From suicidal thinking to suicide bereavement: Psychological processes influencing risk and support

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Table of contents

List of Tables 4
List of Figures 5
Acknowledgements 6
Chapter 1 7
Abstract 8
Introduction 9
Method 10
Results 12
Discussion 33
References 37
Chapter 2 44
Plain Language Summary 45
Abstract 46
Introduction 47
Methods 50
Results 53
Discussion 60
References 77
Appendices 70
Appendix 1.1: PRISMA Checklist 71
Appendix 1.2 Systematic Review electronic search strategy and results 75
Appendix 1.3: Quality appraisal tables 77
Appendix 2.1: STROBE Statement—checklist of items that should be included in reports of observational studies 79
Appendix 2.2 Research Proposal 83
Appendix 2.3 Research Measures 84
Appendix 2.4: Data analysis plan 85
Appendix 2.5: Data assumption checks 86
Appendix 2.6: Syntax and Output 87
Appendix 2.7: Data Availability Statement 88
Appendix 3: Reflexivity Statement 89

List of Tables

Chapter 1

Table 1: Summary table of quantitative study characteristics and findings……..19

Table 2: Summary table of qualitative study characteristics and findings…….23

Table 3: Summary table of mixed-methods study characteristics and findings…….34

Chapter 2

Table 1: Comparison of primary and longitudinal study sample……65

Table 2: Correlations and descriptive statistics for study variables……67

Table 3: Hierarchical regression analysis……..69

List of Figures

Chapter 1

Figure 1: Prisma Flow Diagram……17

Chapter 2

Figure 1: Moderated mediation analysis……..70

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Chapter 1

Barriers and facilitators of help-seeking for the suicide bereaved: A mixed methods systematic review

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Abstract

Background: People bereaved by suicide are at increased risk of adverse physical and mental health outcomes, including suicide. Postvention activities aim to support recovery and reduce risk, but help-seeking is often delayed, limited, or absent. Better understanding of factors that hinder or enable help-seeking among suicide bereaved is therefore critical. To date, no systematic review has specifically synthesised barriers and facilitators to help-seeking in this population

Methods: A systematic search of peer-reviewed literature was conducted using four databases (Embase, MEDLINE, PsychINFO, and SocINDEX) from inception through to June 2025. Peer reviewed English language qualitative, quantitative and mixed-methods studies addressing barriers and facilitators of help-seeking in the suicide bereaved were included. Studies were quality assessed and findings narratively synthesised.

Results: Forty-five studies met inclusion criteria. Three overarching domains influencing help-seeking were identified: Intrapersonal Factors**,** referring to how an individual's identity, self-concept, psychological state, and self-appraisal influenced their help-seeking behaviour; Interpersonal Factors, encompassing relationships and interactions with professional services and/or informal social supports; Systemic Factors, including service visibility, gaps in service provision and practical barriers, along with societal factors. Stigma emerged as a cross-cutting influence across all domains, shaping disclosure, access to support, and help-seeking behaviours.

Conclusions: Help-seeking following suicide bereavement is shaped by interacting intrapersonal, interpersonal, and systemic factors, with stigma operating across all levels. Findings highlight the importance of proactive, flexible, and compassionate postvention responses that account for fluctuating readiness and reduced capacity to seek help in the aftermath of suicide.

Keywords: Suicide, bereavement, help-seeking, postvention

Introduction

Suicide does not occur in isolation. Each death by suicide is estimated to affect up to 135 people, with between five and fifteen close relatives experiencing profound bereavement (Andriessen et al., 2017; Cerel et al., 2019). With approximately 720,000 suicide deaths globally each year (World Health Organization, 2024) the number of individuals significantly impacted by suicide bereavement reaches into the millions. Beyond the universal grief associated with loss, suicide bereavement presents unique challenges. Evidence indicates increased risks of adverse physical health outcomes, including cardiovascular disease, chronic obstructive pulmonary disease, and diabetes (Bolton et al., 2013) alongside elevated rates of depression, anxiety, substance misuse, complicated grief, and reduced mental health–related quality of life (Mitchell et al., 2009; Wagner et al., 2021).

Theoretical perspectives describe coping with bereavement as a dual process involving ongoing movement between loss-oriented experiences (such as grief, yearning, and confronting the death) and restoration-oriented demands (including role changes and the practical demands of daily life) (Stroebe and Schut, 2010). Meaning reconstruction approaches (Bradley et al., 2025) similarly emphasise the active process of making sense of the loss and rebuilding a sense of identity and coherence. These perspectives may be particularly relevant to bereavement following suicide, where feelings of guilt, confusion, rejection and abandonment are common and the need to understand the death can be especially pronounced (Young et al., 2012).

From a suicide prevention perspective, exposure to suicide is a risk factor for future suicidal behaviour (Calderaro et al., 2022; Pitman et al., 2014). This increased risk is multifactorial, reflecting genetic vulnerability and shared adversities, social and environmental stressors, as well as those factors arising directly from the bereavement experience, which can include complicated grief and depression (Brent & Melhem, 2008).

Supporting recovery following suicide bereavement and preventing adverse outcomes, including suicidal behaviour, is the focus of postvention (Andriessen et al., 2019). Postvention encompasses a range of responses designed to support those bereaved by suicide, within which help-seeking represents the individual's active engagement with available support. Help-seeking has been conceptualised as an adaptive coping process involving efforts to obtain external assistance in response to distress, including emotional support, information, advice, or treatment (Rickwood & Thomas, 2012). Support may be accessed through formal sources, such as healthcare professionals, community workers, or third-sector providers, or through informal sources, including family, friends, and social networks, each addressing different needs (Andriessen, 2019; Brown et al., 2014). From a theoretical perspective, help-seeking can also be understood as a multi-step process of accessing care, rather than a single decision or behaviour, involving the recognition of need, a decision to seek support, the ability to reach and obtain services, and the extent to which needs are ultimately met (Levesque et al., 2013). Importantly, access is shaped not only by individual factors, but also by characteristics of services and systems (e.g., their visibility, acceptability, and availability), as well as the interaction between these and individuals' capacities to perceive, seek, reach, and engage with support. Applied to suicide bereavement, barriers and facilitators to help-seeking can be understood as those factors arising at the interface between bereaved individuals and the systems, organisations, and social environments through which support is accessed.

Despite the availability of postvention services, evidence regarding their effectiveness remains mixed, help is not always sought or accessed (Andriessen et al., 2019) and studies indicate substantial unmet need. For example, while the majority of suicide-bereaved individuals report needing professional support, fewer than half access it (Wilson & Marshall, 2010; McDonnell et

al., 2022). When individuals in need do not seek help, the risk of adverse outcomes increases (Geležėlytė et al., 2020).

Understanding the factors that facilitate, or hinder help-seeking is therefore critical for informing practice and improving postvention responses. Barriers to help-seeking refer to factors that impede or prevent individuals from accessing support, while facilitators are those that motivate, enable, or encourage help-seeking (Lui et al., 2024). Although determinants of help-seeking have been examined in relation to suicidal behaviour in specific populations and psychological distress more broadly (Cameron et al., 2025; Elshaikh et al., 2023; Lui et al., 2024), existing reviews of suicide bereavement have focused on service use, postvention effectiveness, or singular phenomena such as stigma (Abbate et al., 2024; Hanschmidt et al., 2016; Kaspersen et al., 2022). To date, no review has specifically synthesised the barriers and facilitators influencing help-seeking among individuals bereaved by suicide.

Rationale and Aim

A systematic search, appraisal and synthesis of current evidence on the barriers and facilitators influencing help-seeking among individuals bereaved by suicide is important for both policy and practice. Emerging patterns, themes and knowledge gaps can identify important areas for future research, interventions and funding priorities aimed at providing critical intervention to a vulnerable and under-supported group. Given the multifaceted nature of help-seeking, which encompasses measurable behavioural patterns as well as subjective and relational experiences, integrating quantitative and qualitative evidence enables a more nuanced and clinically meaningful synthesis.

Aim
The aim of this mixed-methods systematic review is to systematically identify, appraise, and synthesise quantitative and qualitative evidence in order to develop a comprehensive understanding of the barriers and facilitators influencing help-seeking behaviour following suicide bereavement.

Research Question
What are the barriers and facilitators to help-seeking among individuals bereaved by suicide?

Method

Protocol registration and reporting standards

The review protocol was registered with the international prospective register of systematic reviews (PROSPERO; CRD420251027785). The review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021) (See Appendix 1.1).

Search Strategy

Searches were carried out in June 2025. Searches of the peer-reviewed empirical literature were undertaken via multiple electronic databases based on their coverage of literature relevant to the review topic: Embase, MEDLINE, PsycINFO, and SocINDEX. All databases

were searched from inception to June 2025. Reference lists of included studies were also hand-searched to identify additional relevant articles. Gray literature was not included, as the review focused on peer-reviewed empirical studies to ensure consistency in methodological quality and appraisal.

The search strategy for this review was developed through an initial scoping exercise of the existing literature to identify commonly used terminology in related reviews (e.g. Magaard et al., 2017) and was subsequently refined in consultation with the College of MVLS librarian at the University of Glasgow. Searches combined controlled vocabulary terms (e.g. MeSH and Emtree headings, where applicable) with free-text keywords, using Boolean operators to capture three core concepts and related synonyms: (1) suicide, (2) bereavement (e.g. survivor, grief), and (3) help-seeking (e.g. service use, postvention, support). Free-text terms were searched across titles, abstracts, and keywords. Following piloting and discussion with the librarian, search terms relating explicitly to “barriers” and “facilitators” were not included to avoid excluding studies that examined help-seeking experiences without framing them using this terminology. See Appendix 1.2 for the full search strategy.

Inclusion and Exclusion Criteria

Peer reviewed English language articles reporting primary empirical qualitative, quantitative and mixed-methods research up until 2025 were eligible for inclusion, where they: reported data from (i) adult or child/adolescent populations who have lost a loved one or close other to suicide; and (ii) reported outcomes and findings indicative of experienced or perceived barriers and/or facilitators of help-seeking following suicide loss. Help-seeking encompassed both formal and informal means, and in the absence of explicit reference to the terms “barriers” and/or “facilitators”, studies were included if study results identified reasons or phenomena that positively or negatively impacted help-seeking or accessing support post-bereavement.

Articles were excluded if they reported on (i) persons bereaved by suicide whose primary relationship with the deceased was professional (i.e. GP, work colleague, etc.), that is not a relative, loved one or close other; or (ii) did not report findings on the role of barriers or facilitators of formal or informal help-seeking as defined above.

Study Selection

Search results were exported into EndNote 21 reference management software. Following removal of duplicates, titles and abstracts were screened for relevance by the primary researcher, with a second reviewer independently screening a random 10% of records. Agreement at this stage was 100%. Full-text articles were then retrieved and assessed against the eligibility criteria, with a second reviewer independently screening a random 20% of records. Initial agreement at the full-text stage was 70%. Discrepancies primarily related to whether certain social interactions constituted help-seeking; agreement was reached that interactions would be included where there was explicit reference to ‘help’ or ‘support’. In addition, some studies initially identified as focusing on help-seeking were excluded following full-text review where no definite barriers or facilitators were reported. All disagreements were resolved through discussion, resulting in 100% agreement.

Data extraction

Data extraction was conducted using a structured form derived from a Joanna Briggs Institute template. The form was designed to standardise the collection of study characteristics, the data extracted included authors and date of study, methodology, analytical approach, participants and country. In addition to study characteristics, all text relating to barriers and facilitators to help-seeking was extracted in summary form, guided by the review question and predefined inclusion criteria. These extracted findings formed the dataset for the subsequent synthesis and were reviewed iteratively to identify patterns and similarities across studies.(Nussbaumer-Streit et al., 2023)

Quality appraisal

Methodological quality of eligible studies was appraised using the Mixed-Methods Appraisal Tool (MMAT, Hong et al., 2018). The MMAT provides a single structured framework for evaluating qualitative, quantitative, and mixed-methods research based on established methodological criteria such as study design, data collection methods, sample representativeness, and design-specific risks of bias. It was selected for this review as it enables systematic assessment across study types, thereby reducing potential bias and enhancing the reliability of the synthesis. The primary reviewer applied the tool by rating each criterion as 'yes', 'no', or 'can't tell', which informed an overall judgement of high, moderate, or low quality. A second reviewer independently assessed a random sample of 20% of included studies, and discrepancies in judgements were resolved through discussion. To provide a comprehensive assessment of available evidence on the barriers and facilitators to help-seeking among the suicide bereaved quality ratings were not used to determine study inclusion but informed interpretation of the evidence base.

Data Synthesis

A narrative synthesis approach was used to categorise and report findings across key domains: Barriers to professional help-seeking; Barriers to informal help-seeking; Facilitators to professional help-seeking, and Facilitators to informal help-seeking. This differed to the review protocol which anticipated a thematic synthesis (Thomas & Harden, 2008). This change in the synthesis was arrived at following study selection when it became clear that line-by-line coding of study findings, as required in thematic synthesis, was neither appropriate nor feasible, given that barriers and facilitators to help-seeking were often not a substantive focus of primary papers, and the aim of the review was not to re-interpret the entirety of participants' experiences but to integrate findings relevant to a specific outcome of interest. Therefore, a broader narrative synthesis approach was adopted (Popay et al., 2006).

Narrative synthesis is recommended where review questions require selective extraction of relevant data and integration across diverse forms of evidence (Akers et al., 2009). This approach enabled the: (1) identification and extraction of findings related specifically to barriers and facilitators; (2) development of a preliminary synthesis by tabulating and grouping these

findings; (3) exploration of relationships within and across studies; and (4) assessment of the robustness of the synthesis.

The synthesis of findings followed a Convergent Integrated Approach (Stern et al., 2025), recommended when the research question can be addressed by both quantitative and qualitative research designs. Data is transformed by 'qualitizing' quantitative findings into a qualitative format, providing a narrative interpretation of the quantitative results. It is recommended that data is transformed in this direction rather than quantitizing qualitative data, as codifying quantitative data is less error-prone than attributing numerical values to qualitative data (Santos et al., 2018). In order to retain key strengths of thematic techniques, extracted findings were thematically grouped under higher-order categories (e.g., stigma, perceptions, access to services), which is in keeping with Step 3 of narrative synthesis: "exploring relationships within and across studies", and the JBI recommendation to categorise findings. These methods support transparency and coherence in how findings are organised, while using the broader narrative synthesis framework to integrate the evidence.

