJ Open* 2022;12:e055000.
5 Rajapakse T, Griffiths KM, Christensen H. Characteristics of non-fatal self-poisoning in Sri Lanka: a systematic review. *BMC Public Health* 2013;13:331.
6 Knipe DW, Bandara P, Senarathna L, *et al*. Childhood adversity and deliberate self-poisoning in Sri Lanka: a protocol for a hospital-based case-control study. *BMJ Open* 2019;9:e027766.
7 Thoonen IMJ, Rietjens SJ, van Velzen AG, *et al*. Risk factors for deliberate self-poisoning among children and adolescents in The Netherlands. *Clin Toxicol (Phila)* 2024;62:39–45.
8 Tay EY, Tan GF, Yeo AWC, *et al*. Intentional Poisoning in Pediatric Patients: Examining the Risk Factors. *Pediatr Emerg Care* 2021;37:e1510–4.
9 World Health Organization. The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines. Geneva WHO; 1992.
10 World Health Organization. Practice manual for establishing and maintaining surveillance systems for suicide attempts and self-harm. Geneva WHO; 2016.
11 Department of Census and Statistics, Sri Lanka. Demographic and health survey. Colombo DCS; 2016.
12 Pushpakumara P, Dawson AH, Adikari AMP, *et al*. Exploration of associations between deliberate self-poisoning and psychiatric disorders in rural Sri Lanka: A case-control study. *PLoS One* 2021;16:e0255805.
13 Hawton K, Saunders KEA, O'Connor RC. Self-harm and suicide in adolescents. *Lancet* 2012;379:2373–82.
14 Bello I, Rodríguez-Quiroga A, Quintero J. Suicidal and self-harm behavior in adolescents, an unsolved problem. A comprehensive review. *Actas Esp Psiquiatr* 2023;51:10–20.
15 Chandradasa M. Suicidal ideation in gay adolescents in the context of cultural stigma and criminalized homosexuality in Sri Lanka. *Int J Soc Psychiatry* 2019;65:83–4.
16 Jadva V, Guasp A, Bradlow JH, *et al*. Predictors of self-harm and suicide in LGBT youth: The role of gender, socio-economic status, bullying and school experience. *J Public Health (Oxf)* 2023;45:102–8.
17 Naslund JA, Bondre A, Torous J, *et al*. Social Media and Mental Health: Benefits, Risks, and Opportunities for Research and Practice. *J Technol Behav Sci* 2020;5:245–57.
18 Pienyu K, Margaret B, D'Souza A. Academic stress, perceived parental pressure, and anxiety related to competitive entrance examinations and the general well-being among adolescents - A cross-sectional survey from Karnataka, India. *J Educ Health Promot* 2024;13:474.
19 Dye HL. Is Emotional Abuse As Harmful as Physical and/or Sexual Abuse? *J Child Adolesc Trauma* 2020;13:399–407.
20 Thompson MP, Kingree JB, Lamis D. Associations of adverse childhood experiences and suicidal behaviors in adulthood in a U.S. nationally representative sample. *Child Care Health Dev* 2019;45:121–8.
21 Narang P, Garg V, Sharma A. Regulatory, safety and economic considerations of over-the-counter medicines in the Indian population. *Discov Health Syst* 2023;2:17.
22 Morken IS, Dahlgren A, Lunde I, *et al*. The effects of interventions preventing self-harm and suicide in children and adolescents: an overview of systematic reviews. *F1000Res* 2019;8:890.