The Functions of Nonsuicidal Self-Injury

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Introduction

There is a long history of research and clinical work attempting to understand why some people engage in nonsuicidal self-injury (NSSI). A significant observation that emerges from this work is that NSSI is a *functional* behavior rather than a symptom of mental disorder (Klonsky, 2011; Nock, 2009; Nock & Cha, 2009). That is, self-injury appears to occur with the purpose (whether held consciously or unconsciously) of achieving some goal or end state; it serves a function for the person. This is of course not to say that NSSI always feels like a choice. For example, some people experience their NSSI as akin to an addiction over which they have limited control (Buser & Buser, 2013; although see Victor et al., 2012). However, even in these cases NSSI appears to meet some need(s) in the individual's life. An understanding of NSSI as inherently functional has had a major influence on our understanding of what potentially causes people to engage in NSSI, and in guiding clinical practice and the interventions developed to help those who self-injure.

In this chapter, we aim to provide an overview of the extant research concerning the functions of NSSI and to highlight the major implications of this work for future research, clinical practice, and prevention. In this chapter, *function* is used to refer to either the self-reported reasons for engaging in NSSI behaviors or the expected or actual consequences of the behaviors. We begin by summarizing research concerning the prevalence and structure of different functions of NSSI. We then consider the conceptual insights that are offered by the research into NSSI functions. Finally, we outline implications for future research and clinical practice (including prevention and intervention) based on what we know so far about the functions of these behaviors.

Variety of NSSI Functions

A large body of research has focused on asking individuals who self-injure about the reasons for or functions of this behavior (see reviews by Edmondson et al., 2016; Klonsky, 2007; Suyemoto, 1998). This research has highlighted a wide variety of different functions. Many of these functions are considered intrapersonal (sometimes called autonomic), focusing on changing or affecting a person's internal states in some way. These include self-injury as a form of affect regulation, helping the person to cope with or reduce emotional distress. NSSI is experienced by some as an emotional "release" of pent-up feelings (Stänicke et al., 2018). Some individuals describe NSSI as a means of escaping specific aversive states of awareness, such as a feeling of emotional numbness or periods of dissociation (e.g., allowing the person to feel "something"; Klonsky & Glenn, 2009; Rallis et al., 2020). Relatedly, NSSI may also be a means of generating a positive or desired state, such as producing a rush or period of brief euphoria. Self-punishment (i.e., engaging in NSSI as a way to punish oneself for perceived wrongdoings or personal flaws) is often presented as a distinct function to affect regulation but may still relate to the regulation of internal experiences, perhaps as a means of quelling feelings of shame, guilt, or self-criticism (Hooley & Franklin, 2017; Sheehy et al., 2019). Although NSSI is an established risk factor for subsequent suicidal behavior (Hamza et al., 2012; Ribeiro et al., 2016), some people self-injure explicitly as a way to cope with and resist suicidal feelings (Kraus et al., 2020). It is speculated that NSSI may provide a way of responding to suicidal urges and feelings, without engaging in suicidal behavior, but through various mechanisms, including an increasing acquired capability to harm oneself, the risk of suicidal behavior also grows over time (Hamza et al., 2012; see Victor et al., this volume).

In addition to intrapersonal functions, many reported functions of NSSI are interpersonal in nature, involving other people (Edmondson et al., 2016; Klonsky, 2007; Stänicke et al., 2018; Suyemoto, 1998). These include NSSI providing a means to express or

communicate the level of distress one is experiencing, or as a way of seeking help from others. NSSI may also become a form of peer bonding or affiliation (Klonsky & Glenn, 2009; Stänicke et al., 2018). It has been suggested that NSSI may have other communicatory functions, such as to indicate toughness or to keep others (e.g., bullies or abusers) away (Nock, 2008). Such functions may relate to certain settings such as prisons, in particular (Dixon-Gordon et al., 2012; Gambetta, 2009; see Winicov, this volume). This may reflect the limited avenues available to people in prison to impact their surroundings. The use of self-injury to affirm boundaries between self and other, or as a result of anger toward others being redirected toward the self, have also been reported (Yakeley & Burbridge-James, 2018). Finally, it has been noted that NSSI may act as a means of hurting others. For example, in Huey et al. (2015), in their qualitative study of homeless women who self-injure, one participant described the use of self-injury as a way to hurt her mother who had been physically abusive to her.

