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# The Parent-Child Dyad and Other Family Factors Associated with Youth Nonsuicidal Self-Injury a

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#### **Abstract**

Nonsuicidal self-injury (NSSI) is a significant public health concern with clear negative consequences for the individual and their families. NSSI is most prevalent during adolescence—a developmental period during which youth navigate normative interpersonal stressors and developmental challenges. Although elevated rates of NSSI during adolescence are likely due to a combination of genetic, environmental, and contextual factors, this chapter focuses specifically on the influence of parents and the parent-child relationship on risk. To this end, we outline relevant theoretical frameworks in the context of developmental trajectories of NSSI. We review risk factors involving parents and the parent-child dyad, including parent-related factors that perpetuate risk in the context of parental awareness or youth disclosure of NSSI. We discuss protective factors within the parent-child dyad that reduce risk for youth NSSI, and provide an overview of interventions for youth NSSI that involve strong parental components, including parent training and parent education programs.

**Keywords:** parent, youth, parent-child relationships, NSSI, parent training, communication,

psychoeducation

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Nonsuicidal self-injury (NSSI), which involves intentional self-inflicted harm without the intent to die (cutting, scratching, burning, hitting self, inserting objects under nails, etc.), is a transdiagnostic behavior that occurs in the presence of many psychiatric diagnoses as well as in the absence of any diagnosis (Nock et al., 2006). Nonetheless, NSSI and suicidal thoughts and behaviors are highly comorbid, and there is clear evidence that NSSI heightens risk not only for future engagement in NSSI but also for suicide attempts (Ribeiro et al., 2016). There are clear age differences in NSSI, with adolescents reporting higher rates of NSSI than children or adults. More specifically, studies suggest a lifetime NSSI prevalence of approximately 8% in children, 18% in adolescents, and 6% in adults (Barrocas et al., 2012; Muehlenkamp et al., 2012; Swannell et al., 2014). There is also a small but significant sex difference in NSSI, with women across all age groups

being one and a half times as likely to have a history of NSSI as men (Bresin & Schoenleber, 2015). Moreover, there is also evidence that rates of NSSI are significantly elevated in gender and sexual minority groups. For example, 45%–55% of transgender or gender nonconforming teens reported NSSI within the last year (Clark et al., 2014; Eisenberg et al., 2017). In addition, in a large sample of children, those identifying as gay or bisexual were 4.7 times more likely than children identifying as heterosexual to report a history of NSSI (21.6% vs. 5.5%; Blashill et al., 2021).

The precise reasons for these high rates of NSSI in youth are unclear and are likely due to a combination of genetic, environmental, and contextual factors. In this chapter, we focus specifically on the influence of parents and the parent-child relationship. Although this overview includes a focus on parental characteristics and parent-child relational risk factors for NSSI, we also discuss the reciprocal nature of youth NSSI and factors involved in parent-child interactions. Therefore, we first outline relevant theoretical frameworks in the context of developmental trajectories of NSSI and then review risk factors involving parents and the parent-child dyad. Third, we review parent-related factors that perpetuate risk in the context of parental awareness or youth disclosure of NSSI. Fourth, we discuss protective factors within the parent-child dyad that reduce the risk for youth NSSI. Fifth, we provide an overview of interventions for youth NSSI that involve strong parental components, including parent education programs. The sixth section presents a case example that illustrates some of the relations described in this chapter. Finally, we propose important areas for future research in these areas.

## **Theoretical Frameworks of NSSI**

Theoretical frameworks for NSSI are still evolving. Many of these theories focus on the role of emotional reactivity and emotion regulation. For example, according to many classic theories of NSSI, elevated levels of negative affect and increased reactivity to emotional stimuli play key roles in risk for NSSI (Chapman et al., 2006; Hasking et al., 2016; Linehan, 1993; Selby & Joiner, 2009). In contrast, more recent models include a more explicit focus on interpersonal influences.

