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Family matters: Understanding caregiver's perceptions and knowledge
of adolescent nonsuicidal self-injury

A thesis presented in partial fulfilment
of the requirements for the degree of

Master of Science
in
Psychology

at Massey University, Manawatu,
Aotearoa New Zealand.

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2026

Abstract

Caregiver understanding of adolescent nonsuicidal self-injury (NSSI) is critical for early detection, disclosure, and intervention, yet limited research has examined caregivers' understanding and beliefs regarding their young person's self-injury. Previous research demonstrates that caregiver perceptions are often discordant with adolescent self-reports, with caregivers frequently underestimating NSSI prevalence or misattributing its functions. This thesis comprises two complementary studies. Study One surveyed $n = 204$ caregivers (M age = 49.7, $SD = 6.10$), assessing how demographic and psychological characteristics, NSSI lived experience, and perceptions of their child peers were associated with their perceptions of their child's NSSI. Results indicated that caregiver perceptions were influenced more by social context, particularly beliefs about peer NSSI, than by their own psychological wellbeing or personal NSSI lived experience. Study Two extended this work by examining 91 matched caregiver-adolescent dyads, allowing direct comparison of caregiver reports with adolescent self-reported NSSI. Concordance between caregiver and adolescent reports was modest, with greater accuracy associated with caregiver gender and family connectedness. Family routines, such as shared mealtimes, were negatively associated with adolescent NSSI, underscoring the importance of relational context. Taken together, findings highlight the need for family-inclusive approaches to NSSI prevention, including caregiver psychoeducation targeting awareness of NSSI and highlighting potential early signs of adolescent distress. Findings have implications for developing culturally responsive, family-inclusive interventions and psychoeducation initiatives, with the potential to improve early identification, support, and treatment access for adolescents who engage in NSSI.

Keywords: non-suicidal self-injury, adolescence, caregiver-adolescent dyads, emotion regulation, functions, disclosure, New Zealand.

Acknowledgements

This thesis could not have been completed without the support, guidance, help, and love of several people throughout the year. First and foremost, I would like to sincerely thank the caregivers and adolescents who participated in this study, as well as the school staff who made their participation possible. This research would not be possible without your contribution, and I cannot thank you enough for your bravery and strength in sharing your beliefs and feelings with us.

To my supervisor, Dr Kealagh Robinson, I am incredibly grateful to have had you as my supervisor. Your expertise, help, support, and unwavering patience throughout this journey has been incredible. You have supported me through every step of the journey, and have created a research environment that was exciting, encouraging, and collaborative. You have been a huge part of this journey. There are not enough words to express my thanks and gratitude for you and all you have done.

Lastly, to my husband and my parents. Your support, kindness, love, and patience have made this journey possible. With the late nights and endless hours of dedication, you have been supportive through every step but also reminded me that it is important to take breaks, to remember I have friends and a social life outside of my thesis, and to always come back with a fresh mind and enthusiasm to continue. Thank you for being part of my motivation, my commitment and my dedication, I could not have done this without you.

Statement of Contribution

This thesis used pre-existing data collected previously as part of a broader research team. Robinson and Gray co-developed the research question and analysis plan, receiving feedback from the Primary Investigator of broader collaboration team (Professor Marc Wilson, Victoria University of Wellington). With supervision from Robinson, Gray led the data analyses and wrote the thesis.

Data were drawn from research supported by the Health Research Council of New Zealand (11/645) and the Royal Society Te Apārangi Marsden Fund (18-VUW-16). Funders were not involved in the design of the study; the collection, analysis or interpretation of data; or in writing the thesis.

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Chapter One: General Introduction

Nonsuicidal Self-Injury (NSSI) is a complex and multifaceted behaviour characterized by the deliberate and direct damage to one's own body tissue without suicidal intent (International Society for the Study of Self-Injury, 2018). NSSI is a behaviour often used to manage overwhelming or unwanted emotions (Chen, 2025). NSSI is a global public health concern, with prevalence ranging from 18.0% to 23.0%, and consistently higher rates reported among females (Moloney et al., 2024; Plener et al., 2015; Swannell et al., 2014). Adolescence represents a period of heightened vulnerability to NSSI, with onset typically occurring in early to mid-adolescence and prevalence declining into adulthood (Muehlenkamp et al., 2012; Swannell et al., 2014). This developmental stage is marked by significant social, cognitive, and emotional changes, including increased emotional reactivity, impulsivity, and regulation difficulties, all of which contribute to elevated risk for NSSI (Emery et al., 2017; Johnson et al., 2012; Steinberg, 2025). Adolescents with poorer emotion regulation capacities may struggle to tolerate distress, reframe negative experiences, or seek interpersonal support, increasing the likelihood that they will rely on immediate, behaviour-based strategies such as NSSI to manage overwhelming or unwanted emotions (Glenn & Klonsky, 2013). While a substantial body of research has examined individual-level predictors and functions of NSSI (for review, see Fox et al., 2015), comparatively less attention has been directed toward the broader interpersonal context in which these behaviours emerge and are maintained.

Caregivers¹ and family members are often among the first to discover that a young person self-injures (Oldershaw et al., 2008). In particular, caregivers play a central role in adolescents' experiences disclosing their NSSI and help-seeking, which in turn can shape

¹ The term 'caregiver' is used throughout this thesis as an inclusive umbrella terms to capture parents, stepparents, foster parents, aunties, uncles, grandparents, and other adults who are the primary guardian of a young person.

adolescents' broader emotion regulation and coping resources (Costa et al., 2022; Ratliff et al., 2023). Caregivers are also a central support system for young people, with research demonstrating that supportive family functioning, parental care, and positive caregiver-adolescent relationships are associated with reduced NSSI behaviours, greater resilience, and better emotion regulation in adolescents (Gao et al., 2024; Wang et al., 2025; Zhou et al., 2025). Despite the importance of caregivers in youth NSSI, caregivers' understanding of NSSI remains underexplored in the literature. Addressing this gap is critical, as interventions that fail to incorporate the family system may overlook a key mechanism through which adolescent NSSI can be either perpetuated or mitigated.

This thesis examines NSSI within the context of the family system, focused on exploring caregiver understanding and knowledge of youth NSSI. Rather than conceptualising NSSI solely as an intrapersonal phenomenon, this research positions caregiver perceptions and responses as central to early NSSI identification, disclosure, and help-seeking. Across two complementary studies, the thesis provides a multi-informant perspective on how NSSI is understood and recognised within families. Study One explores individual differences in caregiver perceptions of youth NSSI, including their beliefs about its functions, causes and severity, and how their own lived experience of NSSI may influence this. By identifying patterns in caregivers' beliefs and knowledge, Study One provides foundational insight into the interpretive frameworks that shape family responses to NSSI and potentially influence adolescents' willingness to disclose and seek support. Study Two then extends this work by examining concordance between caregivers and young people in reports of youth NSSI. Using a dyadic approach, this study investigates the degree of agreement regarding the presence, frequency, severity, and characteristics of self-injury. By directly comparing matched caregiver and youth reports, Study Two assesses caregiver accuracy and highlights potential gaps in awareness. Together, the two studies offer an integrated

examination of how NSSI is perceived, recognised, and understood within the family context, providing empirically grounded insights to inform theory, clinical practice, and future research.

A (pragmatic) introduction to nonsuicidal self-injury

Public perceptions on NSSI have changed over time from a poorly understood, stigmatized behaviour to a well-conceptualised, multifaceted mental health concern with specific diagnostic relevance (Hooley et al., 2020). Initial empirical research tended to conflate NSSI with suicidal behaviour, reinforcing misconceptions about intent and risk and contributing to negative attitudes toward individuals who self-injure (Nock, 2010). Such views not only shaped research and diagnostic practices but also influenced help-seeking, with adolescents reporting shame, fear of judgment, and reluctance to disclose self-injurious behaviours to caregivers or professionals (Rowe et al., 2014). Overtime, growing empirical evidence and advocacy efforts have challenged these assumptions, understanding NSSI as a complex behaviour primarily associated with emotion regulation difficulties, rather than simply reflecting a desire to die or manipulative attempts for attention (Klonsky & Glenn, 2013; Lloyd-Richardson et al., 2007; Whitlock et al., 2006).

A significant shift in conceptualization occurred with the inclusion of NSSI in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5; American Psychiatric Association [APA], 2013) as a condition requiring further study. This inclusion marked an important step toward distinguishing NSSI from suicidal behaviour and acknowledging its clinical significance as a behaviour warranting targeted assessment and intervention (Zetterqvist, 2015). This inclusion also reflects the growing consensus that self-injurious behaviour can occur outside the context of suicidal intent or borderline personality pathology (Plener & Fegert, 2012). Collectively, these developments reflect a broader shift away from moralistic and stigmatizing interpretations of NSSI and towards a more evidence-based,

compassionate understanding, with implications for both clinical practice and public attitudes.

Common behaviours of NSSI include cutting, burning, hitting, or scratching oneself (Apicella et al., 2025). NSSI is prevalent during adolescence, with the behaviour typically beginning in early-to-mid adolescence and often involving multiple methods and repeated behaviours (Brown & Plener, 2017). Research on NSSI functions consistently shows that the most prevalent motivations are intrapersonal, particularly emotion regulation and relief from intense negative affect, but interpersonal functions, such as communicating distress and peer bonding, are also commonly reported (Reinhardt et al., 2022). NSSI is frequently performed in private and in locations that are easily concealed, therefore it may remain hidden from caregivers, peers, and clinicians, complicating detection and support (Klonsky et al., 2014). Although, by definition, NSSI does not involve suicidal intent, it is a transdiagnostic behaviour that occurs across a range of psychiatric presentations including mood, anxiety, and personality disorders, and is strongly associated with broader psychological distress and comorbidity (Reinhardt et al., 2022). Importantly, NSSI is a robust predictor of suicidal ideation and behaviours, with adolescents engaging in NSSI showing higher rates of suicide planning and attempts compared to those without such histories, highlighting the public health significance of the behaviour (de Neve-Enthoven et al., 2024).

Empirical investigation of NSSI within Aotearoa New Zealand remains limited, though a growing body of research highlights its prevalence and psychological correlates. Initial evidence suggested that up to half of adolescents had self-injured before the end of high school (Garisch & Wilson, 2016; Garisch et al., 2017). Subsequent research has reinforced these concerns, demonstrating robust associations between NSSI and psychological distress, emotion dysregulation, and low self-esteem across both adolescent and adult samples in New Zealand (de Silva, 2023; Fitzgerald & Curtis, 2017; Robinson et

al., 2025). Collectively, these findings are consistent with international literature and highlight the central role of affective dysregulation and broader mental health difficulties in understanding NSSI within the New Zealand context.

Emerging research has begun to situate NSSI within culturally grounded frameworks in Aotearoa New Zealand. A substantial body of literature has identified a range of potential risk and predisposing factors that may contribute to the elevated rates of adolescent NSSI (Clark et al., 2022; Ball et al., 2022). New Zealand adolescents face numerous social and structural challenges, including early-life trauma and stress, bullying, family violence, socioeconomic disadvantage, poverty, and the ongoing impacts of colonisation (Clark et al., 2022; Ball et al., 2022). These factors have been widely identified as potential contributors to the development of NSSI behaviours (Wang et al., 2022), highlighting the importance of examining how such contextual influences may shape the prevalence and experience of NSSI among adolescents in New Zealand. Research has also highlighted that dominant Western models of self-injury may not adequately capture the lived experiences of rangatahi Māori, emphasising instead the importance of understanding NSSI within relational, cultural, and spiritual contexts, including connections to whānau, identity, and mātauranga Māori (Kingi et al., 2017). These perspectives suggest that behaviours labelled as self-injury in Western frameworks may carry different meanings when understood through Indigenous knowledge systems, where historical narratives, collective identity, and cultural values shape interpretations of distress and coping (Kingi et al., 2017; Johnson et al., 2024). These perspectives challenge individualised, pathology-focused models of NSSI and highlight the importance of culturally responsive, family-centred approaches to research and intervention in Aotearoa New Zealand.

Intervention and prevention in Aotearoa New Zealand

In New Zealand, mental health prevention and intervention initiatives increasingly recognise developmental and family dynamics. School-based wellbeing programmes, community supports such as Youthline, and digital mental health tools like SPARX, aim to strengthen coping and emotion regulation skills prior to the onset of NSSI, while population-level strategies seek to reduce stigma and encourage help-seeking (Fleming et al., 2020; Ministry of Health, 2022). Evidence based interventions such as Dialectical Behaviour Therapy for Adolescents and attachment, or family-focused therapies explicitly involve caregivers, enhancing family communication, validation, and confidence in responding to distress, factors shown to protect against adolescent NSSI (Mehlum et al., 2018; Kothgassner et al., 2021). Despite these advances, service gaps remain, particularly for rural communities and for Māori and Pasifika youth, highlighting the need for culturally responsive and family-inclusive approaches to both prevention and interventions (Beautrais, 2001; Ministry of Health, 2022). Taken together, these considerations highlight the importance of understanding family perspectives on adolescent NSSI, as caregivers and the wider circle of support around an adolescent are key players in recognising difficulties, facilitating help-seeking, and supporting the effectiveness of both prevention and intervention efforts.

Theoretical models of nonsuicidal self-injury

Several contemporary theoretical models have been developed to explain why some adolescents engage in self-injury while others exposed to similar stressors do not. These theoretical models include the Cognitive-Emotion Model of NSSI (Hasking et al., 2016), the Benefits and Barriers Model (Hooley & Franklin, 2018), and the NSSI Family Distress Cascade Theory (Waals et al., 2018). Collectively, these models highlight the central role of emotion dysregulation, reinforcement processes, and interpersonal contexts, particularly family and peer systems, in the onset and maintenance of NSSI.

The Cognitive-Emotion Model

The Cognitive-Emotion Model of NSSI conceptualises self-injury as a strategy used by some individuals to manage intense emotional experiences and maladaptive cognitions (Hasking et al., 2017). According to this model, individuals differ in their emotional reactivity, tolerance for distress, and cognitive appraisals of self and environment, which together influence the likelihood of engaging in NSSI. Adolescents who experience heightened negative affect or difficulty regulating emotions may be more prone to experience stressors as overwhelming, leading to the perception that self-injury provides a necessary outlet. The model proposes that NSSI is maintained through negative reinforcement, where the behaviour temporarily alleviates distress, reduces aversive cognitions, or interrupts intolerable emotional states, therefore increasing the probability that it will be used again in future to manage a distressing situation. Individual differences in cognitive patterns, such as self-criticism, are argued to interact with these emotional vulnerabilities to shape both the initiation and persistence of self-injury (Hasking et al., 2017). Adolescents with poorer emotion regulation skills may struggle to tolerate distress, reappraise negative emotional experiences, or access adaptive coping strategies, increasing reliance on immediate behaviour-based strategies such as NSSI to manage overwhelming emotions (Adrian et al., 2011). By highlighting the interplay between cognition, emotion, and behavioural reinforcement, the Cognitive-Emotion Model provides a comprehensive framework for understanding why NSSI begins for some adolescents and how the behaviour can become entrenched.

The Benefits and Barriers Model

Building on the emotion-regulation framework, the Benefits and Barriers Model offers a complementary explanation for why some adolescents engage in NSSI while others exposed to similar stressors do not (Hooley & Franklin, 2018). The model conceptualises

NSSI as a behaviour that arises when the perceived benefits of engaging in self-injury outweigh the perceived barriers that typically deter an individual. The perceived benefits are defined as the positive outcomes or functions that the individual anticipates from NSSI, which closely correspond to established intrapersonal and interpersonal functions in the literature, including affect regulation, communication of distress, and peer bonding (Klonsky & Glenn, 2009; Nock & Prinstein, 2004). Barriers, on the other hand, represent the internal or external factors that make self-injury aversive or difficult, such as a natural aversion to pain, fear of physical harm, concerns about social stigma, lack of knowledge or exposure to NSSI, or feelings of self-worth that conflict with the behaviour (Hooley & Franklin, 2018). Even a single barrier is argued to prevent engagement, yet repeated exposure, heightened emotional distress, or peer influence can erode these barriers over time. The interpersonal context is particularly relevant within this model, as peer discussion, social media exposure, or peer bonding around self-injury can reduce stigma and increase perceived benefits, while caregiver responses may either strengthen barriers, through supportive, validating responses, or unintentionally weaken them through invalidation or extreme emotional reactions (Hooley & Franklin, 2018). By integrating the motivating functions of NSSI with factors that inhibit engagement, the Benefits and Barriers Model provides a nuanced framework for understanding the initiation, persistence, and escalation of self-injury, highlighting the interaction of individual, relational, and social influences on adolescent behaviour (Hooley & Franklin, 2018).

The Family Distress Cascade Theory

Extending these individual level models, the Family Distress Cascade Theory situates NSSI within the broader family system and emphasizes the reciprocal emotional and relational process that may maintain the behaviour overtime (Waals et al., 2018). This theory emphasises the influence of the adolescent–caregiver relationship, suggesting that repeated

engagement in NSSI initiates a cascading sequence of emotional responses within the family. While these emotion responses do not require caregiver's knowledge of the adolescent's self-injury, the responses become particularly pronounced after a caregiver becomes aware of the behaviour. Caregivers, upon discovery of NSSI, often experience acute stress, fear, guilt, and a sense of crisis, reactions that are understandable but may inadvertently intensify family distress (Waals et al., 2018). Heightened caregiver emotional responses may increase family conflict, emotional invalidation, or overprotective monitoring, therefore amplifying adolescents' emotional dysregulation. As adolescents experience increased emotional intensity within the family environment, the perceived benefits of NSSI as an emotion-regulation strategy may increase, reinforcing the behaviour. Over time, caregivers may experience emotional exhaustion or "empathy burnout" (Waals et al., 2018, p. 2), where the caregiver is unable to respond to their child in a compassionate manner, creating further difficulties and tension in the adolescent-caregiver relationship. This reciprocal escalation of adolescent and caregiver distress forms the core of the cascade process.

