

SELF-INJURY IN YOUTH

The Essential Guide to Assessment
and Intervention



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CHAPTER

9

Intervention and Prevention in the Community

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In this chapter, the practitioner will gain an understanding of:

- The role development, social, and physical environments may play in the initiation and maintenance of NSSI in community populations
- The nomenclature and a taxonomy that is useful for thinking about community-level intervention and prevention in mental health
- Specific examples of NSSI intervention and prevention efforts
- Issues in prevention related to development, culture, and NSSI

The notion of community, though easy to wield in the abstract, is exceptionally difficult to operationalize in practice. Communities consist of individuals, clusters of individuals, such as families, and institutions with implicit and explicit contracts that guide the complex transactions between and among them. In contemporary use, community is fluid, dynamic, and multifaceted and may be bounded by common location; vocation or experience; history; or social, religious, economic, and political interests. Traditional notions of community and research methods used to study them are increasingly complicated by the diminished role geographic boundaries play in the formation of groups, by proliferation of instantaneous communication modalities, such as the Internet and cell phone technology, and by substantial individual and familial migration in and out of communities. Internet communities are, perhaps, the best example of this because they render obsolete the role of geopolitical

boundaries in social exchange, establishment of norms, and perceptions of group membership and belonging.

Despite its elusive nature, community is a common unit of study and intervention. For this to be effective, however, there must be clarity about what constitutes the boundaries of the community of interest and, most importantly, *whose* behavior is of interest in assessment, intervention, and prevention. In psychiatric epidemiology, "community" populations of youth are those identified through community settings such as schools or through nationally representative studies, such as those conducted of self-injury in Great Britain (Hawton & Rodham, 2006). For the purposes of this chapter, *community* will be used to refer to nonclinical settings in which youth are found in high concentration. This may include, but is not limited to, neighborhoods, youth-serving programs, and secondary school and college settings. Although youth communities are increasingly virtual, Internet-based intervention and prevention efforts for virtually defined communities may be quite different than those for geographically defined areas. Although we do offer some suggestions about the need to acknowledge and address the role that virtual communities play in nonsuicidal self-injury (NSSI), we will not discuss strategies for intervening in or preventing NSSI in on-line communities.

This chapter is dedicated to a broad review of literature germane to intervention and prevention of adolescent NSSI in community populations. Because the developmental period in which intervention and prevention efforts take place is an important consideration in crafting effective prevention efforts, we begin with a summary of NSSI in a developmental context. From there we move into a discussion of the NSSI in community contexts intended to build on prior chapters by highlighting the theoretical role that community-level mechanisms play in fostering the initiation and maintenance of NSSI among significant numbers of cognitively intact youth not found in clinical settings. The final segment of this chapter will set forth promising practices for community-level NSSI prevention efforts.

SELF-INJURY IN A DEVELOPMENTAL CONTEXT

There is broad agreement that community-level prevention efforts with youth, regardless of the focus, are most successful when grounded in an understanding of the developmental tasks and processes at play in the populations of interest (Bronfenbrenner, 1979; Eccles & Gootman, 2002; Lerner, 1991). This is particularly true for NSSI because the behavior occurs most often during adolescence (Conterio & Lader, 1998; Favazza, 1996; Walsh, 2006), which suggests that developmental stage plays a role in receptivity and reliance on NSSI as a coping mechanism. Adolescence, regardless of how it is defined, is a distinct stage of life from both childhood and adulthood. Physical and sexual maturity coupled with the need to acquire skills necessary for carrying

out adult roles mandate increasing independence and a realignment of social interconnections (Erikson, 1968; Feldman & Elliott, 1990). It is the life period in which childhood gives way to intense concentration on development of the skills, attitudes, and capacities required for adulthood (Erickson, 1968; Havighurst, 1972).

Only early childhood, in which rapid physical, cognitive, social, and emotional changes are obvious, rivals adolescence in the speed and breadth with which changes occur. Over a period of just a few years, childhood bodies become adult bodies with concomitant desires and capacities, needs for physical and emotional intimacy with peers intensify, questions about one's sexual capacities and identity emerge and demand address, the desire for autonomy from parents and other adults clashes with the enduring need for connection and validation from these same individuals, needs for belonging and affirmation of likely success outside family realms emerge, and vocational possibilities and skills must be catalogued and developed. All of these tasks, in turn, must be resolved in a way that permits integrated development of a set of values and behaviors capable of guiding adult actions and decisions and, most importantly, of providing a sense that life is fundamentally meaningful and worthwhile. The brain-behavior-social context interactions that occur during this period have profound implications for emotion and motivation—the depth of which has only just begun to be explored (Dahl, Spear, Kelley, Shaikh, & Clayton, 2004).