In their four functions model of NSSI, Nock and Prinstein (2004) hypothesize four processes that reinforce NSSI (see Hird et al., this volume). These processes fall along two separate dimensions: positive versus negative and automatic (intrapersonal) versus social (interpersonal). The intrapersonal functions (i.e., automatic negative and automatic positive reinforcement) build from earlier emotion regulation models of NSSI, suggesting that self-injury is preceded by emotion dysregulation and can function as an emotion regulation strategy. However, the interpersonal functions (i.e., social negative reinforcement and social positive reinforcement) represent novel additions and highlight interpersonal processes in NSSI risk. Specifically, they suggest that engagement in NSSI may help to modify the individual's social environment (e.g., increase attention or reduce punishment). This model, therefore, highlights the potential role of an individual's social environment in the decision to engage in NSSI, presuming that individuals with undesirable or negative social environments may be more motivated to change their social environment than individuals without such social stress. Further, it is important to note that the interpersonal and intrapersonal factors underscored in this model may be concurrently present and correlated given that the perception of a negative or stressful social environment may be exacerbated by a propensity for emotion dysregulation or heightened reactivity to emotional situations.

Hooley and Franklin (2018) built upon earlier models but proposed that, despite evidence that NSSI is often preceded by increased negative affect and emotion dysregulation, those who engage in NSSI do not necessarily experience higher levels of negative affect or emotion dysregulation compared to individuals who do not engage in NSSI. Rather, these theorists propose that NSSI is a behavioral strategy employed by individuals for whom the benefits of NSSI—which can include emotion regulation, self-punishment, peer

group affiliation, and/or communication—outweigh the physiological, psychological, and social barriers of such behavior. Thus, in addition to NSSI being reinforced through emotion regulation or self-punishment, social influences are hypothesized to play a key role either in terms of closer perceived ties to a desired social group or through its perceived utility in communicating distress (or strength) to others.

Finally, the family distress cascade theory (Waals et al., 2018) focuses specifically on dynamic cycles of risk within families. Waals et al. proposed that following disclosure of NSSI, parents may demonstrate increased hypervigilance and heightened efforts to control their child's behavior because of their own experience of guilt, fear, or shame, which, in turn, perpetuates risk. This model is unique in that it underscores the reciprocal relation between parental factors and youth NSSI, particularly following the parental discovery of youth NSSI. As such, this model may provide a particularly relevant theoretical framework for NSSI risk across childhood and adolescence given compounding interpersonal stressors (e.g., balancing relationships with peers and parents) and normative developmental challenges (e.g., desire for more independence) that occur during this period.

# **Parental and Parent-Child Relational Risk Factors**

Evidence for relations between youth NSSI and numerous parental factors has been growing over the last two decades (Arbuthnott & Lewis, 2015; Bean et al., 2021; Fortune et al., 2016). This line of research comprises efforts to understand the role of parental characteristics (e.g., psychopathology), as well as factors related to the parent-child relationship and interactions, including relationship quality, relational conflict, perceived lack of parental support, invalidation, rejection, parental control, and perceived parental criticism. Importantly, there is also growing theoretical and empirical support for additional parent-related factors that emerge and perpetuate risk following youth disclosure or parental awareness of NSSI (i.e., parental well-being and access to accurate information about NSSI). Relevant findings are reviewed and discussed below.

# **Parental Self-Injury and Psychopathology**

There is strong empirical support for the intergenerational transmission of suicidal thoughts and behaviors (Brent & Melhem, 2008), which is likely due to both genetic and environmental influences. Although much less work has focused on NSSI specifically, evidence from a twin study suggests that genetic influences account for 46% and 62% of the variance in NSSI for men and women, respectively (MacIejewski et al., 2014). Regarding the behavior itself, however, only two studies of which we are aware have examined the link between parent and offspring NSSI. One of these, which focused on offspring of parents with a history of mood disorders, found that neither parental NSSI nor suicide attempts prospectively predicted youth engagement in NSSI over a one- to eight-year follow-up (Cox et al., 2012). In contrast, a study of college students found that those who reported a history of NSSI in their parents were more likely to have a history of NSSI themselves than were those who denied any history of NSSI in their parents (Dawkins et al., 2019). Although the reason for this difference in findings is not clear, it is possible that intergenerational transmission of NSSI risk is more likely when offspring are directly exposed to NSSI in their parents or are at least aware of its occurrence.