Taken together, these three theoretical models converge in highlighting the central role of emotion dysregulation and interpersonal reinforcement in adolescent NSSI. Importantly, NSSI reflects more than difficulties in regulating emotions, it also involves cognitive vulnerabilities, patterns of relational stress, and developmental stressors. These models collectively highlight that NSSI is not solely an individual behaviour, but one embedded within family and peer systems. Understanding how caregiver responses and peer contact interact with adolescents' emotion regulation capacities, cognitive patterns, and coping strategies is therefore essential for informing prevention and intervention efforts that address both individual vulnerabilities and relational dynamics.

The developmental context of nonsuicidal self-injury

Research consistently demonstrates that NSSI peaks during adolescence and, for many young people, does not persist into adulthood (De Luca et al., 2023). Therefore, adolescence provides a critical developmental context for NSSI. Adolescence is a developmental period marked by profound psychological, neurobiological, and social change. Heightened emotional reactivity and increased sensitivity to social evaluation are common during this stage, reflecting ongoing maturation of neural systems involved in affective processing and cognitive control (Casey et al., 2011; Steinberg, 2008). Across childhood and adolescence, development involves not only substantial physical maturation but also significant emotional and psychological changes that require guidance and support. Between the ages of 6 and 12, children's primary developmental task centres on setting and achieving personal goals, while adolescence (approximately 12–18 years) is characterised by the pursuit of self-identity and the testing of personal and social boundaries (Gladding, 2015). During this period of developmental transition, secure relationships and a stable emotional foundation are particularly important for healthy socioemotional development (Branje, 2022). At the same time, adolescents experience increasing autonomy, identity exploration, and a growing desire for independence from caregivers, while also relying on them for emotional security and guidance. Social development also accelerates, with peer relationships becoming more central and influential, alongside greater engagement with complex social hierarchies, romantic relationships, and digital environments (Brown & Laursen, 2005; Steinberg & Morris, 2001). These overlapping emotional, cognitive, and social transitions can heighten vulnerability for the need of coping strategies while regulatory capacities are still developing (Guyer et al., 2016). Understanding adolescence as a period of both opportunity and heightened sensitivity provides essential context for interpreting behaviours such as NSSI.

Emotion dysregulation and nonsuicidal self-injury

Consistent with the theoretical models, a wealth of evidence demonstrates robust associations between emotion dysregulation and NSSI (for a meta-analytic review, see Wolff et al., 2019). Emotion dysregulation reflects widespread difficulties regulating emotions, typically conceptualised as comprising interconnected domains of a lack of emotional awareness, nonacceptance of emotional responses, lack of emotional clarity, difficulty engaging in goal-directed behaviour, impulse control difficulties, and limited access to emotion regulation strategies (Gratz & Roemer, 2004). Adolescents who self-injure often experience rapid escalation of negative emotions, limited access to adaptive regulation strategies, and a tendency toward impulsive behavioural responses to distress (Crowell et al., 2009; Gratz & Roemer, 2004). Although NSSI produces short-term relief from overwhelming or unwanted emotions, ecological momentary assessment research indicates the negative affect typically escalates prior to self-injury and declines in the hours following the behaviour, suggesting that NSSI may temporarily regulate emotional distress (Armey et al., 2011). However, NSSI does not resolve underlying regulatory deficits and relying on NSSI to manage emotional states may reduce emotion regulation skills over time (Robinson et al., 2019).

Emotions, and the regulation of emotions, is profoundly social. Emotion dysregulation difficulties are frequently embedded within broader developmental and interpersonal context, including disruptions in caregiver-adolescent relationships, which may further constrain opportunities to learn adaptive emotion regulation strategies (Crowell et al., 2009; Linehan, 1993). Similarly, peer contexts may influence emotional regulation through social reinforcement, modelling, or validation of maladaptive coping behaviours. Over time, NSSI may become a learned and reinforced response to emotional distress, reinforcing dysregulation over time and underscoring the importance of early, emotion-focused intervention efforts (Glenn et al., 2013). It is important to note that not all adolescents who

experience high levels of distress engage in self-injury, suggesting that deficits in regulatory skills, rather than emotional distress alone, are critical in distinguishing those at greater risk (Adrian et al., 2011).

A substantial body of research has highlighted the significant role of caregiver emotion socialization in shaping children's capacity to regulate their emotions. This includes, among other factors, how parents respond to their children's emotional expressions, whether parenting approaches are characterized by warmth and support (versus control or hostility), and how parents model emotional expression and manage their own emotions (Bariola et al., 2012). Caregivers play an incredibly important role in the emotional development of their children, and positive parenting can have a profound impact on children's emotion regulation when compared with more negative parenting styles.

The role of caregivers and families in nonsuicidal self-injury

Despite increasing autonomy during the period of adolescence, adolescents remain embedded within their family systems. Caregivers are typically the first to observe behavioural changes, respond to emotional crises, and initiate help-seeking or treatment (Hunter et al., 2015). Consequently, caregiver interpretations of NSSI, including beliefs about its causes, functions, and severity, may influence both immediate responses and longer-term intervention pathways. Even as adolescents seek greater independence, caregivers continue to play a central role in identity development, modelling coping strategies, and providing emotional security (Allen et al., 2018; Durbin et al., 1993). Consistent evidence shows that parental warmth, monitoring, and open communication are associated with more adaptive psychosocial outcomes, whereas conflictual or invalidating family environments are linked to greater emotional and behavioural difficulties (Yap et al., 2014). Despite the importance of family processes, research on NSSI has largely focused on adolescents themselves, with comparatively less attention given to caregiver experiences and family dynamics.

Given the importance of caregivers in fostering emotional development for youth, considerable overlap is often observed between the emotional experiences and regulatory patterns of caregivers and their children. This overlap may arise through several mechanisms. Shared family environments can contribute to common emotional climates, as exposure to similar stressors and patterns of emotional communication shape how emotions are expressed and regulated within the household (Stoop & Cole, 2022). Additionally, adolescents are highly sensitive to parental emotional cues, with research linking parental emotional functioning to adolescents' own emotion regulation capacities and psychological outcomes (Chaplin et al., 2024). Genetic and temperamental similarities may further contribute to overlapping emotional tendencies between caregivers and adolescents. Together, these processes highlight how adolescents' developing emotion regulation capacities are closely intertwined with the emotional functioning of their caregivers and the broader family emotional environment.

Consistent and sensitive caregiving practices support the formation of secure internal models of the self and others, fostering healthy relationships and shaping key aspects of social development, emotional regulation, and social competence (Santana-Ferrández et al., 2025). Accordingly, attachment relationships with caregivers serve as important protective factors against emotional, physical, and mental health difficulties during adolescence (Mónaco et al., 2019). From early childhood onward, caregivers play a central role in shaping how young people understand, express, and regulate their emotions. Through everyday interactions, modelling, and responses to children's emotional experiences, caregivers help socialise emotion regulation skills and coping strategies that adolescents later draw upon when managing distress (Bariola et al., 2012; Paley & Hajal, 2022).

Numerous social influences contribute to the development of emotion regulation during adolescence, including interactions with parents, teachers, and peers (Bariola et al.,

2012). Within the family context, parenting style has been consistently associated with adolescents' engagement in NSSI. Positive parenting behaviours, such as a display of comfort and warmth are associated with a lower frequency of NSSI behaviours during adolescence (Fong et al., 2022). In contrast, more controlling or psychologically intrusive parenting, characterised by attempts to excessively regulate or influence adolescents' thoughts, emotions and behaviours, has been linked to higher rates of NSSI (Baetens et al., 2015; Fu et al., 2020), and broader relational and identity difficulties. One explanation for this association is the influence of parenting practices on the development of emotion regulation. When emotional experiences are dismissed, criticised, or overly controlled within the family, adolescents may have fewer opportunities to learn adaptive strategies for managing distress. Given that NSSI is widely understood as a less adaptive strategy used to regulate overwhelming emotions, difficulties in emotion regulation may increase the likelihood that adolescents engage in self-injury as a means of coping (Baetens et al., 2015; Fu et al., 2020).

These processes align with Linehan's Biosocial Theory, which proposes that self-injurious behaviours more broadly can develop when individuals with heightened emotional sensitivity and difficulty returning to baseline emotional states are raised in invalidating or unsupportive environments (Linehan, 1993). Within this framework, family environments that minimise, punish, or misunderstand emotional experiences may exacerbate existing vulnerabilities in emotion regulation. More broadly, the wider developmental context surrounding adolescents, including adverse childhood experiences, attachment difficulties, and other environmental stressors, may further contribute to the emergence and maintenance of NSSI behaviours (Usmani et al., 2024).

Family processes may also shape NSSI risk through intergenerational influences. A family history of self-harm has been identified as a significant risk factor, with parental NSSI associated with an increased likelihood of similar behaviours in children (Fox et al., 2015;

Victor & Klonsky, 2014). This association may reflect both inherited vulnerabilities, such as difficulties with emotion regulation or impulsivity (Glenn & Klonsky, 2013), and modelling processes (Jarvi et al., 2013). Given that caregivers are often gatekeepers to professional support and key agents in adolescents' emotional socialisation, understanding how they conceptualise and respond to NSSI is critical for developing developmentally informed and family-inclusive interventions.

Caregiver understanding and perspectives of nonsuicidal self-injury

NSSI has a large impact on not just the adolescents engaging in the behaviour but on those surrounding them, including close family and friends, who are also usually a part of the adolescents' support network. Caregivers are directly affected by adolescent NSSI and can experience negative emotions themselves, a lack of support both socially and professionally, and an increase in stress (Townsend et al., 2021). These responses can have consequences for familial relationships, the family dynamic and the outcome of the NSSI behaviours of their adolescent.

Caregivers play a key role in the emotional and behavioural development of their children (Ayob et al., 2022), and their understanding and experiences of youth self-injury may critically shape both the identification and management of their children's NSSI. A growing body of research demonstrates that caregivers' perceptions of youth self-injury are central to detection, help-seeking, and intervention outcomes (Kandsperger et al., 2023). Caregivers are often among the first to notice behavioural changes or physical signs associated with NSSI and are frequently the first to discover their young person's NSSI (Oldershaw et al., 2008; Townsend et al., 2023). Caregivers may also adopt a *wait and see* approach, hoping that the behaviour represents a temporary developmental phase that will resolve over time (Oldershaw et al., 2008). This uncertainty and distress can significantly

affect family dynamics and may influence how caregivers respond to and support adolescents experiencing NSSI.

Stigma can further complicate these caregiver responses. Public stigma often frames NSSI as attention-seeking or indicative of weakness, while anticipated stigma (the fear of negative judgment from others), may discourage both adolescents and caregivers from seeking support (Lewis et al., 2025; Meheli & Banerjee, 2022; Tatnell et al., 2014). Caregiver beliefs about whether NSSI is attention-seeking, manipulative, or a sign of severe psychopathology can shape the type and timeliness of professional support sought (Kandsperger et al., 2023).

As caregivers play a key role in adolescent NSSI, this highlights the emotional toll that NSSI takes on the wider family and the need for clear guidance (Ferrey et al., 2016; Oldershaw et al., 2008). Caregiver *mis*perceptions of NSSI, whether minimization, stigma, or overestimation, can also exacerbate relational strain and shape parenting behaviours that, in turn, affect adolescent coping and recovery (Tatnell et al., 2014; Waals et al., 2018). These factors highlight how caregiver perceptions and social pressures can influence early identification, disclosure, and engagement with interventions for adolescent NSSI. By researching caregivers' understanding and beliefs of NSSI, it can bridge necessary gaps where youth are seeing a delay in access to help and treatment, due to parental misconceptions or misunderstandings (Roberts et al., 2024; Glenn et al., 2015).

Caregivers' own experiences with NSSI are likely to influence their perceptions of youth NSSI. Preliminary research suggests that adults with lived experience of NSSI may be more likely to have children who also engage in self-injury (O'Hare et al., 2022; Paul et al., 2021). Research also suggests that caregivers with a history of NSSI may struggle with their own mental health, which can impact family functioning, caregiver-child communication, and

the emotional climate of the household – factors that are consistently linked to youth NSSI (Tatnell et al., 2014; Waals et al., 2018).

Understanding parental perspectives of NSSI is critical not only for contextualizing adolescent NSSI but also for informing intervention frameworks. Family environment factors, including parental warmth, invalidation, communication patterns, and emotion socialization practices, have been linked to both the onset and maintenance of NSSI (Li et al., 2023). Caregivers' emotional responses to discovering NSSI can influence whether adolescents feel supported or further invalidated, which in turn may affect disclosure and recovery (Lewis et al., 2025; Oldershaw et al., 2008). Given that evidence-based interventions for adolescent NSSI often incorporate family components (Zhang et al., 2026), a clearer understanding of how parents conceptualize and respond to NSSI is essential. By incorporating and focusing on caregiver perspectives, research can move toward developmentally appropriate, family-centred models of care that recognize adolescents not as isolated individuals, but as members of extended family systems which can influence both risk and resilience.

The current thesis

Despite increasing knowledge about adolescent NSSI, critical gaps remain, particularly within the New Zealand context. Most research has relied on adolescent self-report, with limited investigation of caregiver perspectives and how family dynamics, parenting styles, and emotional socialisation influence the onset and maintenance of self-injury (Oldershaw et al., 2008). Addressing these gaps is essential for developing prevention and intervention strategies that are both developmentally appropriate and culturally responsive. Understanding how caregivers understand and perceive adolescent NSSI can inform more effective, family-inclusive approaches, while also highlighting systematic or relational factors that may sustain NSSI. These unresolved questions directly motivate the

present studies, which aim to explore caregiver perspectives and the broader family context of adolescent self-injury in Aotearoa New Zealand.

This thesis comprises two complementary studies examining adolescent NSSI from both caregiver and adolescent perspectives, with a particular focus on understanding caregiver perceptions and accuracy in identifying self-injury within a New Zealand context. Study One explored caregivers own experiences, including whether caregivers themselves have engaged in NSSI, and how these experiences may shape their perceptions of NSSI in their children and among their children's peers. It also examines caregivers' beliefs about the functions of adolescent NSSI, specifically the purposes they believe self-injury serves, addressing the research questions regarding (1) the prevalence of caregiver self-injury, (2) caregiver recognition of adolescent NSSI, and (3) the perceived functions of youth self-injury. Building on these findings, Study Two incorporates adolescent self-reports alongside matched caregiver responses to directly assess caregiver awareness and accuracy in identifying adolescent NSSI. This dyadic design allows for examination of factors associated with concordance and discrepancies between caregiver and adolescent reports and evaluates whether matched data provide more robust insights than caregiver reports alone. Together, these studies aim to provide exploratory, preliminary insights into caregiver understanding, beliefs, and accuracy, highlighting how family perspectives influence recognition, interpretation, and response to adolescent self-injury, and ultimately informing future work to develop more culturally responsive, family-inclusive approaches to NSSI prevention and intervention in Aotearoa New Zealand.

Chapter Two

Study One: Caregiver perceptions of youth nonsuicidal self-injury

Youth NSSI impacts not only the young person who self-injures, but also their family, friends, and wider support network. As reviewed in Chapter One, the majority of research on youth NSSI has examined the prevalence, predictors, functions and psychological impacts of youth NSSI from adolescents' perspectives. Far less is known about how caregivers themselves experience and perceive youth self-injury. Caregivers are often the first to notice signs of self-injury (Oldershaw et al., 2008) and adolescents' coping and recovery are heavily shaped by family responses (Bean et al., 2022). A wealth of evidence shows that supportive, empathetic caregiving can foster adolescent resilience, while critical or punitive caregiver responses may worsen an adolescents' distress. In the context of NSSI, parental misconceptions or misunderstandings of the behaviour may delay access to help and treatment for their youth (Fu et al., 2020; Roberts et al., 2024; Savla & Sutar, 2024). Disclosure of NSSI is also strongly shaped by the caregiver-adolescent relationship, with adolescents more likely to disclose NSSI when they perceive caregivers as emotionally available and non-judgemental, and less likely to do so when they anticipate negative reactions (Simone & Hamza, 2020). Understanding caregiver perceptions, whether they think their young person self-injures or not, of youth NSSI is critical because these perceptions strongly influence the likelihood of early identification, disclosure, and help-seeking (Oldershaw et al., 2008). Given these gaps in the literature, Study One aims to explore how caregivers' individual experiences with NSSI may shape their beliefs and their understandings of youth NSSI and the functions the behaviour serves.

Preliminary evidence suggests that adults often possess limited and inconsistent knowledge about youth NSSI (Fu et al., 2020). Educational stakeholders frequently confuse NSSI with suicidal behaviour, underestimate its prevalence, and hold misconceptions about

its causes, functions, and developmental course (Hamza et al., 2023). Research with young people consistently shows that NSSI typically serves intrapersonal emotion regulation functions, such as alleviating distress, reducing feelings of numbness, and sometimes interpersonal functions, such as communicating distress, influencing others (Klonsky et al., 2014; Nock & Prinstein, 2004). Interpersonal functions are socially reinforced, and intrapersonal functions are self-focused and reinforced by the individual (Klonsky & Glenn, 2009). However, studies examining caregiver perspectives suggest that many caregivers interpret NSSI primarily through an interpersonal lens (Peel-Wainwright et al., 2021). Caregivers often believe that adolescents self-injure to seek attention, manipulate others, or express anger, while underestimating the emotion regulation motives most frequently reported by young people (Kelada et al., 2016). These misunderstandings then shape caregivers' responses to the behaviour. When NSSI is interpreted as attention-seeking or manipulative, caregivers may respond with anger or punishment, which can increase secrecy and shame, or reduce opportunities for disclosure and support (Baetens et al., 2015; Kelada et al., 2016). In contrast, caregivers who recognise the emotion regulation functions of NSSI are more likely to facilitate supportive and informed responses which can open communication with youth (Baetens et al., 2015).

Research also demonstrates that most caregivers are unaware that their adolescent engages NSSI (Kelada et al., 2016). Many caregivers also report little awareness of NSSI prior to discovering their young person's behaviour, initially interpreting it as normative adolescent rebellion or a transient phase rather than a coping strategy for emotional distress (Arbuthnott & Lewis, 2015; Hamza et al., 2023). Qualitative investigations show that parents often underestimate the age, onset, frequency and severity of their adolescents' self-injury, and some do not recognise the behaviour until it escalates or is discovered by schools, peers, or medical professionals (Ferrey et al., 2016). Approximately half of people with lived

experience of NSSI report having never disclosed their self-injury (for review see, Simone & Hamza, 2020). When disclosure does occur, it is typically to friends rather than to parents or professionals (Simone & Hamza, 2020). Adolescents frequently cite fears of negative or punitive reactions, concerns about burdening caregivers, or beliefs that their caregivers will not understand as key barriers to disclosure (Simone & Hamza, 2020). Taken together, existing evidence indicates knowledge of a young person's self-injury may be constrained by both caregiver misconceptions of NSSI and youth disclosure preferences, creating a significant barrier to early identification and intervention (Ferry et al., 2016).