The number and complexity of tasks a human being needs to accomplish during adolescence is complicated by variations in the timing with which various cognitive, emotional, and physical capacities are accomplished. For example, studies consistently show few age differences in cognitive processes relevant to risk taking and decision making between adolescents and adults (Steinberg & Cauffman, 1996). Instead, differences in risk behaviors in adolescence and adulthood are attributable to age differences in psychosocial factors that influence self-regulation, namely disjunction between novelty and sensation-seeking (both of which increase dramatically at puberty) and the development of self-regulatory competence (which does not fully mature until early adulthood) (Steinberg, 2004). When timing issues such as these are coupled with psychosocial factors that frustrate or delay healthy developmental processes such as early childhood trauma, biological imbalances or difficult temperamental dispositions, overly demanding or challenging environments, and persistent inconsistency in the nature of the demands of various social environments (e.g., family, peers, school, community), detrimental consequences are likely to result (Lerner & Steinberg, 2004).

Such factors render it unsurprising that less than healthy methods of coping, such as NSSI, emerge with regularity, particularly because NSSI is thought to involve dysregulation of the endogenous opioid system and other limbic system functions that regulate emotion responses (Konicki & Shulz, 1989; Symons, 2002).

Whereas attraction to the violence of the practice may be puzzling, the need met by the function is not. NSSI is an act that is universally acknowledged to be undertaken in cognitively intact youth to regulate emotional imbalance and to communicate distress to the self or others (Chapman, Gratz, & Brown, 2006; Klonsky, 2006; Nock & Prinstein, 2004), and as Conterio and Lader (1998) so aptly point out, NSSI may literally and figuratively serve as an outlet for the "growing pains" of adolescence. Their extensive clinical experience with self-injurious adolescents suggests that NSSI gives form and expression to discomfort with physical changes and sexual impulses, confusion about the twin need for autonomy and connection, the need to perform perfectly in all social situations, and the need for psychological reconciliation of past family or childhood hurt and dysfunction.

Not surprisingly, empirical evidence validates the importance of these four areas (see Yates, 2004 and Walsh, 2006 for review), and it is likely that further investigation into the relationship between NSSI and development will place the behavior as one of multiple contemporary adolescent expressions of angst. However, although a number of biological and intrapersonal processes are clearly at work, the self-mutilative nature of NSSI and the concerning level of prevalence with which it is currently found in youth populations belies the influence of environmental forces as well. Indeed, a large and growing body of research demonstrates that a common set of environmental precursors are largely responsible for the stress and vulnerability that serve as pathways for multiple forms of psychopathology. As Levine and Smolak (2006) so aptly point out in a recent review of literature on eating disorders, "Mental disorders, behavioral problems, and ill health in general flourish when people have too much stress, too little respect for themselves and others, too few personal relationships and too little perceived support, and too few personal, social, and physical resources for meeting their needs" (p. 135). Comments such as the following self-injury message board post exemplify these pathways well:

I cut myself for two reasons. To feel something and to commit violence that doesn't hurt anyone else. Like many young people who don't "fit" in the average American high school, I swung back and forth between a numbness that I still find scary, and an all-consuming rage at the life I had. At the same time, unlike the Columbine boys, who I had more in common with than I care to think about, I never wanted to hurt anyone else...since I hated myself for not being "normal", I made an excellent target.... One of the things I liked about it was how it continued to burn and ache, like a reminder that I was still there, a klaxon telling me I hadn't actually ceased to exist.

Large and growing numbers of cognitively intact young people are unable to meet core developmental needs to belong, exercise voice, and experience mastery in key developmental areas without engaging in self-injurious behavior of all sorts. This challenging problem cannot

be addressed by "fixing" the person without fixing the environments in which they learn and grow. Indeed, from an ecological (Bronfenbrenner, 1979; Lerner, 1995) and public health perspective, NSSI may be best viewed as one of several emerging symptoms that suggest that even relatively average adolescents are finding contemporary western societies increasingly difficult to successfully navigate. Not only have a growing number of books been dedicated to this general thesis (Garbarino, 1995; Hersch, 1998; Levine, 2006; Twenge, 2006), but empirical study of changes in anxiety and psychiatric disorders over the past several generations suggest linear upward trends in rates of mental disorders in youth over the past half century for reasons not solely attributable to biological changes or differences in detection and classification of psychiatric disorders (Benton, Robertson, Tseng, Newton, & Benton, 2003; Birmaher et al., 1996; Erdur-Baker, Aberson, Barrow, & Draper, 2006; Twenge, 2000, 2006).