Research regarding the impact of parent psychopathology on youth NSSI is similarly sparse and has also yielded mixed results. For example, maternal and paternal depression have been linked to youth history of NSSI (Wilcox et al., 2012), and one study found that onset of maternal depression predicted subsequent NSSI in youth (Hankin & Abela, 2011). In contrast, however, other research found no association between parental mood and anxiety disorders and youth NSSI and suggested, instead, that parental substance use disorders

and attention deficit/hyperactivity disorder (ADHD) are associated with youth NSSI (Gromatsky et al., 2017; Gromatsky et al., 2020). Clearly, more research is needed in this area.

## **Parent-Child Relationship and Interactions**

Research examining factors related to the parent-child relationship and interactions provides clear evidence that perceived lack of parental support, perceived invalidation/rejection, and general conflict within the parent-child relationship are associated with youth engagement in NSSI (Arbuthnott & Lewis, 2015; Bean et al., 2021; Fortune et al., 2016). This research comprises both cross-sectional (Adrian et al., 2011; Ammerman & Brown, 2018; Claes et al., 2015; Liu et al., 2020) and longitudinal (Andrews et al., 2013; Hilt et al., 2008; Victor et al., 2019; You & Leung, 2012; Zhu et al., 2020) studies that employ a variety of selfreport measures of the parent-child relational and interaction factors. For instance, a perceived lack of parental support is associated with prior engagement in NSSI among youth (Ammerman & Brown, 2018), and prospectively predicts youth engagement in NSSI over a 12-month follow-up (Andrews et al., 2013; Tatnell et al., 2014). Similarly, parental invalidation predicts youths' future engagement in NSSI in research involving self-report assessment (You & Leung, 2012) and behavioral coding of invalidation during parentchild interactions (Adrian et al., 2018). Finally, still other research suggests that harsh parental punishment, low parental monitoring, and poor parent-child attachment quality are associated with first occurrence of NSSI within the next year (Victor et al., 2019), which further supports earlier findings that youth who selfinjure report poorer parent-child relationship quality than youth who do not (Hilt et al., 2008). There is also evidence that these relations persist into adulthood, such that adults who endorsed NSSI within the previous six months also described experiencing increased parental control, parental alienation, and fear or concern related to their parents' care (or lack thereof) during childhood (Bureau et al., 2010).

Notably, a small but growing line of research focused specifically on the relation between parental criticism and youth NSSI has emerged from the larger body of literature examining parent-child relational factors and NSSI. Research in this area has employed measures of youths' perceived levels of parental criticism (Ammerman & Brown, 2018; Baetens et al., 2015a; Yates et al., 2008) and interviewer-coded levels of parental criticism (James & Gibb, 2019; Wedig & Nock, 2007), with both cross-sectional (Ammerman & Brown, 2018; Wedig & Nock, 2007; Yates et al., 2008) and longitudinal (Yates et al., 2008) designs. Taken together, these studies suggest that youths' perceptions of parental criticism as well as interviewer-coded levels of parental criticism are linked to youth NSSI. Specifically, youth of parents exhibiting high, compared to low, levels of criticism are more likely to have a past history of NSSI (Ammerman & Brown, 2018; James & Gibb, 2019; Wedig & Nock, 2007) and are more likely to engage in NSSI in the future (Yates et al., 2008). Support for the link between parental criticism and NSSI across these two levels of analysis is important as youths' perceptions of parental criticism may be susceptible to response or recall bias. It is also important to note that, like other parent-child relational and interaction factors, there is preliminary evidence that parental criticism during childhood continues to be associated with engagement in NSSI into adulthood (Daly & Willoughby, 2019; Hack & Martin, 2018).