Beyond simply documenting broad gaps in caregiver knowledge and awareness, research is needed to understand individual differences in caregivers' perceptions of youth NSSI. One factor that is likely to influence caregivers' perceptions of youth NSSI is their own lived experience of NSSI. Adults who themselves have self-injured may be more likely to have children who also engage in self-injury, with evidence suggesting approximately a two-to-three-fold increase in risk (Li et al., 2025; Yu et al., 2024). Emerging evidence suggests that vulnerability to NSSI may be partially heritable, with genetic factors influencing psychobiological systems such as emotion dysregulation, stress reactivity, and impulsivity that increase risk of self-injury (Kaess et al., 2021). Caregivers' own experiences of poorer mental health can impact family functioning, caregiver-child communication, and the emotional climate of the household (Tatnell et al., 2014; Waals et al., 2018) — all factors that are consistently linked to youth NSSI. Given that lived experience can reduce stigma and increase understanding of NSSI (Baetens et al., 2015; Hamza et al., 2023; Kelada et al., 2016), caregivers' experiences engaging in NSSI likely also shapes their beliefs and attitudes towards self-injury. For instance, caregivers who have themselves self-injured may be more attuned to signs of psychological distress or self-injury among their young person and may respond with greater empathy. Emerging evidence suggests that NSSI may cluster within

families, reflecting the interplay of shared genetic vulnerability, caregiver beliefs about self-injury, and family environmental processes, with caregiver mental health challenges further increasing adolescents' risk of engaging in NSSI (Tatnell et al., 2014).

Caregivers' demographic and household characteristics may also influence their beliefs, perceptions, and awareness of youth NSSI. Previous research suggests that female caregivers are more likely than male caregivers to monitor and communicate with their children about mental health concerns (Navarro et al., 2020; Rueter & Koerner, 2008; Yap et al., 2014), which may provide mothers with greater insight into their child's emotional states and potential self-injury. Birth order and family size may also play a role, as caregivers of multiple children may experience divided attention, potentially reducing awareness of each child's individual experiences (Fukuya et al., 2021; Lawson & Mace, 2010). Socioeconomic and relational factors may likewise shape caregiver perceptions of adolescent distress. Economic strain has been associated with increased parental stress and reduced capacity to detect and respond to youth difficulties (Conger et al., 2010). In contrast, family routines such as shared mealtimes are linked to closer caregiver-child communication, stronger family functioning, and improved adolescent wellbeing, suggesting that they provide an important context for caregiver awareness of youth experiences (Dallacker et al., 2018; Fiese & Schwartz, 2008; Hammons & Fiese, 2011). Together, these findings suggest that caregiver and household characteristics may shape the degree to which caregivers are aware of and able to recognise self-injury in their children.

At the psychological level, caregivers' own emotion regulation and mental health may influence the awareness of, and responses to, self-injury. Difficulties in emotion regulation may limit caregivers' capacity to tolerate distressing disclosures or recognize subtle signs of NSSI, while elevated symptoms of depression, anxiety and stress may further interfere with accurate perception. Previous research has proposed and empirically supported similar

mechanisms in adjacent contexts, demonstrating that caregiver psychopathology is linked to diminished sensitivity to youth distress cues and less accurate caregiver perceptions of youth mental health (Coyne et al., 2021; Goodman et al., 2011), suggesting a plausible pathway through which these factors may impeded recognition of NSSI. Conversely, high self-esteem may create a buffer for caregivers against feelings of helplessness or self-blame regarding their adolescents' behaviour, supporting more open communication with their adolescent and awareness (Oth & Robins, 2014). These phenomena may reflect individual differences in caregiver perceptions of youth NSSI.

Despite increasing recognition of the importance of family context in adolescent NSSI, several aspects of caregiver experiences remain poorly understood. In particular, little empirical attention has been given to the prevalence of caregiver lived experience of NSSI, and relatively little is known about how caregivers interpret the functions that NSSI may serve for young people. Further, caregivers are not a homogenous group, and individual differences in their demographic, household, and psychological characteristics may shape how they perceive and respond to adolescent distress. Understanding these differences is important because caregiver recognition of NSSI is central to youth disclosure, help-seeking, and engagement with treatment (Goodman et al., 2011; Kelada et al., 2016; Orth, 2017; Shaffer et al., 2016).

Study One explored how individual differences in caregiver characteristics are associated with caregiver beliefs of adolescent NSSI. Caregivers in Aotearoa New Zealand completed an online survey assessing demographic and household characteristics, lived experience of NSSI, and indicators of psychological wellbeing, including emotional distress, emotion regulation, and self-esteem. Caregivers were then asked about their awareness and perceptions of their young person's engagement in NSSI and their perceptions of the functions it may serve. Study One aimed to explore caregivers' beliefs of the functions of

adolescent NSSI and their perceptions of the likelihood that their young person self-injures, before testing whether individual differences in caregiver demographic and psychological characteristics were associated with caregiver perceptions of youth NSSI. As this study represents an initial exploration, no a-priori hypotheses were proposed. Addressing these research questions will provide insight into an underexamined feature of caregiver samples and offer contextual information about potential intergenerational patterns of NSSI, as well as the diversity of explanations caregivers hold for why adolescents engage in self-injury.

Method

Procedure

Study One comprises a secondary data analysis of three online surveys of Aotearoa New Zealand caregivers of adolescents conducted between 2017 and 2021. Ethics approval for all three surveys was provided by Victoria University of Wellington's Human Ethics Committee (Application #24438). All surveys were hosted on Qualtrics and took approximately 30–40 minutes to complete. Participants provided informed consent via an online tick box and were provided with information about the support resources available to them. Participants were offered a movie voucher as a token of appreciation. Given the exploratory nature of Study One, power analyses were not conducted.

Survey One

Survey One ($n = 107$) was conducted in 2017, recruiting caregivers of adolescents taking part in the Youth Wellbeing Study, a longitudinal study of adolescents' wellbeing (for greater detail, see Robinson et al., 2019). The Youth Wellbeing Study followed a cohort of year nine students from seventeen secondary schools across the Greater Wellington Region for five years throughout their time in high school. Caregivers at participating schools were invited through school newsletters to participate in an online survey investigating youth

wellbeing in Aotearoa New Zealand, including caregiver and whānau lived experience of NSSI.

Survey Two

Survey Two ($n = 45$) was also conducted in 2017, recruiting caregivers of adolescents via a national weekly magazine as part of a regular column focused on psychology and wellbeing. One issue of the magazine contained an invitation to participate in the online survey examining youth wellbeing in Aotearoa New Zealand.

Survey Three

Survey Three ($n = 89$) was conducted in 2021, recruiting caregivers of adolescents taking part in a cross-sectional study of adolescent wellbeing. This cross-sectional study partnered with two secondary schools in the Greater Wellington Region to survey students from Year 9–13 (for greater detail about this study, see Robinson et al., 2021). Parents and caregivers at both participating schools were invited via school newsletters to take part in the online survey.

Participants

Data from all three surveys was combined, resulting a sample of 201 caregivers. Participants ranged from 22 to 74 years old, with the majority of participants identifying as female. Consistent with the broad demographics of the Greater Wellington region (Statistics New Zealand, 2018), the majority of the sample identified as Pākehā/ New Zealand European. In comparison to the New Zealand population (Statistics New Zealand, 2018), participants were generally wealthier (*Median* = \$100,001 to \$150,000 a year) and generally more educated (*Median* = completed Bachelor's degree / Trade Certificate / Advanced Trade Certificate). The household size of our sample was also generally slightly larger than that of the general population when compared to the 2018 census data (Statistics NZ, 2018).

Measures

Caregiver demographic characteristics

Participants reported their age, gender, ethnicity, highest level of education, employment status, income, and household information. Age and gender were assessed with open-text responses. Participant's gender descriptors were coded with reference to the coding structure developed by Fraser et al. (2020). Ethnicity was measured with pre-filled options including 'New Zealand European/Pākehā', 'Other European', 'NZ Māori', 'Cook Island Māori', 'Samoan', 'Other Pacific Island', 'Chinese', 'Indian', 'Other Asian', and included an open-text box titled 'Other (Please state)'. Highest education level was measured with the response options 'Left school before or during 5th form'; 'Completed 5th form, then left school'; 'Left school before or during 7th form'; 'Completed 7th form'; 'One or more years study towards a qualification at a polytechnic or university'; 'Completed a Bachelor's degree/Trade Certificate/Advance Trade Certificate'; and 'Completed a Postgraduate degree'. Annual household income was measured using the response options: 'Up to \$20,000 a year (\$384 a week)'; '\$20,001 to \$40,000 a year (\$385 - \$769 a week)'; '\$40,001 to \$60,000 a year (\$770 - \$1,153 a week)'; '\$60,001 to \$100,000 a year (\$1,154 - \$1,923 a week)'; '\$100,001 to \$150,000 a year (\$1,924 - \$2,885 a week)' and 'More than \$150,001 a year (more than \$2,886 per week)'.

Table 1*Demographic characteristics of Study One participants*

Characteristic	%/ <i>M (SD)</i>
Gender	
Male	16.4%
Female	80.1%
Age	49.7 (6.10)
Ethnicity	
Pākehā / New Zealand European	84.1%
Māori	6.0%
Another ethnicity	19.4%
Number of children	2.19 (0.91)
Household income	
Up to \$20,000	2.0%
\$20,001–\$40,000	3.0%
\$40,001–\$60,000	6.0%
\$60,001–\$100,000	9.9%
\$100,001–\$150,000	15.9%
More than \$150,001	18.9%
Education level	
Left school before/during 5 th form	0.5%
Completed 5 th form	4.0%
Left school before/during 7 th form	7.5%
Completed 7 th form	4.0%
One or more years of tertiary study	13.0%

Household characteristics

Participants reported the number of people who lived in their household, as well as the nature of their relationship, using the response options: ‘biological children’; ‘stepchildren’; ‘foster children’; ‘children’s cousins’; ‘children’s aunt/uncle’; ‘children’s grandparents’; ‘whānau/other relative’; and ‘other’, which also offered a free text box if the pre-proposed answers were not satisfactory. Participants also reported the gender of the children in the household, and the age of their youngest and eldest child. Two questions

drawn from the Family Ritual Questionnaire (Fiese et al., 1993) which assessed family mealtime practices. Participants responded to the items ‘Our family regularly eats the main meal together’ and ‘In our family, mealtime involves eating together at the table’ using a 5-point scale ranging from ‘1 - Not True at All’ to ‘5 - Very True’. Consistent with previous research (Hammons & Fiese, 2011), these items showed a strong positive correlation ($r = .61$), suggesting acceptable internal consistency. Thus, an average score of the two mealtime items was created.

Caregiver nonsuicidal self-injury

All participants were invited to respond to a screening question that assessed their personal experience of lifetime NSSI: ‘Sometimes people have thoughts about hurting themselves on purpose, but do not actually hurt themselves. And sometimes people hurt themselves deliberately (i.e., on purpose) to cause damage to their body but NOT to kill themselves (e.g. cut, burn, scratch or carve their skin, bang or hit themselves, or prevent wounds from healing). Please indicate whether you have had thoughts about hurting yourself on purpose (but not actually done this), whether you have hurt yourself on purpose (e.g. cut, burnt, or scratched, etc.), or whether you never done this’. This question had the three following response options: ‘No, I have never hurt myself on purpose’, ‘I have thought about hurting myself on purpose’, and ‘Yes, I have hurt myself on purpose’. Similar single-item measures have been widely used in large-scale epidemiological and clinical studies with evidence supporting their validity in capturing lifetime lived experience of NSSI (Nock, 2009; Swannell et al., 2014; Whitlock et al., 2006).

Participants who reported either lifetime NSSI history or ideation were invited to complete a modified version of the Deliberate Self-Harm Inventory (DSHI; Gratz, 2001) assessing their lifetime engagement in 13 common NSSI behaviours. This section began with the prompt, ‘Have you ever deliberately (but without wanting to kill yourself) ...’, followed

by descriptions of common NSSI methods: cutting; burning; carving; scratching; biting; using sandpaper; using bleach on the skin; using acid on the skin; sticking sharp objects into the body; rubbing glass on skin; deliberately breaking bones; punching; and preventing healing. Each of the items in the DSHI screening questions used a Likert scale with 5 response options ranging from ‘0 - I’ve never thought about doing this’ to ‘4 - I’ve done this many times’. As in previous research, an average of the DSHI score was created as an index of NSSI severity. Consistent with previous research (Vigfusdottir et al., 2022; Robinson et al., 2021), the DSHI demonstrated adequate internal reliability in the current sample ($\alpha = .78$).

Psychological distress

Participants reported their recent experiences of depression, anxiety and stress symptoms using the 21-item Depression, Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995). Participants respond to items such as ‘I found it hard to wind down’ on a 4-point scale ranging from ‘1- Strongly Disagree’ to ‘4-Strongly Agree’. Scores were calculated by averaging subscale items, such that a higher score indicates greater depression, anxiety, and stress, respectively (Ronk et al., 2013). The DASS-21 has displayed excellent convergent validity and has been established for use among a range of ages and demographics (Osman et al., 2012). Consistent with previous studies (Moya et al., 2022; Thiyagarajan et al., 2022) all three subscales of the DASS-21 demonstrated excellent internal consistency in the current sample (Depression $\alpha = .88$; Anxiety $\alpha = .78$; Stress $\alpha = .82$).

Self-esteem

Participants reported their self-esteem using four items from the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is a self-report instrument that is widely used for evaluating individual self-esteem and is the standard measure of self-esteem in psychological research (Gray-Little et al., 1997; Rosenberg, 1965; Salerno et al., 2017). The

original scale has 10 items, however for this survey four items with the highest factor loading were chosen to minimise participant burden. Two items were positively worded (e.g., “Overall I am satisfied with myself” and “I feel that I have a number of good qualities”) and two were negatively framed (e.g., “I certainly feel useless at times” and “Generally, I tend to feel that I am a failure”). Participants respond to items on a 4-point scale ranging from ‘1- Strongly Disagree’ to ‘4- Strongly Agree’. The negatively framed items were reverse-coded, and the overall mean was computed such that a higher score indicates greater levels of self-esteem. The RSES has displayed excellent convergent validity and has been established for use among a range of ages and demographics (Gnambs et al., 2018; Monteiro et al., 2022; Wang et al., 2014). Consistent with previous studies (Monteiro et al., 2022; Rosenberg, 1965) the RSES demonstrated an acceptable level of internal consistency in this sample ($\alpha = .73$).

Emotion dysregulation

Participants reported their emotion dysregulation using the 18-item Difficulties in Emotion Regulation Scale (DERS-18; Victor & Klonsky, 2016). Participants responded to items such as ‘I have difficulty making sense out of my feelings’ on a 5-point scale ranging from ‘0 - Almost Never (0-10% of the time)’ to ‘5 - Almost Always (91-100% of the time)’. The Difficulties in Emotion Regulation Scale (DERS) has also been used among many different populations including both clinical and community samples and is one of the most widely used measures of emotion dysregulation (Victor & Klonsky, 2016; Wolff et al., 2019). The DERS-18 is a shortened version of the original 36-item scale and has demonstrated comparable psychometric performance while being more suited to an online survey where participants are already asked a multitude of questions (Victor & Klonsky, 2016). Three negatively framed items were reverse-coded, and all items were then averaged to create an index of overall emotion dysregulation. Consistent with prior research demonstrating strong

reliability (Rosharudin et al., 2023; Victor & Klonsky, 2016), the DERS-18 showed excellent internal consistency in the current sample ($\alpha = .88$).

Adolescent nonsuicidal self-injury

Participants responded to the items ‘How likely is it that your adolescent(s) has deliberately hurt themselves (without wanting to kill themselves)?’ and ‘How likely is it that your adolescents’ friends have deliberately hurt themselves (without wanting to kill themselves)?’ on a 5-point scale ranging from ‘1- Highly Unlikely’ to ‘5 - Highly Likely’. The items align with standard definitions of nonsuicidal self-injury that distinguish self-harm from suicidal intent (Nock, 2009) and are similar to single-item questions used in prior research to assess parental perceptions of adolescent self-harm and perceived peer self-injury (Prinstein et al., 2010).

A subset of participants (52.7%, $n = 106$), also reported the functions they believed youth NSSI serves using 13-items modified from the Inventory of Statements About Self-Injury (ISAS; Klonsky & Glenn, 2009). Although the ISAS is conventionally administered as a self-report measure, methodological precedents exist for adaption of self-report measures to capture observer or proxy perspectives in related research contexts (De Los Reyes, 2015). Participants responded to items such as ‘Adolescents self-injure in order to manage their emotions (e.g., calming themselves down)’ on a 3-point scale ranging from ‘0 - Not Relevant to Adolescents’ to ‘2 - Very Relevant to Adolescents’. Items were averaged to give subscale measures of interpersonal and intrapersonal functions. Consistent with previous studies (Klonsky & Glenn, 2009; Rezaei et al., 2021), both subscales demonstrated acceptable levels of internal consistency (Interpersonal functions $\alpha = .77$; Intrapersonal functions $\alpha = .70$).

Data analysis

Statistical analyses were conducted using Jamovi (Version 2.6.44.0). Statistical significance was set at $p < .050$, with $p < .100$ considered a trend. Forty participants were excluded prior to analysis; $n = 1$ who appeared to be an adolescent that had mistakenly taken part², $n = 3$ who reported that they did not care for or parent any young people, and $n = 36$ who completed less than half the survey. Little's MCAR test indicated that the data were missing completely at random ($\chi^2(1278) = 1359.30, p = .056$), with 8.55% missingness. Missing values were imputed using expectation maximisation (100 iterations). Zero-order correlations explored associations between variables. Mixed-measures ANOVA and t -tests compare caregivers' perceptions of the functions of adolescent NSSI by their own NSSI lived experience. A hierarchical linear regression model then examined demographic and psychological characteristics of caregivers as predictors of perceived youth NSSI. Demographic variables were entered at Step 1 of the model, followed by psychological measures entered at Step 2.