Whether or not rates of youth struggling to meet developmental needs or deal with childhood adversity have increased, methods of providing short-term relief from distress find fertile soil in populations of adolescents. The combination of high need for self-expression, high drama, and willingness to try out new behaviors and identities can make "alternative" behaviors appealing to individuals or subgroups of youth. Because of the emphasis on being simultaneously accepted by peers and proving oneself unique is a pillar of adolescent development, novel and extreme behaviors may be adopted and passed along, covertly or overtly, quite readily. Successful intervention and prevention are thus likely to be most effective when both developmental stage and processes are taken into consideration. It is also important, however, to consider and address the mechanisms through which behaviors spread in communities of youth.

NSSI IN THE COMMUNITY CONTEXT

When Barent Walsh wrote his dissertation on NSSI in 1987, the behavior was virtually unheard of in community populations. Regarded as a disorder primarily associated with significant cognitive or emotional impairment such as psychosis or borderline personality disorder, it was largely confined to clinical settings (B. Walsh, personal communication, November, 11, 2006). To some extent, this fact reflects the dearth of epidemiological study of NSSI in any population; the only two recognized epidemiological studies prior to the late 1980s (Clendenin & Murphy, 1971; Weissman, 1975) were based on emergency room populations. It also reflects a lack of awareness about the behavior among youth-serving professionals, although whether this is due to ignorance of the behavior or very low prevalence in community populations is not clear.

Unfortunately, lack of baseline data will forever prevent an accurate accounting of historical trends. What is clear at this point is that the

behavior is both prevalent and acknowledged among those who work with youth in nonclinical settings (Heath, Toste, Nedecheva, & Charlebois, 2008; Kress, Gibson, & Reynolds, 2004; Ross & Heath, 2002; Whitlock, Eckenrode, & Silverman, 2006; Whitlock, Purington, Eells, & Cummings, 2008). Although growing awareness has prompted research on the phenomenon in community samples, robust assessment of the differences between NSSI in clinical and community populations is currently lacking. What we do know suggests that whereas there are important similarities in form and function across individuals in clinical and community samples, there may be important differences in comorbidity, help-seeking, life trajectories, and contextual contributors to initiation, duration, and meaning. Because community samples often contain some individuals who might also be found in clinical samples, assuming discrete differences between the two samples imposes artificial boundaries that are unlikely to exist. However, studies on community samples suggest the presence of self-injurious individuals who do not fit the clinical profile (Adler & Adler, 2007; Hawton & Rodham, 2006).

Although clearly speculative at this juncture, it is likely that some of the differences in NSSI expression and patterns between clinical and nonclinical samples arise as a result of the fact that NSSI often goes undetected for long periods or indefinitely in community populations of youth (see Hawton & Rodham, 2006, for review). For example, in a recent study of NSSI in a representative sample of college students from two northeastern U.S. universities, 36% reported that no one knew that they self-injured, and only 21.4% indicated that they had discussed their NSSI with a mental health professional (Whitlock, Eckenrode, et al., 2006). The clear capacity of some individuals to function well enough on a day-to-day basis to avoid detection suggests that, if present, conditions that commonly accompany NSSI in clinical populations, such as emotion and cognition regulation disorders, may be less detectible or not present at all in community populations of youth. This leads to questions about whether initiation of NSSI in community samples stems from similar motivations and is maintained by similar mechanisms as in clinical samples.

ROLE OF THE COMMUNITY IN THE INITIATION AND MAINTENANCE OF NSSI

If the widespread assumption that NSSI has increased in prevalence in community populations of youth is correct, we must then ask how awareness of the behavior has spread and through what mechanisms it has been made appealing to large numbers of youth. Although lacking NSSI-specific data germane to this question, studies of the social contexts of behavior consistently show that positive and negative behaviors are socially patterned and often clustered (Berkman & Kawachi, 2000; Evans, 2004; Sameroff & Siefer, 1995). Such nonrandom distribution

suggests that social and physical environments play an important role in the way behaviors move from one individual and context to another. With this in mind, social epidemiologists have identified four primary mechanisms through which social environments influence behavior: (a) shaping of norms; (b) providing social (re)enforcement of behaviors; (c) providing (or limiting) opportunities to engage in the behavior; and (d) facilitating or inhibiting the antecedents for the behavior (Berkman & Kawachi, 2000). Considered together, these mechanisms provide a useful framework for understanding how NSSI might spread in community populations of youth.