Thus far, we have focused on the impact of parent factors on youth NSSI. However, as noted above, this relation is hypothesized to be reciprocal (Waals et al., 2018). Supporting this transactional model of risk, one qualitative study synthesizing interviews from 20 parents of youth who engage in NSSI underscores how parental awareness of youth NSSI can alter parenting and communication styles within a family in an effort to reduce risk of additional NSSI (Fu et al., 2020). Also consistent with transactional models, findings from one recent longitudinal study suggest that parental rejection predicts prospective NSSI engagement and that youth NSSI engagement predicts prospective parental rejection (Zhu et al., 2020). Another study similarly suggests reciprocal relations between parental control and youth NSSI such that higher levels of parental control were associated with youth NSSI six months later and youth NSSI predicted prospective

increases in parental control (You et al., 2017). These efforts to better understand the relation between these parent-child factors and risks are critical to reducing risk and offer support for a dynamic cycle of risk.

Finally, we want to briefly acknowledge that although this chapter is focused specifically on the role of parental and parent-child relational factors on risk for NSSI in youth, at a broader level, myriad family factors are also associated with youth NSSI (e.g., Baetens et al., 2015b; DeVille et al., 2020; Hack & Martin, 2018; Hasking et al., 2020; Jiang et al., 2016; Kelada et al., 2016; Webster & King, 2018). Further, the impact of youth NSSI on parents' well-being (described below) can dramatically impact the dynamic and functioning of a family (e.g., Byrne et al., 2008). Indeed, factors such as family functioning (Baetens et al., 2015b; Hasking et al., 2020a; Kelada et al., 2018), cohesion (Cruz et al., 2014; Liang et al., 2014), conflict (DeVille et al., 2020), and communication patterns (Hack & Martin, 2018; Latina et al., 2015; Webster & King, 2018) have each been linked to risk for NSSI in youth. Of note, although poor communication may increase risk for NSSI, communication competence within a family may also serve as a protective factor with risk for NSSI decreasing as competence increases (Latina et al., 2015; Webster & King, 2018). It is likely that many of these family factors encompass, and are fed by, the parental and parent-child relational factors previously described. Nonetheless, these factors may also provide additional and important system-level context for youth risk.

## Parental Awareness and NSSI Disclosure

It is not uncommon for youth to hide their engagement in NSSI from others (Fortune et al., 2008b; Rossow & Wichstrøm, 2010). Furthermore, many parents of youth who self-injure are never aware of their child's engagement in NSSI (Baetens et al., 2014; Kelada et al., 2016; Mojtabai & Olfson, 2008). Because youth are more likely to disclose their NSSI to a friend than to a parent (Fortune et al., 2008b; Rossow & Wichstrøm, 2010; Watanabe et al., 2012), parents are sometimes made aware of youth NSSI by their child's school or medical provider (Oldershaw et al., 2008). Moreover, youth who choose to disclose their NSSI directly to a parent are more likely to disclose after an episode of NSSI rather than in the process of seeking help from a parent to prevent NSSI (Evans et al., 2005). To this end, factors that contribute to initial and ongoing parental responses to NSSI disclosure, including parental well-being and psychological education, may play an integral role in future help-seeking prior to NSSI engagement and NSSI cessation.

# **Parental Well-Being**

Managing the distress and safety of youth who self-injure can be a terrifying, exhausting, and traumatic experience that takes a toll on parental well-being, which, in turn, can impact parental capacity to effectively support youth (Byrne et al., 2008; McDonald et al., 2007; Oldershaw et al., 2008; Rissanen et al., 2009). Guilt, shame, fear, anxiety, anger, and helplessness are common emotional experiences following NSSI disclosure that are intensified by the stigma associated with the behavior, and can make parents reluctant to access resources or seek support (Byrne et al., 2008; Fu et al., 2020; Krysinska et al., 2020). These emotional experiences can also lead parents to feel isolated and alone in the process of supporting their child. Similarly, many parents may exhibit difficulties prioritizing their own needs and well-being when supporting youth who engage in NSSI (Oldershaw et al., 2008). Therefore, with NSSI awareness, parents may deny their own self-care or experience difficulty modeling effective emotion regulation due to the fatigue and secondary stress that frequently accompanies supporting a youth who engages in NSSI (Krysinska et al., 2020; Whitlock et al., 2018). Finally, financial strain can impact parental time and resources to access professional services to support their own emotional well-being. Moreover, parents' financial strain can be exacerbated by changes in employment that sometimes result from supporting youth who self-injure (i.e., working fewer hours, taking unpaid leave) (Fu et al., 2020; McDonald et al., 2007).