Results

Outcome of the study selection process

The electronic database searches returned 3,870 records. Following the removal of duplicates (n = 1,401), 2,469 titles and abstracts were screened for relevance. Of these, 2,327 were excluded, leaving 142 articles to progress to full-text review. Not all articles could be retrieved and 141 were reviewed against the eligibility criteria. A further 96 articles were excluded at this stage for the following reasons:

- The bereaved participants were not relatives, loved ones, or close others of the person who died by suicide, or if it was not possible to determine the nature of their relationship (e.g., Allie et al., 2024; Cole et al., 2025).
- Studies did not include factors of help-seeking whether that be formal or informal support (e.g. Dutra, 2018; Sandford et al., 2018)
- Studies did not report identified reasons or phenomena that positively or negatively impacted help-seeking or accessing support post-bereavement (Maple, 2019; Socco et al., 2019)
- Studies which were not available in English full text (e.g. Kowano, 2011; Prittigia et al., 2021)

No additional studies were identified from reference list searches. At title and abstract screening stage, reviewers agreed on 100% of records screened. At full text assessment, reviewers initially agreed on 70%, full agreement was reached following discussion. In total, forty-five studies met the inclusion criteria and were included in the final synthesis (see Figure 1).

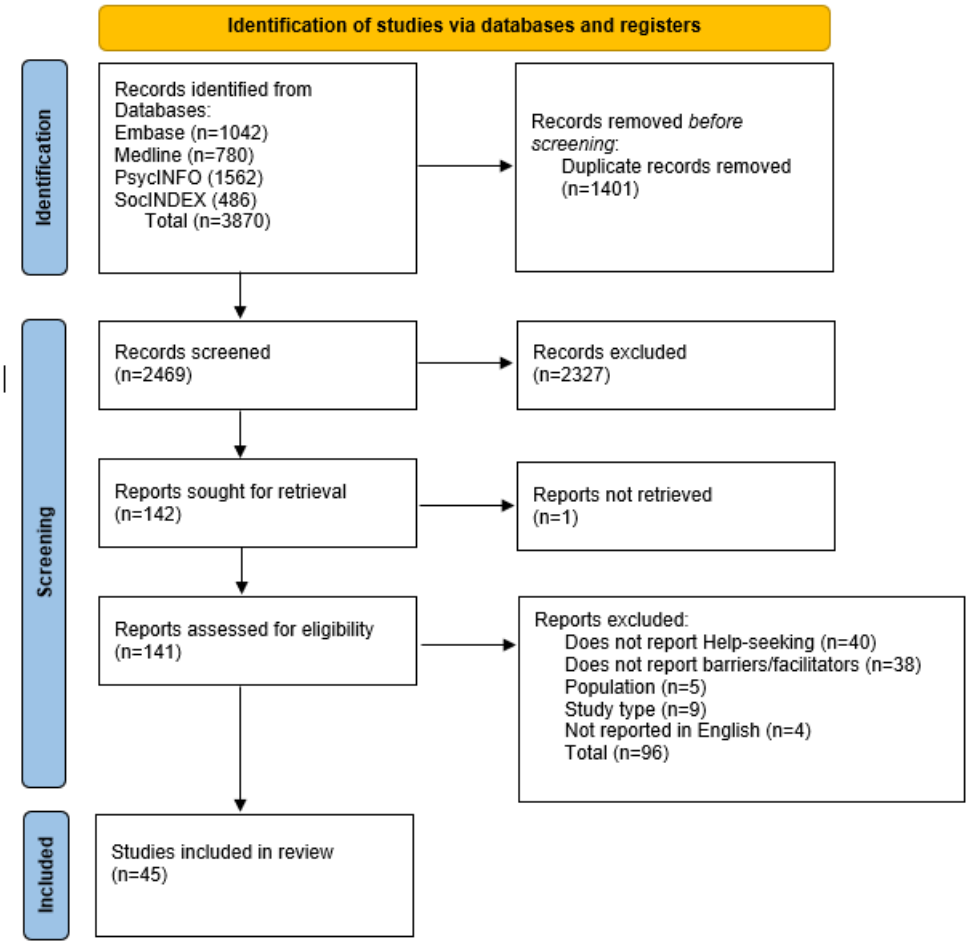

Figure1: Prisma Flow Diagram of Study Screening and Selection

Overview of included studies

To enhance readability given the volume of included literature, consistent with other high quality systematic reviews (e.g. Richardson et al., 2021; Zortea et al., 2021) in clinical psychology, each study has been allocated a unique identification number, as presented in the summary table of study characteristics and findings (Tables 1-3). These identification numbers are used in place of in-text citations when referring to individual studies throughout the results section. The forty-five included studies were published between 1995 and 2025. Papers 1-11 used a quantitative design; papers 12-42 used a qualitative design and the remaining 3 papers, 43-45, used a mixed-methods design. Eleven studies were conducted in the United States (3, 4 ,6, 7, 9, 10, 17 ,23, 27, 31, 39), ten in Australia (11, 12, 14, 15, 18, 21, 29, 34, 37, 38), eight in the United Kingdom (3, 4, 6, 7, 9, 10, 17, 23, 27, 31, 39), four in Ireland (25, 32, 33, 41) with three in both Canada (24, 30, 44) and Norway (1, 2, 43). Two studies were conducted in Italy (5, 20) and one in each of Germany (28), Hong Kong (19), Estonia (40) and Lithuania (45). Study sample sizes for the quantitative papers ranged from 63 (9) to 22,580 participants (1). The qualitative studies ranged in sample size from 2 (23) to 499 (16), and the mixed method studies ranged from 29 (44) to 128 participants (43). Two of the quantitative papers (1 and 2) were linked studies carried out by the same research team and based on the same population. Likewise, the two qualitative papers (14, 15) were linked, carried out by the same primary researcher and based on subsets of the same population sample.

Studies were heterogeneous in their phenomena of interest. While all were relevant to experiences of suicide bereavement, the extent to which barriers or facilitators to help-seeking formed a substantive focus varied considerably. Isolating accounts of help-seeking from more general interactions and social experiences following suicide bereavement (e.g., in studies referencing informal help-seeking) was also challenging. To help delineate help-seeking from general interactions, and in the absence of more explicit search terminology, data were included if interactions were described in terms of help or support.

Quality appraisal

The MMAT (Hong et al., 2018) was used to evaluate study criteria across key methodological criteria for each study design (Appendix 1.3). Based on this appraisal, of the quantitative studies, the two linked studies (1 and 2) were judged to be high quality, six were medium quality and three were low quality due to lack of validated measurements and risk of non-response and selection bias. Of the qualitative papers, twenty-four were judged to be high quality, six were medium quality and three were low quality due to insufficient data/quotes to substantiate findings or very limited scope based on sample size. Of the three mixed-method studies, two were judged medium quality, and one as low quality due to the lack of integration of methods and weak qualitative components. Lower-quality studies were retained in the synthesis to preserve the breadth of evidence in an under-researched area. However, their findings were interpreted with caution and considered in the context of the wider evidence base. Importantly, findings from lower-quality studies were largely consistent with those reported in higher-quality studies and did not introduce substantively new or contradictory evidence. As such, their inclusion was not considered to meaningfully bias the overall conclusions of the review.

Table 1: Study characteristics and relevant findings on barriers and facilitators to help-seeking among suicide bereaved (n= 11 quantitative studies)

ID	Study	Design/method	Participants	Country	Analysis	Relevant findings on barriers and facilitators
1	Bélanger et al. (2024)	Quantitative Population study	*N*=22, 580 (F=57.7%) Age: 20 – 79 years (*M*=47.1) Kinship: partner 11% offspring 24.1%, parent 25% sibling 39.8%	Norway	Fixed-effects linear regression analysis	Barriers: Gender - an increase in GP consultations for mental health reasons following suicide bereavement was more likely if female
2	Bélanger et al. (2025)	Quantitative Population study	*N*=14 781 (F=52.8%) Age: 20 – 70 years (*M*=45) SES: higher education 30.2%; In employment 73.5% Kinship: partner 10%, offspring 23 % parent 27.6% sibling 39.2%	Norway	Regression and trajectory analysis	Barriers: Men and older adults were overrepresented in groups with little or only GP use, suggesting age and gender as barriers to specialist help-seeking Facilitators: Women, higher education, and loss of a partner or child (kinship) were linked to increased uptake of mental health care
3	Drapeau et al. (2016)	Quantitative Cross-sectional study	*N*=418 (F=90%) Ethnicity: White 89.7% Age: *M*=49.5 years. SES: higher education 54%; In employment 59.8% Kinship: partner 13%, offspring 30% parent 16% sibling 17% friend 7%	United States	Regression analysis	Barriers: Neuroticism, (avoidant coping) extraversion Stigma concerns Facilitators: Openness, agreeableness, conscientiousness and active emotional coping each associated with more favourable help-seeking attitudes or greater resilience to stigma
4	Duval et al. (2025)	Quantitative Cross-sectional study	*N*=120 (F=82.5%) Ethnicity: White 92.5% Age: 27-81 years (*M*=55.6)	United States	Descriptive and inferential statistical analyses (independent-	Facilitators: In the context of interactions with first responders, seeking help was associated with perceived higher levels of compassionate

			Kinship: parent 48.3% partner 21.7%		samples t-tests and chi-square tests of independence to examine group differences)	communication, provision of practical information, referrals made, more personal disclosures, and follow-up contact from first responders
5	Entilli et al. (2023)	Quantitative Cross-sectional study.	*N*=132 (F=79.2%) Age: *M*=42.3 years. SES: 72.9% in employment. Kinship: Close relatives and partners = 57.8% Non-relatives 42.2%	Italy	Linear and logistic regression. AI rule-based analysis	Barriers: Suicide bereaved who did not seek help most often cited stigma and finance Difficulties with accessing online support.
6	Feigelman et al. (2020)	Quantitative Cross-sectional study	*N*=146 (F=83.56%) Age 20 – 80 years (*M*=52). Ethnicity: White 94% SES: further or higher education 59% in full-time employment 47% Kinship: first-degree relative 79% less close relative 2% other 19%	United States	Descriptive and correlational analysis	Barriers: Help-seeking from primary care inhibited when survivors felt it wasn't relevant to discuss with GP, the GP didn't ask, or they anticipated egotistical or reproachful reactions Facilitators: GPs who showed compassion, listened, spent extra time, and took concrete action, notably referring to mental-health care and support groups (and, when appropriate, prescribing medication) Some survivors also valued careful physician self-disclosure of similar losses
7	Feigelman et al. (2024)	Quantitative Cross-sectional study	*N*=1132, of which 222 were "first degree relatives" (analysis based on this number) Ethnicity: White, 66.8% Hispanic 9% Black 9.9% racially mixed 4.9%. SES: higher education 56.8%	United States	Descriptive statistics, correlation and multivariate analysis	Barriers: Those less likely to obtain grief support were of older age, lower social support, had lack of religious affiliation, higher perceived stigma and secrecy Facilitators: Those more likely to obtain grief support demonstrated stronger grief distress, greater closeness to the deceased, higher perceived social support and religious involvement

			in employment 73%			
8	McDonnell et al. (2022)	Quantitative Cross-sectional study	*N*=7158 (F=78.7%) Age 18-84 years (*M*=43.6) Ethnicity White 97%. SES: in employment 75%. Kinship: parent 16% sibling 16% offspring 14% second-degree relative 9% friend 19% Other 15%	UK	Descriptive statistics	Barriers: Many didn't know services existed (35%), some perceived no local services (12%) Majority rated provision inadequate (62%); in addition Sizeable numbers relied on informal support or self-coping Roughly half reported no employer-offered support
						Facilitators: Early proactive contact is strongly preferred (65% within a week) GP/online/counselling routes function as accessible gateways among those who do engage
9	Mcmenamy et al. (2008)	Quantitative Cross-sectional study	*N*=63 (F=71%) Age *M*=50.4 years Ethnicity: White 94% Education: College or further, 81%. Kinship: parents 20% offspring 29% siblings 18% partner 18%	United States	Descriptive and correlational analysis	Barriers: Depression/low energy (52%) Not knowing where to find help (45%) Resource unavailability (34%) Reluctance to ask, stigma concerns, pervasive communication difficulties and isolation constraining disclosure and access. Distrust. Family opposition Time/financial limits
						Facilitators: One-to-one contact with another survivor (100%) Suicide-specific groups (94%) Availability of individual therapy/mental-health care, and low-threshold resources (books/web). Clergy/funeral directors emerging as valued contacts who could serve as gateways to accessing support.
10	Pfeffer & Everett (2000)	Quantitative Cross-sectional study, telephone survey	*N*=227 (F=63.4%) Kinship: parent 17% offspring 7%	United States	Descriptive analysis	Barriers: Disagreements or opposition within the family Difficulties related to language

			sibling 19% partner 16% other relative 14%, unknown 28%			Practical or systemic challenges such as lack of time, financial strain, and limited access to transport
11	Wilson & Marshall (2010)	Quantitative Cross-sectional study	*N*=166 (F=75.6%) Age 20-78 years (*M*=49). SES: University or higher education 78% in employment 63%. Kinship: parent 35% offspring 14% siblings 16% partners 22% Second-degree relative 5.5% non-relative 7.9%	Australia	Descriptive analysis	Barriers: Difficulties in finding or accessing information, limited awareness of available services Support sometimes not offered. Some felt that no one could help Practical obstacles such as distance to services and the financial burden of accessing care Being left on a waiting list for years. Struggling to seek support while caring for Children. Only realising in hindsight that help had been needed during the grief process

Note: Demographics are listed where made available within individual studies. *N*=number, *M*=Mean, F= female, SES = Social economic status, GP = General Practitioner

Table 2: Study characteristics and relevant findings on barriers and facilitators to help-seeking among suicide bereaved (n= 30 qualitative studies)

ID	Study	Design/method	Participants	Country	Analysis	Relevant findings
12	Adams et al. (2019)	Qualitative Semi-structured interviews	*N*=7. Age 20-27 years, adolescents at time of suicide. Kinship: siblings 100%	Australia	Interpretive phenomenological analysis	Barriers: Protective silence Anticipated stigma, self-stigma Living away from peer group (distance) Finding, engaging with, or accepting support
						Facilitators: Availability of people, access to trained professionals