The functions described here, while capturing those most common in the research, do not cover every possible reason. It should also be noted that NSSI may serve multiple co-occurring functions for a particular individual (Cipriano et al., 2017), and that different acts of self-injury may have had a different function for the same person. For instance, in a study of adults sampled using random-digit dialing, two thirds of those engaging in NSSI reported two or more functions for their NSSI behaviors (Klonsky, 2011).

Neuropsychology of NSSI Functions

Neuropsychological investigations into why people may self-injure have indicated differences in brain regions associated with emotion and reward processing (Pambianchi & Whitlock, 2019; Poon et al., 2019). Such evidence is consistent with the use of NSSI as a way to regulate emotions (although some researchers have questioned the idea that self-injury arises primarily from problems with emotion regulation; Hooley & Franklin, 2017). There is

also evidence of differential neural responses to social rejection and when asked to reflect on how others perceive them, among people who self-injure (Pambianchi & Whitlock, 2019). Such findings are consistent with the idea that self-injury may serve to regulate responses to experiences of social exclusion or negative self-image. A putative biological mechanism through which self-injury may regulate affect (reduction of negative affect and possible increase in positive affect) is the release of endogenous opioids. However, the evidence supporting this hypothesis is limited (Bresin & Gordon, 2013; Kirtley et al., 2015).

Structure of NSSI Functions

Various studies have investigated the underlying structure of NSSI functions, using factor-analytic methods. A consistent finding is that intrapersonal and interpersonal functions do not appear to load onto the same factors in these studies but instead typically load onto distinct factors. Studies have largely focused on data from two self-report measures, the Inventory of Statements about Self-Injury (ISAS; Klonsky & Glenn, 2009), or the Functional Assessment of Self-Mutilation (FASM; Lloyd et al., 1997), and findings differ depending on the scale used. Studies using the ISAS have supported a two-factor structure with separate intra and interpersonal factors (Klonsky & Glenn, 2009; Klonsky et al., 2015; Kortge et al., 2013). Studies using the FASM have led to much less consistent results. Early studies supported a four-factor structure, where intra and interpersonal functions could also be distinguished in terms of whether they reflected positive reinforcement (i.e., NSSI in order to create a desired, rewarding state) or negative reinforcement (i.e., NSSI to escape from a negative state; Lloyd-Richardson et al., 2007; Nock & Prinstein, 2004). However, subsequent studies have failed to replicate this structure and have identified two-factor, three-factor, or alternate four-factor solutions as the preferred models (Dahlström et al., 2015; Kaess et al., 2013; Leong et al., 2014; Zetterqvist et al., 2013). A robust study in a large sample of Swedish adolescents, using both exploratory and confirmatory approaches and replicating models across independent

samples, suggested an alternate four-factor solution, with three interpersonal factors (social influence, peer identification, avoiding demands) and a single intrapersonal factor (Dahlström et al., 2015). Other studies have similarly supported the idea of a distinct peer identification and social influence factors (Kaess et al., 2013). The reason for the varied results with the FASM is unclear, but differences in population and analytic approach are likely important here.

Prevalence of NSSI Functions

It is clear that a wide range of different potential NSSI functions exist. This heterogeneity represents a challenge to trying to understand NSSI within a particular model or theory, or to intervene with a specific therapeutic approach. However, research highlights that certain functions are more prevalent than others. Though studies have varied in the reported prevalence of the different reported functions of NSSI, a common theme is that those functions related to affect regulation appear most commonly cited. For example, in a large sample of Swedish adolescents (n = 836 providing relevant data) the most commonly endorsed functions were "to stop bad feelings" (47%), "to relieve feeling numb or empty" (46%) and "to punish yourself" (41%). These same three functions were the most endorsed in a sample of adolescents at a psychiatric inpatient unit (endorsed by 52%, 30%, and 31% of participants, respectively; Nock & Prinstein, 2004). Data from an Australian household survey similarly found that among those reporting NSSI (n = 133) the most common function was to manage emotions (41–58%; Martin et al., 2010).