#### Parental Education about NSSI

Parental responses to NSSI may be informed by stigma associated with the behavior and commonly held misconceptions, including those that minimize the behavior (e.g., "cutting is a normative adolescent behavior" or "if I ignore it then it will stop") and those that catastrophize it (e.g., "NSSI indicates imminent death by suicide" or "NSSI occurs exclusively in the context of a psychiatric disorder") (Arbuthnott & Lewis, 2015; Byrne et al., 2008; Fu et al., 2020; Oldershaw et al., 2008; Rissanen et al., 2009). Although some parents may recognize their child's NSSI as a sign of distress, such misinformation can make it difficult for parents to understand their child's engagement in NSSI and respond effectively (Oldershaw et al., 2008; Rissanen et al., 2009). To this end, parental access to, and understanding of, accurate information about the etiology, implications, and treatment of NSSI may be critical to reducing risk (Curtis et al., 2018). Indeed, parents of youth who self-injure have highlighted the need for access to digestible and accurate information about the behavior, including written recommendations and examples, to assist with supporting youth who self-injure (Krysinska et al., 2020; Stewart et al., 2018).

## **Protective Factors**

Although research often focuses upon parental characteristics and parent-child relational factors associated with risk, many components of the parent-child relationship function as protective factors, buffering against youth NSSI. For instance, the presence of positive parenting behaviors, such as parental support, comfort, and warmth have all been linked to reduced risk for NSSI in youth (Claes et al., 2015; Tatnell et al., 2014; Victor et al., 2019). Indeed, it is possible that when youth feel cared for and supported by their parents, they are more likely to engage in help-seeking behaviors from their parents, or to openly communicate their distress and thoughts about NSSI with their parents (Arbuthnott & Lewis, 2015; Fortune et al., 2008a, 2008b; Rissanen et al., 2009). Moreover, these familial factors, as well as family cohesion and adaptability, play a key role in prevention and intervention efforts to decrease the likelihood that youth will initiate, or reengage in, NSSI (Brent et al., 2013; Glenn et al., 2015, 2019; Tompson et al., 2012). To this end, parental resources, including awareness of and access to psychological resources and educational materials that offer accurate information about NSSI and treatment, are also pertinent considerations in youth risk (Arbuthnott & Lewis, 2015; Byrne et al., 2008). As described above, these factors may be especially relevant for protecting against future risk following youth disclosure of NSSI and facilitating help-seeking behaviors. Indeed, educational resources can shape parental responses to NSSI disclosure, thereby preventing or interrupting the dynamic cycle of risk proposed by the NSSI family distress cascade theory (Waals et al., 2018).

# **Interventions**

Although there is clear support for links between youth NSSI and parental, parent-child relational, and parent-child interaction factors, efforts to empirically validate treatments of NSSI in youth have largely focused on individualistic treatment approaches, like cognitive behavioral therapy (CBT) and dialectical behavior therapy (DBT) (Bean et al., 2021). Importantly, however, treatments with strong parental components and parental education or training programs have been identified as some of the most effective approaches for reducing NSSI in youth (Glenn et al., 2015, 2019; Ougrin et al., 2015). To this end, in a recent review focused on family factors involved in youth NSSI and the use and utility of family therapy in reducing risk for self-injury, Bean et al. (2021) proposed that interpersonal contextual factors should be a primary target of treatment for NSSI and that empirically validated individualistic interventions for NSSI (e.g., CBT and DBT) may be enhanced by efforts to incorporate increased attention to interpersonal factors and considerations of the family environment. For example, these treatments could be updated and improved through integration of specific interventions targeting parental support/invalidation, parental criticism/shame, family rigidity/parental control, and conflict within the parent-child relationship.