13	Adshead & Runacres (2024)	Qualitative Semi-structured interviews	*N*=6 (F=50%). Adults 18+ attending suicide bereavement support group.	UK	Realist approach thematic analysis	Barriers: Lack of supportive relationships, inconsistent concern. Stigma and mistrust. Self-stigma and not wishing to be dependent on services Masculinity – societal expectations of men in relation to appropriate expression of grief Not wanting to be a burden Facilitators: Perceived understanding of others Motivated by desire to improve relationships
14	Andriessen et al. (2019)	Qualitative Semi-structured telephone interviews	*N*=39 (F=77%). Mean age= 20.6 years, adolescents at time of bereavement. *N*=19 suicide bereaved	Australia	Thematic analysis	Barriers: Self-reliance Low awareness of services Poor fit or mistrust of professionals perceived inadequacy of school counsellors Limited peer group availability Scepticism of online support Facilitators: Parental encouragement and referral Positive therapeutic relationships. Clinician expertise in bereavement
15	Andriessen et al. (2022)	Qualitative Individual and group semi-structured interviews	*N*=18 (F=78%) Age 14-23 years (*M*=19.2) – adolescents at time of bereavement	Australia	Thematic analysis	Barriers: Difficulty of finding good fit with counsellor Structural access issues such as long waits and limited specialist availability Mistrust Facilitators: Flexible delivery Availability of specialist adolescent appropriate bereavement support
16	Azorina et al. (2019)	Qualitative Free text survey questions,	*N*=499 (F=83%) Mean age 25 years. Ethnicity: White 92% Kinship: blood relative 53% partner 4% friend 33%	UK	Thematic analysis	Barriers: Social discomfort, stigma, taboo, shame and embarrassment leading to isolation and concealment of topic Negative encounters preventing further sharing Facilitators: Shared experience, feeling validated

			other 9%			
17	Barnes (2006)	Qualitative Semi-structured interviews	*N*=19 African American Kinship: parents 32% siblings 16% offspring 10.5%, partner 10.5%	United States	Ethnography	Barriers: Cultural stigma, religious taboo, absence of culturally relevant support structures Family conflict Low mental health literacy
18	Blaze & Roberts (2023)	Qualitative Semi-structured interviews	*N*=10 (F=90%) Age 21-49 years (*M*=32.2) Kinship: siblings 100%	Australia	Thematic analysis	Barriers: Lack of sibling-specific services Limited understanding from professionals and peers Pervasive stigma Service access difficulties Burdensome caregiving roles for parents Negative experiences with police and coronial staff
						Facilitators: Shared understanding within sibling-specific peer groups Safe non-judgemental spaces to express grief Flexible and supportive workplaces Proactive signposting to relevant services
19	Chan & Cheung (2022)	Qualitative Semi-structured interviews	*N*=10 Chinese males Age 30-60 years. Kinship: parent 70% partner 30%	Hong Kong	Thematic analysis	Barriers: Cultural stigma, social taboo fear of judgement Masculinity, view that Chinese men should be viewed as competent and strong Distrust of professionals
						Facilitators: Culturally sensitive peer support groups Refraining emotional openness as a form of strength
20	Cipoletta et al. (2022)	Qualitative Live chat transcripts	*N*=30 (F=90%). Mean age 35.7 years. Suicide bereaved individuals Kinship: siblings 37% (other kinship not stated)	Italy	Thematic analysis	Barriers: Low awareness of resources Emotional paralysis from guilt and shock Stigma-driven isolation
						Facilitators: Anonymity Accessibility, immediacy of live-chat

21	Clark & Goldney (1995)	Qualitative Method unclear	*N*=97 (F=76%). Age 12-77 years (*M*=40) Attendees at suicide bereavement support group. Kinship: parent 34% spouse 29% sibling 19%, off-spring 9%, other 9%	Australia	Not stated	Barriers: Not knowing where to go or how to look for help
22	Cogan et al. (2025)	Qualitative Interviews	*N*=15, Professionals who support suicide bereaved older adults.	UK	Thematic analysis	Barriers: Stigma and generational norms Structural access problems, including transport, digital exclusion, physical and cognitive impairments Weak signposting Religious and traditional beliefs
23	Ferlatte et al. (2019)	Qualitative Interviews, Photovoice	*N*=2, Bereaved gay men who lost partner to suicide.	United States	Thematic analysis	Barriers: Following on from stigma received (in relation to homosexuality) both men were reticent to seek help. Layered stigma
24	Gall et al. (2014)	Qualitative Interviews	*N*=11 (F=81%) Mean age 49 years. Kinship: parents 36 % off-spring, 27% other 35% *N*=4 (Mental Health workers)	Canada	Thematic analysis	Barriers: Concerns of burdening or traumatising others. Low expectations of what others could offer
25	Gordon & Mcelvaney (2022)	Qualitative Interviews	*N*=5 (F=100%). Age 19 – 66 years (*M*=49). Kinship: mother 40%, mother-in-law 20% aunt 20% cousin 20%	Ireland	Interpretive phenomenological analysis	Barriers: Emotional paralysis Family care-taker role sidelining own needs Stigma-driven unspeakability. Gender - male relatives reluctance to seek help. System frictions, lapsed support, access difficulties.

						Facilitators: Modelling help-seeking
26	Hafford-Letchfield et al. (2022)	Qualitative Interviews	*N*=24 (F=88%) Individuals bereaved by suicide in later life. Age 60-94 years (*M*=72). Ethnicity: White 96% Kinship: parent 62.5%, partner 17%, sibling 8% other 12.5%	UK	Interpretive phenomenological analysis	Barriers: Negative reactions from others, difficult relationships, blame and shame Caring role or needing to put others needs first
						Facilitators: Proactive help/support Motivation for survival, carrying on for others
27	Hunt et al. (2019)	Qualitative Semi-structured interviews	*N*=10 (F=40%). Age 30-72 years (*M*=47.6). Kinship: sibling 60%, offspring 20%, other 20%.	United States	Thematic analysis	Barriers: Silence around suicide, rejection, judgement from family and friends. Negative professional encounters Use of stigmatising language
						Facilitators: Professionals who were respectful and validating Families who communicated openly about the loss
28	Marek & Oxele (2024)	Qualitative Online interviews	*N*=18 (F=50%) Age 23-64 years. Kinship: parent 28% offspring 22% partner 22%, sibling 17% other 11%	Germany	Qualitative content analysis	Barriers: Putting needs of others first Lack of social norms, silence, avoidance, insensitivity. Fluctuating needs
						Facilitators: Acts of kindness, shared understanding
29	Mckinnon & Chonody (2014)	Qualitative Interviews	*N*=15 (F=86%) Age 26-75 years (*M*=49) Kinship: sibling 43%, offspring 36%	Australia	Thematic analysis	Barriers: Physical consequences of grief i.e. sleep, lack of energy Emotions: anger, depression, self-blame and guilt Distance/travel.

			spouse 14%, parent 7%			Distress at shared grief in groups. Discontinuity of care
						Facilitators: Compassion and rapport when approaching services
30	Michaud-Dumont et al. (2020)	Qualitative Semi-structured interviews	*N*=3 (F=66%) Age 20-65 years. Kinship: offspring 33%, grandchild 33%, other 33%.	Cananda	Thematic analysis	Barriers: Stigma and taboo Having to seek out services
						Facilitators: Availability of neutral space
31	Miers et al. (2012)	Qualitative Interviews	*N*=8 (6 parent units). Kinship: parents 100%	United States	Thematic analysis	Barriers: Lack of proactive, clear guidance at scene and afterwards. Many had to locate support themselves
						Facilitators: Someone to explain steps and options
32	Nic an Fhaili et al. (2016)	Qualitative Semi-structured focus group interviews	*N*=15 (F=73%). Kinship: parent 46% sibling 33% offspring 7% spouse 7% other 7%	Ireland	Framework method analysis	Barriers: Stigma, particularly in rural areas. Shame, social withdrawal. Reluctance to sit in public waiting rooms Use of language Limited proactive outreach from GPs Fears of medication Low awareness of service availability
						Facilitators: Compassionate and proactive engagement from GP including acknowledgement of loss and life of deceased. Active listening, flexible appointment options and locations Signposting
33	O Connel et al. (2024)	Qualitative Semi-structured interviews	*N*=12 (F=83%) Suicide bereaved individuals including parent, (ex-) spouse, sibling, offspring.	Ireland	Thematic analysis	Barriers: Poor early capacity to absorb information, variable readiness Low awareness Occasional invalidation in therapy Social discomfort

						Facilitators: Standardised proactive outreach, clear written guidance given and re-offered Online availability to reduce geographic barriers Peer-service protocols (intake, distress management, signposting)
34	Peters et al. (2016)	Qualitative Interview	*N*=10 (F=70%). Kinship: spouse 50%, parent 30%, other 20%	Australia	Thematic analysis	Barriers: Stigma related encounters; feeling blamed, shamed, rejected or silenced. Managing manage others' discomfort and responses, impeding disclosure and access to support
35	Pitman et al. (2018)	Qualitative Interviews	*N*=27 (F=66%) Sudden bereavement, of which suicide, *n*=11. Age 20-40 years, Ethnicity: White 93%	UK	Thematic analysis	Barriers: Stigma related social awkwardness, silence, avoidance. Pressure to hide grief and secrecy. Failures to offer support Lack of information Facilitators: Explicit offers of support
36	Rivart (2021)	Qualitative Free-text survey	*N*= 227 (F=77%). Age 18-72 years, (*M*=38.8) Ethnicity: Mixed race 46.7%, Asian 32%, Black Caribbean or African 14.1%, Other non-white 7%. Kinship: friend 17.6% sibling 14% parent 4.4% partner 5.3% offspring 6.6%, other 9.3%	UK	Thematic analysis (secondary data)	Barriers: Lack of knowledge Invisible services Failed or invalidating contacts with agencies and professionals, gaps at first response (police) Stigma/taboo within some communities. Rejection/isolation within community
37	Ross et al. (2021)	Qualitative Focus groups	*N*=15 (F=80%) Age 31-73 years. Kinship:	Australia	Interpretive phenomenological analysis	Barriers: Changing needs Shock, numbness, confusion

			Spouse, partner or family member.			Lack of access to clinicians with appropriate skills Distress at re-telling of story Stigma related shame, guilt, rejection and isolation
						Facilitators: Proactive, practical support in early stages. Flexibility in services Clear guidance and support in direction
38	Ross et al. (2018)	Qualitative Semi-structured interviews	*N*=14, Suicide bereaved parents. Age 50 – 78 years. Kinship: Parents 100%	Australia	Thematic analysis	Barriers: Social withdrawal resulting in subsequent isolation and reduced support Inability to talk to partner
						Facilitators: Supportive workplace, including empathy, help accessing counselling, flexible time off
39	Sheehan et al. (2018)	Qualitative Focus groups	*N*=71 of which 46% Suicide bereaved. (F=52%) Ethnicity: White 55% Black 37%	United States	Thematic analysis	Barriers: Denial of support, Lack of emotional safety with climate of silencing and anticipated stigma Limited time off work and pressure to return
40	Suija et al. (2022)	Qualitative Semi-structured interviews.	*N*=37 (F=73%) Kinship: parents 27% partner 22% sibling 19% offspring 5% close friend 24% other 3%	Estonia	Inductive content analysis	Barriers: Self-navigating, feeling alone Shame, lack of trust Irregular contact and follow-up Aversion to re-telling and inhibitions about talking
						Facilitators: Clear early information Contact from people who can listen and be present
41	Trimble et al. (2012)	Qualitative Questionnaire	*N*=10 (F=50%). Age 18-60+ (*M*= 38). Kinship: partner or close family member	Ireland	Thematic analysis	Barriers: Lack of understanding from professional services, feeling uncomfortable, not understood Fear of stigma and judgement Access/cost Not feeling help is necessary

						Readiness to face issue
						Facilitators: Greater access, increased awareness. Proactive support networks Lived experience of professional Low cost-free services. Specialised groups i.e. teens, LBGTQ
42	Wainwright et al. (2020)	Qualitative Interviews	*N*=29 (23 parent units) Age 46 – 70 years. Kinship: parents 100%	UK	Thematic analysis	Barriers: Fear of burdening/inflicting on others. Fear of reactions Travel distance to groups GP Triage hurdles, short slots, waiting room distress Lack of proactive outreach GP uncertainty/limited signposting
						Facilitators: Acknowledgement of bereavement Non-pressured time slots GP initiated contact including home visits Clear written information and referrals Active signposting

Note: Demographics are listed where made available within individual studies *N*=number, *M*=Mean, F= female, SES = Social economic status, GP = General Practitioner

Table 3: Study characteristics and relevant findings on barriers and facilitators to help-seeking among suicide bereaved (n= 3 Mixed-Methods studies)

ID	Study	Design/method	Participants	Country	Analysis	Relevant findings
43	Dyregrov (2002)	Mixed-methods quantitative surveys and	*N*=128 (F=60%). Age 23-73 years (*M*=51). Kinship:	Norway	Statistical analysis and qualitative mode of analysis	Barriers: Limited proactive outreach, short-lived follow up Co-ordination/handover failures Resource constraints

		qualitative interviews	parents 100%			Under-provision for siblings Facilitators: Routine repeated proactive contact Written protocols/practical guidance
44	Ligier et al. (2020)	Mixed-methods combining audit, brief measures and qualitative interviews	*N*=29 (F=79%) Mean age 57.7 years	Canada	Descriptive statistics and content analysis	Barriers: Nearly half received no initial offer of help, most wanted proactive phone outreach in the first two months Referrals to psychological support were uncommon
45	Geležėlytė et al. (2020)	Mixed-Methods Open-ended questionnaire	*N*=82 (F=78%). Age 19-70 years (*M*=37.9). Kinship: First-degree relative 67%, friend 6%, other 27%	Lithuania	Linear regression and thematic analysis	Barriers: Gaps in the system included long waits, few specialists, lack of information, financial costs Stigma around seeking help, fear of talking to strangers Self-reliance Past negative experiences with professionals Practical obstacles such as lack of time or energy Facilitators: Positive attitudes toward professional care Higher levels of stigma and guilt, which were unexpectedly linked with greater help-seeking

Note: Demographics are listed where made available within individual studies. *N*=number, *M*=Mean, F= female, SES = Social economic status, GP = General Practitioner

Synthesis: barriers and facilitators to help-seeking following a loss to suicide

Three overarching categories and one cross-cutting theme were identified from the findings:

Overarching categories

Intrapersonal Factors, referring to how an individual's identity, self-concept, psychological state, and self-appraisal influenced their help-seeking behaviour.

Interpersonal Factors, encompassing relationships and interactions with both professional services and informal social supports.

Systemic Factors, including service visibility, gaps in service provision and practical barriers, along with societal factors.

Cross-cutting theme

Stigma, referring to negative social attitudes, was found to be a cross-cutting sub-theme interwoven across the three main groupings

Intrapersonal Factors

Identity

Sixteen studies reported intrapersonal factors related to identity as influencing help-seeking following suicide bereavement. These included gender, age, roles, beliefs, and aspects of self-concept.

Six studies described gender-related influences on help-seeking, two of which found male gender to be associated with lower levels of service utilisation (1, 2). Two studies also identified male pride as a barrier, describing how bereaved men hoped their distress would resolve without support and preferred to be perceived as strong, tough, or brave rather than as someone needing help (13, 25). One study situated gender-related barriers within a Chinese cultural context, identifying that traditional masculine norms discouraged emotional expression; however, reframing emotional engagement as a sign of strength was identified as a potential facilitator to help-seeking (19). In contrast, one study did not identify any differences in help-seeking based on gender, age, or other demographic variables (45).

Age-related identity factors were reported in two studies, which found that individuals in the oldest age categories demonstrated lower utilisation of GP services following bereavement (2, 7). One additional study provided contextual insight into generational expectations, describing how older individuals often perceive themselves as strong, resilient family figures during crises, a role which may act as a barrier to seeking support (22).

An individual's identity related to their perceived role was further identified in two studies. One study reported that adherence to traditional female roles acted as a barrier to help-seeking (25), while another found that perceived caregiving responsibilities for others led individuals to prioritise others' needs over their own (26). Conversely, in these studies, the motivation to continue functioning for others was also identified as a facilitator for help-seeking.