Attempts to generate pooled estimates for the prevalence of different functions are complex, since the measures and labels used to describe functions vary across studies, and different functions are not mutually exclusive. In Taylor et al. (2018), an attempt was made to overcome these challenges by applying a prespecified framework to categorize data into different types of function using broader (e.g., interpersonal) and more specific categories

(e.g., communication of distress). Where a study reported data on different functions that related to the same category (e.g., a study reports prevalence data for several different functions that all describe a form of affect regulation), the most prevalent was used. These decision rules allowed pooled estimates to be generated. Across the 50 studies included in the meta-analysis, intrapersonal functions were most commonly reported, in particular those related to affect regulation (71%, 95% CI: 63–78), or more specifically the escape from a negative or unwanted state (70%, 95% CI: 62–78). Inducing a positive state (50%, 95% CI: 42–57) and self-punishment (51%, 95% CI: 41–62) were less common but still endorsed by around half of participants. Interpersonal functions, including communication of distress (42%, 95% CI: 30–55) and interpersonal influence (i.e., attempts to affect the behavior of others; 28%, 95% CI: 23–33), were less common, although still not rare. A limitation of this meta-analysis is that the method used to organize the data means that the prevalence estimates provided for broader function categories, such as "interpersonal" or "intrapersonal," are likely underestimates, whereas estimates for more specific functions (e.g., "affect regulation" and "communication of distress") are likely to be better.

Within the meta-analysis by Taylor et al. (2018), it was found that factors such as the choice of assessment tool and the population studied affected the prevalence estimates obtained. Prevalence estimates tended to be lower in university student samples (compared with nonstudent samples). Prevalence estimates also tended to be higher when the ISAS was used, and lower when the FASM was used, though this was potentially attributable to the response options used for these measures (the FASM has a "rarely" option, which for the purposes of the meta-analysis was counted as nonendorsement of that function). When results were restricted to a specific measurement tool (either the ISAS or FASM), the relative ordering of different functions in terms of their prevalence still remained largely consistent,

with emotion regulation as the most prevalent, and functions related to influencing or punishing others being among the least endorsed of those investigated.

There is some evidence that the functions underlying NSSI may change over time. Muehlenkamp et al. (2013), using the Nonsuicidal Self-Injury Assessment Tool (NSSI-AT; Whitlock et al., 2014), found that interpersonal functions were more commonly reported as a motivation for the first incident of NSSI but became less prevalently endorsed for subsequent NSSI (28% vs. 20%). Gardner et al. (2021) further found that among adolescents who self-injured, 8% reported only interpersonal functions, but for adults who self-injured, interpersonal functions always occurred alongside intrapersonal functions (36% of adults endorsed intra- and interpersonal functions, while the remainder only reported intrapersonal functions). Thus, interpersonal functions may sometimes relate to self-harm initiation but only reinforce repeated NSSI in the presence of intrapersonal functions. Similarly, it has been argued that affect-regulation based functions for NSSI may become more important in maintaining this behavior over time (Halpin & Duffy, 2020; Hooley & Franklin, 2017).