Results

Participants household and psychological characteristics

Table 2 presents descriptive statistics of participant's households. Participants typically had families comprising adolescent children, with the youngest child typically aged 11–15 years and the oldest 16 years or older, and most households reported children of different genders. Most participants were caregivers for their biological children, while others cared for stepchildren. Table 3 presents descriptive statistics and zero-order correlations among participants' psychological characteristics. Lived experience of NSSI was

² This participant reported their age as 14 and indicated that they lived in the same household as “Mom and dad and sister and brother”.

Table 2*Descriptive statistics of Study One participants' household characteristics*

Household Characteristic	%/ <i>M (SD)</i>
Gender of youth	
Male only	23.4%
Female only	22.4%
Children with different genders	39.3%
Number of children	2.19 (0.91)
Age of youngest child	
0–5 years	5.0%
6–10 years	24.0%
11–15 years	96.0%
16–18 years	19.0%
19+ years	1.0%
Age of oldest child	
12–15 years	46.0%
16–18 years	48.8%
19+ years	23.9%
Relationship to those in the household	
Biological children	94.0%
Stepchildren	2.5%
Foster children	1.5%
Children's cousins	1.5%
Children's aunt/uncle	0.0%
Children's grandparents	1.5%
Whānau/other relative	2.0%
Other	5.0%
Family Mealtimes (Average)	4.00 (1.00)

Note. Categories are not mutually exclusive where families include multiple children; therefore, totals may exceed foster children, or extended whānau members.

uncommon; 6.9% ($n = 14$) participants reported engaging in NSSI and 15.0% ($n = 30$) had thought of doing so. The most commonly endorsed NSSI behaviours were punching and cutting. Participant's depression, anxiety, stress, emotion dysregulation, and NSSI lived experience showed strong positive correlations with one another and were negatively correlated with self-esteem.

Caregiver perceptions of adolescent nonsuicidal self-injury

Figure 1 shows the distribution of participant's ratings of the likelihood of child and peer NSSI. Participants were more likely to believe that their adolescents' peers were engaging in NSSI compared to their own young person ($t(200) = -7.68, p < .001, d = -0.541$). Ratings of child NSSI likelihood were remarkably right-skewed ($Skew = 1.18$) while ratings of peer NSSI likelihood showed less skew ($Skew = 0.11$). Perceived likelihood of both child and peer NSSI was positively associated with participants' depression, anxiety, stress, and emotion regulation difficulties, and negatively associated with self-esteem. Neither child nor peer NSSI likelihood was associated with participant's own lived experience of NSSI.

Among the subsample of participants who reported the functions of adolescent NSSI, interpersonal functions of NSSI were more strongly endorsed than intrapersonal functions ($t(91) = 7.45, p < .001$). In terms of specific functions, the most endorsed functions of youth NSSI were Self-Punishment (71.3% of participants selecting 'very relevant') and Feeling Generation (67.6% of participants selecting 'very relevant'), while the least endorsed were Autonomy (36.5% of participants selecting 'not relevant') and Toughness (27.1% of participants selecting 'not relevant').

Zero-order correlations suggested that participants' own lived experience of NSSI was not associated with the extent to which they endorsed intrapersonal ($r = 0.01, p = .954$) or interpersonal functions ($r = -0.07, p = .489$) of adolescent NSSI. Given strong positive correlations between intrapersonal and interpersonal ratings ($r = 0.56, p < .001$), we next explored the extent that participants' own NSSI lived experience influenced their perceptions of the functions of adolescent NSSI. We conducted a mixed-measures 2×2 ANOVA with Function (Intrapersonal vs. Interpersonal) entered as a within-subjects factor and NSSI Status (NSSI History vs. No NSSI) entered as a between-subject factor. Findings demonstrated a significant main effect of Function, $F(1, 91) = 55.53, p < .001$, such that interpersonal

functions were more highly endorsed than interpersonal functions, $t(91) = 7.45, p < .001, d = 1.56$. There was no evidence of a main effect of caregiver NSSI status, $F(1, 91) = 0.54, p = .465$, although the interaction between function and caregiver NSSI status showed trend towards significance, $F(1, 91) = 3.14, p = .080$. Follow-up t -tests with Bonferroni correction showed no difference by NSSI status in how participants rated the interpersonal functions of adolescent NSSI ($t(91) = 1.52, p = .792, d = 0.32$). However, participants with lived experience of NSSI rated the intrapersonal functions of adolescent NSSI higher than did participants without lived experience ($t(91) = 12.25, p < .001, d = 2.57$). Taken together, findings suggest that caregivers' own personal experience of NSSI shapes their perceptions of adolescents' intrapersonal (but not interpersonal) motivations for NSSI.

Individual differences in caregivers' perceptions of child self-injury

Finally, we conducted a hierarchical linear regression to explore whether individual differences in caregivers' demographic, household, or psychological characteristics uniquely predicted their reports of the likelihood that their young person engages in NSSI (see Table 4 for inferential statistics). Demographic and household characteristics (age, gender, caregiver economic worry, number of children, family mealtimes) were entered into Step 1 of the model. This initial model did not significantly predict variability in caregivers' likelihood ratings, $F(5, 109) = 1.09, p = .368, R^2 = .05$. The addition of psychological characteristics to Step 2 of the model explained significantly more variance, $\Delta F(10, 193) = 3.98, p < .001, \Delta R^2 = .33$, such that the model was significant, ($F(10, 193) = 3.98, p < .001$) and explained 33.2% of the variance in caregivers' beliefs of child NSSI. Caregivers' belief that their child's peers self-injure was the only significant predictor in the model ($\beta = .44$); all other demographic, household, and psychological predictors were nonsignificant.

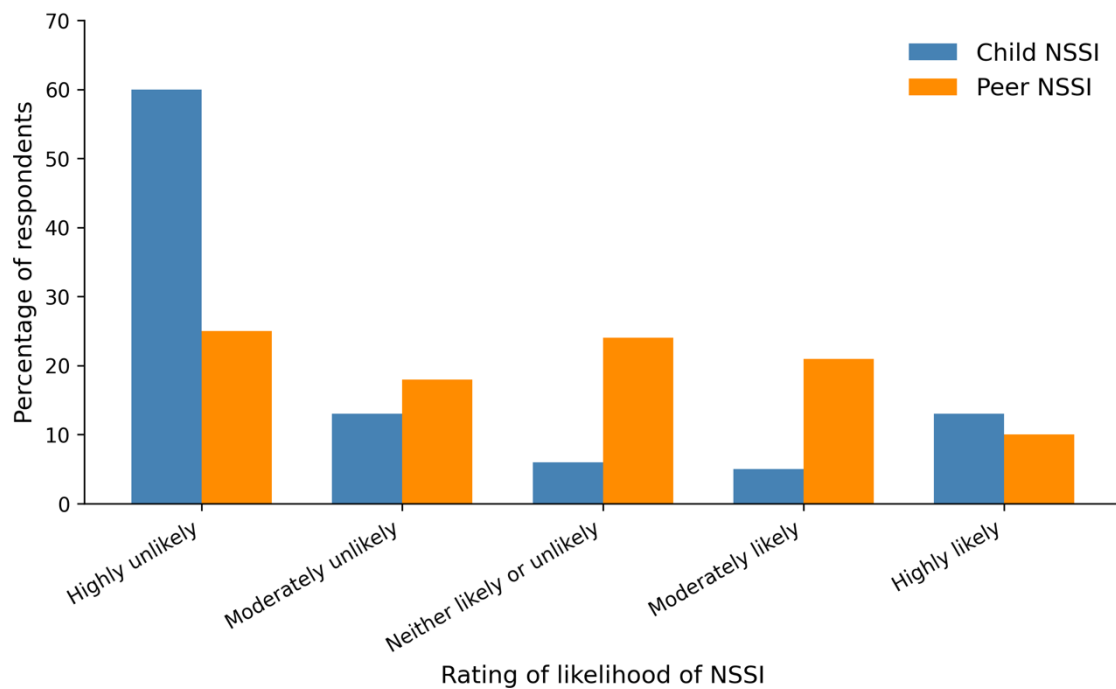
Table 3*Zero order correlations among participant's psychological characteristics and perceptions of youth nonsuicidal self-injury*

Variable	<i>M (SD)/ %</i>	Scale range	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Depression	0.41 (0.47)	0–3	—								
2. Anxiety	0.25 (0.25)	0–3	.65**	—							
3. Stress	0.59 (0.47)	0–3	.65**	.68**	—						
4. Emotion dysregulation	1.78 (0.48)	0–5	.71**	.54**	.58**	—					
5. Self-esteem	2.58 (0.34)	1–4	-.60**	-.44**	-.47**	-.58**	—				
6. Intrapersonal functions	1.06 (0.42)	0–2	.10	.09	.11	-.07	.04	—			
7. Interpersonal functions	1.55 (0.41)	0–3	-.06	.04	-.04	-.03	<.01	.56**	—		
8. Child NSSI likelihood	2.00 (1.46)	1–5	.31**	.22*	.26**	.29**	-.20*	.01	-.07	—	
9. Peer NSSI likelihood	2.72 (1.31)	1–5	.27**	.19*	.25**	.29**	-.21*	.23*	.12	.53**	—
10. Caregiver NSSI ^a	6.9%	—	.34**	.21*	.22*	.21*	-.20*	.15	.07	.09	.13

Note. ^a Spearman's rho. Significant correlations are bolded for clarity, * $p < .050$ and ** $p < .001$. NSSI = Nonsuicidal self-injury.

Figure 1

Participant's ratings of the likelihood of child and peer nonsuicidal self-injury.

**Figure 2**

Participants' perceptions of the functions of adolescent nonsuicidal self-injury, separated by caregivers' own nonsuicidal self-injury status.

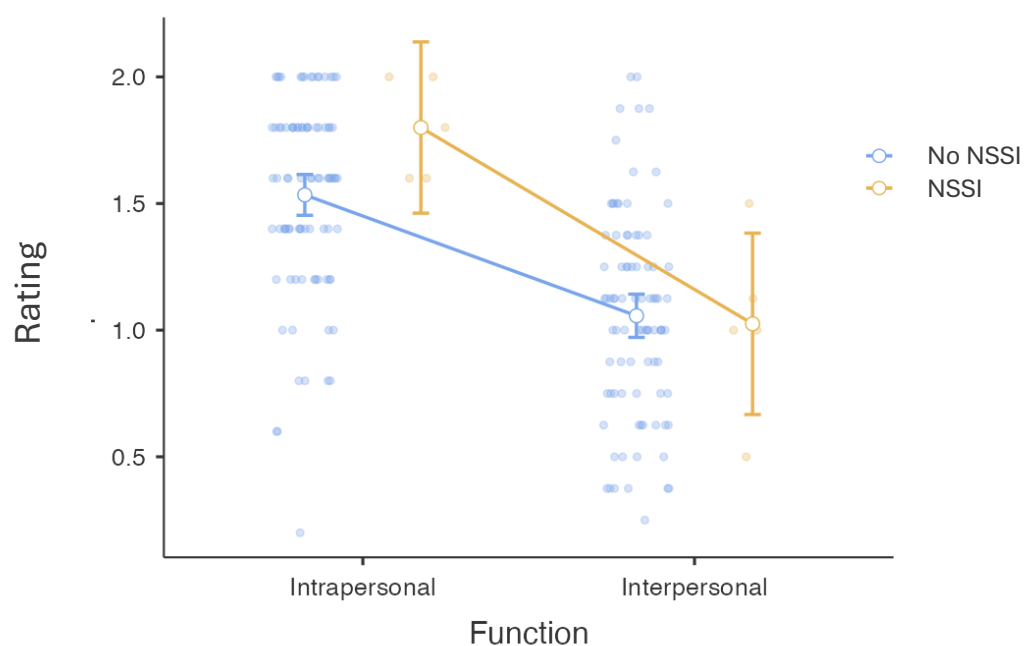


Table 4

Caregivers' demographic, household, and psychological characteristics as predictors of likelihood ratings that their young person self-injures.

Predictor	β	95% CI	<i>p</i>
Demographic and household characteristics			
Age	-0.07	-0.27, 0.12	.467
Gender	0.28	-0.20, 0.76	.262
Number of children	0.02	-0.17, 0.20	.849
Economic worries			
Family mealtime practices	0.14	-0.25, 0.11	.455
Psychological characteristics			
Emotion dysregulation	0.05	-0.19, 0.29	.672
Self-esteem	0.05	-0.17, 0.26	.675
Depression	0.19	-0.12, 0.49	.220
Anxiety	0.13	-0.13, 0.40	.313
Stress	-0.08	-0.35, 0.18	.534
Caregiver NSSI	-0.23	-1.02, 0.57	.574
Peer NSSI	0.44	0.26, 0.62	<.001

Note. Caregiver NSSI coded such that 0 – No NSSI and 1– Lifetime NSSI. Significant predictors are bolded for clarity.

Discussion

Much of the existing literature on adolescent NSSI has focused primarily on young peoples' perspectives, with comparatively little attention given to the perspectives of caregivers and the broader family context. However, caregivers play a central role in recognising adolescent distress, facilitating disclosure, and supporting recovery. By including caregiver perspectives, a more holistic understanding of adolescent NSSI can be formed,

therefore helping bridge the gap between individual-focussed and family-focused research. Study One sought to extend the literature by examining caregiver perspectives on adolescent NSSI within Aotearoa New Zealand. Study One explored caregivers understanding of the functions of adolescent NSSI and their perceptions of the likelihood that their young person self-injures, before testing whether individual differences in caregiver demographic and psychological characteristics were associated with caregiver perceptions of youth NSSI.

Findings provide several insights into how caregivers perceive adolescent NSSI and the individual differences that may shape these perceptions. First, the distribution of caregiver ratings indicated that the perceived likelihood of their own child engaging in NSSI was highly skewed toward the lower end of the scale, with most caregivers indicating that it was very unlikely that their young person self-injured. This pattern is notable given evidence that NSSI is relatively common during adolescence, suggesting that caregivers may underestimate its occurrence within their own families (Arbuthnott & Lewis, 2015; Wang et al., 2025). Previous research has consistently identified discrepancies between adolescent self-reports of NSSI and caregiver awareness, with many caregivers unaware that their child is engaging in the behaviour (Baetens et al., 2015; Jones et al., 2019). Such mismatches in knowledge are critical, as caregivers' beliefs strongly influence whether professional support is pursued and how communication unfolds within the family (Byrne et al., 2008, Fortune et al., 2016). As a result, low perceived NSSI may contribute to delayed recognition of distress or missed opportunities for early intervention. Caregiver knowledge will be explored more in Study Two.

Findings also provided further insight into factors associated with caregiver beliefs about youth NSSI. Caregivers' demographic characteristics were largely unrelated to perceptions of their adolescent NSSI's. This suggests that caregiver interpretations of youth self-injury may not be strongly shaped by demographic characteristics alone. Instead,

caregiver perceptions may be influenced by more complex relational or contextual processes within families. Previous research similarly highlights that family functioning, communication patterns, and emotional climate within the household are often more closely associated with adolescent NSSI (Tatnell et al., 2014; Waals et al., 2018). This finding aligns with broader literature suggesting that adolescent NSSI is embedded within complex interpersonal and environmental systems, rather than being strongly linked to caregiver demographic characteristics alone (Tatnell et al., 2014; Waals et al., 2018).

Zero-order correlations showed that indicators of caregiver psychological distress, including depression, anxiety, and stress, were strongly associated with one another and with greater emotion dysregulation and lower self-esteem. These relationships are consistent with well-established models of adult psychological functioning, which demonstrate that emotional distress often co-occurs with difficulties regulating emotions and diminished self-worth (Gross & Feldman Barrett, 2011; Orth & Robbins, 2014). Notably, when examined within the same model, the majority of caregivers' psychological characteristics were unrelated to their perception of their young person's self-injury. This included whether the caregiver had a personal history of NSSI, which did not uniquely predict beliefs about their child's behaviour. While it might be expected that caregivers with lived experience of self-injury would demonstrate greater sensitivity to recognising the behaviour in others, this pattern was not observed in the present sample. This variable emerging as not statistically significant may reflect the influence of other unmeasured factors, such as stigma or parental mental health, which were not accounted for in this model or study. Qualitative studies with caregivers suggest that many caregivers initially interpret self-injury as typical adolescent behaviour emotional volatility, or attention-seeking before recognising it as a coping strategy for psychological distress (Fu et al., 2020; Kelada et al., 2016; Oldershaw et al., 2008). Such interpretations may limit the extent to which personal experience alone translates into greater

recognition of NSSI, particularly when caregivers lack clear knowledge about the behavioural indicators or underlying motivations associated with self-injury.

In contrast, perceptions of peer behaviours emerged as the only unique predictor of caregivers' beliefs that young person engages in NSSI. This finding underscores the importance of peer context in shaping caregiver interpretation of adolescent risk. Peer relationships become increasingly relevant during adolescence, and exposure to peers who engage in self-injury has been consistently linked to greater likelihood of adolescents reporting similar behaviours (Gifford-Smith et al., 2005; Jarvi et al., 2013). Caregivers may therefore rely on information about their child's social environment when forming judgements about potential risk behaviours, particularly when direct evidence is absent. Awareness or suspicion that peers may be engaging in self-injury may heighten caregiver concern, particularly given the well-established role of peer influence in adolescent NSSI (Jarvi et al., 2013). Peer relationships play an important role in broader adolescent wellbeing, with friendship quality linked to psychosocial adjustment and emotional development (Burk & Laursen, 2005), and higher-quality peer relationships associated with lower rates of depressive symptoms (Adekunle et al., 2022). Together, this literature suggests that caregivers may interpret their child's risk of self-injury partly through the social environments in which their child is embedded.