Eight studies reported beliefs and self-concept as influencing help-seeking behaviour (6, 8, 9, 10, 13, 14, 15, 45). These included perceptions of being able to cope alone, valuing self-reliance, scepticism towards therapy, or uncertainty about recognising a need for help. One study additionally linked personality traits to help-seeking, identifying openness and agreeableness as associated with increased help-seeking, while neuroticism and extraversion were negatively associated and acted as barriers (3).

Psychological state

Ten studies reported that psychological state and the embodied emotional impact of suicide bereavement influenced individuals' ability to seek help. Across these studies, intense emotional distress was commonly described as a barrier to recognising the need for support or identifying appropriate sources of help.

Two studies highlighted how 'numbness' and the complexity of grief functioned as limiting factors, preventing individuals from knowing who to approach or how to initiate help-seeking (20, 32). Three studies described acute emotional states including shock, pain, horror, upset, confusion, anger, and emotional rawness as inhibiting access to support during the early stages of bereavement (16, 42, 43). One study described suicide bereavement as producing a complex web of interrelated physical and psychological states, making it difficult for individuals to connect with available supports (25). Embodied distress was further reported in two studies, which described how symptoms such as insomnia, poor appetite, and lack of energy reduced individuals' capacity to reach out for help (9, 29)

While profound and debilitating grief was frequently described as a barrier, two studies identified changes over time. One study reported that once initial feelings of numbness subsided, individuals were better able to benefit from available support (37). Another study identified the desire to alleviate overwhelming emotional states as a key motivator for seeking help, reframing distress as a facilitator rather than solely a barrier (13).

Self-appraisal

Thirteen studies reported negative self-appraisal following suicide bereavement, including self-stigma, shame, self-judgement, and their impact on help-seeking behaviour.

Two studies reported that individuals who did not seek help were more likely to hold negative views of themselves as suicide loss survivors, with feelings of shame about seeking help and concern about how others might perceive them (6,9). One study focusing on adolescents identified embarrassment as a prominent barrier to help-seeking (14). In two further studies, shame prevented individuals from attending their GP, while another described how stigma and secrecy surrounding suicide led some individuals to withhold information even from close family members (32, 40, 35)

The consequences of prolonged secrecy were highlighted in one study, in which concealment of the suicide over many years was described as emotionally devastating and contributing to significant psychological distress (27). Among older adults, one study reported that feelings of shame and stigma restricted access to support groups (22) and led to withdrawal and social isolation. Another study on bereaved parents describes conversations about the bereavement experienced as intolerable due to guilt and self-blame (37).

In contrast, one study reported that individuals who sought help experienced higher levels of guilt, suggesting that guilt may operate differently across help-seeking trajectories and, in some cases, act as a motivator rather than solely as a barrier (45).

A further form of negative self-appraisal identified in four studies was the belief of being a burden or an imposition on others, which limited individuals' willingness to access informal support from family and social networks (13, 22, 24, 42).

Interpersonal Factors

Professional relational qualities

Thirteen studies reported that the quality of interactions with professional supports influenced engagement with help-seeking following suicide bereavement, functioning as either barriers or facilitators. Early professional encounters were consistently identified as particularly influential.

Three studies highlighted the importance of first impressions, reporting that compassionate, supportive initial interactions were associated with increased engagement with services. Of these, one study found that individuals who sought support reported higher levels of perceived compassion from first responders, suggesting that perceived compassion may play a facilitating role in help-seeking (4). Another described how a positive initial interaction with police at the time of death, combined with provision of information about available support services, acted as a facilitator to subsequent help-seeking (18). One study reported that an initial negative interaction with a professional could lead to disengagement, dropout, and mistrust of services (15).

Professional competence was identified as an important factor in six studies. These studies reported that access to practitioners who were skilled, capable, and knowledgeable about suicide bereavement facilitated engagement, while perceived lack of competence acted as a barrier (6,15, 20). Practitioner experience either through specialist training in suicide bereavement or through lived experience was also identified as facilitating trust and engagement in three studies (29, 37, 41).

Relational qualities of professional interactions were emphasised across seven studies. Compassionate communication, characterised by practitioners offering time, care, and genuine interest, was consistently associated with positive help-seeking experiences (32, 34, 37, 40). Trust and the ability to establish a comfortable, relatable therapeutic relationship were identified as key facilitators in three studies, supporting sustained engagement with services (9, 15, 25).

One study specifically highlighted the importance of GPs actively acknowledging the occurrence of a suicide bereavement, noting that such acknowledgement provided relief and validation and created an opportunity to explore the loss and fulfil the need to be listened to (32).

Relational strain

Eleven studies reported that relational strain and challenging encounters with others affected individuals' ability to access informal social support following suicide bereavement. Across these studies, discomfort, avoidance, and negative reactions within social and family relationships were commonly described as barriers to help-seeking.

Two studies reported that friends and family members were often perceived as embarrassed or uncomfortable discussing the death by suicide, with insensitive comments contributing to quarrels, estrangement, and subsequent withdrawal from relationships (37, 38). In two further studies, avoidant and awkward behaviour from others led bereaved individuals to feel responsible for alleviating the discomfort of those around them, resulting in prioritisation of others' emotional needs over their own support needs (28, 34).

Negative social reactions were reported across five studies, including expressions of shock, looks of horror, and uncertainty about what to say. These responses reduced opportunities for

receiving informal help and contributed to feelings of isolation and disconnection from key sources of social support (16, 18, 26, 27, 42).

Strain within close family relationships was highlighted in two studies. One study described how negative attitudes within the family restricted individuals' perceived freedom to access external support, including attendance at support groups (25), while another identified family disagreements as a barrier to help-seeking (10).

One additional study described a pattern of protective silence within families, whereby family members refrained from expressing grief to protect one another from further distress. This circular dynamic was found to inhibit emotional expression and limit opportunities for mutual support (12).

Systemic Factors

Service visibility

Thirteen studies reported that limited awareness or knowledge of available services and support provision acted as a barrier to help-seeking following suicide bereavement (8, 9, 11, 14, 18, 20, 21, 32, 33, 36, 37, 42, 45). Across these studies, the absence of visible, accessible information at a time of acute distress was consistently identified as inhibiting engagement with support. Many bereaved individuals reported not knowing what services were available or how to access them during the early stages of bereavement.

In a similar vein, eleven studies highlighted the importance of proactive support, whereby professional services initiated contact and provided information about available help (4, 5, 25, 29, 30, 32, 33, 41, 42, 43, 45). These studies described how the responsibility for initiating help-seeking was often experienced as overwhelming or unmanageable in the context of intense grief.

One study provided a detailed account illustrating this need for outreach, describing how a bereaved parent recognised the need for professional support but felt unable to initiate contact independently. Proactive engagement from a liaison service was experienced as crucial during a period of heightened vulnerability, enabling access to support that would otherwise not have been sought (25).

Service provision and accessibility

Eighteen studies reported issues related to the provision, availability, and capacity of services to meet the needs of individuals bereaved by suicide (8, 9, 11, 12, 15, 17, 18, 20, 22, 25, 26, 29, 33, 37, 40, 41, 42, 43). Across these studies, service provision was frequently perceived as inadequate within local communities, with long waiting times, limited availability, or an absence of services tailored to the specific needs of the bereaved commonly identified as barriers to help-seeking. Having flexibility and timing in how and when services were offered was considered a facilitator of accessing help in recognition that the bereaved have fluctuating needs and were not always ready to access help when it was available. Practical barriers such as travel distance, workplace flexibility and cost were also identified. Online provision acted as a facilitator that mitigated some of these barriers, but for others lack of digital fluency or unease or mistrust of online services acted to deter.

Stigma

Stigma was identified as a cross-cutting phenomenon influencing help-seeking across social, professional, and broader systemic or cultural contexts. Over half of the included studies reported stigma as a barrier to accessing support following suicide bereavement (3, 5, 7, 8, 12, 13, 16, 17, 18, 19, 20, 22, 23, 25, 27, 29, 32, 34, 35, 36, 37, 39, 41, 45).

Stigma impacted help-seeking in multiple ways, including missed opportunities to offer or request support and an absence of safe environments in which grief could be openly discussed. Several studies described how a lack of sensitive listening and responsive communication contributed to perceived judgement and anticipated stigma, inhibiting disclosure and engagement with support, particularly in early encounters with others. Insensitive language, alongside exposure to gossip and speculation, was reported to contribute to feelings of judgement and social exclusion, leaving bereaved individuals with the perception that others did not want to engage with their loss. As a result, stigma frequently led to concealment of the cause of death, reluctance to speak openly about the bereavement, and reduced access to appropriate formal and informal support.

At a cultural level, intersectional stigma was reported in two of these studies, particularly among individuals who already experienced marginalisation or discrimination related to sexuality or ethnicity. In these contexts, suicide bereavement compounded existing stigma and further constrained help-seeking opportunities (23, 36).

Stigmatising beliefs were also identified as barriers to help-seeking within some religious communities. However, these same studies noted that religious belief and faith-based communities could also act as sources of comfort and support, highlighting the dual role of religion as both a barrier and facilitator depending on context (7, 17, 22)

Discussion

This review systematically identified and synthesised findings from 45 studies that examined barriers and facilitators to help-seeking following suicide bereavement. Few studies focussed specifically on the barriers and facilitators to help-seeking among those bereaved by suicide. Instead, many of the included studies explored broader experiences of bereavement or postvention, with help-seeking emerging indirectly within their findings. Despite this, barriers and facilitators were consistently reported across studies and the present review synthesised findings under three overarching categories of help-seeking influence: intrapersonal, interpersonal, and systemic factors, with stigma emerging as a cross-cutting influence. Facilitators often mirrored barriers, and vice versa, highlighting the nuanced and interrelated nature of these influences.

The present review complements existing review-level syntheses investigating the effectiveness of postvention interventions for people bereaved by suicide (Andriessen et al., 2019). Importantly, by examining barriers and facilitators to help-seeking, the current review addresses an earlier and crucial stage of the care pathway. In doing so, the review offers insight into why engagement with postvention interventions may be delayed or absent.

The review findings indicate that intrapersonal factors play a crucial role in influencing help-seeking, for example where intense emotional overwhelm and embodied distress limited individuals' capacity to recognise need or initiate help-seeking. This early constraint was often compounded by internalised expectations, such as the need to remain strong for others or to fulfil caregiving roles which discouraged acknowledgement of personal vulnerability. These findings suggest that help-seeking following suicide bereavement may be less constrained by

unwillingness than by a temporary loss of psychological and identity-based capacity to seek support.

Interpersonal factors highlighted the relational nature of help-seeking and how initial vulnerabilities could be met with containment or withdrawal. Compassionate interactions, particularly from professionals were described as legitimising distress and enabling disclosure, while insensitive responses reinforced fears of judgement and social exclusion. Strain within family and social relationships influenced engagement with informal support, shaping early decisions about whether others were safe to approach. Scott et al. (2020) found increased social support was consistently associated with improved wellbeing among suicide bereaved individuals, underlining the importance of informal support networks for this population. The current review extends this literature by highlighting the ways in which people react and relate to one another in the aftermath of suicide may actively shape whether such support becomes accessible, sustained, or avoided.

At a systemic level, help-seeking was shaped less by the absolute availability of services than by how visible, responsive, and accessible they were at a time of acute vulnerability. This aligns with postvention and help-seeking literature (e.g. Kaspersen et al., 2022) suggesting that bereaved individuals often struggle to initiate support independently in the aftermath of suicide, particularly when cognitive and emotional resources are compromised. Poor service visibility effectively transferred responsibility for engagement onto bereaved individuals at a point when their capacity to navigate systems was limited. In contrast, proactive outreach, flexibility, and clear signposting functioned not only as practical facilitators but also as symbolic signals of legitimacy and care, helping to establish viable pathways to support. The current review makes an important contribution to current knowledge, demonstrating that system responsiveness in the early aftermath of suicide may actively shape whether support is perceived as accessible, appropriate, and permissible to seek.

Across the included studies, stigma was a pervasive and multifaceted influence, operating in intersecting and compounding forms across intrapersonal, interpersonal, and systemic domains. Stigma shaped how distress was interpreted, how others responded, and how support was accessed, thereby exerting a continuous influence on help-seeking trajectories. This is consistent with a recent major scoping review of suicide-related stigma, which reported associations between stigma, reduced help-seeking, secrecy, social withdrawal, and poorer mental health outcomes across suicide-affected groups (Wyllie et al., 2025). The present review builds on the recent work of Wyllie et al. (2025) and demonstrates how stigma operates across intrapersonal, interpersonal, and systemic domains to shape help-seeking trajectories among the bereaved. Furthermore, this review also contributes to the broader help-seeking literature, showing that many barriers identified among suicidal individuals (e.g., Hom et al. 2015) are also experienced by those facing the aftermath of loss.

The findings of this review should be considered within a broader socio-cultural context, as the majority of included studies were conducted within predominantly Western populations and may therefore reflect culturally specific understandings of suicide bereavement and help-seeking. Cultural scripts surrounding suicide, grief, and disclosure can significantly shape help-seeking behaviour. For example, Barnes (2006) highlights how suicide may be considered taboo within some ethnic minority communities, with suicide representing a failure of not only an individual, but also the failure of the community. Suicidal behaviour also remains a criminal offence in over 20 countries worldwide, with disproportionately harmful effects of ‘antisuicide’ legislation experienced by women (World Health Organisation, 2023; Wu et al., 2022). These issues therefore add further layers of stigmatisation to a community that already feels stigmatised because of racism and oppression.

This has important implications for the interpretation of the current findings, where the bereaved may experience increased pressure to manage distress privately in order to avoid shame or social repercussions. Barriers such as reluctance to disclose distress or seek formal support may not solely reflect intrapersonal processes but may instead be embedded within cultural norms that prioritise privacy, family-based coping, or the avoidance of shame. In this context, preferences for informal support or reduced engagement with services may represent culturally meaningful coping strategies rather than deficits in help-seeking behaviour.

In addition, structural and relational factors must be considered. Individuals from minority ethnic backgrounds may face both internal stigma within their communities and external stigma in the form of perceived discrimination or mistrust of services, which may further limit engagement with support. The experiences reported by Rivart et al (2021), including unsuccessful attempts to access help and negative encounters with services, suggest that what is often conceptualised as a barrier to help-seeking may reflect broader systemic inequalities rather than individual reluctance.

It is important to recognise the heterogeneity within and across ethnic minority groups. Treating these groups as a homogeneous category risks obscuring important differences in cultural beliefs, support preferences, and experiences of stigma (Rivart et al., 2021). Taken together, these considerations highlight the need to interpret help-seeking as a socially and culturally situated process, shaped by the interaction between individual, interpersonal, and structural factors.

Disappointingly, the key barriers to help-seeking identified in this review were recurring across the 30-year span of the included studies, suggesting limited progress in removing barriers and facilitating access to help-seeking. While digital innovations have increased access to support for some individuals (O'Connell et al., 2024), underlying intrapersonal and interpersonal barriers such as stigma, emotional overwhelm, and relational strain appear largely unchanged.