Despite evidence that the prevalence of different functions may vary depending on population, method of assessment, and even within-individuals over time, the predominance of affect regulation-related functions remains a consistent finding. This observation is mirrored in the emergence of theoretical models (Chapman et al., 2006; Hasking et al., 2017) and treatment approaches (e.g., Emotion Regulation Group Therapy; Turner et al., 2014) that emphasize difficulties in this area. It has been argued, however, that methodological issues may have contributed to predominance of affect regulation functions. Edmondson et al. (2016) highlight how the assessment tools used, may restrict participants to a number of prespecified functions and consequently introduce bias. They also note that even where participants are providing more open-ended accounts of the reasons for their self-injury, the interpretation and categorization of these data may again introduce bias, favoring certain

models and understandings of NSSI. Edmondson et al. (2016) suggest there may be underexplored functions of NSSI, including the use of self-injury as a way to seek gratification, or as a way to protect the self from others (e.g., creating a barrier to unwanted attention by making oneself appear unattractive), or as a way of defining or validating the self. These other functions have received less attention within theoretical models and clinical approaches to NSSI (though psychodynamic approaches do highlight the use of self-injury as a process of self-definition; Yakeley & Burbridge-James, 2018) but nonetheless play an important part in the experience of NSSI for some individuals.

NSSI is a highly stigmatized behavior, and the idea that NSSI is "attention-seeking" is a recognized pejorative stereotype. Research suggests that NSSI does have an important interpersonal dimension for many people, though this is rarely just about eliciting attention from others, and typically reflects some deeper interpersonal need (e.g., to have one's distress recognized, to be supported, and to maintain a sense of self). This stigma may impact on individuals' willingness to disclose interpersonal reasons for NSSI, however, and could mean such reasons are underreported.

Contextualizing the Functions of NSSI

While NSSI functions are typically grouped into the intra- and interpersonal, and the factor-analytic evidence supports this distinction, it is worth noting that no function is purely interpersonal or purely intrapersonal. While regulating emotional distress is a common example of an intrapersonal function, these feelings do not occur in a void, and social stresses and adversity can be a major factor driving the emotional distress that individuals are trying to cope with through their self-injury (Cawley et al., 2019; Turner et al., 2016; Victor et al., 2018). Thus, although the reduction of negative emotional states may be the proximal function of NSSI, the wider interpersonal context remains relevant in understanding the occurrence and persistence of these emotional states.

The social context may help us to understand why a person may come to self-injury as a way to regulate their feelings, as opposed to other methods of affect regulation. Seeking support from others is a common way to cope with distress (Taylor, 2011), but where the immediate social environment is highly invalidating or disregarding of one's feelings, a person may be left to struggle with such emotions alone and be more likely to engage in self-injury as a way to respond (Peel-Wainwright et al., 2021). This may be especially likely where a person has not had the opportunity to develop alternative, more adaptive, ways to regulate such feelings, perhaps as a result of having grown up in a suboptimal social environment. As another example, an individual may engage in self-injury as a response to feelings of anger about others in their lives (Huey et al., 2015; Mangnall, 2006). They may fear expressing these feelings directly due to how it could impact on their relationships or hurt others, and so self-injury may become a private way to respond to these emotions. Therefore, instances of self-injury with what appears to be an intrapersonal functional may still have a fundamentally relational dimension. A systematic review and metasynthesis focusing on interpersonal processes underlying NSSI indicated that many individuals had the experience of being trapped in an aversive and disempowered social environment, where avenues for support could be limited. In this context, NSSI became a means of regaining control and taking the ability to manage difficult feelings into one's own hands (Peel-Wainwright et al., 2021). Consequently, when considering the functions of NSSI, especially at an individual level, it is important that this is grounded in a consideration of the wider social context within which self-injury occurs.

Inferred and Implicit Functions

The research described so far has largely relied on individuals' self-reports of the functions of their self-injury. Self-report measures operate at conscious controlled level of processing and while these produce valuable data, they are prone to bias such as inaccurate retrospective