Finally, caregivers in the present study rated intrapersonal functions of adolescent NSSI more highly than interpersonal functions, which was influenced by their own lived experience of NSSI. This pattern broadly reflects contemporary theoretical models of NSSI, which emphasises the central role of intrapersonal emotion regulation in maintaining self-injurious behaviour (Klonsky, 2011; Taylor et al., 2018). Research with adolescents consistently shows that NSSI most commonly serves functions such as reducing emotional distress, regulating overwhelming emotions, or alleviating psychological pain (Klonsky &

Glenn, 2009; Nock & Prinstein, 2004). Caregivers' greater endorsement of intrapersonal motives may therefore indicate some awareness of the emotional difficulties underlying the behaviour. However, the relatively lower endorsement of interpersonal motives may also suggest that caregivers underestimate the potential communicative or relational functions as a means of expressing distress or influencing interpersonal relationships (Nock & Prinstein, 2004). Together, these findings suggest that while caregivers may recognise the emotional distress associated with NSSI, their understanding of the broader interpersonal context in which the behaviour occurs may remain limited.

Clinical implications

Taken together, our findings underscore that psychological interventions targeting adolescent self-injury should also include caregivers. Understanding caregiver experiences and beliefs about NSSI in general can help inform more responsive, family-centred interventions. In particular, psychoeducation about the functions that NSSI can serve for youth, and how caregiver responses can influence adolescent coping including discovery, disclosure and help-seeking may be helpful. Caregiver psychoeducation is already incorporated into several evidence-based treatments for adolescent self-injury such as Dialectical Behaviour Therapy for Adolescents, which includes family skills training to help caregivers better understand and respond to emotional distress (Kothgassner et al., 2021; Woodberry & Popenoe, 2008). As caregivers are often the first to discover NSSI among youth (Oldershaw et al., 2008), they form an integral part of the help-seeking process for youth, and their response to the discovery or disclosure to NSSI is important for how much support, shame, or guilt their young person feels regarding their NSSI. Caregivers can be integral in providing care to their adolescents and can also help promote engagement with treatment services and providers, therefore creating better outcomes for youth (Aggarwal & Patton, 2018). Educating caregivers about the functions of NSSI in youth can help them

respond more effectively, therefore helping to foster an environment that encourages discovery, disclosure and help-seeking behaviours. Additionally, involving caregiver in the intervention process can enhance the overall effectiveness of the treatment by ensuring consistent support and understanding at home.

Strengths and limitations

Study One has some key strengths. First, it addresses an important gap in the literature by focusing on caregiver perspectives of adolescent NSSI, an area that has received considerably less empirical attention compared to research centred on young people themselves. Examining caregiver beliefs and awareness contributes to a more holistic understanding of NSSI by recognising the important role families play in identifying distress, facilitating disclosure, and supporting recovery. The study also benefited from the inclusion of both male and female caregivers represents a further strength, as much of the existing research on parenting and youth mental health relies disproportionately on mothers (Davison et al., 2016; Mestermann et al., 2023). Including caregivers of different genders therefore allows for a broader representation of family experiences and perspectives.

Study One's findings should also be interpreted in light of three key limitations. First, Study One has a limited sample size of relatively homogeneous caregivers. Participants were largely Pākehā / New Zealand European and who were generally wealthier and more highly educated than the wider Aotearoa population (Statistics New Zealand, 2020). As a result, the findings may not generalise to caregivers from more socioeconomically disadvantaged backgrounds, Māori or Pacific whānau, or families from other ethnic minority groups whose experiences and understandings of youth wellbeing may differ. Additionally, participants were caregivers of young people attending schools in an urban area, meaning the findings may not reflect the experiences of families living in rural or more geographically isolated communities, where access to mental health resources, school-based support, and community

services may differ. Our participants also comprised largely of female caregivers, underrepresenting the perspectives of male caregivers (20.5%, $n = 33$), therefore our gender analyses were likely underpowered. Given that female caregivers are more likely than male caregivers to monitor and communicate with their children about mental health concerns (Navarro et al., 2020; Rueter & Koerner, 2008; Yap et al., 2014), the sample may also reflect broader gendered patterns of parental involvement. This imbalance is also commonly observed in family research, where mothers are substantially more likely to participate in studies relating to their children's health and development (Davison et al., 2016). As a result, the perspectives of male caregivers remain comparatively underrepresented in the literature on youth mental health which is an important consideration for future research.

Second, Study One did not include the children's self-reports of NSSI. This limits the current study, as it only examines caregivers' beliefs of youth NSSI with no adolescent reports to be corresponded to. That is, Study One could not determine how accurate caregivers were in determining whether their child *actually* engaged in NSSI or not. Study Two will address this limitation. Finally, data are cross-sectional. As a result, the findings capture associations between variables at a single point in time and do not allow for conclusions about causal relationships or the direction of effects. While caregiver perceptions of peer NSSI were associated with beliefs about their child's NSSI, it is not possible to determine whether awareness or peer behaviour influences caregiver concern or whether other contextual factors shape both perceptions simultaneously. Longitudinal research is needed to determine how caregiver beliefs, adolescent behaviour, and social context interact over time (Kazdin, 2003; Maxwell & Cole, 2007).

Future research directions

Given the exploratory nature of Study One, future research should aim to confirm the extent to which these findings generalise to broader populations, including different regions

and cultural contexts within Aotearoa New Zealand to better capture the range of family contexts in which adolescent NSSI occurs (Miller & James, 2025). In particular, more inclusive sampling strategies could facilitate greater representation of Māori and Pacific youth, who are often underrepresented in psychological research despite experiencing disproportionate mental health inequities (Ministry of Health, 2022). Future studies should focus specifically on understanding the perspectives of male caregivers, who were underrepresented in the current sample to better understand their potentially unique perspectives, knowledge, and support needs regarding youth NSSI. Quantitative research designs may be particularly useful for unpacking the nuances of how caregiver beliefs about peer behaviour develop and subsequently shape perceptions of risk in their own children. Furthermore, longitudinal investigation into the interpersonal and intrapersonal contextual factors that influence caregiver recognition and interpretation of NSSI could provide critical insights to inform interventions aimed at promoting early identification and timely support for young people.

Conclusion

Study One suggests that caregivers' demographic, household, and psychological characteristics are largely *unrelated* to their perceptions of whether their young person self-injures. Instead, the extent to which caregivers thought their young person's peers engage in NSSI was the only unique predictor of perceptions of youth NSSI. This finding highlights the central role of young people's peers in shaping caregiver perceptions of their young person's self-injury, suggesting a need for increased attention to how social environments influence recognition and response to youth distress. Although caregivers with lived experience of NSSI reported greater intrapersonal functions of adolescent NSSI than did their peers, NSSI lived experience was unrelated to perceptions of youth NSSI, suggesting that they are no

more (or less) knowledgeable about their young person's self-injury. Study Two will examine caregiver's knowledge of NSSI, exploring concordance across youth and caregiver reports.

Chapter Three

Study Two: Caregiver Knowledge of Youth Nonsuicidal Self-Injury

Despite the prevalence of adolescent NSSI and its relationship with subsequent psychopathology, disclosure of NSSI remains low, with many young people concealing the behaviour from caregivers (Muehlenkamp et al., 2012). This creates a critical challenge for early detection and intervention, as timely caregiver recognition of NSSI is often a necessary step for initiating professional help seeking and support (Kelada et al., 2016). Caregiver perception plays a critical role in shaping pathways to the discovery, disclosure, and treatment of adolescent NSSI (Arbuthnott & Lewis, 2015). However, prior research indicates that caregivers frequently underestimate or misinterpret their child's engagement in NSSI, often conceptualizing it as an interpersonal strategy rather than recognizing its common intrapersonal emotion regulation functions (Baetens et al., 2015; Kelada et al., 2016). Likewise, Study One found that caregivers overwhelmingly reported very low likelihood that their own child engaged in NSSI, despite acknowledging that self-injury may occur among adolescents more broadly. A critically important but under examined area of research concerns the extent to which caregivers accurately identify adolescent NSSI.

Evidence suggests that many caregivers remain unaware of their adolescents' NSSI behaviour, with research indicating that caregiver awareness of adolescent NSSI is substantially lower than self-reported rates, suggesting that many cases go unrecognized by caregivers (Glenn et al., 2013; Tschan et al., 2015). These misattributions and perceptual gaps may inadvertently affect the way caregivers respond to disclosure, shaping whether they offer empathy and support, or instead react with confusion, fear, or punitive behaviours, which in turn delay intervention, reinforce stigma, discourage disclosure, and ultimately hindering access to appropriate care (Baetens et al., 2015; Fortune et al., 2016; Oldershaw et al., 2008). Understanding the extent to which caregivers know about their young person's NSSI, and the

factors that influence this knowledge, is essential for informing education, improving early detection, and reducing barriers to treatment.

Looking beyond NSSI, understanding adolescent behaviour often relies on reports from multiple informants, most commonly adolescents themselves and their caregivers. In research involving children or adolescents, incorporating multiple informants is essential, as young respondents may have limited language skills, cognitive maturity, or contextual understanding when interpreting complex questions, while caregiver reports can provide complementary contextual information that strengthens the validity and completeness of the data collected (Aebi et al., 2017; De Los Reyes, 2015).

However, research consistently shows that caregiver and youth mental health reports frequently diverge (De Los Reyes, 2015). Early meta-analyses found that caregiver-adolescent agreement on emotional and behavioural difficulties tends to be modest, with correlations typically falling within the small to moderate range (Achenbach et al., 1987; De Los Reyes et al., 2015). Discrepancies between youth and caregiver reports occur across a wide range of psychological constructs, including internalizing difficulties (e.g., anxiety and depression), externalizing behaviours (e.g., conduct problems and hyperactivity), and broader emotional and behavioural adjustment, highlighting that discrepancy is not uniform but varies systematically by problem domain and participant perspective (Hou et al., 2010; Huang et al., 2017). Discrepancy between youth and caregiver reports is often attributed to differential visibility of behaviours: caregivers are more likely to notice outwardly disruptive actions, whereas internal states may be less visible and therefore more accurately reported by the adolescent, and not the caregiver (De Los Reyes et al., 2015). Accordingly, studies frequently find that adolescents report higher levels of internalizing problems than their parents perceive (Aebi et al., 2017; Wang et al., 2014).

At the same time, caregivers may lack knowledge about the signs, functions, or prevalence of self-injury, which can further limit recognition (Kelada et al., 2016). Some studies do find high levels of similarity between adolescent self-reports and parent reports. In a large nationally representative sample in Australia, Gray et al., (2021), found high concordance between adolescents and parents on the total difficulties score of the Strengths and Difficulties Questionnaire, agreement ranging between 82–94% across domains. Another study using the same measure with adolescents aged 11–18 and their parents, revealed that although adolescents tended to report slightly more difficulties, the overall total difficulty and impact scores did not significantly differ between caregiver and self-reports (Arman et al., 2013). Together these findings indicate that caregivers and adolescents may hold broadly similar perceptions of adolescents overall mental health. However, it remains unclear whether similar patterns of agreement occur in an Aotearoa New Zealand context, highlighting the need for research that examines parent-adolescent concordance in mental health reporting within the unique cultural and social environment of New Zealand.

Despite its significance, research directly comparing caregiver and adolescent reports of youth NSSI remain relatively limited. Methodological and ethical challenges have often restricted the inclusion of both adolescents and caregivers in self-harm research (Fortune et al., 2016). Recruiting matched caregiver-adolescent dyads can be complex, as caregivers may be reluctant to participate in studies addressing such sensitive topics. Furthermore, the need to preserve confidentiality for young people who self-injure presents additional ethical considerations (Hiriscu et al., 2014). Adolescents may be reluctant to participate alongside caregivers when the behaviour is undisclosed (Tschan et al., 2015), and caregivers unaware of NSSI may not view themselves as relevant participants (Baetens et al., 2015). Consequently, much of the existing literature has relied on either caregiver reports or adolescent self-reports in isolation, limiting understanding of how these perspectives align or diverge.

As NSSI is often hidden, the extent to which we can expect caregiver-adolescent agreement is somewhat complex. Research on multi-informant assessment suggests that agreement is typically higher for observable behaviours than for internal experiences such as mood or thoughts (Achenbach et al., 1987; De Los Reyes et al., 2015). From this perspective, some level of convergence may be expected if the behaviour becomes visible through physical wounds or scarring, discovery of implements or bandages, or direct disclosure. However, several characteristics of NSSI may instead contribute to divergence. Young people often engage in self-injury in ways designed to minimize detection, including selecting body locations that are easier to conceal (e.g., upper arms or thighs, the stomach) and engage in the behaviour in private settings when alone (Whitlock et al., 2018). In addition, concerns about stigma, shame or negative reactions from others may discourage adolescents from disclosing the behaviour to caregivers (Muehlenkamp et al., 2012). Taken together, these features suggest that although NSSI is behaviorally defined, its concealed and highly private nature may lead to lower levels of caregiver-adolescent agreement than might otherwise be expected for other observable behaviours.

In line with this prediction, preliminary studies examining discrepancies between adolescent and caregiver reports of youth NSSI have found that adolescents typically report higher rates of NSSI than those recognized by their caregivers (Baetens et al., 2015; Glenn et al., 2015). Discrepancies between caregiver and adolescent reports should not be dismissed as simply measurement error but instead should be considered meaningful information about social context of adolescent NSSI. Factors such as caregiver mental health, adolescent age and gender, and family function have been shown to moderate the degree of agreement between respondents (Wang et al., 2014). For example, caregivers' own psychological distress can shape their reports, leading to under- or over- reporting of adolescent internalizing symptoms (De Los Reyes & Kazdin, 2005). Examining both adolescent and

caregiver perspectives is therefore critical for developing a more comprehensive understanding of NSSI within families, capturing both the lived experiences of young people and caregivers' interpretations and responses.

Study Two extends from Study One to compare how caregivers' reports of adolescent NSSI map on to adolescents' own self-reports, before exploring how both caregiver and adolescent characteristics are associated with greater convergence between reports. Caregivers who took part in Study One were matched to their adolescent participants in a complementary mental health survey and who consented to data linkage. This dyadic design provides a unique opportunity to not only evaluate the extent of convergence between young and caregiver reported NSSI but also the adolescent, caregiver, and family characteristics associated with greater convergence across reports. In the absence of previous research or theory, no a-priori hypotheses were made.

Method

Procedure

Study Two uses caregiver data as described in Study One (see pages 33-38), as well as adolescent data collected as part of the Youth Wellbeing Study. The Youth Wellbeing Study was a longitudinal survey of high school students recruited from seventeen secondary schools across the Greater Wellington Region between 2012 and 2021 (for greater detail, see Robinson et al., 2019). Ethics approval was provided by by Victoria University of Wellington Human Ethics Committee (HEC#27994 and HEC#31199) and New Zealand National Health and Disability Ethics (12/NTB/35). Students took part in 30–40 minutes survey either online (hosted via Qualtrics) or via a paper copy during class time, under the supervision of a research team member. Students under the age of 16 required parental consent to take part in the survey. Adolescents provided informed consent to take part in the survey, as well as informed consent for their data to be linked to their caregiver. Only participants who

consented to have their responses linked across surveys were included in the present analyses. Adolescents were invited to participate through school mailing lists and completed the survey online. As part of the broader longitudinal project, participants received a small token of appreciation for their participation.

Participants

The final matched sample comprised of 91 caregiver-adolescent dyads (total $n = 182$). The adolescent sample included 48.4% young women, 48.4% young men, and 3.3% gender diverse young people ($M = 15.6$, $SD = 1.17$). Most adolescents identified as Pākehā (89.0%), with smaller proportions identifying as Māori (5.5%) or another ethnicity (22.0%). As in Study One, the majority of caregiver sample were female (80.9%), and identified as Pākehā (85.0%; 3.3% identified as Māori).

Measures

All caregiver demographic and psychological measures are identical to those described in Study One (see pages 33-38). Adolescent demographic and psychological measures are described below.

Demographic and household characteristics

Adolescent participants in the study provided information regarding their demographic characteristics, including age, gender, ethnicity, and home environment. Age and gender were assessed using open-text questions allowing participants to report their age in years and identify their gender. Ethnicity was captured using a combination of pre-specified options including 'Pākehā', 'Māori', 'Samoan', 'Tongan', 'Chinese', 'Indian', and also included an open-text box titled 'Other', allowing the participants to enter their ethnicity if it was not included in the pre-proposed options.

Table 5*Demographic characteristics of Study Two adolescent participants*

Characteristic	%/ <i>M (SD)</i>
Gender	
Male	16.4%
Female	80.1%
Age	15.6 (1.17)
Ethnicity	
Pākehā / New Zealand European	89.0%
Māori	5.5%
Another ethnicity	22.0%
Number of homes	
One	87.9%
Two or more	12.1%

Nonsuicidal self-injury

All adolescents were invited to complete a screening question that assessed their lifetime history of NSSI, using the same item as caregivers (see page 35). Participants who reported having engaged in NSSI or thought about doing so were also asked to report on the recency of their NSSI (*‘When was the last time you did something to hurt yourself on purpose?’*) using a 5-point scale ranging from ‘1 (within the last week)’ to ‘6 (over a year ago)’. Participants’ engagement in specific NSSI behaviours were measured using a modified version of the DSHI, as previously described (see pages 35–36). An average of participants’ responses to the 13 items was calculated as an index of NSSI severity. This measure demonstrated good internal consistency in the current sample ($\alpha = .85$), consistent with both Study One and prior research (Wiswanti & Hendrawan, 2025).

Suicidal ideation

Lifetime suicidal ideation was assessed using the initial screening question from the Suicide Behaviours Questionnaire (SBQ; Osman et al., 2001), which asked participants whether they had ever thought about or attempted suicide. Participants responded to this item using a 6-point scale, ranging from ‘1 – Never’ to ‘6 - Attempted and really hoped to die’. Participants who report lifetime suicidal ideation or behaviour (i.e., a score of >1) were also invited to respond to items assessing past year ideation (“In the last year have you made a plan about how you would kill yourself”) and past year attempts (“In the last year have you tried to kill yourself”; response options for both items: ‘Yes’ or ‘No’.)

Psychological distress

Psychological distress was assessed via symptoms of depression and anxiety using the DASS-21, with the stress subscale omitted to reduce participant burden. Both the Depression ($\alpha = .90$) and Anxiety ($\alpha = .86$) subscales demonstrated excellent internal consistency, consistent with previous studies (Chang et al., 2025; Hou et al., 2025).