Rarely can a social setting be held responsible for initiation or perpetuation of a particular behavior. Individuals bring into environments biological predispositions as well as norms, experiences, and expectations derived from other settings they inhabit (families, for example). However, recognition of the role social environments play in behavior adoption and maintenance contains important implications for intervention and prevention. Studies have documented, for example, that within confined institutional spaces populated by individuals susceptible to NSSI, such as inpatient treatment centers or floors, initiation of NSSI by a patient can spur a mini-epidemic among residents (Matthews, 1968; Ross & McKay, 1979; Taiminen, Kallio-Soukainen, Nokso-Koivisto, Kaljonen, & Helenius, 1998). In this case, the setting is populated by individuals who possess many of the biological, experiential, and psychological antecedents often linked to NSSI, contains individuals for whom the practice of other self-damaging behaviors is normative, and often inadvertently rewards those who practice NSSI with much desired staff attention. Although opportunities to employ tools common in NSSI, such as knives and razor blades, may be limited, access to fingernails, sharp corners, and the points of eating utensils are difficult for staff to banish or regulate.

There are, of course, important limitations to generalizing from institutional settings to settings in which a diverse cross section of youth are found, such as schools, neighborhoods, and youth groups. It would be rare in these settings to encounter social environments that concentrate the risk of NSSI in the same way institutional settings might. Nonetheless, the notable prevalence of NSSI in community samples of youth suggests that the social mechanisms through which NSSI spreads are present in community settings as well. Moreover, because adolescents tend to group themselves by common interest and behavioral practices, it is possible that NSSI behavior in community settings among youth is both diffuse (found in individuals who conform to the stereotypical secretive and isolated image) and concentrated in subgroups where it may be performed as a part of group membership. A recent study of NSSI in "Goth" groups in the UK (Young, Sweeting, & West, 2006) supports this assumption. Similar findings have been documented in unpublished data collected by Young and Sweeting, which is undergoing analysis. In a survey of secondary school nurses and counselors in secondary school

settings across New York state, a quarter of the 300 respondents indicated seeing students who injured themselves alone or together as a part of group membership. In light of these trends and the ubiquitous assumption that NSSI is increasingly prevalent in community settings, prevention efforts will be aided by consideration of the ways in which pro-self-injury norms, opportunities, reinforcement, and antecedents are established and maintained in community settings.

SELF-INJURY NORMS, OPPORTUNITIES, REINFORCEMENT, AND ANTECEDENTS IN COMMUNITY SETTINGS

Although identifying the point at which NSSI began to surface in community populations in more than isolated pockets is impossible, it is possible to trace the point at which it began to enter mainstream culture and media. Unpublished data collected by Whitlock shows that from 1993 to 2004, over 14 pop icons revealed self-injurious habits in various media outlets; similar disclosures by popular stars prior to that time were rare. Although not all possessed widespread popular appeal, some did. Princess Diana, Johnny Depp, Angelina Jolie, and Christina Ricci all publicly admitted to NSSI and shared detailed information about the medicative and calming sensation the behavior produced for them.

The same period saw a large increase in the number of mainstream movies, music, and news articles with NSSI scenes or themes (Whitlock, Purington, & Gershkovich, in press). NSSI scenes and themes have also appeared in television dramas such as *Grey's Anatomy* and *Seventh Heaven* and even comedies such as *Will and Grace*. While some of the media attention dedicated to the behavior is aimed to educate or to portray fictitious events and characters, the net result may highlight NSSI as a cognitively available emotional outlet for individuals predisposed to the behavior, similar to the pattern Brumberg (1992) observed in the spread of anorexia nervosa in the 1980s. The concomitant popularity of tattooing and piercing that emerged in the late 1980s as well as the emphasis on "extreme" behaviors obvious in television programming and advertisements may also contribute to normalizing NSSI.

Increased awareness and popularity of any behavior assumes an entirely new dimension when coupled with the ascension of the digital age. Youth born in 1985 and after, otherwise known as "Digital Natives," tend to use the Internet as the first stop in information gathering and socializing (Lenhart, Madden, & Hitlin, 2005). The power of the Internet to bring individuals together based on shared interests in a variety of forums—from message boards to sites where homemade videos can be uploaded and shared such as YouTube—provides historically unparalleled opportunity.