recall of events and responding in a manner deemed favorable by others (i.e., social desirability). The perceived social stigma around NSSI (e.g., Burke et al., 2019) may encourage socially desirable responding and this may be especially likely when responding to questions about NSSI functions that might attract more criticism and judgement from others (e.g., self-injuring to elicit care/support). One way to circumvent the potential bias inherent in explicit measures of NSSI functions is to use implicit measures to assess people's automatic, unconscious thoughts. With this aim, a number of studies have used variants of the performance-based Implicit Association Test (IAT; Greenwald et al., 2003) and found stronger associations between NSSI and the self in those who do rather than do not self-injure (C. R. Glenn et al., 2016; J. J. Glenn et al., 2017). This implicit identification with NSSI is indicated by, for example, a faster reaction time when "cutting" and "me" are paired rather than when "cutting" and "not me" are paired. Some of the work that has used the IAT to assess the functions of NSSI has adapted the measure and found stronger implicit associations between NSSI and emotional relief among those who do rather than do not self-injure (Gratz et al., 2016; Gratz et al., 2018). There are also studies that have used the IAT to test mechanisms that might underpin NSSI functions. For example, Nagy et al. (2021) found that experimentally induced self-criticism (which might underpin functions such as self-punishment) strengthened implicit identification with NSSI (Nagy et al., 2021), though this effect was present in both individuals who do and who do not self-injure. Caution is needed in interpreting these studies, given concerns about the reliability and validity of IAT (Schimmack, 2021). Further work into the idea of implicit NSSI functions, including the validity of this concept and the interaction between explicit and implicit functions, is warranted.

Characteristics of NSSI Associated with Function

Understanding the functions served by NSSI is important for several reasons. Endorsement of a greater number of functions served, or function accumulation, is associated with increased risk of psychopathology, as well as suicide ideation and behaviors (Nock & Prinstein, 2005; Paul et al., 2015; Victor & Klonsky, 2014). NSSI functions also vary in their association with specific types of psychopathology. Intrapersonal functions are associated more strongly with depression, borderline personality disorder (BPD) symptomology, nonsuicidal self-injury disorder (NSSID) criteria, and suicidal ideation than interpersonal functions (Glenn & Klonsky, 2013; Gratz et al., 2015; Klonsky & Glenn, 2009; Nock & Prinstein, 2005; Victor et al., 2015). Further, intrapersonal negative reinforcement functions (e.g., to reduce negative feelings) have been shown to relate to hopelessness and prior suicide attempts, while intrapersonal positive reinforcement functions (e.g., to feel something) have been shown to be associated with posttraumatic stress disorder (PTSD) and major depressive disorder (MDD) (Nock & Prinstein, 2005). Individuals with high scores on both intra- and interpersonal NSSI functions report higher depression and anxiety than other people who self-injure (Klonsky & Olino, 2008). Higher endorsement of both intra- and interpersonal NSSI functions was also positively associated with suicidal ideation (though not attempts) in one study (Klonsky & Glenn, 2009) though in another those with high intra- but low interpersonal scores have the highest prevalence of suicidal ideation and suicide attempts compared to other people who engage in NSSI (Klonsky & Olino, 2008). Notably when investigating gender differences in a large U.S. student sample, females were more likely to endorse affect regulation related functions, or using NSSI as a form of self-control, compared to men (Whitlock et al., 2011). The study did not consider nonbinary or other gender groups, however.

The individual functions comprising the intra- and interpersonal superordinate functions importantly also appear to differ in their strength of association with suicidal

ideation and attempt history. For example, Paul et al. (2015) found that all but three ("to get a rush/surge of energy," "to deal with frustration," and as "self-punishment") of the 17 functions assessed (using the NSSI-AT; Whitlock et al., 2014) were significantly associated with suicidal behavior, with functions related to avoiding attempting suicide, coping with self-hatred, and feeling generation (i.e., antidissociation) showing the strongest associations. NSSI for interpersonal communication and antidissociation (i.e., feeling generation) were the only functions significantly related to suicidal ideation. A number of studies have found that, perhaps unsurprisingly, endorsement of antisuicide functions (i.e., using self-injury to prevent oneself acting on suicidal feelings) is associated with current suicidal ideation and planning (Burke et al., 2018; Robinson et al., 2021; Victor et al., 2015). Together, these findings suggest that individuals who use NSSI to avoid suicide, to cope with self-hatred, or to terminate dissociative states may be at a higher risk for making a suicide attempt than those who do not.