Within this line of research, there is growing support for two-clinician treatment models, which offer individual support to youth and their parents as well as joint family interventions. Specifically, programs such as Safe Alternatives for Teens and Youth (SAFETY; Asarnow et al., 2015) strive to improve youths' protective interpersonal supports through CBT- and DBT-informed intervention with both the teen and their parents and demonstrate promising reductions in NSSI and suicide attempts three months after treatment (Asarnow et al., 2017). Similarly, attachment-based family therapy (Diamond, 2014; Ewing et al., 2015) seeks to improve the parent-child relationship by addressing relationship ruptures to rebuild trust within the relationship and foster positive parent involvement. This type of intervention is designed to reduce risk by increasing youth willingness to seek parental support and training parents to respond effectively (Amoss et al., 2016). It is important to note, however, that these interventions are currently designed to target suicidality. Nonetheless, they also appear well suited to address and reduce youth NSSI risk by addressing individual and dyadic influences of risk, thereby supporting parents' ability to effectively manage youth NSSI risk.

Parent education and training programs are also effective in reducing risk by helping parents appropriately respond to episodes of NSSI and support the safety of their child (Glenn et al., 2019). As previously described, misconceptions about NSSI can influence parental response to NSSI disclosure (Arbuthnott & Lewis, 2015; Byrne et al., 2008; Fu et al., 2020; Oldershaw et al., 2008; Rissanen et al., 2009). These programs, therefore, can support parents in the process of caring for their children by disseminating accurate information about the etiology, implications, and treatment of youth NSSI (Curtis et al., 2018; Krysinska et al., 2020; Stewart et al., 2018). These parent training programs should also include information about interpersonal influences, family conflict resolution strategies, training in skills for emotion regulation, communication, and problem–solving (Bean et al., 2021). Finally, the programs may be strengthened through the inclusion of information pertaining to parental self–care.

# **Case Example**

To help illustrate many of these considerations in practice, a clinical example may be useful. Zo was a 14-year-old nonbinary teen who lived with their parents and younger brother. Zo presented to the emergency department following an intentional Tylenol ingestion in a suicide attempt with recent cuts on their arms and scarring on their upper thighs and stomach. Thus, although NSSI does not always occur in the context of suicidal thoughts and behaviors, Zo's suicide attempt illustrates the increased risk for suicide attempts among youth who self-injure (Ribeiro et al., 2016). During their initial psychological evaluation, Zo reported having experienced symptoms of depression, including sadness, anhedonia, difficulty concentrating, disrupted sleep, and feelings of worthlessness, for approximately one year. They reported experiencing suicidal thoughts for approximately six months and denied any suicidal behavior prior to this attempt. They first engaged in NSSI (i.e., cutting, initially with a pencil sharpener blade, and more recently with a razor) about nine months prior to admission and had been self-injuring several times a week for the last month. They denied any use of tobacco, alcohol, or substances. They also denied any experiences of trauma or abuse.

During the interview, Zo stated that they first expressed their preference for they/them pronouns to their parents six months ago. Zo's parents expressed support for Zo's pronoun preference, yet Zo shared that they sometimes misgender them when talking to others. Zo expressed that these errors are invalidating. Zo reported that their parents apologize when they make mistakes and explained that it was hard to adjust to the change. Their parents also occasionally talk about missing their "daughter." Zo reported feeling like an inconvenience and that they have let their parents down. Zo described feeling hesitant to ask their parents for support, including help for NSSI, and identified being misgendered and thoughts of inconveniencing their parents as frequent precipitants to NSSI.

Zo reported that when their parents first learned about their NSSI a couple of months ago after seeing some marks on their arm, they "freaked out." Their parents immediately began looking for a therapist, and they lost their right to privacy. Zo shared that they can no longer be in their room alone and that their parents now closely monitor their phone and social media use after reading texts between Zo and a friend about the self-injury. Their parents worried that Zo's friend was influencing them to engage in NSSI. Zo shared that this friend is one of the only people they feel comfortable talking to about their urges to self-injure. Zo expressed feeling overwhelmed and frustrated by their parents' reaction, which exacerbated their symptoms of depression, suicidality, and urges to self-harm.