The Internet may be particularly appealing to adolescents and young adults because healthy social and emotional development relies on their ability to find acceptance and belonging in social groups, establish meaningful relationships, and to establish interpersonal intimacy (Reis & Shaver, 1988; Sullivan, 1953). Among those who self-injure, on-line anonymity may assist in managing the shame, isolation, and distress that so often accompany the behavior (McKenna & Bargh, 2000; Whitlock, Powers, & Eckenrode, 2006). Because on-line exchange can fill-in where off-line exchange fails, virtual interaction may provide the sense, illusory or real, that core developmental needs for community, intimacy, and honesty are met—at least for a while (Whitlock, Lader, & Conterio, 2007). Unfortunately, it is also possible that the ease with which one can identify NSSI communities, share stories, and solicit information enhances opportunities for NSSI to become normative both on- and off-line (Whitlock, Lader, et al., 2007).

Moreover, growing evidence that participation in virtual communities is a factor in off-line behavior (Brodie et al., 2000; Rideout, 2002; Wilson, Peebles, Hardy, & Litt, 2006) suggests a mechanism through which virtual life and experiences affect nonvirtual life. On-line discussion of techniques, triggers, and attitudes toward off-line help-seeking may shape behavioral choices outside of the virtual realm that are later brought back, shared, and used to assure support and membership. As has been documented with disordered eating and violence in the media (Bushman & Huesman, 2000; Donnerstein & Smith, 2000; Malamuth & Impett, 2000), proliferation of NSSI on the Internet may fundamentally reinforce NSSI as a behavioral option. In addition to cultural reinforcement, the biological, intrapsychic, and social functions cited by self-injurious youth for initiating the behavior also serve to maintain it (see Chapter 4). Also, as is true for other risk behaviors, once present in any concentration within highly youth-populated settings such as schools, the opportunity for the spread of NSSI may be enhanced. This is particularly true where the practice is distributed among a variety of social groups or used as part of group membership, as there is growing evidence to suggest (Walsh, 2006; Young et al., 2006).

Environments in which antecedents to NSSI are found in high concentration are the final mechanism through which the social epidemiology framework used here suggests NSSI might spread (Berkman & Kawachi, 2000). As reviewed in Chapter 13 (on inpatient treatment), among clinical populations, the most commonly identified antecedents of NSSI are a history of trauma (most often sexual abuse), emotion and personality disorders, disordered eating, social isolation, suicidality, and being female or a member of a minority sexual orientation group. Community settings with high proportions of individuals possessing these traits may be at higher risk for initiating and maintaining NSSI.

INTERVENTION AND PREVENTION OF NSSI IN COMMUNITY SETTINGS

NSSI behavior is frightening and worrisome for many youth and adults. This is particularly true for adults who did not grow up with NSSI as part of their social landscape and who tend to view it as a suicidal gesture. The clear and pervasive presence of the behavior in community settings, however, raises the need for detection, intervention, and prevention approaches likely to be efficacious in a variety of community settings.

COMMUNITY-LEVEL PREVENTION AND INTERVENTION

Because *community* is such an all-encompassing term, defining the target population for a particular intervention or prevention is a crucial first step. The target population consists of the individuals or entities to which services are focused and in which it is hoped change will be effected. When the community is defined as a setting with clearly defined physical or institutional boundaries, such as a school, detention facility, or other youth-serving program, the tasks associated with NSSI intervention and prevention necessarily occur within the scope and reach of the physical and associational boundaries of the community. A school, for example, typically identifies as its target population the student body (or particular individuals at heightened risk within its student body) and focuses detection, intervention, and prevention efforts only on this group. Larger community-level interventions, however, often occur across geopolitically defined areas, such as neighborhoods or school districts and thus are concerned with a much larger and more diverse population of youth.

Although approaches vary, there are important commonalities. The Institute of Medicine nomenclature for understanding intervention and prevention (Mrazek & Haggerty, 1994) offers a useful taxonomy for thinking about community-level intervention and prevention in mental health. As illustrated in Table 9.1, the Institute of Medicine breaks prevention into three levels that differ by approach, target, and objective. It is important to note that prevention subsumes intervention and detection because depending on the level of prevention specified and the setting in which it takes place, it includes intervention and detection activities.

Universal prevention approaches target an entire population without regard to the particular level of risk among individuals or groups within the population. Universal prevention is typically (a) targeted to groups rather than individuals; (b) focused on groups of individuals assumed to be healthy, although possibly at risk of the behavior by virtue of their circumstance (such as their age, in this case); (c) intended to change group norms, policies, or practices; and (d) founded on credible evidence or

theory (Cowen, 1973, 1983). Examples specific to NSSI include teaching or promoting media literacy or incorporating coping skills training into educational curricula likely to reach large numbers of students.