Several studies have found an association between NSSI functions and trajectories of behavioral engagement. For example, in a three-year longitudinal study, using the NSSI-AT (Whitlock et al., 2014), Kiekens et al. (2017) examined the prospective association between NSSI functions and continuation of NSSI among college students and found that certain functions, specifically, those associated with intrapersonal positive reinforcement (i.e., "get a rush or surge of energy"), predicted the persistence of NSSI behaviors beyond adolescence. Similarly, Yen et al. (2016) found that use of NSSI for intrapersonal positive reinforcement predicted persistence of NSSI behaviors among adolescent psychiatric inpatients during the six months following hospitalization. Conversely, intrapersonal negative reinforcement and interpersonal reinforcement functions (interpersonal positive and negative reinforcement) did not predict NSSI behaviors after hospitalization. These findings suggest that use of NSSI to regulate emotions, specifically, to generate emotion, predicts continuation of NSSI over time,

perhaps because NSSI is effective in enhancing positive emotion and, therefore, reinforces continued engagement (Paul et al., 2015; Pollak et al., 2020; Selby et al., 2014). Indeed, research suggests that individuals rate intrapersonal functions as significantly more effective than interpersonal functions (Brausch & Muehlenkamp, 2018). These findings suggest that identifying individuals' reasons for NSSI engagement may help to distinguish those at higher risk (and those at lower risk) of NSSI persistence. In contrast, in a clinically severe sample of adolescents, duration of NSSI engagement did not vary by function, after controlling for relevant demographic and clinical characteristics (Victor et al., 2016). Knowledge and understanding of NSSI functions can also help clarify the types of difficulties that people engaging in NSSI may experience. For example, research suggests that individuals using NSSI for intrapersonal functions have greater difficulties with emotional reactivity and regulation, as well as self-criticism; while individuals using NSSI for interpersonal functions have greater difficulty in their relationships with others (Hilt et al., 2008; Nock, 2008; Turner et al., 2016).

Clinical Assessment of the Functions of NSSI

Understanding the functions behind NSSI appears essential in identifying the underlying factors and processes that maintain this behavior, and thus in guiding treatment decisions. It therefore is important to consider functions of NSSI as part of clinical assessments, and to factor this information into clinical formulations of individual's difficulties (Klonsky & Lewis, 2014). Understanding the functions of NSSI can be essential to tailoring treatment interventions for people engaging in NSSI (Klonsky & Muehlenkamp, 2007; Walsh, 2007; Washburn et al., 2012).

Myriad validated assessment tools of NSSI exist that cover the functions of the behavior. Widely used measures include the ISAS (Klonsky & Glenn, 2009), FASM (Lloyd et al., 1997), NSSI-AT (Whitlock et al., 2014), and the Suicide Attempt Self-Injury Interview

(SASII; Linehan et al., 2006). While all these tools tend to cover the same general categories of NSSI functions, as noted, the choice of measure may have an impact on the reported prevalence of different functions. While these tools are helpful in better understanding the characteristics of an individual's NSSI, it should be noted that the reliance on predetermined categories runs the risk of missing important nuance in an individual's particular experience of NSSI (Edmondson et al., 2016). Consequently, we recommend that such NSSI assessment tools are used as part of a wider clinical interview where practicable to do so. Many tools have been explicitly developed based on discussions with people who self-injure, with items mapping the functions and language used (e.g., Whitlock et al., 2014). Nonetheless, given the presentation of a list of predetermined categories may still bias or influence how a person describes their self-injury, it may often be preferable that such assessments begin with more open-ended questioning about the function of NSSI, before specific assessment tools are introduced. Given the evidence that the importance of different functions may change over time for individuals who self-injure (Muehlenkamp et al., 2013), there may also be a value in asking about both functions related to the onset of NSSI as well as current functions. Repeated measurement of NSSI functions may also be important given these may change over time. Finally, it is important to note that just because an episode of NSSI influences the behavior of others (e.g., elicits a caregiving response), this does not mean that such a consequence influenced the person's decision to engage in NSSI.