Self-esteem

Self-esteem was measured using a shortened, 4-item version of the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), which yielded acceptable internal consistency ($\alpha = .65$). Although slightly lower than typical reliability estimates for the full scale (Tatnell et al., 2014; Son et al., 2021), this measure provided a useful index of adolescents’ self-perceptions.

Family connectedness

Family connectedness was assessed using a 6-item measure developed by the broader research team. Participants rated items such as ‘My family and I often have fun together’, ‘My family members and I always get along’, ‘I feel very close to my family’, ‘My family always know where I am’, ‘My family knows a lot about what is going on for me’, and ‘I feel safe with my family’ using a 5-point scale ranging from ‘1-Strongly Disagree’ to ‘5-Strongly

Agree’. All items were averaged to create an overall family connectedness score, which demonstrated adequate internal consistency ($\alpha = .79$) aligning with prior validations of similar measures (Crandal et al., 2020; Foster et al., 2017; Tsoutsis & Dikeos, 2024).

Convergence between youth and caregiver reported self-injury

As reported in Study One, caregivers reported the likelihood that their adolescent has engaged in NSSI on a 5-point response scale ranging from ‘1 – Highly Unlikely’ to ‘5 – Highly Likely’. These responses were created into a binary option for Study Two analyses: ‘Highly Unlikely’ were recoded as 0 (‘No’) and all other response options coded as 1 (‘Other’). We then created a binary measure to capture convergence between caregiver and youth reported NSSI. Parent responses were then matched to adolescents’ self-reported NSSI from the screening item: *‘Sometimes people have thoughts about hurting themselves on purpose, but do not actually hurt themselves. And sometimes people hurt themselves deliberately (i.e., on purpose) to cause damage to their body but NOT to kill themselves (e.g. cut, burn, scratch or carve their skin, bang or hit themselves, or prevent wounds from healing). Please indicate whether you have had thoughts about hurting yourself on purpose (but not actually done this), whether you have hurt yourself on purpose (e.g. cut, burnt, or scratched, etc.), or whether you never done this’*. This question had the three following response options: ‘No, I have never hurt myself on purpose’, ‘I have thought about hurting myself on purpose’, and ‘Yes, I have hurt myself on purpose’. Caregiver-adolescent dyads were coded as convergent when both parent and adolescent responses were aligned (e.g., i.e., both dyads reported no NSSI (coded as 0), or both indicated some degree of NSSI (coded as 1)), and inaccurate when they did not align. This coding resulted in a parent accuracy variable for all matched caregiver-adolescent pairs.

Data Matching

Of the Study One sample, 142 participants gave their consent to link with their child and provided their child(ren)s name, age and school. Fifty-one caregivers who participated in Study One were unable to be matched to their adolescent, including six where their adolescent did not consent to data linkage. Seven caregivers could be linked to more than one adolescent. In this instance, we elected to retain the oldest adolescent. Four adolescents were able to be linked to more than one caregiver. In this instance, we elected to retain the male caregiver (in all four instances, a male and female caregiver had each chosen to participate).

Data Analysis

Statistical analyses were also conducted using Jamovi (Version 2.6.44.0). Before any analyses were conducted the data needed to be cleaned in order for the Study One sample to be matched to create the Study Two sample. We matched Study One caregivers with 91 young people that completed a youth survey, across 12 schools in the Greater Wellington Region. Six adolescents were removed from the sample, as they did not provide their consent to be matched with their caregivers' data. Seven parents had more than one child take part in a youth survey, and we retained the data for the oldest child. For four youth who had more than one parent take part, we elected to match their data to the male caregiver to increase the gender diversity of caregiver participants.

Following these exclusions, the final sample size was $n = 182$ (91 dyads). A total of 6.2% of values were missing. Little's MCAR test indicated that the data were not missing completely at random, ($\chi^2(1278) = 316.84, p = .014$). Missing values were imputed using expectation maximization (EM) with 100 iterations. Zero order correlations were first conducted to examine bivariate associations between youth and caregiver demographic and psychological characteristics, as well as their relationships with adolescents' self-reported NSSI. Hierarchical linear regression analyses were then conducted to examine whether demographic or psychological characteristics of the youth or their caregiver predicted

convergence across reports of NSSI. Caregiver and adolescent demographic variables (age, gender, economic worry, number of children, family mealtime average) were entered at Step 1. Caregiver psychological characteristics (NSSI, DERS-18, RSES, stress, anxiety, depression) were added at Step 2, to determine whether caregivers' emotional and psychological functioning explained additional variance beyond demographic factors. Finally, at step 3, caregivers' perceptions of their own child's likelihood of engaging in NSSI and their perceptions of peers' NSSI likelihood were entered to assess whether caregiver awareness or beliefs about NSSI within their child's social environment predicted adolescents' self-reported behaviour over and above demographic and psychological factors. This hierarchical structure allowed the model to evaluate the relative importance of contextual caregiver perceptions after accounting for more distal demographic and psychological influences.

Results

Preliminary analysis

A spearman's rank-order correlation analysis of caregiver reports was conducted to examine associations among demographic variables (age, gender, number of children), caregiver psychological factors (economic worry, self-esteem, emotion dysregulation, depression, anxiety, stress), and NSSI-related perceptions within a subsample of caregivers matched to their child's self-reported NSSI. Several significant relationships emerged. Youth-reported NSSI was positively associated with caregiver gender ($r = 0.258, p = 0.01$) indicating that adolescents whose mothers participated were more likely to report a history of NSSI compared to those whose fathers participated. A significant negative correlation was observed of caregiver reported family mealtime frequency ($r = -0.422, p = <.001$), suggesting that fewer shared family meals were associated with greater likelihood of their child engaging in NSSI. Additionally, caregiver perceptions of peer NSSI showed a positive trend-level

association with adolescents' self-reported NSSI ($r = 0.197, p = 0.061$) suggesting that caregivers who perceived higher levels of NSSI among peers were more likely to have adolescents who reported engaging in NSSI, aligning with the established role of peer influence in adolescent self-injury, which was something suggested in Study One.

Adolescent nonsuicidal self-injury

NSSI was common within our sample of adolescents; 30.8% reported a lifetime history of NSSI and 10.9% reported having thought about self-injuring. Of adolescent participants who reported lifetime NSSI, the most common behaviours were cutting, scratching, and sticking sharp objects into the skin. Among those with NSSI lived experience, 42.3% of participants reported engaging in NSSI within the past three to six months, and 26.9% of participants answered within the last week to a month, highlighting the variability in recent self-injurious behaviours.

The role of family awareness in caregiver identification of NSSI

The correlation matrix (Table 6) revealed several significant associations between caregiver perceptions and youth-reported indicators of NSSI, although overall correspondence between domains was limited. Caregivers reported a higher perceived likelihood that their child was engaging in NSSI when the young person themselves indicated that their family was aware of their NSSI ($r = .66, p = .001$), representing the strongest association observed. Notably, this was the only significant correlation involving youth-reported variables that reflected caregiver knowledge of NSSI, suggesting that caregiver recognition of NSSI may depend heavily on explicit disclosure or family awareness rather than indirect indicators. No other significant associations were found between caregiver-reported characteristics and youth-reported outcomes, indicating limited alignment between caregiver perceptions and adolescents' self-reported experiences. Consistent with this pattern, few caregiver or demographic variables were significantly associated with caregiver NSSI

accuracy, suggesting that accuracy in identifying youth NSSI was largely unrelated to caregivers' own psychological characteristic. The only exception was an association between caregiver accuracy and caregiver gender ($r = .29, p = .005$), indicating that female caregivers had greater knowledge of their young person's NSSI.

Table 6

Zero order correlations among youth characteristics associated with caregiver-youth accuracy.

Variable	<i>M (SD)</i>	Scale range	1.	2.	3.	4.	5.
1. Child NSSI likelihood	1.79 (1.32)	1–5	—				
2. Peer NSSI likelihood	2.60 (1.28)	1–5	.40**	—			
3. Family know about NSSI ^a	1.85 (0.98)	1–3	.67*	.58*	—		
4. Friend engages in NSSI	0.75 (0.44)	0–1	.25*	.26*	.39	—	
5. NSSI - Youth ^b	0.31 (0.46)	0–1	.32*	.21*	.37	.17	—

Note. ^a Among youth who self-injure. ^b Spearman's rho. * $p < .050$ and ** $p < .001$. NSSI = Nonsuicidal self-injury.

These finding highlights caregiver gender as a potentially important factor in understanding variability in NSSI recognition, suggesting that differences between male and female caregivers may influence the likelihood of accurately identifying adolescent self-injury. Overall, these findings highlight the limited extent to which caregivers can infer NSSI risk from general perceptions or personal characteristics and instead point to the central role of communication and disclosure within the family context.

Caregiver and household characteristics predicting youth NSSI severity

A hierarchical multiple linear regression was conducted to examine whether caregiver and contextual factors *uniquely* predicted the severity of children's self-reported NSSI, as measured by the DSHI. Caregivers' demographic, psychological, and perceptual variables were entered into three steps to assess their incremental contribution to explaining variation in child NSSI severity. As displayed in Table 7, the regression model demonstrated improving fit with the addition of caregiver psychological and perception-based variables. Model 1,

Table 7

Demographic, household, and psychological characteristics as predictors of participants' ratings of the severity of child self-injury.

Predictor	β	95% CI	p
Demographic and household characteristics			
Age	0.16	-0.54, 0.86	.601
Gender	0.53	-0.82, 1.88	.383
Number of children	-0.09	-0.79, 0.59	.750
Economic worries	-0.68	-1.93, 0.62	.256
Family mealtime practices	-0.61	-1.34, 0.12	.090
Psychological characteristics			
Emotion dysregulation	-0.45	-1.53, 0.64	.363
Self-esteem	-0.27	-1.05, 0.50	.430
Depression	0.08	-1.65, 1.82	.914
Anxiety	0.47	-0.57, 1.52	.318
Stress	-0.49	-1.14, 0.16	.121
Caregiver NSSI	-0.92	-5.61, 3.77	.656
Peer NSSI	-0.04	-0.58, 0.49	0.846
Child NSSI	0.15	-0.35, 0.65	0.49

Note. Caregiver NSSI coded such that 0 – No NSSI and 1– Lifetime NSSI. NSSI = nonsuicidal self-injury

which included demographic and contextual factors (caregiver age, gender, economic worry, number of children, and family mealtime frequency), significantly predicted children's NSSI severity, $F(5,15) = 4.36$, $p = .012$, accounting for 59.2% of the variance ($R^2 = .592$).

Adding caregiver psychological variables (self-esteem, emotion dysregulation, depression, anxiety, and stress) in Model 2 increased the explained variance to 82.8% ($R^2 = .828$), and the overall model remained significant, $F(11, 9) = 3.94$, $p = .024$. However, this change in variance was not statistically significant, $\Delta R^2 = .24$, $F(6, 9) = 2.06$, $p = .159$. In model 2, caregiver perceptions of NSSI (perceived likelihood of their own child and their child's peers engaging in NSSI) were added. This final model accounted for 84% of the variance ($R^2 = .840$), but the incremental increase was non-significant, $\Delta R^2 = .01$, $F(2, 7) = 0.26$, $p = .777$. The full model trended towards, but did not reach, statistical significance overall, $F(13, 7) = 2.83$, $p = .087$.

Within Model 3, no individual predictors reached conventional levels of significance, however, one trend emerged meaningful. Family mealtime frequency was negatively associated with children's NSSI severity, $\beta = -0.26$, $t(7) = -1.96$, $p = .090$, indicating that fewer shared family meals tend to relate to greater severity of self-injury behaviours. Caregivers' *perceived* likelihood of their own adolescents' ($\beta = 0.04$, $p = .495$) or their adolescents' peers ($b = -0.02$, $p = .846$) engaging in NSSI did not significantly predict NSSI severity, suggesting that parents' perceptions of NSSI were not aligned with their children's self-reported NSSI severity. Together, these results indicate that while caregiver and contextual factors collectively explained a substantial proportion of variance in child NSSI severity ($R^2 = .84$), individual predictors largely failed to predict adolescent self-reported NSSI severity.

Discussion

The present study aimed to extend existing research on adolescent NSSI by examining the extent to which caregiver characteristics, perceptions, and family context are associated with adolescents self-reported engagement in NSSI within a matched caregiver-adolescent sample, and how this may influence concordance between the matched dyad responses.

Building on Study One, with focused on caregiver beliefs and perceptions in isolation, Study Two sought to directly compare caregiver reports with adolescent self-reports, enabling an examination of concordance, predictors of caregiver knowledge, and the relational and contextual factors associated with youth NSSI. In doing so, the study addressed a key gap in the literature by incorporating dyadic data, allowing for a more ecologically valid understanding of how NSSI is recognised and interpreted within family systems.

Taken together, these findings suggest that adolescents self-reported NSSI was most strongly associated with markers of family relational context – particularly of lower family connectedness – and with caregivers' accurate recognition of NSSI risk. In contrast, caregiver psychological characteristics showed minimal association with adolescent NSSI, and few variables meaningfully predicted caregiver knowledge. These findings highlight the central role of relational and contextual factors, rather than individual caregiver characteristics, in understanding both adolescent self-injury and its recognition within families.

The present study identified several key patterns in the correlational analyses, beginning with the association between adolescent self-reported NSSI and family connectedness. Specifically, a significant negative association was observed between youth NSSI and family mealtime frequency, indicating that adolescents who reported fewer shared family meals were more likely to report engaging in NSSI. This finding suggests that reduced opportunities for routine family interaction, communication, and emotional connection may be associated with increased vulnerability to NSSI behaviours. Regular shared activities such as family meals may function as a protective context, providing opportunities for monitoring, support, and relational closeness, whereas their absence may reflect or contribute to family disconnection. This interpretation is consistent with a substantial body of literature demonstrating that family cohesion, communication, and shared routines are protective factors against a range of adolescent risk behaviours, including NSSI (Fulkerson et al., 2006;

Goodrum et al., 2020). Conversely, reduced family interaction may reflect or contribute to relational disconnection, which has been consistently linked to increased risk of NSSI (Tatnell et al., 2014). The present findings therefore reinforce the importance of considering everyday relational context, rather than solely individual-level risk factors, in understanding adolescent self-injury. This pattern may also suggest that families with lower levels of engagement or cohesion could be slightly less likely to participate in matched designs, potentially due to reduced communication, engagement with research, or logistical barriers. However, given the lack of statistically significant findings overall, these interpretations should be made cautiously.

A second key finding was the positive association between adolescents' self-reported NSSI and caregivers' perceptions of their child's likelihood of engaging in NSSI. This pattern indicates some degree of concordance between caregiver awareness and adolescent behaviour, suggesting that caregivers may have partial insight into their child's self-injury. However, this awareness is likely indirect rather than based on explicit disclosure, potentially reflecting caregivers' sensitivity to behavioural or emotional cues such as distress or withdrawal. This finding is notable given prior literature indicating that caregivers often underestimate or remain unaware of adolescent NSSI (Baetens et al., 2015; Glenn et al., 2013). Importantly this association did not remain significant in the multivariate regression model, suggesting that caregiver awareness is not an independent predictor of adolescent NSSI but is instead shaped by multiple interacting factors. This aligns with broader research demonstrating that adolescent NSSI is frequently concealed, with many young people choosing not to disclose their behaviour to caregivers (Whitlock et al., 2006). As such, caregiver awareness may depend less on individual caregiver characteristics, and more on family processes such as communication quality, trust, and opportunities for disclosure.

The analyses also revealed a trend-level association between caregivers' perceptions of peer NSSI and adolescents' self-reported NSSI. Although this relationship did not reach conventional levels of statistical significance, it suggests that caregivers who perceive higher levels of NSSI within their child's peer group may be more likely to have adolescents who report engaging in the behaviour themselves. This finding may reflect caregivers' responsiveness to broader social cues or awareness of their child's social environment. Alternatively, it may indicate processes of peer influence, whereby adolescents who engage in NSSI are more likely to affiliate with peers who exhibit similar behaviours, consistent with mechanisms of social selection and socialisation, leaning into the intrapersonal functions of NSSI. This interpretation is supported by existing literature highlighting the role of peer dynamics in the development and maintenance of adolescent NSSI (Jarvi et al., 2013). While the cross-sectional nature of the data precludes conclusions regarding directionality, findings highlight the importance of considering peer context in both research and intervention efforts targeting NSSI.

In contrast to these associations, a particularly important finding was the lack of significant relationships between caregiver psychological characteristics and both adolescent NSSI and caregiver accuracy. Neither correlational nor regression analyses indicated that caregiver mental health variables meaningfully contributed to the prediction of adolescent NSSI or the accuracy of caregiver perceptions. Furthermore, the inclusion of caregiver psychological variables in the regression model did not substantially improve model fit, reinforcing their limited explanatory value within this sample. This suggests a relative independence between caregiver internal functioning and both youth behaviour and caregiver awareness. While this contrasts with some prior research suggesting that parental mental health may influence youth outcomes and parental insight (Hou et al., 2010; Yap et al., 2014), the present findings point toward more indirect pathways. It is possible that caregiver

psychological functioning exerts influence through family processes such as parenting style, communication, or emotional availability, rather than directly predicting adolescent NSSI. More broadly, this pattern aligns with literature in child and adolescent mental health indicating that discrepancies between caregiver and youth reports are often not strongly explained by demographic or individual psychological factors but instead reflect complex family and perceptual dynamics (Baumgartner et al., 2020; De Los Reyes, 2015). Alternatively, the relatively small sample size may have limited the detection of more subtle effects, however the consistency of null findings across analyses suggests that caregiver characteristics alone may not adequately account for variation in adolescent NSSI.

Finally, the regression analysis comparing caregivers who were successfully matched to their adolescent data with those who were not successfully matched to their adolescents' data with those who were not indicated that no caregiver demographic, psychological, or perceptual variables significantly predicted adolescent self-reported NSSI. This finding suggests that the matched and unmatched groups did not differ systematically on the variables assessed, providing important evidence against substantial selection bias within the dyadic sample. As such, confidence in the validity and generalisability of the matched analyses is strengthened.