Selective prevention approaches focus on nonsymptomatic individuals considered at high risk due to biological, psychological, and socio-cultural factors. These approaches are designed to target risk factors believed to predispose individuals to the disorder in question. Examples specific to NSSI include focused emotion regulation training or reduction of help-seeking stigmas to individuals or groups of youth identified as at risk of NSSI.

Indicated, also called targeted, prevention focuses on individuals with very clear precursors to the behavior of interest, such as episodes of dissociation or presence of borderline personality disorder symptoms. Indicated prevention efforts are time and cost intensive in community settings where detailed mental health assessments are not typical or feasible. For this reason, we will only discuss frameworks and practices likely to be effective in universal and selective prevention efforts. It is also important to stress that, to our knowledge, there have been *no* evaluated prevention initiatives specific to NSSI. We can, however, make recommendations based on the review earlier in this chapter as well as lessons learned from suicide and disordered eating prevention programs because both of these have been strongly linked to NSSI (Favazza & Conterio, 1989; Favazza, DeRosear, & Conterio, 1989; Pattison & Kahan, 1983; Whitlock, Eckenrode, et al., 2006).

UNIVERSAL PREVENTION APPROACHES FOR NSSI

Population approaches, which include community-level interventions to prevent NSSI, are by no means the norm. Prevention research in the mental health arena often has struggled to ensure that interventions are theoretically and empirically tied to known risks, even as it appears that theory-driven interventions are more likely to be rigorously evaluated and to result in the desired outcomes (Mrazek & Haggerty, 1994). Although there now is a growing body of research regarding risk factors for NSSI, this has yet to be tied in a systematic fashion to prevention efforts that would be likely to affect a large proportion of young adults.

Models such as that posited by Levine and Smolak (2006)—the nonspecific vulnerability-stressor model (NSVS)—bring together empirical and theoretical knowledge about both adolescent development and underlying social-environmental causes of maladaptive behaviors. Derived from a broad and sound body of empirical study and theoretical principles, NSVS tenets apply well to what is known about NSSI specifically and meld developmental considerations with an emphasis on setting-level intervention (e.g., families, schools, peer groups, youth groups, etc.). The NSVS model stresses the teaching of life skills for coping with stress, provision of opportunities to attain

TABLE 9.1 Application of the Institute of Medicine Nomenclature to NSSI

Terminology	Target population	Prevention goal	Examples of NSSI-specific objectives
Universal prevention	Entire population	Changes in group norms or practices, present in the larger population, known or theoretically believed to reduce risk and increase protective factors.	<ul style="list-style-type: none"> • Involve multiple social ecologies (school, neighborhood, peer groups, youth groups, families, etc.) • Capacity to cope • Medial and digital literacy • Social connectedness • Social isolation • Promote help-seeking when signs of distress are present • Train individuals working with youth to recognize and respond to signs of SI and its precursors • Equip youth to recognize signs of distress. • Equip parents to recognize and respond to signs of NSSI • Develop protocols for dealing with NSSI behavior in specific settings (such as schools and youth programs) • Train individuals who work with youth to identify those at risk • Enhance capacity to cope and help-seeking coping capacity in target group • Provide counseling services for target youth aimed at reducing risk and enhancing coping • Youth voice? • Engage parents and/or other key adults in lives of target population in achieving objectives • Increase screening for target population • Vigorously treat youth with early NSSI behavior (e.g., single NSSI incident) • Provide counseling services for target youth aimed at reducing risk and enhancing coping • Actively identify and engage self-injurious youth in therapy
Selective (or targeted) prevention	Individuals or subgroups at significantly higher than average risk of developing mental disorders or adverse outcomes.	Changes in attitude, knowledge, and behavior of target population	
Indicated preventive	High risk individuals with detectable precursors to the condition of interest	Reduction of precursor and prodromal signs and symptoms	

goals and feelings of competence and mastery, and a focus on increasing social connectedness at the individual and setting level. Prototypical elements of the approach emphasize:

- Broad incorporation of personal and interpersonal exercises for understanding and improving self-esteem, internal locus of control, and individual identity
- Peer and individual group-level instruction in ways to increase life skills
- Student involvement and engagement in development of environments that produce positive change
- Focus on altering attitudes and behaviors of adults, institutions, and peer groups to create supportive environments, with healthier norms and a manageable number of stressors (Levine & Smolak, 2006, p. 146).