This case highlights a number of points raised in this chapter. As noted earlier, rates of NSSI are elevated in adolescents, particularly among gender-nonconforming teenagers (Clark et al., 2014; Eisenberg et al., 2017). As noted above, a perceived lack of parental support is a risk factor for NSSI (Andrews et al., 2013; Tatnell et al., 2014), and, in this case, Zo's parents' intermittent use of she/her pronouns was perceived as invalidating their identity and autonomy. This negatively affected Zo's relationship with their parents and likely amplified Zo's desire for accepting social connection (e.g., from peers). This case also clearly illustrates the dynamic cycle of risk for NSSI proposed in the NSSI family distress cascade theory (Waals et al., 2018) and is consistent with prior research demonstrating transactional relations between youth NSSI and parent control over time (Bureau et al., 2010). Indeed, upon learning about Zo's engagement in NSSI, Zo's parents increased their supervision and monitoring of Zo's behaviors for fear of future incidents of NSSI and, perhaps, suicide attempts. This increase in parental control could be perceived by Zo as a punishment as it resulted in limits to Zo's developmentally normative desire for independence and a barrier to supportive social connections. Though well-meaning, this type of parental response is likely to reinforce Zo's desire to hide their distress from their parents and reduce their willingness to seek help, which perpetuates their risk. Building from the empirically supported treatments reviewed earlier, it appears that Zo would benefit from treatment with a strong parental component or a two-clinician intervention model to enhance communication within the family from both Zo and their parents (i.e., around the impact of misgendering, emotional distress, and risk for NSSI), particularly as Zo's parents verbally expressed their desire to support Zo's gender identity and responded to their engagement in NSSI with concern. In addition to targeting communication, treatment should focus on increasing Zo's help-seeking behavior from their parents, helping Zo's parents to learn to appropriately respond to their NSSI, and teaching Zo skills to more effectively tolerate the emotional distress they experience.

## **Future Directions**

A review of research examining parent-child dyads and youth NSSI illuminates several important directions for future studies. One key area for future research is the examination of developmental differences in youth NSSI risk and protective factors. As noted at the outset, there are clear developmental differences in the prevalence of NSSI, with rates more than twice as high in adolescents compared to children (Barrocas et al., 2012; Muehlenkamp et al., 2012; Swannell et al., 2014). However, the reasons for this increase are not well understood. The transition to adolescence is characterized by significant hormonal and neural changes associated with increased stress reactivity and reward sensitivity (Casey et al., 2008; Gunnar et al., 2009; Paus et al., 2008; Rudolph, 2014) as well as changing relationships with parents and peers that can lead to increases in interpersonal stress (see Zetterqvist & Bjureberg, this volume). In terms of these social changes, adolescents begin to experiment with new social roles that often inform their self-concept (Casey et al., 2008; Chein et al., 2011; Collins & Repinski, 1994; Somerville, 2013). They develop heightened awareness of societal expectations and nurture greater emotional intimacy in platonic and romantic peer relationships as peer relationships take on more central roles (Nesi et al., 2018; Rose & Rudolph, 2006; Steinberg & Morris, 2001). During adolescence, youth—particularly girls—also experience an increase in negative life events and interpersonal stress to which they exhibit increased reactivity (Ge et al., 1994; Rose & Rudolph, 2006; Rudolph, 2014; Rudolph & Hammen, 1999). These developmental changes underscore a need for research examining how parents can help to buffer these effects. Thus, adolescence is characterized by heightened emotional reactivity and need for emotion regulation, an increased salience of peer influences, and a normative desire for more independence, which lead to new negotiations to balance peer and familial relationships to meet adolescents' needs of both autonomy and connectedness. These changes result in a normative escalation in the emotional intensity of parent-child conflict (Laursen et al., 1998). What remains unclear, however, is the extent to which these factors help explain the dramatic rise in NSSI observed during adolescence.