An additional noteworthy finding was the association between caregiver gender and adolescent NSSI, where adolescents whose mothers participated were more likely to report a history of NSSI, and caregiver gender emerged as the only variable significantly associated with concordance. This suggests that caregiver gender may play a role in the recognition of adolescent NSSI. One possible interpretation is that mothers, who are often more involved in day-to-day caregiving and emotional communication, may have greater access to information about their child's internal experiences, therefore increasing the likelihood of detecting NSSI (Yap et al., 2014). This interpretation is consistent with research indicating that mothers are more likely to engage in emotional discussion, monitor wellbeing, and participate in mental

health-related communication (Navarro et al., 2020; Yap et al., 2014). Alternatively, gender differences may reflect variations in reporting styles or willingness to acknowledge the possibility of self-injury. Regardless of the underlying mechanism, findings highlight caregiver gender as an important factor warranting further investigation, particularly considering the relative underrepresentation of male caregivers in the literature.

Clinical implications

The present findings have several important clinical implications. First, the association between family connectedness and adolescent NSSI highlights the potential value of intervention that strengthens family relationships and communication. Encouraging regular, meaningful interactions, such as shared meals, conversations, or joint activities, may provide opportunities for early identification of distress and foster a supportive environment for closure. Second, the findings underscore the importance of caregiver awareness in the detection and management of NSSI. Even partial awareness appears to be associated with adolescent behaviour, suggesting that improving caregiver knowledge and recognition of NSSI may facilitate earlier intervention. Psychoeducational approaches that enhance caregivers understanding of the signs, functions, and risk factors of NSSI may therefore be beneficial (Waals et al., 2018). Such approaches are consistent with family-based interventions, including Dialectical Behaviour Therapy for Adolescents, which emphasise caregiver involvement and skill development (Miller et al., 2007). Third, the lack of association between caregiver psychological characteristics and youth NSSI suggests that interventions should not focus solely on caregiver pathology, but rather on relational processes and communication patterns. Supporting caregivers to respond in validating, non-judgemental ways may be particularly important in reducing stigma and encouraging disclosure, as adolescents are more likely to seek help and disclose self-injury when they perceive adult responses as supportive and emotionally validating, whereas invalidating or

dismissive reactions can increase shame and reduce future help-seeking (Baetens et al., 2015; Muehlenkamp et al., 2012; Whitlock et al., 2018).

Strengths and limitations

The present study has severable notable strengths that contribute to its value within the NSSI literature. A key strength is the use of matched caregiver-adolescent dyadic data, which remains relatively rare in research on self-injury. Much of the existing literature relies on either adolescent self-report or caregiver reports in isolation, limiting the ability to directly assess concordance or discrepancy between perspectives (Baetens et al., 2015; Glenn et al., 2015). By linking caregiver responses from Study One with adolescents' self-reported NSSI, the current study provides a more ecologically valid and nuanced understanding of how self-injury is recognised and interpreted within family systems. This design allows for direct examination of caregiver accuracy, rather than relying on indirect proxies such as adolescents' perceptions of whether their caregivers are aware.

A further strength lies in the study's focus on both individual and relational factors, including caregiver psychological characteristics, perceptions of peer behaviour, and indicators of family connectedness such as mealtime frequency. This aligns with contemporary models of adolescent psychopathology that emphasise the interplay between individual, familial, and social-contextual influences (Masten & Cicchetti, 2010; Steinberg, 2014). Additionally, the study's exploratory approach allowed for the identification of patterns that may not have been captured within more narrowly hypothesis driven designs, contributing to the development of future research questions in this underexplored area.

Despite these strengths, several limitations should be considered when interpreting the findings. First, the sample size was relatively modest ($n = 91$), which may have limited statistical power, particularly in the regression analyses. Small sample sizes increase the likelihood of Type II errors and can result in less stable parameter estimates, making it more

difficult to detect subtle but potentially meaningful effects (DeVellis & Thorpe, 2021). This limitation is particularly relevant given that some variables showed significant associations at the bivariate level but did not emerge as unique predictors in the multivariate models.

Secondly, the study relied on cross-sectional data, which limits the ability to draw causal inferences or determine the directionality of associations. For instance, while reduced family connectedness was associated with higher likelihood of adolescent NSSI, it is unclear whether lower connectedness contributes to self-injury risk, or whether adolescent distress and withdrawal reduces opportunities for family interaction. Longitudinal research is needed to disentangle these relationships and better understand how caregiver awareness and adolescent behaviour evolve over time (Maxwell & Cole, 2007). In addition, although the study included both male and female caregivers, female caregivers were overrepresented, which may have influenced the observed association between caregiver gender and concordance. Given that mothers are more likely to participate in research and engage in discussions about mental health (Yap et al., 2014), the perspectives of male caregivers may be underrepresented. This limits the ability to fully understand gender differences in caregiver awareness and highlights the need for future research to more actively recruit and include fathers and other caregivers.

Finally, another key limitation is that the present study could not distinguish how caregivers' awareness of adolescent NSSI was obtained. That is, it remains unclear whether concordance between caregiver perceptions and adolescent self-reports reflects direct disclosure from the adolescent, caregiver independent detection, or knowledge acquired through third-party sources such as peers, schools, or health professionals. This distinction is important, as prior research suggests that pathways to discovery vary and are associated with different family dynamics and outcomes, with disclosure often linked to more supportive communications, whereas accidental discovery may be associated with heightened conflict or

distress (Baetens et al., 2015). The inability to differentiate these pathways limits the interpretation of caregiver ‘accuracy’, as concordance may reflect different underlying processes of awareness rather than consistent recognition of NSSI. Future research should aim to directly assess how caregivers become aware of adolescent self-injury to better understand the mechanisms underlying caregiver-adolescent agreement.

Future research directions

The present findings highlight several important avenues for future research. First, there is a clear need for larger and more diverse samples to improve the generalisability and robustness of the findings. The current study relied on a relatively modest sample of matched caregiver-adolescent dyads, which, while methodologically valuable, may have limited statistical power and the detection of more subtle effects. Future research should aim to recruit more socioeconomically, culturally, and geographically diverse families, particularly including greater representation of Māori and Pacific whānau, as well as male caregivers. Expanding the diversity of samples would allow for a more nuanced understanding of how cultural values, family structures, and community contexts shape both adolescent NSSI and caregiver awareness (Kingi et al., 2017; Miller & James, 2025).

Future research is also needed to explore the alignment and discrepancies between youth and caregiver reports which is important for both theoretical and practical reasons. Theoretically, this work contributes to models of family functioning and communication in the context of adolescent psychopathology, highlighting how perceptions, awareness, and emotional concordance within the caregiver-child relationship influence outcomes (Steinberg, 2014; Yap et al., 2014). Practically, identifying factors that enhance caregiver accuracy, such as caregiver emotional regulation, open family communication, or lived experience with NSSI, can inform psychoeducation and intervention efforts aimed at early detection. Accurate caregiver awareness is a critical step towards bridging the gap between youth distress and

professional support, as caregivers often serve as the primary gatekeepers to mental health services (Micheltore & Hindley, 2012). Therefore, research that integrates matched caregiver and adolescent perspectives provides not only richer empirical insight but also a foundation for designing family-informed interventions that promote understanding, reduce stigma, and improve outcomes for adolescents engaging in NSSI.

Finally, future research should aim to disentangle the pathways through which caregivers become aware of adolescent NSSI, as understanding whether concordance arises from direct disclosure, independent detection, or third-party information could clarify how family communication and relational dynamics influence early recognition and intervention (Baetens et al., 2015). Longitudinal designs would be particularly valuable in tracking changes in caregiver awareness over time and examining how different pathways to discovery relate to adolescent help-seeking, treatment engagement, and emotional outcomes. Additionally, integrating qualitative approaches could offer rich, contextualised understanding of the processes by which caregivers learn about and interpret adolescent self-injury.

Conclusion

In summary, the present study provides important insights into the relational and perceptual dynamics underlying adolescent NSSI within family systems. By incorporating matched caregiver-adolescent data, this research moves beyond single-informant approaches and offers a more comprehensive understanding of how self-injury is experienced by adolescents and recognised by caregivers. The findings highlight that adolescent NSSI is most closely linked to family relational context, particularly indicators of connectedness, as well as to caregiver awareness, rather than to caregivers own psychological characteristics.

Importantly, the results suggest the while caregivers may not always fully recognise their child's engagement in NSSI, there is evidence of partial awareness, particularly in

relation to perceived risk. This underscores the complexity of caregiver-adolescent concordance, reflecting both the concealed nature of NSSI and the interpretative processes through which caregivers make sense of their child's behaviour. The identification of caregiver gender as a key factor in NSSI accuracy further highlights the importance of considering differences in parental roles, communication styles, and engagement in adolescent emotional life. Overall, this research contributes to a growing body of literature that recognises caregivers as central figures in adolescent mental health. By demonstrating the value of matched caregiver-adolescent data, it provides a foundation for future research aimed at improving understanding, enhancing caregiver awareness, and ultimately supporting better outcomes for young people engaging in NSSI.

Chapter Four: General Discussion

NSSI is a significant mental concern for youth, with onset of the behaviour peaking during adolescence and often signaling widespread emotional distress (Muehlenkamp et al., 2012; Swannell et al., 2014). Existing research has largely focused on establishing the psychological risk factors for the onset and maintenance of NSSI, with comparatively less attention has been given to the relational contexts in which these behaviours emerge (Adrian et al., 2011; Nock, 2009). Previous studies have highlighted that caregivers are often the first responders to adolescent distress (Hunter et al., 2015), yet limited research has examined caregiver perceptions directly. This thesis sought to address this gap by examining NSSI through a family system lens, integrating adolescent self-reports with caregiver perspectives to better understand how family beliefs, parental mental health, and patterns of emotional communication shape both the development of NSSI and the responses it receives. Study One examined caregiver perception of adolescent NSSI alongside their own lived experiences, recognizing that caregivers are active interpreters whose beliefs, wellbeing, and emotional responses shape how NSSI is understood and managed. This study aimed to identify how lived experience of NSSI, and perceptions interact to shape how caregivers perceived the functions and likelihood of adolescent NSSI. Study Two extended this work using matched adolescent-caregiver dyadic data to examine concordance between caregiver perceptions and adolescent self-reported NSSI, exploring whether factors such as family connectedness and communication may influence the alignment or discrepancy between respondents.

By integrating adolescent and caregiver perspectives, this thesis demonstrates how discrepancies in understanding may contribute to delayed help-seeking and prolonged distress, while also showing that NSSI is embedded within complex family environments that can either amplify or buffer risk. Situated within the context of Aotearoa New Zealand, the findings highlight evidence of familial clustering of NSSI, supporting prior work that shared

vulnerability, caregiver beliefs, and environmental stressors interact to shape adolescent coping behaviours (Tatnell et al., 2014), and offer both theoretical extensions to existing models and practical implications for family-centered prevention and early intervention.

Study One provided preliminary insights into the factors associated with caregiver reports of their adolescents' NSSI. In this study, caregivers completed an online survey assessing demographic characteristics, psychological functioning (e.g., emotional distress, emotion regulation, and self-worth), and their perceptions of the adolescents' engagement in NSSI. Interpretations from Study One indicated that several characteristics were associated with reports of adolescent NSSI. Higher levels of caregiver depression, anxiety, stress, and emotion dysregulation were all positively associated with greater perceived likelihood of youth NSSI, while self-esteem was negatively associated. Caregivers' perceptions of peer NSSI were also moderately associated with their reports of their own child's NSSI. However, when these variables were considered together, only caregivers' beliefs about peer NSSI remained uniquely associated with their reports, suggesting that perceptions of the peer environment may play a particularly influential role in shaping caregivers' awareness and understanding of youth self-injury, beyond broader psychological or demographic factors. This finding aligns with broader developmental literature emphasizing the importance of peer contexts during adolescence and may reflect either increased parental vigilance when peer risk is perceived, or the clustering of similar behaviours within social networks.

In contrast, other psychological variables—including caregiver history of NSSI—did not uniquely predict caregiver reporting once peer-related beliefs were considered, highlighting the complexity of pathways through which parents recognize youth distress. These findings indicate that while multiple demographic and psychological factors may be relevant, perceptions of peer behaviour appear particularly salient in caregivers' recognition of NSSI risk, however Study One does not indicate accuracy of caregiver beliefs about their

young person's NSSI. Given this limitation, in Study Two we matched caregiver-adolescent data, of those who consented, to directly examine the extent to which caregivers and adolescent NSSI reports aligned, and to identify factors associated with both youth self-injury and caregiver awareness. The dyadic matched design revealed important discrepancies between adolescent self-reports and caregiver awareness of NSSI. While some caregivers accurately identified their child's struggles, a substantial proportion underestimated or were unaware of the presence of NSSI — 63.7% of caregivers deemed it '*Highly Unlikely*' their child was engaging in NSSI. Overall, findings suggest that caregiver accuracy was limited and not strongly predicted by demographic or psychological characteristics, with caregiver gender emerging as the only variable associated with differences in concordance. Instead, the results point to the importance of relational and contextual factors, particularly family connectedness and caregiver awareness of risk, in understanding adolescent NSSI.

Study Two findings contribute to a growing body of literature highlighting both the importance and the complexity of caregiver awareness in youth NSSI (Wang et al., 2025; Xue, 2026). Consistent with prior research demonstrating frequent divergence between adolescent and caregiver reports of self-injury (Jones et al., 2019; Wang et al., 2014), the results from Study Two showed a strong cross-informant association between youth-reported family awareness of NSSI and caregiver-perceived likelihood of adolescent NSSI. Specifically, when adolescents indicated that their family knew about their NSSI, caregivers concurrently rated the likelihood of their adolescent engaging in NSSI as higher. This pattern suggests that caregiver awareness may not be incidental but instead reflects meaningful recognition or risk, or simply that their adolescent has disclosed their NSSI. At the same time, the broader correlation matrix indicated that caregiver psychological distress (depression anxiety, stress, emotion regulation difficulties, and economic worry) was largely unrelated to

caregiver accuracy in identifying NSSI, despite these variables being strongly intercorrelated in theoretically coherent ways.

These findings suggest that while caregivers' own mental health characteristics cluster in expected patterns, they do not seem to be related to detection of youth NSSI. Instead, awareness and perceived likelihood appear more closely tied to youth-reported exposure and behaviour. Given longstanding evidence that parent-adolescent perspectives on internalizing and self-injury behaviours often diverge, and that relatively few studies have directly compared matched caregiver-adolescent reports of NSSI (De Los Reyes, 2015; Fox, 2015), this thesis used matched dyadic data that provided insights which have not been visible using adolescent-only or caregiver only reports.

Together, these findings emphasize that families play a critical role in the prevention and early identification of NSSI (Fu et al., 2020; Glenn et al., 2015). Enhancing caregiver understanding of NSSI functions, improving emotional communication within families, and supporting caregiver mental health may reduce risk pathways by fostering environment in which adolescents feel seen, heard, and supported (Goodrum et al., 2020). This aligns with broader evidence that family engagement and parenting practices, such as emotional awareness, consistent support, and open communication, are protective factors against a range of adolescent mental health difficulties, including self-injury (Fox et al., 2018). Adolescent NSSI and caregiver responses to self-injury do not occur in isolation but are embedded within broader social and cultural contexts that shape understandings of mental health, emotional expression, and help-seeking. Family norms, beliefs about coping, and attitudes toward mental health difficulties may influence how caregivers interpret and respond to adolescent distress (Gross & Feldman Barrett, 2011; Hammond et al., 2025).

A central finding across this thesis is that adolescent NSSI appears to emerge from the interplay between emotional vulnerability and the availability of responsive, supporting

caregiving contexts (Ratliff et al., 2023). In Study One, associations between caregiver mental health, family emotional climate, and adolescent NSSI, including the finding that poorer caregiver mental health was associated with greater perceived likelihood of adolescent NSSI, highlight the importance of the relational environment in shaping NSSI behaviour. This pattern suggests that when caregivers experience psychological distress, adolescents may have fewer opportunities for co-regulation, emotion coaching, and support, increasing reliance on maladaptive strategies such as NSSI to manage overwhelming emotion. However, corresponding analyses in Study Two showed weaker or non-significant associations between caregiver psychological functioning and adolescents' self-reported NSSI, suggesting that these factors may be more strongly related to caregivers' perceptions than to adolescents' actual behaviours. This discrepancy indicates that caregiver distress may influence how risk is interpreted or perceived, rather than directly reflecting adolescent engagement in NSSI, underscoring the importance of incorporating youth self-reports when examining these relationships. This interpretation is consistent with attachment-based and cognitive-emotion models, which conceptualize NSSI as a negatively reinforced behaviour that provides rapid relief from distress, while being embedded within interpersonal contexts (Hasking et al., 2017; Nock, 2009). It also aligns with research demonstrating that insecure attachment and poor parental emotion socialization contribute to adolescent emotion dysregulation and self-injury (Allen et al., 2018; Adrian et al., 2011).

A second key finding concerns that role of caregiver beliefs and interpretations of NSSI risk. In Study One, caregivers tended to attribute NSSI primarily to peer influences, potentially underestimate the role of family emotional processes. This suggests that caregiver cognitions may shape how adolescent distress is recognized, interpreted, and responded to within the family system. When caregivers externalize the causes of NSSI, opportunities for early identification and supportive intervention within the home may be reduced, as attention

is directed away from relational dynamics that may be susceptible to change. This interpretation is consistent with research indicating that caregiver perceptions influence both recognition of risk and responsiveness to distress (Reich & Vandell, 2010; Townsend et al., 2023). It also aligns with the Benefits and Barriers model of NSSI (Hooley and Franklin, 2018) which posits that engagement in self-injury reflects a balance between intrapersonal benefits and interpersonal costs. Within this framework, caregiver responses play a critical role, as anticipated misunderstanding, stigma, or minimization may increase the interpersonal costs of disclosure while leaving the intrapersonal regulatory benefits of NSSI unchallenged (Oldershaw et al., 2008; Rowe et al., 2014).