Implications for Intervention

Having a thorough understanding of the functions that underlie someone's self-injury may be important as this may inform the effectiveness of particular interventions used. For example, if a client engages in self-injury primarily in response to feels of shame and self-criticism, as a form of self-punishment, then therapeutic approaches that target these psychological processes of shame and self-criticism, such as compassion-focused approaches (e.g., van

Vliet & Kalnins, 2011), may be helpful. For others, where self-injury is a way to regulate unexpressed feelings of anger toward family members, systemic interventions may be of value, alongside work on developing alternative emotion-regulation techniques.

In making clinical judgments about treatment based on NSSI functions we advocate a contextualized approach to thinking about the function of NSSI, whereby the function that self-injury serves is positioned and understood within the wider psychological and social context of a person's life and history. For example, negative self-concept and self-criticism are elevated among those who self-injure (Forrester et al., 2017; Hooley & Franklin, 2017; Taylor et al., 2020). For such individuals, even though the function of self-injury may be about regulating negative emotions, adopting alternative strategies for regulating emotions that are perceived as being kind to oneself (e.g., soothing or relaxation techniques) may be difficult as they are dystonic with this underlying psychological context of self-criticism. One reason NSSI may come to be adopted by such individuals is that it provides an ego-syntonic (in that it is self-attacking in nature) means of regulating negative emotions (Hooley & Franklin, 2017). While the function of NSSI is an important piece of clinical information, it is arguably just one piece of the jigsaw and unlikely to be helpful if used as a guide for treatment in the absence of a broader understanding of someone's life and experiences (Lewis et al., 2017).

Self-Injury and the Therapeutic Relationship

Given its functional nature, NSSI can play an important role in someone's life. People can form strong positive beliefs about their NSSI and their reliance on this behavior (Sandel et al., 2020), and for some it may seem that NSSI is the thing that has kept them alive through incredibly difficult times. These positive beliefs about NSSI may exist alongside negative beliefs about the adverse consequences self-injury has had for them (Sandel et al., 2020). Consequently, some individuals are understandably ambivalent about cessation of their self-

injury. This ambivalence about stopping self-injury has been shown in qualitative studies (Hambleton et al., 2020; Shaw, 2006). Interventions for NSSI often have the cessation of the behavior as a primary goal (Lewis & Hasking, 2021; Warner & Spandler, 2012). There are various driving factors for this focus, but this may include the framing in some psychotherapeutic circles of NSSI as a therapy-interfering behavior that needs to stop for other therapeutic work to occur (Prada et al., 2018), and also due to concerns about risk to self that are associated with NSSI (such concerns can create an individual pressure to stop a client self-injuring but can also result in an organizational pressure as well). This focus on cessation or reduction of NSSI has the potential to clash with clients' own ambivalence or concerns about ending their self-injury. This tension has the potential to create ruptures in the therapeutic relationship and lead to a mismatch in therapeutic goals, which may disrupt therapeutic work going forward. Shared goals are an important foundation for effective therapy (Blake et al., 2019). Hence, when working with NSSI, careful negotiation of what the goals of therapy should be, holding in mind the function NSSI serves for the person, will likely be important. Mental health staff have described how an awareness of the role self-injury plays in a client's life can help them to see the client as a whole person, leading to better therapeutic work (O'Connor & Glover, 2017). Likewise, an investigation by the UK mental health charity the Samaritans (2020) suggested that people who self-injure want interventions to take a holistic approach and think about the underlying drivers and not just the behavior itself. Indeed, individuals engaging in NSSI discuss a range of concerns (e.g., disclosure, scarring, and alternative viable coping strategies) that extend well beyond NSSI cessation (Lewis & Hasking, 2021).