Many of the elements featured in the NSVS model resonate with approaches commonly used in clinical settings to treat self-injurious youth. For example, dialectical behavior therapy, of which enhancing capacity to cope and mindfulness is a major element, is used often with significant success (Comtois, 2002; Hawton et al., 1998; Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Walsh, 2006). Similarly, Conterio and Lader (1998) use a dynamic and relation-based approach with which they report significant success.

Although not focused on youth, the U.S. Air Force's (USAF) Suicide Prevention Program illustrates a universal prevention initiative designed to change setting-level norms, provide (re)enforcement for positive help-seeking, and intervene in behavioral antecedents (Knox, Litts, Talcott, Feig, & Caine, 2003). One of the primary components includes identification and training of community gatekeepers to reach and refer those individuals at immediate risk of suicide and other self-damaging behaviors. Community gatekeepers are those with consistent access to enlistees, such as USAF commanders. Gatekeeper training is coupled with changes in policies that affect help-seeking, such as reduction in confidentiality policies for those seeking help from mental health services. By limiting confidentiality for disclosures to gatekeepers, the number of self-referrals to ambulatory mental health services increases which, in turn, enhances the likelihood that enlistees in danger of suicide are detected and assisted early. Another major target of the training includes institutionalizing a buddy system in which all USAF members are trained to recognize early signs and symptoms of someone in danger of harming him- or herself. This enhances capacity to recognize distress in oneself and others and reinforces the value and likelihood of help-seeking.

Case Study: Suicide Prevention in the U.S. Air Force

The USAF suicide prevention program is one of the only community-level, persistent, multidimensional approaches to suicide prevention. A multidimensional approach captures all of the aspects likely to be predictors of successful implementation. These include characteristics of communities (in the USAF, these include the geographical location and size of the various USAF bases, or communities); the theoretical framework of each of multiple interventions (in the USAF, the Eleven Initiatives), and the integrated strategic approach (universal, selective, or indicated) chosen to deliver multiple interventions. Taken together, this multidimensional universe will likely require institutionalization at the community level to support both implementation and ongoing fidelity.

The USAF's Eleven Initiatives were designed to alter social norms, increase knowledge and awareness, promote early help-seeking, and alter policies that might impede help-seeking and treatment for suicidality. They include leader awareness education and training, incorporation of suicide prevention practices into professional curricula, development of detection and referral policies, increased prevention focus among mental health personnel, establishment of a seamless system of services, tools for assessing behavioral health, and central surveillance. Evaluation of the program has shown tremendous success in reducing the rate of suicide in the USAF (Knox et al., 2003) and is now being adapted to college settings.

Nine years worth of outcome data show consistent reduction in the rate of suicide and related outcomes. For example, there have been measurable reductions in risk for accidental death, homicide, and moderate and severe family violence (Knox et al., 2003). The effectiveness of the initiative has led to an adaptation of the main components in a college setting under the lead of the second author, Knox. Although NSSI is well understood to not represent a suicidal attempt or gesture, a growing body of evidence suggests that it is a risk factor for suicide (Muehlenkamp & Guitierrez, 2004; Nock, Joiner, Gordon, Lloyd-Richardson, & Prinstein, 2006; Whitlock & Knox, 2007). Such evidence suggests that similar community-level risk reduction strategies may be effective for NSSI.

Negotiating and balancing connectedness and autonomy is a core and often difficult task for adolescents in western countries. Providing environments simultaneously capable of fostering a sense of individual accomplishment and connection with others may emerge as a critical component of both universal and targeted prevention efforts. In the case of NSSI, helping peers and parents recognize early signs of distress, of which NSSI is one, is imperative because these are the groups most likely to be those first "gifted" with knowledge of the behavior. Because the first response to such disclosures plays a large role in what

is subsequently shared (Conterio & Lader, 1998; Walsh, 2006), peers and parents are quite literally the "front line" in NSSI prevention and intervention. In light of the role that media and the Internet may play in spreading knowledge of NSSI, inclusion of media and virtual literacy campaigns is also warranted. Whereas these need not be focused specifically on NSSI, teaching youth to discern between healthy and unhealthy examples of coping may help prevent a variety of behaviors linked to poor coping mechanisms including, but not limited to, NSSI.