A third key finding relates to discrepancies between adolescent self-reports of NSSI and caregiver awareness, as observed in Study Two. These mismatches suggest that many adolescents do not disclose self-injury to caregivers, potentially due to expectations of limited understanding, negative reactions, or insufficient support (Baumgartner et al., 2020). In this context, NSSI may function not only as a strategy for regulating internal distress but also as an indirect expression of unmet emotional needs. This interpretation is consistent with interpersonal theories of NSSI, which emphasize the communicative and social signaling functions of self-injury, particularly in environments where direct expression of distress feels unsafe or ineffective (Nock & Prinstein, 2004). More broadly, this finding reinforces the importance of considering the relational context in which distress is experienced and managed, rather than conceptualizing NSSI solely as an intrapersonal phenomenon.

Findings highlight caregiver awareness as a critical and previously underexamined process within the caregiver-adolescent dyad. Variation in the extent to which caregiver perceptions align with adolescent experiences may help explain differences in NSSI persistence, escalation, and recovery. Caregivers are often among the first to notice behavioural changes and play a central role in recognizing risk, initiating help-seeking, and

facilitating engagement with treatment (Hunter et al., 2015). However, consistent with prior literature, the present findings suggest that NSSI is frequently concealed, and caregivers may underestimate or remain unaware of their child's self-injury (De Los Reyes & Kazdin, 2005). Caregivers' beliefs about NSSI further shape both recognition and response, influencing whether adolescents feel safe to disclose and whether professional help is sought (Oldershaw et al., 2008). As such, caregiver awareness functions as a key mechanism linking adolescent distress to pathways of care.

Importantly, caregiver accuracy in recognizing adolescent NSSI appears to reflect broader processes of emotional attunement, communication, and relational safety within the family. When caregivers are able to identify their child's engagement in NSSI, this may indicate higher levels of emotional responsiveness, openness, and sensitivity to subtle cues of distress. Such concordance is likely to be protective, as it reflects a relational environment in which adolescents feel seen and supported (Arbuthnott & Lewis, 2015; Brausch et al., 2025; Lobo et al., 2024). However, this finding must be interpreted with caution. Caregiver awareness does not necessarily reflect independent detection of risk, rather it may result from adolescent disclosure. In this sense, accuracy may be as much an indicator of adolescents' willingness to share sensitive information as it is of caregiver perceptiveness. This distinction is important, as both processes are shaped by relational dynamics within the family.

Taken together, these findings indicate that adolescent NSSI cannot be fully understood through intrapersonal models alone but instead reflects a dynamic interaction between individual emotion regulation processes, caregiver beliefs and responses, and the broader relational context. This integrated perspective highlights that caregiver emotional availability, interpretive frameworks, and responsiveness play a central role in shaping adolescents' coping strategies, perceived barriers to disclosure, and the relational meaning of self-injury. This is consistent with attachment theory, which conceptualizes caregivers as a

secure base for managing distress, and suggests that disruptions in relational security may undermine both emotion regulation and help-seeking (Shaver et al., 2016; Townsend et al., 2023).

Clinical implications

Findings suggest that clinical responses to youth NSSI should prioritize relational safety, caregiver involvement, and adolescents' perceptions of being understood (Witt et al., 2021). Many adolescents who self-injure anticipate negative reactions from caregivers or doubt that their distress will be recognized, which can increase secrecy and reduce help-seeking (Oldershaw et al., 2008; Rowe et al., 2014). The observed discrepancies in caregiver awareness described in this thesis highlight the need for clinical assessment practices that explicitly explore adolescents' beliefs about disclosure, perceived caregiver responses, and barriers to seeking support, rather than assuming family awareness. Interventions that include psychoeducation for caregivers about the functions of NSSI, alongside therapeutic work with adolescents to build communication skills and emotion regulation strategies, may help to reduce secrecy and improve psychological safety within families (Diamond et al., 2019). Importantly, when adolescents perceive caregivers to be emotionally available and non-judgmental, they are more likely to disclose distress and engage with treatment, improving clinical outcomes and reducing reliance on self-injury as a coping strategy (Choe et al., 2023; Hammond et al., 2025; Nock & Prinstein, 2004). These findings highlight that effective intervention should address adolescent's relational context, fostering not only individual coping skills but also safe and responsive family communication.

Findings also highlight the need for clinical approaches that support caregivers themselves. Many caregivers' report uncertainty about how to recognize NSSI, how to respond without escalating distress, and how to balance supervision with trust, suggesting the structured psychoeducation and skills training should be integrated into treatment pathways

(Ferrey et al., 2016; Whitlock et al., 2006). Given the associations observed between parental mental health and adolescent NSSI, services should also routinely screen and provide support for caregiver wellbeing, recognizing that caregiver stress, depression, or anxiety can affect both family communication and the consistency of support provided to the young person (Tatnell et al., 2014; Tschan et al., 2015). Routine screening could include questions about caregiver awareness, emotional communication patterns, and caregiver mental health.

Family-based interventions that focus on emotion coaching, collaborative problem-solving, and reducing patterns of invalidation or avoidance have been shown to improve adolescent emotional outcomes and strengthen family functioning (Diamond et al., 2019). At a systems level, these findings support the development of services that include caregiver consultation sessions, addressing feelings of shame and guilt that caregivers may carry about their young person's NSSI, culturally responsive whānau engagement (Muriwai et al., 2015; Wilson et al., 2021), and coordinated school-family communication (Whitlock et al., 2018), recognizing that empowering caregivers with knowledge, coping strategies, and support networks may enhance early detection, reduce family distress, and improve long-term outcomes for both adolescents and their families (Kandsperger et al., 2023; Li et al., 2023; Zhou et al., 2025).

Beyond the immediate family, the findings also point to important clinical implications for schools and the broader network of adults involved in a young person's life. Given that adolescents often spend substantial time in school settings, teachers, school counsellors, and broader pastoral care staff may be especially well placed to notice behavioural changes or emotional distress and to facilitate early referral pathways (Kelada et al., 2017; Kellerman et al., 2022). While many caregivers underestimate or remain unaware of their young person's NSSI, it may be that external adults who become aware of self-injury (e.g., school staff) might assume parents do not know and therefore feel compelled to inform them directly. On the surface, this seems logical given caregivers' central role in initiating

help-seeking (Michelmore & Hindley, 2012), however research suggests that this approach can have unintended negative consequences if not handled carefully (Whitlock et al., 2018). Qualitative work on school responses to NSSI highlights that guidelines for when and how to disclose such concerns to parents are often lacking, and that both school staff and families express the need for clearer protocols and support around communication (Kelada et al., 2017; Whitlock et al., 2018). Importantly, decisions about disclosure should consider the young person's confidentiality, readiness, and the quality of the caregiver-child relationship, as abrupt or unmediated disclosure can potentially erode trust, increase shame, or discourage future help-seeking (Vallance et al., 2016). Rather than automatically assuming parents are unaware and must be told, best practice emphasizes collaborative, developmental, and context-sensitive communication strategies that involve the young person in decisions about how and when information is shared, and that equip caregivers with support and understanding rather than simply relaying risk status.

Given the discrepancies in caregiver awareness identified in Study Two, schools can play a critical bridging role by communicating concerns sensitively with caregivers and helping families access appropriate resources (Cole & Kokai, 2021). Taken together, these findings support a coordinated, multi-pronged approach in which schools, health services, and community support services work alongside families to create consistent pathways for early detection, referral, and sustained care for young people who engage in NSSI.

Strengths and limitations

A central strength of this thesis lies in its positioning of adolescent NSSI within a family-systems framework rather than treating self-injury solely as an individual-level phenomenon. By examining caregiver mental health, family emotional processes, and caregiver beliefs alongside adolescent outcomes, the study was able to identify contextual correlates that are often overlooked in NSSI research, which has historically prioritized

intrapersonal mechanisms such as emotion dysregulation (Nock, 2009). This broader approach allows for a more ecologically valid understanding of NSSI as embedded within relational environments, highlighting the role of family dynamics in both the development and maintenance of self-injurious behaviour.

A further key strength of the thesis is its multi-informant design. Mono-informant bias refers to the limitation that arises when data are collected from a single source, such as adolescents alone, which can inflate associations due to shared method variance and reflective subjective perceptions rather than objective or shared experiences (De Los Reyes et al., 2015). By incorporating both caregiver-reported and adolescent-reported data across the thesis, this research reduces reliance on a single perspective and strengthens confidence that observed associations reflect broader family processes rather than individual reporting biases.

In particular, the inclusion of matched adolescent-caregiver dyadic data represents a significant methodological contribution. Such designs remain relatively rare in NSSI research due to recruitment challenges, confidentiality constraints, and the sensitive and often undisclosed nature of self-injury (Tschan et al., 2015). The use of dyadic data enabled direct within-family comparisons, providing a more nuanced understanding of how NSSI is perceived, interpreted, and recognized within real-world family contexts. This approach captures discrepancies between adolescent experiences and caregiver awareness that would be obscured in single-informant designs, therefore offering a more comprehensive and clinically relevant account of NSSI within the family system.

In light of these strengths, there are several limitations that should be considered when interpreting the findings of this thesis. First, the cross-sectional design limits conclusions about potential causal pathways between family processes and NSSI. While zero-order correlations identified several associations between family processes, caregiver perceptions, and adolescent NSSI, only certain factors, most notably caregiver gender, emerged as

uniquely associated with NSSI concordance when accounting for other demographic and psychological variables in the analyses. However given the cross-sectional design, it remains unclear whether these factors precede, follow, or reciprocally influence self-injury over time. Longitudinal work is needed to clarify development pathways and test cascade processes directly (Masten & Cicchetti, 2010). Second, self-report measures may be influenced by recall bias, social desirability, or under-reporting, particularly in sensitive domains such as self-injury and caregiver mental health (De Los Reyes & Kazdin, 2005). Participants may consciously or unconsciously minimize behaviours or experiences that are perceived as socially undesirable or stigmatized, leading to potential underestimation of symptom severity or frequency. Additionally, adolescents and caregivers may differ in their interpretation of survey items, and differences in literacy, emotional awareness, or willingness to disclose distress could further affect the accuracy of responses (Eddy et al., 2011). These factors highlight the importance of supplementing self-report data with multi-informant assessments or objective measures where possible to provide a more comprehensive understanding of the phenomena under investigation.

Third, the small sample size and specific demographic profile of participants may limit the generalizability of these findings to other populations (Bornstein et al., 2013). In this thesis the majority (Study One: 81.1%, Study Two: 89.0%) of participants were Pākehā, with comparatively high rates of employment, higher education attainment, and mid-to-high household incomes, which may not reflect the broader ethnic and socioeconomic diversity of Aotearoa New Zealand (Statistics New Zealand, 2023). As such, family dynamics and stress responses observed here might differ in groups with different cultural backgrounds, financial pressures, or experiences of systemic disadvantage (e.g., Māori, Pacific, and lower-income families), and these contextual factors were not fully captured in the current research.

Future research directions

Future research should address these limitations and build on findings using longitudinal dyadic designs to examine how caregiver awareness and family dynamics influence NSSI trajectories over time. The present cross-sectional approach provides only a snapshot of beliefs and experiences, limiting conclusions about causality, directionality, or how perceptions evolve alongside young people's recovery or escalation of behaviours. Longitudinal studies following caregivers and young people across developmental periods would allow researchers to examine whether early caregiver recognition of NSSI predicts earlier youth help-seeking, whether changes in caregiver beliefs relate to treatment engagement, and how family responses influence trajectories of NSSI and wellbeing. Such work would be particularly valuable in the context of Aotearoa New Zealand, where services are increasingly emphasizing early intervention and family-centered care (Fleming et al., 2024; Miller & James, 2025). The use of longitudinal designs would help to better understand how caregiver perceptions of NSSI develop and change over time.

Future research should additionally prioritize the integration of a culturally grounded lens, particularly within the context of Aotearoa New Zealand. In the Aotearoa context, Māori worldviews, values, and whānau structures are central to understanding youth wellbeing (Kingi et al., 2017). The present study did not explicitly examine caregiver perceptions through a Te Ao Māori framework, which limits the cultural relevance and applicability of findings for rangatahi Māori and their whānau. Future work should therefore adopt Kaupapa Māori or co-designed research approaches that center Māori knowledge systems, concepts of Hauora, and collective understandings of distress and healing (Johnson et al., 2024; Wilson et al., 2021), and should also adopt of Te Ao Māori lens to the understanding of NSSI, as this understanding may differ in a specific cultural context (Kingi et al., 2017). Exploring how caregivers interpret NSSI within frameworks such as whakapapa, manaakitanga, and whanaungatanga could reveal culturally specific meanings of self-injury, pathways to

disclosure, and preferred support mechanisms (Kingi et al., 2017; Miller & James, 2025).

This would not only improve cultural validity but also support the development of interventions that are responsive to Māori realities and strengths-based family practices.

Additionally, future research should broaden definitions of ‘caregiver’ to reflect diversity of family structures common in Aotearoa New Zealand, including intergenerational living households where grandparents, aunties, or older siblings are primary caregivers (Cribb, 2009). In our sample 94.5% of participants were parents to their biological children. The definition of a caregiver in NSSI research often defaults to a parent (Townsend et al., 2021), however this overlooks the diversity of caregiving arrangements, particularly in intergenerational living contexts. Caregivers from different generations may hold distinct beliefs about mental health, emotional expression, and help-seeking, shaped by their own historical, cultural, and socioeconomic experiences (Staniland et al., 2021; Warmingham et al., 2020). For example, a grandparent who grew up during periods of significant stigma around mental illness may interpret NSSI differently from a parent raised during a period of greater mental health literacy. Investigating these generational differences could illuminate how caregiver identity influences recognition of NSSI, responses to disclosure, and engagement with services and help inform the development of targeted caregiver education and support programs that are inclusive of non-parental primary caregivers. Recognizing these nuances in research would provide a more accurate and holistic understanding of family systems and caregiving influences on youth NSSI, ultimately guiding interventions that are sensitive to the structure, experience, and needs of diverse caregiving arrangements.

Conclusion

The present thesis provides a preliminary examination of adolescent NSSI within family systems, emphasizing the critical role of caregiver awareness, perceptions, and

responses in shaping both the development and management of self-injurious behaviours. Across Study One and Study Two, the findings consistently highlighted that adolescents' engagement in NSSI cannot be fully understood in isolation from their wider family, environmental and emotional contexts. Study One demonstrated that caregivers carry many perceptions about what functions NSSI serves for youth and the likelihood their child is engaging in NSSI, yet neither their demographic characteristics, nor their personal lived experience of NSSI influenced those perceptions, the only significant association was whether the caregivers believed their children's peers were engaging in NSSI.

Study Two complemented this approach by employing a dyadic design to examine caregiver awareness and accuracy, revealing that many caregivers underestimate or remain unaware of their young person's NSSI. This misalignment, of demographic and psychological variables and their relation to adolescent NSSI and caregivers' knowledge of that, has meaningful consequences: adolescents experiencing low caregiver attunement were less likely to disclose, increasing reliance on covert self-regulation strategies, while caregivers faced the challenge of responding effectively in the absence of accurate information (De Los Reyes & Kazdin, 2005). The discrepancies highlighted in Study Two were not simply measurement artefacts but appeared to reflect broader relational dynamics, including communication barriers, stigma surrounding self-injury, and caregiver uncertainty about how to recognize or respond to distress (Curtis et al., 2018).

Collectively, this thesis underscores the reciprocal and relational nature of NSSI, aligning with interpersonal theories that conceptualize self-injury as both a mechanism of emotional regulation and a social signal of unmet relational needs (Nock & Prinstein, 2004). These findings extend cognitive-emotion models of NSSI, illustrating that emotional relief gained through self-injury may be influenced not only by intrapersonal mechanisms but also

by the responsiveness and availability of caregivers, with family processes either amplifying or attenuating reinforcement pathways (Hasking et al., 2017; Nock, 2009).

These findings have significant clinical and policy implications, emphasizing the need for interventions that engage caregivers, schools, and broader support networks. From the adolescent perspective, ensuring that caregivers are informed, emotionally available, and non-judgmental enhances the likelihood of disclosure and timely engagement with treatment, reducing the reliance on NSSI as a coping mechanism (Nock & Prinstein, 2004; Oldershaw et al., 2018). From the caregiver perspective, structured psychoeducation, skills-based training, and mental health support can improve caregiver confidence, promote constructive responses, and mitigate stress or guilt associated with discovering or managing self-injury (Ferrey et al., 2016; Tatnell et al., 2014). Extending beyond the family, schools and other adults in the young person's network serve a complementary role in early detection, bridging communication between adolescents and caregivers, and facilitating access to services, highlighting the importance of coordinated, multi-agency approaches, however external organizations must approach such sensitive topics carefully and ensure confidentiality and readiness needs of the adolescent are being met (Whitlock et al., 2018; Zhou et al., 2025).

Despite these contributions, the thesis also identifies key avenues for future research. Longitudinal dyadic studies are required to capture the temporal dynamics of caregiver awareness, adolescent disclosure, and NSSI trajectories, providing insight into critical periods for intervention. Integrating culturally grounded approaches is essential, particularly within a Te Ao Māori framework, to understand how rangatahi and whānau interpret, respond to, and manage self-injury in ways that reflect collective values, intergenerational knowledge, and culturally specific caregiving practices (Kingi et al., 2017; Wilson et al., 2021). In addition to exploring culturally grounded approaches, expanding the definition of caregiver to include grandparents or other non-parental figures in future research would acknowledge the

diversity of whānau structures and highlights how generational perspectives influence recognition, interpretation, and response to mental health challenges.

Overall, this thesis demonstrates that addressing adolescent NSSI requires a multi-layered approach that recognizes the interplay of individual, relational, and contextual factors. By integrating theoretical frameworks, including cognitive-emotion models (Hasking et al., 2017), the Benefits and Barriers model (Hooley & Franklin, 2018), family cascade theory (Waals et al., 2018) and interpersonal models of self-injury, with empirical evidence from adolescents and caregivers, the research provides a nuanced understanding of the mechanisms through which NSSI emerges and is maintained. Crucially, the findings affirm that families, schools, and wider support networks are not peripheral to adolescent wellbeing but are central to early identification, prevention, and recovery. This work advances both theory and practice, offering empirically grounded insights that are directly translatable to interventions designed to support young people who self-injure, their caregivers, and the systems in which they are embedded, ultimately contributing to improved outcomes, relational understanding, and culturally responsive mental health care.

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