Implications for Prevention

The growing understanding of the functions that NSSI serves has several implications for prevention efforts in a variety of different settings. Programs designed to prevent the initial

onset of self-injury in settings like schools and colleges, for example, could base aspects of the program around the common functions of NSSI. This could include basic psychoeducation and skills training with the aim of improving young people's ability to identify, label, communicate, and regulate difficult feelings. This may help undermine the emergence of NSSI as a means of communicating or coping with difficult emotional states. So far there have been few investigations of prevention programs for NSSI. Klingman and Hochdorf (1993) trialed a school-based prevention program for self-destructive behaviors (not NSSI specifically) that focused on developing distress coping skills. While well received by participants, there was no evidence that it led to a reduction in self-destructive behavior. The Happyles program (Baetens et al., 2020) was designed for school-based prevention of NSSI, which included general psychoeducation and exercises relating to emotional well-being and regulation, alongside more focused content on NSSI (including psychoeducation about the functions of NSSI). Although there were some positive results, such as improvements over time in emotional awareness, there was no evidence relating to the prevention of NSSI (Baetens et al., 2020). Further research is clearly needed investigating the potential benefit of prevention programs for NSSI. Consideration of the common functions of NSSI may help in development of such programs. Notably, in both examples above, there is content on emotional regulation and coping. However, given the preliminary evidence that interpersonal NSSI functions may have a greater role in the initial onset of NSSI (compared to ongoing maintenance), consideration of preventative activities linked to these functions of NSSI may also be important (Muehlenkamp et al., 2013).

Implications for Research

The functions of NSSI have been the focus of a large amount of research to date, but there remain important areas where research has been scarce that could be a helpful focus for future studies. First, to date only a few studies have attempted to investigate the temporal

characteristics of different functions, including how the importance of different functions changes over time, and in turn how such changes may relate to NSSI behavior. Understanding these temporal changes may help inform our understanding of how the processes that maintain NSSI change over time. Further research using intensive longitudinal methods would be well suited to investigating this area. Second, research investigating the link between the function NSSI serves and the broader social or environmental context, is needed. Currently, qualitative research highlights how the functions of self-injury are closely tied to the broader social context and psychological needs of the individual (Peel-Wainwright et al., 2021). Experience sampling methodologies (also referred to as ecological momentary assessment) are well suited to exploring psychological phenomena situated within the day-to-day context of a person's life, and so might provide a means of further examining how the functions of NSSI varies across different social contexts (Selby et al., 2014). Third, we suggest above that therapeutic approaches may vary in efficacy depending on the extent to which they match the underlying function of self-injury. This could be investigated through mechanistic clinical trials and individual-patient data meta-analysis, taking a "what works for who" approach to evaluating treatments. Fourth, the interpersonal functions of NSSI have received less research attention, but appear important, and may have more of a role at certain points in the development of NSSI. Further research focused on interpersonal NSSI functions, including when and what contexts they may play a greater role in driving NSSI, is therefore warranted.

Conclusions

Consideration of the functions that NSSI serves, has been essential to the development of our understanding of these behaviors, guiding the development of theory and intervention. Research has identified a wide range of different NSSI functions and has established that some functions, such as those associated with emotion regulation, are more prevalent than

others. Research has also indicated that important differences in the severity and experience of NSSI may exist between people who engage in NSSI for different reasons. It is also becoming clear that the functions of NSSI are not completely fixed, but potentially change over time, and are likely to be closely tied to the wider social and psychological context of someone's life. With these considerations in mind, we recommend the adoption of a contextualized approach to thinking about NSSI functions, treating them not as a stable individual property but instead as something that emerges from the interplay between a person's broader psychosocial needs and constraints and their self-injury. The function of NSSI may act as a helpful guide in considering which preventative activities or interventions will be helpful and can help inform clinical formulation of clients' difficulties. However, we argue that within clinical decision making about individual clients it is beneficial to treat the function of NSSI as one (albeit important) jigsaw piece within the broader picture of that individual.

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