Implications and recommendations

The findings of this review have several important implications for research, clinical practice, and policy. Much of the existing literature examined help-seeking following suicide bereavement indirectly, highlighting the need for future research to focus explicitly on barriers and facilitators to help-seeking. Given that barriers remain largely unchanged over 30 years, research should prioritise developing and evaluating implementation strategies that address these enduring obstacles and support timely, accessible, and compassionate engagement. Building on the present synthesis, researchers may use the intrapersonal, interpersonal, and systemic framework identified here to examine help-seeking as a dynamic and context-dependent process. As digital forms of support continue to expand, future studies should also explore how these factors map onto online and remote service provision.

For clinicians and service-led postvention, the findings underscore the importance of compassionate, trauma-informed responses, particularly in early professional contacts. Explicit acknowledgement of the bereavement, sensitive language, and active listening may help to counteract anticipated stigma and facilitate pathways to support at a time of heightened vulnerability. Services may consider implementing a stepped outreach approach, involving initial contact, follow-up invitations, and flexible re-entry points over time to accommodate fluctuating readiness to engage. Similarly, offering multiple modes of engagement (e.g., face-to-face, digital, or community-based support) may help to reduce practical and psychological barriers to accessing care. Continued development of, and access to, clear, visible information and advice for those affected by suicide remains vital. At a policy level, national strategies such as Creating Hope Together (Scottish Government, 2022) emphasise the importance of improving access to suicide bereavement training and resources to promote effective help-

seeking and help-giving. Ensuring the consistent implementation of these commitments, alongside adequate and sustained funding, should remain a priority

Limitations

This review has several limitations. Few of the included studies explicitly examined barriers and facilitators to help-seeking among individuals bereaved by suicide; most explored broader experiences of bereavement or postvention, with help-seeking findings embedded within wider narratives, resulting in variable depth and specificity. Additionally, many identified barriers and facilitators were overlapping and interrelated, making it challenging to delineate discrete themes and introducing a degree of interpretive subjectivity despite systematic synthesis procedures. The predominance of studies from high-income western countries and reliance on retrospective accounts may also limit transferability to other contexts. Variability in how help-seeking was defined across studies may also have influenced findings. Despite these limitations, the review provides a comprehensive synthesis of existing evidence in understanding help-seeking behaviour and provides a foundation for future research and practice development.

Conclusion

This review synthesised evidence on barriers and facilitators to help-seeking among individuals bereaved by suicide and highlights the complex, interrelated factors shaping engagement with support. Across studies, difficulties with disclosure and engagement were most pronounced in the early stages of bereavement, reflecting reduced capacity and readiness to seek help following loss. Improving postvention responses therefore requires proactive, flexible, and compassionate approaches that address stigma, prioritise relational care, and support individuals at points of heightened vulnerability. This review provides a foundation for future research and practice aimed at enhancing access to support and reducing adverse outcomes among those bereaved by suicide.

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Chapter 2

Perceived Stress and Suicidal Ideation at 22 months: The role of Negative Mood Regulation Expectancies and Alcohol-Related Risk

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Plain Language Summary

Background: Suicidal thoughts are common and can be very distressing. Although many factors are known to be linked with suicidal thinking, it is still difficult to understand why some people experience these thoughts while others do not. Stress and alcohol use are often linked to suicidal thoughts, but the processes that connect these experiences are not fully understood. One possible explanation is how confident people feel in their ability to manage negative emotions, known as negative mood regulation expectancies.

Method: This study used data from a large group of adults living in Scotland who took part in an online health and wellbeing survey. Participants completed questionnaires about stress, alcohol use, confidence in managing negative emotions, and suicidal thoughts. These were completed at the start of the study and again twenty-two months later.

Main findings: The study found that people who reported higher levels of stress and lower confidence in managing negative emotions were more likely to report suicidal thoughts nearly two years later. Confidence in managing negative emotions partly explained the link between stress and later suicidal thoughts. Alcohol use, however, did not play a significant role in explaining this relationship.

Conclusion: These findings suggest that believing you can cope with negative emotions may help protect against the effects of stress on suicidal thoughts. Supporting people to build confidence in managing distress and emotional difficulties may therefore be an important focus for suicide prevention efforts.

Abstract

Background: Suicidal ideation is prevalent in the general population and a significant risk factor for suicidal behaviour. Both perceived stress and alcohol use are associated with suicidal ideation; however, gaps remain in our understanding of how these factors contribute to suicide risk. Negative Mood Regulation Expectancies (NMRE), reflecting beliefs about one's ability to manage negative affect, may represent a key mechanism by which stress contributes to suicidal thinking. This study examined the longitudinal relationships between perceived stress, NMRE, alcohol consumption and suicidal ideation in a community adult population.

Methods: A secondary analysis was conducted using data from the Health and Wellbeing Study, a longitudinal observational study of adults in Scotland. A community sample of adults completed baseline measures of perceived stress, NMRE, and alcohol consumption with recent suicidal ideation measured at baseline and 22-month follow-up. Adjusted regression analysis examined associations between baseline variables and suicidal ideation at follow-up and conditional process analysis tested whether NMRE mediated the association between perceived stress and later suicidal ideation, and whether alcohol consumption moderated key pathways. A further sensitivity analysis controlled for symptoms of depression at baseline.

Results: A total of 896 adults (N=626 female; 267 male; 3 prefer not to answer, Mean age = 36.23; 93.6% white) were included. Perceived stress and NMRE were significantly, independently associated with suicidal ideation at 22-month follow-up, beyond baseline suicidal ideation and age and gender demographics. A moderated mediation model indicated that NMRE partially mediated the relationship between perceived stress and later suicidal ideation, with lower NMRE associated with greater risk. Alcohol consumption was not independently associated with suicidal ideation and did not moderate direct or indirect pathways.

Conclusion: The effects of perceived stress on future suicidal ideation are partly accounted for by a person's belief in their ability to manage negative affect. Strengthening individuals' confidence in their ability to regulate negative mood may represent a valuable target for suicide prevention efforts aimed at reducing stress-related vulnerability to suicidal thinking.

Introduction

Suicide

Suicide is a major public health concern. Globally, over 720,000 people die by suicide every year, with many more attempting suicide and living with suicidal thoughts (World Health Organization, 2024). Internationally, suicide can be thought of as “a fatal act initiated and carried out by the actors themselves” with the fatality of the act setting it beyond that of a suicide attempt, where the outcome may be non-fatal though still motivated by a wish to die (De Leo et al., 2021). Suicidal ideation refers to thinking about suicide with or without an intention to die, or act on any thoughts. However, it is important to acknowledge that some clinical guidelines, notably the UK’s National Institute for Health and Care Excellence (2024), refer to ‘self-harm’ and make no distinction between behaviours carried out with or without suicidal intent (Kapur et al., 2013).

In the United Kingdom, Scotland has the second highest rate of suicide after Northern Ireland with a current mortality rate of 14.6 per 100,000, a 4% increase on the previous year (National Records of Scotland, 2024) making suicide prevention a key policy area for the Scottish Government (Scottish Government, 2022). The “Creating Hope Together” suicide prevention strategy (Scottish Government, 2022) highlights that improving the way services identify those at risk is a priority and addressing key gaps in our understanding of risk factors for particular groups is of high importance.

The prevalence of suicidal ideation, a common precursor to suicidal behaviour is greater still, with 6.7% of adults in England experiencing suicidal thoughts at some point across their lifetime (Butt et al., 2025). Franklin et al. (2017) carried out a major review of risk factors for suicide and found prior suicidal thinking and behaviour amongst the top three risk factors for death by suicide. More recently still Jobes et al. (2024) argue that research is needed to understand and address suicidal ideation in order to decrease mental anguish, suffering and risk of death.

Contemporary perspectives emphasise the multifactorial, complex interplay of factors that contribute to the emergence of suicidal ideation and/or behaviour (O’Connor & Kirtley, 2018; Turecki et al., 2019). These may include psychiatric morbidity, personality factors, cognitive factors and social relationships that occur against a backdrop of negative life events, early life experiences and adversity (O’Connor & Kirtley, 2018; O’Connor & Nock, 2014; Turecki et al., 2019). Despite an extensive volume of research exploring risk factors for suicide, Franklin et al. (2017) found that science is no further forward in being able to predict risk. Their meta-analysis spanning 50 years of research showed that our ability to predict suicide outcomes has not improved and currently remains no better than chance. Consequently, researchers are increasingly seeking to explore the psychological processes and potential mechanisms that may offer a more nuanced and specific set of explanations for why and how suicidal ideation and behaviour may occur.

Researcher interest in elucidating psychological processes and mechanisms of suicide risk is reflected in contemporary theories e.g. Joiner et al. (2010), Klonsky & May (2015), O'Connor & Kirtley (2018). Among these the Integrated Motivational–Volitional (IMV) model of suicidal behaviour (O'Connor & Kirtley, 2018) provides a comprehensive framework for understanding how individuals progress from distress to suicidal ideation and, for some, to suicidal behaviour. The model outlines three phases: pre-motivational, motivational, and volitional. It highlights how background vulnerabilities and stressors interact with psychological processes such as defeat, entrapment, and coping, to shape the transition from ideation to action. Importantly, the IMV model emphasises the importance of moderating mechanisms, recognising that the likelihood of suicidal ideation and behaviours emerging in response to a given risk factor often depends on the presence, strength, or buffering effect of others.

Stress, Negative Mood Regulation, Alcohol, and Suicide risk

Exposure to stress and elevated psychological distress are consistently associated with increased risk of suicidal ideation (Howarth et al., 2020). Theoretical models of suicide propose that stressful life events contribute to suicidal thinking, particularly where individuals struggle to manage feelings of defeat, entrapment, or perceived inability to cope (O'Connor, 2011; O'Connor & Nock, 2014). Within O'Connor and Kirtley's (2018) IMV model, such experiences are positioned as key drivers of suicidal ideation, with individual differences in coping, influencing whether distress escalates into suicidal thoughts. This helps explain why not all individuals exposed to stress develop suicidal ideation and highlights the role of moderating psychological factors. Understanding the mechanisms through which stress interacts with psychological factors to contribute to suicidal ideation therefore remains a critical focus for suicide research.

One potentially important mechanism concerns the extent to which individuals believe or expect that they can effectively manage or alleviate negative mood. Negative Mood Regulation Expectancies (NMRE; Catanzaro, 1990) draw on Rotter's (1954) Social Learning Theory, which proposes that self-beliefs play a critical role in determining outcomes beyond the specific coping strategies employed. Individuals with high NMRE believe they can act to alleviate negative mood states, whereas those with low NMRE have more limited beliefs in their ability to regulate distress.

A growing body of evidence indicates that NMRE is closely linked to mood and affective functioning and is relevant to suicidal risk. Mazur-Socha and Przepiorka's (2021) systematic review and meta-analysis found low NMRE to be associated with depression, anxiety, negative affect, and suicidal risk. Empirical studies have further demonstrated associations between lower NMRE and self-harm and suicidal behaviour. For example, Tresno et al. (2012) found lower NMRE was associated with self-injury and suicide attempts among Indonesian college students, while Melson et al. (2019) reported that NMRE differentiated individuals with a history of self-harm from those without such histories. Together, these findings suggest that NMRE

may play an important role in shaping how individuals respond to stress and whether distress escalates into suicidal ideation.

Alcohol use has also been linked to suicide risk, with evidence indicating that suicidal risk increases with greater alcohol consumption in both dependent and non-dependent populations (Hufford, 2001). Population-based research has reported positive linear associations between harmful alcohol use and suicidal behaviour and ideation, even after adjustment for demographic, social, and psychiatric factors (Ledden et al., 2022). However, alcohol use may be best understood as one contextual factor operating within broader stress and coping processes. There is an established relationship between alcohol and stress, with past year stressors associated with increasing alcohol use, wherein individuals may engage in drinking to cope with negative thoughts, feelings or adversity (Keyes et al., 2012). Indeed, drinking to cope is a consistently associated with higher alcohol consumption and harmful drinking, and has also been found to mediate the relationship between higher perceived stress and increased alcohol use (D'Aquino et al., 2023). Thompson et al. (2024) has also found stress and alcohol-related coping to be linked with lifetime suicidality.

However, not all individuals experiencing stress increase alcohol use, and not all individuals who drink alcohol in response to stress experience suicidal thoughts, suggesting the importance of individual difference factors such as NMRE. NMRE have also been investigated in relation to alcohol use, motives and problems, though findings on the relationship of NMRE with alcohol variables are more mixed. Kassel and Jackson (2000) found low NMRE were associated with increasing alcohol related problems amongst college students and high NMRE were associated with reduced drinking motives. Gonzalez and Hewell (2012) also found NMRE are associated with 'drinking to cope' in college students. In contrast, counter to their hypothesis, Lyvers et al. (2010) found no difference in NMRE between those with reported low-risk alcohol use versus those with high-risk alcohol use, and Catanzaro and Laurent (2004) found NMRE were unrelated to alcohol use.

Aims and Research Questions

In summary, suicide risk is of major global concern with multi-faceted complex causes and our ability to predict suicide risk remains limited. An enhanced understanding of the psychological variables and processes that contribute to suicidal ideation is crucial to inform future research and prevention strategies. Both stress and alcohol contribute to suicidal risk, with emerging evidence that one's perceived ability to address negative affect may also play a role. However, questions remain about how these variables may interact and contribute to suicidal ideation. The aim of this proposed research is to enhance understanding of the interplay between perceived stress, NMRE and alcohol consumption on suicidal ideation over time. The research questions to be addressed are:

1. Are perceived stress, NMRE, and alcohol consumption, associated with suicidal ideation, cross-sectionally and over time in Scotland?
2. What is the nature of the relationship between perceived stress, NMRE, alcohol consumption, and suicidal ideation in Scotland: specifically, does NMRE mediate the association between perceived stress and suicidal ideation and is this relationship moderated by alcohol consumption?

Methods

Design

The present study will conduct a quantitative analysis of the Health and Wellbeing dataset established by Melson and O'Connor (2019), an observational study encompassing three distinct time points: baseline, time 1 (approximately six months post-baseline), and time 2 (average 22 months post-baseline). The present study includes cross-sectional and longitudinal analyses; utilising data collected at baseline and at 22-month follow-up

Participants and procedures

The Health and Wellbeing Study baseline data were collected beginning 2015 with follow ups in 2016 and 2017 – 2018, with the aim of investigating health, wellbeing and suicide risk among Scottish adults in the community. A convenience sample of adults in Scotland aged 18 years were recruited from a range of community settings. Participants who responded to the study invitation accessed the survey via an online link. All participants provided electronic informed consent before completing the self-report questionnaire. The questionnaire required 15-20 minutes to complete and included questions on a range of socio-demographic, lifestyle, mental and physical health status as well as psychological measures. Only the measures relevant to the present study are reported here.

Materials and Measures

Baseline measures

Demographics: Age and gender are associated with suicidal risk (Rogier et al., 2024) and will be included as covariates. Other demographic factors are included for the purpose of describing the study sample. These are ethnicity, relationship status, living arrangements, education and employment.