A second key area for future research is the increased diversity of the samples studied, in terms of both the youth and the parents included. In terms of parents, the vast majority of studies reviewed in this chapter focus specifically on mothers and the mother-child relationship. Continued efforts to examine whether findings from this extant research generalize to fathers and the father-child relationship, as well as caretaker relationships in nontraditional families, are critical. In turn, it will be important to examine whether these processes differ depending upon the nature of the dyadic relationship (mother-daughter, mother-son, father-daughter, father-son, mother-nonbinary youth, etc.). Indeed, these processes may be most salient within certain relationships (at certain developmental stages) than others. Future research on diverse youth samples is also needed to determine how family factors may be similar versus different for different minority samples. Specifically, despite lack of clear evidence for racial/ethnic differences in the prevalence of NSSI (Gholamrezaei et al., 2017), and only relatively small sex differences (Bresin & Schoenleber, 2015), there are significantly higher rates of NSSI in gender and sexual minority youth (Blashill et al., 2021; Clark et al., 2014; Eisenberg et al., 2017; Fox et al., 2020; see Zullo et al., this volume). Additional research is needed to determine how parents and the parent-child relationship can either exacerbate or mitigate the stress these youth experience that can increase NSSI risk. This type of research is

also a critical step toward cultural humility and the development of culturally informed adaptations of evidence-based care.

The third need for future research is the increasingly sophisticated research design. With growing evidence that the relation between parent-child dyadic factors and youth NSSI is reciprocal, there is an increasing need for multimethod research with multiple informants (i.e., parents and youth) with longitudinal designs. Despite important contributions, the vast majority of research to date has focused on self-report assessments of either the parent or youth. It will be important for future research to obtain reports from both the parent and the child to better understand the specific nature of this dynamic cycle of risk and identify points of intervention to prevent or interrupt this cycle. Moreover, given that self-report data are susceptible to reporter bias, such research would be enhanced by additional, more objective methods of assessment. For instance, interviewer-coded paradigms (e.g., five minute speech sample; Magaña et al., 1986) and behavioral coding systems are seldom employed in this area of research and could provide a more robust picture of processes occurring during parent-child interactions that increase risk for NSSI. These methodological approaches have greater ecological validity than self-report measures and could be augmented by other fine-grained assessments during interactions (e.g., moment-to-moment changes in facial affect assessed with electromyography). Finally, research involving intensive longitudinal designs (e.g., through ecological momentary assessment) have the capacity to capture real-time fluctuations in this cycle of risk to better pinpoint specific targets and opportunities for intervention.

Finally, additional research is needed to determine the incremental validity of family-based interventions versus individual therapy and to determine when one approach may be preferable to the other. There is also a need for additional emphasis on psychoeducation and support for parents of youth who engage in NSSI. Another significant question for intervention research is whether interventions that target self-injury broadly are most effective or whether outcomes would be improved by a specific focus on NSSI among youth with no history of suicidal ideation or attempt. This targeted approach might allow a greater focus on factors thought to maintain NSSI specifically rather than self-injury more broadly. To this end, there is a need for more research that specifically aims to better understand how risk and protective factors for NSSI may differ from those involved in youth suicidality.

## **Conclusions**

In summary, NSSI is a significant public health concern with clear negative consequences for the individual and their families. Although not uncommon in children, rates increase dramatically during adolescence, particularly for gender and sexual minority youth. Across childhood and adolescence, specific family influences have been shown to increase or buffer risk for NSSI, with parent and youth influences likely to be reciprocal. Consistent with these effects, there is growing support for family-based interventions, which not only include a focus on parent training and improved communication but also general psychoeducation for parents so that they can respond effectively to occurrences of NSSI in their family. It is important to note, however, that much of the extant research in this area examines risk for both suicidal and nonsuicidal self-injury. Therefore, there is a pressing need to identify predictors of risk that are specific to NSSI. Building from the strengths of this body of work, the next phase of research in this area will seek to increase the diversity of the samples studied, in terms of both parents and youth, and will benefit from increasingly sophisticated research designs to provide a more fine-grained understanding of family-based cycles of risk so that even more effective prevention and intervention efforts can be developed.

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