Alcohol Use Disorder Identification Test (AUDIT): A 10 item self-report questionnaire validated to detect harmful, hazardous, or dependent alcohol use (Bohn et al., 1995). Measuring alcohol consumption and related risk it asks questions such as "How often do you have a drink containing alcohol?" Each question is scored between 0-4, providing a total score ranging 0 up

to 40. In screening contexts, a score equal to or greater than 8 can be used to indicate hazardous or harmful drinking behaviours. As a validated measure used in clinical settings, it demonstrates reliability, test/re-test and internal consistency, and is shown to have good sensitivity (de Meneses-Gaya et al., 2009; Reinert & Allen, 2007).

Negative Mood Regulation Expectancies scale (NMRE)**:** A 30 item self-report scale measuring generalised expectancy of one's ability to alleviate a negative mood state through behaviour or cognitive process (Catanzaro, 1990). Scale items require participants to rate agreement (1 to 5: strongly disagree to strongly agree) with statements such as "When I'm upset, I believe that I won't be able to get myself to do anything about it". Scores are summed (min = 30, max = 150), with higher NMRE scores indicating more active and less avoidant coping mechanisms. The NMRE scale is reliable, performed well under test-re-test conditions and shows good/strong internal consistency (Mearns et al., 2009).

*Perceived Stress Scale Short Form (PSS-SF)***:** A 4-item scale developed by Cohen, (1988) which measures the degree to which a person perceived aspects of their life as uncontrollable, unpredictable, and overloading over the course of the previous month. Respondents use a 5-point scale to indicate how often during the past month they, for example, "…felt that difficulties were piling up so high that you could not overcome them?" (0-4, "never", "almost never", "sometimes", "fairly often", "very often", range = 0-16). Higher scores (min 0, max 16) indicate higher levels of generalised stress. The PSS-SF has been empirically validated and is reliable, performing well on test/re-test conditions and shows good internal consistency across a variety of different populations and cultures (Lee, 2012).

*The Centre for Epidemiologic Studies Depression Scale-Revised (CESD-R***):** A 20 item scale by Eaton (2004) measuring symptoms of depression (e.g., "I could not get going."), based on participants' responses using a 5-point Likert scale (0-4, "Not at all / Less than 1 day", "1 – 2 days", "3 – 4 days", "5 – 7 days", "Nearly every day for 2 weeks", range 0-80). Higher scores indicate greater severity of depressive symptoms. Although the CESD-R is typically treated as a continuous measure, scores of 16 or above have commonly been used as an indicative threshold for clinically significant depressive symptomatology (Eaton et al., 2004) This measure has been found to be internally consistent and valid (Van Dam & Earleywine, 2011).

Baseline and 22-month follow-up measures

Suicide Ideation subscale of the Suicide Probability Scale (SPS-SI): A 8-item self-report sub-scale assessing thoughts and feelings related to current suicidal ideation (Cull & Gill, 2011). Participants use a 4-point scale to respond to statements such as "I feel the world is not worth continuing to live in" on a scale ranging from '0' "none of the time' to '3' "most or all of the time", with the summed score (min = 0, max = 24) providing a measure of recent suicidal thinking.

The subscale has been validated to show reliability test/re-test and internal consistency (Valadez et al., 2009)

Ethics, governance, and data protection

The Ethics Committee of the College of MVLS at the University of Glasgow granted ethical approval for the primary Health and Wellbeing study (Project no 200140114). The proposed study remains within the scope of the original ethical approval, and the principal researcher is a registered as a user of the dataset.

Statistical analysis

All analyses were conducted using SPSS (Version 29) and the Hayes Process Macro Model 15 (Hayes, 2017) for conditional process analysis.

Initially the baseline and 22-month follow-up responses were checked for missing data. Missing data accounted for <2% per measurement item for study items. As the level of missingness was low Expectation Maximisation was used to impute missing data for multi-item scales. Missing data for categorical scales were not imputed.

Initially, participants whose responses could be linked over time to form the longitudinal 22-month follow-up dataset were compared with those in the larger primary study from which they were drawn using independent t-tests and chi-squares. This aim of this step was to ascertain whether those participants in the longitudinal data-set were broadly similar to the larger cross-sectional dataset from which they were drawn. Following this, the participant characteristics and key measurements of the longitudinal dataset participants were tabulated and described using frequencies and percentages for categorical variables (gender, ethnicity) and means and standard deviation for continuous variables (age, Perceived stress, NMRE, AUDIT score, suicidal ideation).

To answer the first research question, whether perceived stress, NMRE, and alcohol consumption, are associated with suicidal ideation, cross-sectionally and over time, bivariate correlations were used to explore the strength of the relationships between baseline variables perceived stress, NMRE, and alcohol consumption, along with suicidal ideation at both baseline and 22-month follow-up. A hierarchical regression model was then used to examine the combined and independent associations of NMRE, perceived stress and alcohol consumption with suicidal ideation at 22-month follow-up. To ensure each variable contributed to our understanding of future suicidal ideation beyond existing risk factors and behaviour, the first step of the hierarchical model included baseline demographic factors (age, gender) and

baseline suicidal ideation. Basic regression assumptions were checked prior to carrying out the multivariable analyses (see Appendix 2.6).

To address the second research question, Model 15 in the Hayes PROCESS macro (2017) was applied to test whether NMRE mediated the relationship of perceived stress on suicidal ideation at 22-month follow-up and whether alcohol consumption moderated the indirect path via NMRE and the direct path from stress to suicidal ideation. Apart from the 22-month follow-up measure of suicidal ideation, all other model factors were measured at baseline. This moderated mediation analysis was specified with 5,000 bootstrapped samples to estimate indirect and conditional effects. Outputs included direct effects, conditional indirect effects, and the index of moderated mediation. Baseline suicidal ideation, age, and gender were included as covariates in the model. Baseline suicidal ideation was controlled for to account for prior levels of the outcome and to enable the examination of prospective change over time. Age and gender were included given well-established differences in the prevalence and expression of suicidal ideation, perceived stress, and emotion regulation processes across demographic groups (Rogier et al.,2024; Huang et al., 2017)

Additionally, a sensitivity analysis was conducted post-hoc including depressive symptoms as a covariate. This was carried out to explore whether observed effects were robust when depressive symptoms, a strong risk factor for suicidal ideation, was accounted for.

Results

The primary Health, Lifestyle and Wellbeing study included 1546 participants at baseline (e.g. Melson & O'Connor, 2019), from which 896 (58%) participants were successfully matched between baseline and 22-month follow-up and provide data used in the present study. Initial checks were carried out using independent samples t-tests and chi-square tests (see Table 1) to explore whether participants comprising the longitudinal dataset were broadly similar to those of the larger cross-sectional primary study sample from which it was drawn.

These checks indicated that participants comprising the longitudinal subsample did not significantly differ in gender or ethnicity from the primary study, although those who provided longitudinal responses were almost two years older and reported slightly lower alcohol consumption. No significant differences were found between participants in the two datasets on the other key study measures of baseline suicidal ideation, perceived stress and depression scores.

The longitudinal sample comprised 896 participants, of mean age 36.23 years (SD = 13.24). The sample was predominantly female (69.9%). Most respondents identified as White (93.6%), with 6.4% identifying with another ethnic background. In terms of relationship status,

approximately half of the sample reported never having been married (50.3%), while 34.4% were married. Smaller proportions reported being divorced (5.9%), separated (3.1%), widowed (0.7%), in a civil partnership (0.3%), or currently in a relationship (1.7%). Educational attainment was relatively high, with 59.9% of participants reporting a university degree or postgraduate qualification. Employment status indicated that most participants were employed (69.9%) or engaged in full-time study (26.7%).

Table 1

Descriptive statistics and comparison of primary and longitudinal study sample characteristics and study measurements.

Characteristic	**Primary study sample (n=1546)**		**Longitudinal 22 month follow-up sample (n=896)**		**Test statistic**
Categorical Variables	**N**	**%**	**N**	**%**	χ^2
Gender					0.00
Male	460	29.88	267	29.79	
Female	1079	70.11	626	69.9	
Prefer not to say	7	0.5	3	0.3	
Ethnicity					2.79
White	1418	91.77	838	93.6	
Other	127	8.22	57	6.4	
Continuous Variables	***M***	***SD***	***M***	***SD***	***t***
Age	34.33	13.04	36.23	13.24	3.44***
NMRE	102.15	18.60	101.87	18.88	-.35
Perceived stress	6.07	3.35	6.05	3.35	-.15
Baseline Suicidal Ideation	1.93	3.42	1.92	3.31	-.079
AUDIT total	7.31	5.09	6.82	4.71	2.39**
Depression	12.49	10.99	12.32	11.11	-.38

Note: *=$p < .05$, **= $p < .01$, ***=$p < .001$. N=number, χ^2 = Chi Square, *M*=Mean, *SD*= *Standard Deviation, t= t-test of independent samples*

Bivariate associations of key study variables and suicidal ideation

Table 2 presents the Pearson correlations among the main study variables. All psychological measures were associated in the expected directions, with moderate to strong associations observed among perceived stress, NMRE, depression and suicidal ideation at both baseline and follow-up. In contrast, alcohol consumption, age and gender showed only small associations with the psychological variables and suicidal ideation. Overall, the correlation pattern highlights stronger relationships among the central psychological constructs and comparatively weaker associations involving alcohol consumption and demographic factors.

Table 2 Correlations (Pearson's r) and decriptive statistics for study variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1 Negative mood regulation expectancies (NMRE)	101.88	18.88	-							
2 Perceived Stress	6.06	3.35	-.64***	-						
3 Alcohol consumption (AUDIT)	6.83	4.71	-.14***	.12***	-					
4 Suicidal ideation (Baseline)	1.92	3.31	-.53***	.52***	.19***	-				
5 Suicidal ideation (Follow-up)	1.92	3.42	-.45***	.45***	.15***	.68***	-			
6 Age	34.3	13.04	.219***	-.162***	-.170	.177***	.155***	-		
7 Gender	-	-	-.064	-.008	.129***	.046	.003	.149***	-	
8 Depression	12.3	11.1	-.617***	.714***	.192***	.658***	.531***	.191***	.029	-

Note: *=$p < .05$, **= $p < .01$, ***=$p < .001$. *M*=Mean, *SD*= *Standard Deviation*

Multivariable associations with suicidal ideation at 22-month follow-up

The next step of the analysis sought to understand whether baseline measures of study variables were associated with suicidal ideation almost two years later. A hierarchical multiple regression was therefore carried out to examine whether baseline NMRE, perceived stress, and alcohol consumption (AUDIT) were associated with suicidal ideation at 22 months follow-up, after controlling for age, gender, and baseline suicidal ideation (Table 3). Prior to carrying out the analysis relevant assumptions were checked. These checks indicated all assumptions were met, with only mild violations within normality of residuals and some outliers which were not considered influential.

The first step of the model (Step 1) including age, gender, and baseline suicidal ideation was significantly associated with suicidal ideation at 22-month follow-up, $R^2 = .462$, F (3,888) = 254.70, $p < .001$, though baseline suicidal ideation was the only variable independently associated with the outcome ($\beta = .67$, $t=26.93$, $p < .001$). In the second step (Step 2) NMRE, perceived stress, and AUDIT were added to the model and accounted for an additional 1.5% of the variance in suicidal ideation at follow-up, $\Delta R^2 = .015$, $F(3, 885) = 8.55$, $p < .001$. This final model accounted for 47.7% of the variance in suicidal ideation at follow-up, with NMRE ($\beta = -.08$, $p < .05$) and perceived stress ($\beta = .08$, $p < .05$) both showing independent significant associations. Alcohol consumption was not significantly associated with suicidal ideation at follow-up ($\beta = .02$, $p > .05$) and baseline suicidal ideation remained the variable most strongly associated with the outcome overall ($\beta = .59$, $p < .001$).

Table 3

Hierarchical regression examining associations between baseline suicidal ideation, age, gender, NMRE, perceived stress, and alcohol consumption with suicidal ideation at 22-month follow-up

		Suicidal ideation at 22-month follow-up				
		B	*SE*	*β*	*t*	*Sig.*
Step 1	Baseline suicidal ideation	.660	.024	.674	26.927	<.001**
	Age	-.007	.006	-.030	-1.204	.229
	Gender	-.167	.176	-.024	-.950	.343
Step 2	Baseline suicidal ideation	.575	.029	.587	19.494	<.001**
	Age	-.002	.006	-.010	-.385	.700
	Gender	-.211	.177	-.030	-1.193	.233
	NMRE	-.014	.006	-.084	-2.492	0.13*
	Perceived stress	.080	.032	.083	2.512	.012*
	Alcohol consumption	.013	.017	.019	.733	.464

Note: R^2 = .462 for Step 1, Adjusted R^2 =.474 for step 2. ΔR^2 = .015 NMRE=negative mood regulation expectancies. *B*=unstandardised coefficient, *SE* = standard error, *β=standardised coefficient, t= t-test of independent samples. *=p* < .05, **= *p* < .01, ***=*p* < .001.

Moderated - mediation analysis

A moderated mediation analysis was carried out using Model 15 of the PROCESS macro (Hayes 2017). This model was used to examine whether baseline NMRE mediated the relationship between baseline perceived stress and 22-month suicidal ideation, and whether this indirect effect was moderated by baseline alcohol consumption. To ensure that the direct, indirect and moderated paths tested in the model contribute to our understanding of future suicidal ideation beyond established risk factors, the model included age, gender, and baseline suicidal ideation as covariates. Figure 1 displays the path diagram and results for the model tested. The findings show that perceived stress was negatively associated with NMRE (*β* = -2.76, *t* = - 17.16, CI: -3.07 – -2.45, *p* < .001), and lower NMRE was associated with higher suicidal ideation (*β* = - .014, t = -2.48, CI: -.027 – -.003, *p* < .05). The direct effect of perceived stress on suicidal ideation was positive and significant (*β* = .080, *t* = 2.52, CI: .018 – .143, *p* < .05). The indirect effect of NMRE on the relationship between perceived stress and suicidal ideation was significant at low and medium levels of the AUDIT moderator variable (low AUDIT: *β* = .047, CI: .007 – .091, medium AUDIT: *β* = .041, CI: .011 – .075) but was not significant at higher levels of AUDIT: (*β* = .033, CI: -.013 – .085). The moderation analyses provided no evidence that alcohol consumption significantly moderated the indirect or direct pathways in the

model. The interaction between perceived stress and alcohol consumption was not significantly associated with suicidal ideation at 22-month follow-up, contributing virtually no additional explained variance (X × W: R^2 change = .0001, $F(1, 884) = 0.184$, $p = .668$). Likewise, the interaction between NMRE and alcohol consumption was not significantly associated with suicidal ideation at 22-month follow-up (M × W: R^2 change = .0001, $F(1, 884) = 0.227$, $p = .634$). Consistent with these findings, the index of moderated mediation was also nonsignificant (Index = –.0014, 95% CI: –.0068 to .0046) indicating that the size of the indirect effect did not vary by level of alcohol consumption. In summary the results indicate an indirect effect of perceived stress on later suicidal ideation via NMRE, which is independent of age, gender and baseline suicidal ideation but this was not moderated by alcohol consumption.

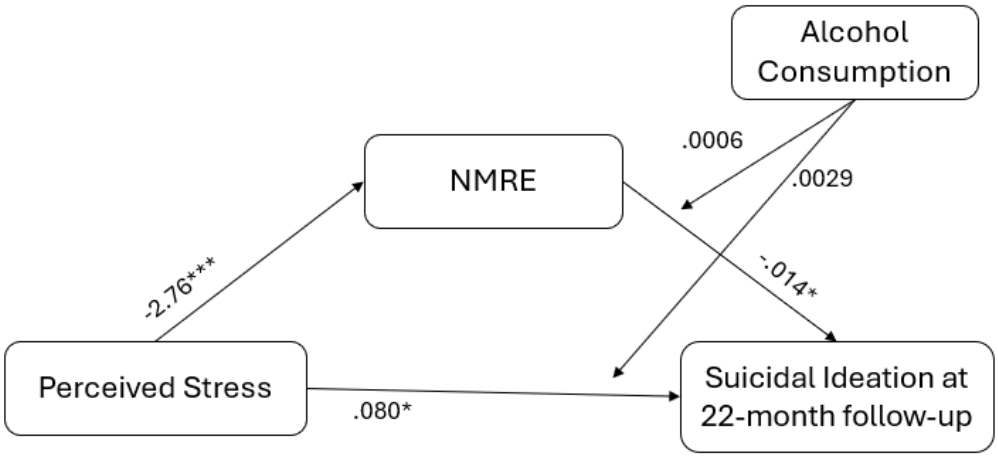

Figure. 1 Diagram of moderated mediation analysis demonstrating NMRE mediating effects of perceived stress on suicidal ideation at 22 months, independent of alcohol consumption, controlling for age, gender and base-line suicidal ideation

Note: *p<.05, ***p < .001

Sensitivity analysis

Sensitivity analyses were carried out to evaluate the robustness of the key multivariable analyses in the presence of depressive symptoms. Both the hierarchical regression and the moderated mediation analyses were re-run including depressive symptoms as an additional covariate.

In the first step of the regression model, age, gender, baseline suicidal probability, and baseline depression accounted for 47.4% of the variance in suicidal ideation at 22-month follow-up (R^2 = .474, $F(4, 888) = 199.82$, $p < .001$). In the second step, baseline perceived stress, negative mood regulation, and alcohol consumption were entered, which explained a further 0.6% of variance (ΔR^2 = .006, $F(3, 885) = 3.22$, $p = .022$). The model remained significant, indicating that the effects of stress and mood regulation were not fully accounted for by depression. Including depression as an additional covariate in the moderated-mediation did not alter the indirect mediated pathway, with perceived stress continuing to be associated with NMRE which in turn was associated with Suicidal Ideation at 22-month follow-up. However, the direct effect of perceived stress on later suicidal ideation was no longer significant, suggesting that the direct relationship between perceived stress and suicidal ideation at 22 months follow-up was partially accounted for by shared variance with depression.

Discussion

The current study investigated the cross-sectional and prospective associations of Negative Mood Regulation Expectancies (NMRE), Perceived Stress and alcohol consumption with suicidal ideation in a general adult population in Scotland. In multivariable regression analysis NMRE (i.e. the extent to which an individual believes or expects that they can effectively manage or alleviate negative mood) and perceived stress were associated with suicidal ideation at 22-month follow-up. A moderated mediation analysis further revealed that the relationship of perceived stress with suicidal ideation 22-months later is partially mediated by NMRE. These prospective associations remained significant after adjustment for participant demographics of age and gender, and baseline suicidal ideation.

Unexpectedly, alcohol consumption was not strongly associated with suicidal ideation and there was no evidence that it acted as a moderator of direct or indirect paths between perceived stress and suicidal ideation. These findings are consistent with a mediating role of NMRE in the relationship between stress and suicidal ideation that is largely independent of alcohol use. Sensitivity analyses further supported the potential mediation effect of NMRE, even in the presence of depression, though the direct relationship between perceived stress and later suicidal ideation was weakened.

The current findings strengthen a growing body of research that positions NMRE as a central cognitive-affective construct influencing mental health outcomes. NMRE, which reflects individuals' beliefs in their ability to regulate negative emotions, emerged in this study as a significant mediator of the relationship between perceived stress and suicidal ideation. This effect held even when depressive symptoms were statistically accounted for, suggesting that NMRE captures a unique aspect of emotion regulation confidence that extends beyond mood state. When depression was controlled for resulting in the attenuation of the direct path between stress and suicidal ideation, the indirect path remained. From a methodological

perspective, this remains an important finding consistent with Hayes and Rockwood's (2017) recommendations for modern mediation and moderation analysis in clinical research where significant indirect effects (in the absence of significant direct paths or moderation) are meaningful and interpretable. In this context, NMRE's mediation, even in the absence of moderated effects and a significant direct path, speaks to its functionality as a process mechanism in understanding how stress translates into risk for suicidal ideation.

This finding contributes to a growing body of research demonstrating that low NMRE is associated with greater emotional dysregulation, reduced confidence in one's coping abilities, and heightened vulnerability to suicidal ideation and behaviour, even when controlling for depression. Catanzaro and Mearns (1990) originally conceptualised NMRE as a generalised expectancy influencing how individuals respond to distress, with low expectancies linked to ineffective emotion regulation strategies. Tresno et al. (2012) extended this work in a cross-cultural context, finding that Indonesian college students with lower NMRE reported significantly higher rates of self-injurious behaviour and suicide attempts, independent of their levels of depressive symptoms. Similarly, Mazur-Socha and Przepiórka (2021) concluded that low NMRE is consistently associated with poorer mental health outcomes across diverse populations and stress contexts, reinforcing its role as a transdiagnostic vulnerability factor that may influence the development of suicidality via impaired affect regulation mechanisms. Importantly the current study extends these findings to a community population of adults, demonstrating that individuals with lower NMRE are more susceptible to the psychological impact of stress, with NMRE significantly mediating the relationship between perceived stress and suicidal ideation. A further contribution to the current evidence base is the demonstration of these effects longitudinally over a 22-month period. This suggests that deficits in mood regulation expectancies may be a critical mechanism through which stress escalates into suicidal thinking and can therefore be considered as a target for intervention.

These findings can also be meaningfully interpreted through the lens of the Integrated Motivational-Volitional (IMV) model of suicidal behaviour (O'Connor, 2011). According to the IMV model, suicidal ideation arises when stressors activate feelings of defeat and entrapment, which are intensified in the presence of poor coping beliefs and emotion regulation capacities. Although NMRE is not a specific feature of the IMV model, it can be interpreted within this framework as NMRE functioning as a protective belief system that moderates the translation of perceived stress into entrapment, influencing the common path to suicidal ideation within the motivational phase. Thus, when NMRE is low, individuals may perceive themselves as emotionally incapable of tolerating or reducing distress, heightening the perceived inescapability of stressful experiences and increasing the likelihood of suicidal ideation. Conversely, high NMRE may buffer this process by promoting greater emotional self-efficacy and perceived control, even in the face of psychological strain.

The finding that alcohol consumption did not act as a moderator for suicidal ideation over time warrants further consideration. Although alcohol use is a recognised risk factor for suicidal

thoughts and behaviour (Darvishi et al., 2015; Hufford, 2001) its influence may be more proximal or situational, rather than moderating longer-term cognitive processes such as mood regulation expectancies. Alcohol use is also known to fluctuate over time, whereas NMRE may reflect a more stable psychological construct, potentially limiting alcohol's capacity to function as a moderator across a 22-month interval. An additional consideration is the role of alcohol as a negative coping mechanism. Higher NMRE has been associated with greater use of adaptive coping strategies (Mazur-Socha et al., 2023) suggesting that individuals with lower NMRE may be more likely to rely on maladaptive coping responses, including alcohol use, when managing distress. Further investigation of how low NMRE interacts with alcohol use as a coping strategy may help clarify how these psychological processes and behaviours jointly contribute to suicide risk beyond the pathways explored in the present study.

While the present findings are consistent with the model tested, in which perceived stress is associated with suicidal ideation via NMRE, the directionality of this pathway should be interpreted with caution. It is important to consider the possibility of bi-directional or reciprocal relationships between these constructs. Although NMRE is conceptualised as a relatively stable expectancy, there is increasing evidence from longitudinal research that emotion regulation processes and stress may influence each other over time. For example, studies have demonstrated reciprocal associations between stress and emotion regulation capacities, whereby greater stress predicts subsequent difficulties in regulation, but poorer regulation also predicts heightened stress exposure or appraisal at later time points (Miklosi, et al., 2014; Spătaru et al., 2024). From this perspective, individuals with lower NMRE may not only be more vulnerable to the effects of stress but may also be more likely to perceive situations as stressful or appraise them as less manageable, thereby contributing to elevated perceived stress. As such, the relationship between perceived stress and NMRE could be understood as transactional, involving feedback loops rather than a strictly unidirectional pathway. As NMRE was assessed at baseline only, the present study cannot establish temporal precedence between NMRE and perceived stress, and the assumed directionality of this pathway cannot be definitively inferred.

Socio-political and systemic considerations

Suicidal ideation does not arise solely from individual psychological processes but is shaped by wider social and political conditions that influence both exposure to stress and access to coping resources (Na et al., 2025). Gallacher et al. (2025) highlight how discrimination and social inequalities increase exposure to adversity while limiting access to protective resources such as stable housing, financial security, and support. These factors relevant to suicide risk, are associated not only with clinical variables but also with experiences such as discrimination, financial strain, and chronic illness or pain.

Within Scotland, suicide risk is socioeconomically patterned, with higher rates observed in the most deprived areas (Public Health Scotland, 2025). This is important when interpreting the present findings, as perceived stress may reflect not only individual differences in appraisal but also unequal exposure to chronic stressors such as insecure employment, housing instability, and reduced access to support. From this perspective, NMRE can be understood as a psychologically proximal mechanism through which these broader stressors are internalised as reduced confidence in managing distress, increasing vulnerability to suicidal ideation over time.

Similar processes may operate in the context of structural racism and disability-related inequality. Experiences of racial discrimination are associated with both elevated perceived stress and increased risk of suicidal ideation (Paradies et al., 2015). Suicide risk is also markedly elevated among disabled people (Public Health Scotland, 2025), highlighting the role of ongoing disadvantage and barriers to support as sources of stress. Taken together, this underscores the importance of situating NMRE within the broader social conditions that shape both stress exposure and access to coping resources.

Limitations

Alongside the strengths of this study there are several important limitations which should be acknowledged. First, although suicidal ideation was assessed prospectively at 22-month follow-up, both perceived stress NMRE were measured at baseline, which limits the strength of inference about the causal directionality tested in the mediation pathway. Also, although the community-based sample enhances ecological validity, participants were recruited through convenience methods and may not be representative of the wider population of adults. Furthermore, there were some modest differences between the longitudinal sample and the larger primary study from which they were drawn, suggesting possible attrition bias over the follow-up period and a likelihood that the longitudinal sample included participants who were motivated and engaged to take part, which may be a reflection of their sense of well-being. While prospective associations remained significant after adjustment for participant demographics of age and gender; this statistical adjustment does not however negate their broader relevance to suicidal ideation. Age and gender may shape how stress is experienced, how individuals regulate emotions, and how suicidal thoughts are expressed (Huang et al., 2017; Wang et al., 2011). Furthermore, the present analyses did not examine whether these factors moderate the observed pathways, and it is possible that NMRE operates differently according to age or gender. It is also important to consider whose experiences may be under-represented in the dataset. Standard survey approaches are likely to miss more disadvantaged or harder-to-reach groups, including those who are digitally excluded, not living in private

households, or who may have reduced trust in research due to prior experiences of discrimination. As such, the stress–NMRE–suicidal ideation pathway identified here may not generalise in the same way to more marginalised or high-risk groups. These limitations should be considered when interpreting the findings and planning future research

Recommendations

The findings suggest several key clinical implications. Firstly, interventions aimed at enhancing NMRE may be particularly valuable, as NMRE functions as a psychological mechanism linking perceived stress to later suicidal ideation. Clinicians may therefore benefit from incorporating targeted emotion regulation skills training and cognitive behavioural approaches designed to strengthen clients' confidence in managing negative affect. Furthermore, interventions aimed at reducing stress and strengthening individuals' expectancies for effective emotion regulation may have value within suicide prevention frameworks. However future research should further delineate the causal ordering of these variables and examine broader patterns of interaction between NMRE, stress, and additional psychological factors that may contribute to suicidal ideation. Future research should also examine whether the mediating role of NMRE operates similarly across more and less advantaged groups by incorporating direct indicators of inequality (e.g., area deprivation, financial insecurity, disability-related barriers, and experiences of discrimination). This may also require study designs that improve representativeness, including targeted recruitment of minoritised groups where sample sizes would otherwise be too small for meaningful subgroup analysis. In addition, expanding measurement beyond individual appraisal to capture more chronic and structurally formed stressors would allow for a clearer examination of temporal relationships, and help avoid over-emphasising individual-level explanations for processes that may, at least in part, be socially produced. Additionally, future research would benefit from directly examining age and gender as potential moderators of the relationships observed, rather than solely treating them as covariates. This would allow for a more nuanced understanding of whether the strength or nature of associations between perceived stress, NMRE, and suicidal ideation differ across demographic groups, and help to identify more tailored targets for intervention. This research should a priori be set within a theoretical framework, such as O'Conner and Kirtley's (2018) IMV model, and explore the potential protective effects of higher NMRE on defeat and entrapment.

Conclusion

This study makes a novel contribution to understanding suicidal ideation by identifying negative mood regulation expectancies as a key psychological mechanism linking perceived stress to later suicidal thinking. The findings suggest that how individuals appraise their capacity to manage negative emotions plays an important role in shaping vulnerability to suicidal ideation. Importantly, this process appears robust across time and independent of alcohol consumption and depressive symptoms. These results highlight confidence in the ability to regulate emotion

as a potentially modifiable target for suicide prevention efforts and underscore the value of interventions that strengthen individuals' perceived ability to cope with distress in reducing longer-term suicide risk.

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Appendices

Appendix 1.1: PRISMA Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
TITLE			
Title	1	Identify the report as a systematic review.	8
ABSTRACT			
Abstract	2	See the PRISMA 2020 for Abstracts checklist.	9
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of existing knowledge.	11
Objectives	4	Provide an explicit statement of the objective(s) or question(s) the review addresses.	11
METHODS			
Eligibility criteria	5	Specify the inclusion and exclusion criteria for the review and how studies were grouped for the syntheses.	12-13
Information sources	6	Specify all databases, registers, websites, organisations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	12
Search strategy	7	Present the full search strategies for all databases, registers and websites, including any filters and limits used.	Appendix1.2
Selection process	8	Specify the methods used to decide whether a study met the inclusion criteria of the review, including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools used in the process.	13
Data collection process	9	Specify the methods used to collect data from reports, including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools used in the process.	13
Data items	10a	List and define all outcomes for which data were sought. Specify whether all results that were compatible with each outcome domain in each study were sought (e.g. for all measures, time points, analyses), and if not, the methods used to decide which results to collect.	13
	10b	List and define all other variables for which data were sought (e.g. participant and intervention characteristics, funding sources). Describe any assumptions made about any missing or unclear information.	13
Study risk of bias assessment	11	Specify the methods used to assess risk of bias in the included studies, including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools used in the process.	13
Effect measures	12	Specify for each outcome the effect measure(s) (e.g. risk ratio, mean difference) used in the synthesis or presentation of results.	n/a
Synthesis methods	13a	Describe the processes used to decide which studies were eligible for each synthesis (e.g. tabulating the study intervention characteristics and comparing against the planned groups for each synthesis (item #5)).	14

Appendix 1.1: PRISMA Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
	13b	Describe any methods required to prepare the data for presentation or synthesis, such as handling of missing summary statistics, or data conversions.	14
	13c	Describe any methods used to tabulate or visually display results of individual studies and syntheses.	14
	13d	Describe any methods used to synthesize results and provide a rationale for the choice(s). If meta-analysis was performed, describe the model(s), method(s) to identify the presence and extent of statistical heterogeneity, and software package(s) used.	14
	13e	Describe any methods used to explore possible causes of heterogeneity among study results (e.g. subgroup analysis, meta-regression).	n/a
	13f	Describe any sensitivity analyses conducted to assess robustness of the synthesized results.	n/a
Reporting bias assessment	14	Describe any methods used to assess risk of bias due to missing results in a synthesis (arising from reporting biases).	n/a
Certainty assessment	15	Describe any methods used to assess certainty (or confidence) in the body of evidence for an outcome.	n/a
RESULTS			
Study selection	16a	Describe the results of the search and selection process, from the number of records identified in the search to the number of studies included in the review, ideally using a flow diagram.	15 & 16
	16b	Cite studies that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	15
Study characteristics	17	Cite each included study and present its characteristics.	16
Risk of bias in studies	18	Present assessments of risk of bias for each included study.	17 & Appendix1.3
Results of individual studies	19	For all outcomes, present, for each study: (a) summary statistics for each group (where appropriate) and (b) an effect estimate and its precision (e.g. confidence/credible interval), ideally using structured tables or plots.	n/a
Results of syntheses	20a	For each synthesis, briefly summarise the characteristics and risk of bias among contributing studies.	18
	20b	Present results of all statistical syntheses conducted. If meta-analysis was done, present for each the summary estimate and its precision (e.g. confidence/credible interval) and measures of statistical heterogeneity. If comparing groups, describe the direction of the effect.	n/a
	20c	Present results of all investigations of possible causes of heterogeneity among study results.	n/a
	20d	Present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	n/a

Appendix 1.1: PRISMA Checklist

Section and Topic	Item #	Checklist item	Location where item is reported
Reporting biases	21	Present assessments of risk of bias due to missing results (arising from reporting biases) for each synthesis assessed.	n/a
Certainty of evidence	22	Present assessments of certainty (or confidence) in the body of evidence for each outcome assessed.	n/a
DISCUSSION			
Discussion	23a	Provide a general interpretation of the results in the context of other evidence.	41
	23b	Discuss any limitations of the evidence included in the review.	43
	23c	Discuss any limitations of the review processes used.	
	23d	Discuss implications of the results for practice, policy, and future research.	43
OTHER INFORMATION			
Registration and protocol	24a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	12
	24b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	12
	24c	Describe and explain any amendments to information provided at registration or in the protocol.	14
Support	25	Describe sources of financial or non-financial support for the review, and the role of the funders or sponsors in the review.	n/a
Competing interests	26	Declare any competing interests of review authors.	n/a
Availability of data, code and other materials	27	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	n/a

Appendix 1.2 Systematic Review electronic search strategy and results

Database	Search terms	Results
EMBASE	exp suicide/ OR suicid*.ti,ab,kw. AND exp survivor/ OR exp bereavement/ OR exp grief/ OR (survivor* or bereav* or grie* or loss).ti,ab,kw. AND exp help seeking behavior/ OR (help-seek* or (seek* adj2 help) or (seek* adj2 treatment) or seek* behavio?r or seek* behavio?r or (seek* adj2 health service*) or health seek* or healthseek*).ti,ab,kw. OR (service us* or service utili* or care utili* or health utili* or "use of help" or ("use of" adj2 service) or treatment utili* or (barrier* adj3 care)).ti,ab,kw. OR (postvention or GP or general practi* or primary care or informal help or social support or peer support).ti,ab,kw.	1042
MEDLINE	exp suicide/ OR suicid*.ti,ab,kw. AND exp survivor/ OR exp bereavement/ OR exp grief/ OR (survivor* or bereav* or grie* or loss).ti,ab,kw. AND exp help seeking behavior/ OR (help-seek* or (seek* adj2 help) or (seek* adj2 treatment) or seek* behavio?r or seek* behavio?r or (seek* adj2 health service*) or health seek* or healthseek*).ti,ab,kw. OR (service us* or service utili* or care utili* or health utili* or "use of help" or ("use of" adj2 service) or treatment utili* or (barrier* adj3 care)).ti,ab,kw. OR (postvention or GP or general practi* or primary care or informal help or social support or peer support).ti,ab,kw.	780
APA PsycINFO	DE "Suicide" OR DE "Military Suicide" OR DE "Youth Suicide" OR DE "Suicidology" OR TX(suicid*) AND DE "Survivors" OR DE "Bereavement" OR DE "Grief" OR TX((survivor* or bereav* or grie* or loss) AND DE "Help Seeking Behavior" OR DE "Health Care Seeking Behavior" OR TX(help-seek* or (seek* adj2 help) or (seek* adj2 treatment) or seek* behavio?r or seek* behavio?r or (seek* adj2 health service*) or health seek* or healthseek*) OR DE "Health Care Utilization" OR DE "Mental Health Care Utilization" OR DE "Utilization	1562

	Reviews" OR TX (service us* or service utili* or care utili* or health utili* or "use of help" or ("use of" adj2 service) or treatment utili* or (barrier* adj3 care)) OR TX((postvention or GP or general practi* or primary care or informal help or social support or peer support)	
SocINDEX	DE "Suicide" OR DE "Military Suicide" OR DE "Youth Suicide" OR DE "Suicidology" OR TX(suicid*) AND DE "Survivors" OR DE "Bereavement" OR DE "Grief" OR TX((survivor* or bereav* or grie* or loss) AND DE "Help Seeking Behavior" OR DE "Health Care Seeking Behavior" OR TX(help-seek* or (seek* adj2 help) or (seek* adj2 treatment) or seek* behavio?r or seek* behavio?r or (seek* adj2 health service*) or health seek* or healthseek*) OR DE "Health Care Utilization" OR DE "Mental Health Care Utilization" OR DE "Utilization Reviews" OR TX (service us* or service utili* or care utili* or health utili* or "use of help" or ("use of" adj2 service) or treatment utili* or (barrier* adj3 care)) OR TX((postvention or GP or general practi* or primary care or informal help or social support or peer support)	486

Appendix 1.3: Quality appraisal tables

Quantitative Studies	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Rating
Belanger et al. (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Belanger et al. (2025)	Yes	Yes	Yes	Yes	Yes	Yes	N/A	High
Drapeau et al. (2015)	Yes	Yes	No	Yes	Yes	Can't tell	N/A	Medium
Duval et al. (2025)	Yes	Can't tell	Can't tell	Can't tell	Can't tell	No	Yes	Low
Entilli et al. (2023)	Yes	Yes	Can't tell	Can't tell	Can't tell	Can't tell	Yes	Medium
Feigelman et al. (2020)	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes	Medium
Feigelman et al. (2024)	Yes	Yes	No	Can't tell	Yes	No	Yes	Medium
McDonnell et al. (2022)	Yes	Yes	Yes	Can't tell	Can't tell	Can't tell	No	Medium
McMenemy (2008)	Yes	Yes	Yes	Can't tell	Can't tell	Can't tell	No	Medium
Provini et al. (2000)	Yes	Yes	Can't tell	Can't tell	Can't tell	No	Can't tell	Low
Wilson and Marshal (2010)	Yes	Yes	Can't tell	Can't tell	No	No	Yes	Low

Q1	Are there clear research questions?
Q2	Do the collected data allow to address the research questions?
Q3	Is the sampling strategy relevant to address the research question?
Q4	Is the sample representative of the target population?
Q5	Are the measurements appropriate?
Q6	Is the risk of nonresponse bias low?
Q7	Is the statistical analysis appropriate to answer the research question?

Qualitative Studies	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Rating
Adams et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Adshead & Runacres (2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Andreissen et al. (2019)	Yes	Yes	Yes	Yes	Yes	Can't tell	YES	High

Andreissen et al. (2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Azorina et al. (2019)	Yes	yes	Yes	Can't tell	Can't tell	Can't tell	Yes	Medium
Barnes (2006)	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes	High
Blaze and Roberts (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Chana & Cheung (2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Cipoletta et al. (2022)	Yes	Yes	Yes	Can't tell	Yes	No	Can't tell	Medium
Clark & Goldney (1995)	No	Can't tell	Yes	No	Can't tell	Can't tell	Can't tell	Low
Cogen et al . (2025)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Ferlatte et al. (2019)	Yes	Can't tell	Yes	Can't tell	Yes	Yes	Yes	Medium
Gall et al. (2014)	Can't tell	Yes	Yes	Yes	Yes	Yes	Yes	High
Gordon and Mcelvaney (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Hafford-Letchfield et al. (2022)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Hunt et al. (2019)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Medium
Mackinnon & Chonody (2014)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Marek & Oxele (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Michaud-Dumont et al (2020)	Can't tell	Yes	Yes	Can't tell	Can't tell	Can't tell	Can't tell	Low
Miers et al. (2012)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Nic an Fhaili et al. (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
O Connel et al. (2024)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Peters et al. (2016)	Yes	Yes	Yes	Yes	Yes	Can't tell	yes	High
Pitman et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Rivart et al. (2021)	Yes	Yes	Yes	Can't tell	Yes	Can't tell	Yes	Medium
Ross et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Ross et al. (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Sheehan et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Medium
Suija et al. (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Trimble et al. (2012)	Yes	Can't tell	Yes	Can't tell	No	Can't tell	No	Low
Wainwright et al. (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

Q1	Are there clear research questions?
Q2	Do the collected data allow to address the research questions?
Q3	Is the qualitative approach appropriate to answer the research question?
Q4	Are the qualitative data collection methods adequate to address the research question?
Q5	Are the findings adequately derived from the data?
Q6	Is the interpretation of results sufficiently substantiated by data?
Q7	Is there coherence between qualitative data sources, collection, analysis and interpretation?

Mixed Method Studies	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Ranking
Dyregrov (2002)	Yes	Yes	Can't tell	Yes	Yes	No	Can't tell	Medium
Lieger et al. (2020)	Yes	Can't tell	Can't tell	Yes	Can't tell	No	No	low
Geleželytė et al. (2020)	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Medium

Q1	Are there clear research questions?
Q2	Do the collected data allow to address the research questions?
Q3	Is there an adequate rationale for using a mixed-methods design to address the research question?
Q4	Are the different components of the study effectively integrated to answer the research question?
Q5	Are the outputs of the integration of qualitative and quantitative components adequately interpreted?
Q6	Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?
Q7	Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?

Appendix 2.1: STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	54
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	56
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	57-60
Objectives	3	State specific objectives, including any prespecified hypotheses	60
Methods			

Study design	4	Present key elements of study design early in the paper	60-61
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	61
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	61
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case	61
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	61-62
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	*62*
Bias	9	Describe any efforts to address potential sources of bias	n/a
Study size	10	Explain how the study size was arrived at	Appendix 2.2
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	61-62
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	63-64
		(*b*) Describe any methods used to examine subgroups and interactions	
		(*c*) Explain how missing data were addressed	64

		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	64
		(*e*) Describe any sensitivity analyses	71

Results

Participants	**13***	**(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed**	**64**
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	64
		(b) Indicate number of participants with missing data for each variable of interest	
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	*64-71*
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	
		Cross-sectional study—Report numbers of outcome events or summary measures	
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	64-71
		(*b*) Report category boundaries when continuous variables were categorized	n/a
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	n/a

Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	71
Discussion			
Key results	18	Summarise key results with reference to study objectives	71
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	73-74
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	71
Generalisability	21	Discuss the generalisability (external validity) of the study results	71-73
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	n/a

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

Appendix 2.2 Research Proposal

Open Science Framework: MRP Proposal

Appendix 2.3 Research Measures

Open Science Framework: Research Measures

Appendix 2.4: Data analysis plan

Open Science Framework – Data analysis plan

Note: Following discussion with associate researchers at the University of Glasgow, the data analysis plan was updated on 23rd October 2025 to reflect more specificity in the statistical analysis planned.

Appendix 2.5: Data assumption checks

Assumption	Outcome	Verdict
Linearity	Visual check	Met
Independence of errors	Durbin Watson = 2.09	Met
Multicollinearity	VIF <2	Met
Homoscedasticity	Residuals evenly spread	Met
Normality of residuals	Mostly normal, few large	Mild violations only
Outliers	Standard residuals up to ±7 but Cooks D <1	Some outliers but not influential

Appendix 2.6: Syntax and Output

Open Science Framework: Syntax and Output

Appendix 2.7 – Data Availability Statement

The dataset used and/or analysed during the current study are available from the trainee's supervisor upon reasonable notice request.

Appendix 3: Reflexivity Statement

In revisiting reflexivity following completion of the analysis, my focus has shifted from anticipated influences on the research process to a more explicit consideration of how my analytic decisions and interpretive lens shaped engagement with the findings. While the use of secondary quantitative data limited direct interaction with participants, reflexivity remained relevant in relation to model specification, interpretation of effects, and the framing of conclusions.

On beginning the analysis, my clinical background and interest in psychologically meaningful mechanisms led me to view negative mood regulation expectancies as a plausible pathway linking perceived stress to suicidal ideation. While the data supported an indirect effect via NMRE, the absence of evidence for moderated mediation by alcohol consumption challenged an initial expectation that alcohol would meaningfully shape these pathways. This required careful reflection to avoid overstating clinically intuitive interpretations that were not statistically supported. In addition, consideration of alternative explanations from the outset informed the decision to conduct a sensitivity analysis including depressive symptoms. Given the strong empirical and clinical links between depression, stress, and suicidal ideation, there was a risk that effects attributed to negative mood regulation expectancies could partially reflect broader depressive processes. Incorporating this additional analysis was intended to guard against over-interpretation of NMRE as a unique mechanism and to ensure that conclusions drawn were robust to the inclusion of closely related constructs and an attempt to remain open to competing explanations.

Engaging reflectively throughout has reinforced the importance of transparency and restraint in quantitative interpretation, particularly where findings partially align with, but also complicate, existing theoretical and clinical expectations.