A note of caution in designing universal prevention strategies is warranted. Because resources for universal prevention efforts are often limited, efforts to raise awareness through one-shot assemblies or awareness campaigns are common. In their review of eating disorder prevention strategies and research, Levine and Smolak (2006) summarize research that suggests that single-shot awareness raising strategies (e.g., educational assemblies or workshops) are, at best, either not effective or only effective in raising short-term knowledge. At worst, they are linked to increases in the behavior they intend to stop—particularly in high school and college populations. Similarly, repeated and rigorous evaluation of the popular DARE program aimed at reducing drug use among youth has also been shown to be ineffective and, at worst, harmful (Brown, D'Emidio-Caston, & Pollard, 1997; Lynam et al., 1999). Although the reasons for the ambivalent findings in studies aimed at evaluating time-delimited awareness raising are not clear, they may mirror some of the same mechanisms at work in studies that find suicide risk to be heightened by press coverage of a recent completed suicide (see Gould, Jamieson, & Romer, 2003, for review). Known as the "Werther effect," scholars have documented evidence for the hypothesis that promoting awareness of suicide may appeal to those susceptible to the behavior (Gould et al., 2003; Phillips, 1974). It is thus important that universal prevention efforts be grounded in sound theory, be mindful of possible unintended consequences, and be focused as much on addressing underlying behavioral mechanisms as in raising awareness about the phenomenon itself (particularly within the broad youth population; adult stakeholders will need specific information).

Case Study: Reduction of Mental Illness in a College Population

The success of the USAF suicide prevention project has led to replication in other settings. One of these involves an adaptation of the approach in college settings where it has been broadened to include NSSI as well as other forms of mental illness and distress. Although designed with the same overarching goals as the USAF suicide prevention project, activities associated with the college project are tailored to meet different contextual capacities and demands than those confronted in the USAF project. The college adaptation includes three primary components: baseline and ongoing population surveillance (via Internet-based survey of mental health and well-being

outcomes of interest), enhancement of clinical competency in effective treatment of mental health issues, and gatekeeper training for rapid detection and intervention. The primary objective is to change institutional norms and procedures, to raise awareness and capacity to detect and respond to mental distress, and to encourage student help-seeking. In the college project gatekeepers consist of residence hall advisors, faculty, and administrative and custodial staff with consistent student contact. Each of these groups is trained to recognize and respond to signs of student distress through presentations and role plays. College mental health providers are trained in clinical methods empirically demonstrated to reduce distress and the subsequent likelihood of self-harm. These components are complimented by university-wide campaigns intended to reduce stigma related to help-seeking and foster adoption of positive coping strategies.

SELECTIVE (OR TARGETED) PREVENTION APPROACHES FOR NSSI

Selective prevention approaches differ from universal approaches largely in the population they strive to reach. Whereas specific activities may vary somewhat from those associated with universal approaches aimed at addressing underlying mechanisms, many of the goals do not. In selective prevention, those deemed at risk of developing self-injurious behaviors are those to whom resources and intervention are directed. In keeping with this, selective prevention activities are often more narrow in scope and center on development and maintenance of a system for detecting and intervening with specific youth at higher than average risk. In the case of NSSI, youth at higher than average risk may be those who evidence a number of characteristics known to be associated with NSSI (see review above and Chapter 5). These characteristics may include poor coping mechanisms, a history of trauma and familial difficulties, a history of emotional or personality disorders, the presence of disordered eating or other self-harming behaviors such as drug or alcohol use and smoking, bisexual or questioning sexual orientation, self-depreciating cognitive appraisal style, or strong negative emotionality. Physiological problems associated with NSSI include sleep disorders and the tendency to somaticize stress. Association with friends who self-injure is another risk factor.

Because so many of these risk factors are associated with a myriad of other unhealthy behaviors, all targeted prevention approaches with this population may be more widely effective when aimed at enhancing interpersonal, intrapersonal, and environmental mechanisms known to serve as protective factors in NSSI and other risk behaviors. They are also likely to be most effective when mindful of the ways in which each setting might inadvertently support NSSI norms, social reinforcement, opportu-

nities, and antecedents and when addressing salient development-related struggles and needs.

At the individual level, this broader approach might include training at-risk youth related to positive coping mechanisms, balanced cognitive appraisal styles, and emotion regulation. It may also include facilitating access to individuals and opportunities to experience mastery, enhance interpersonal skills, and develop other developmentally appropriate skills. At the institution level, selective prevention efforts should focus on the development of protocols for detecting and responding to NSSI behaviors, identifying and intervening in individuals and groups for which NSSI is or may become normative, structuring responses to avoid inadvertently rewarding and thus reinforcing the behavior, and limiting opportunities for self-injurious practices (if possible). In line with this and as described in the previous chapter, protocols typically include staff training on the signs and symptoms of NSSI (and, ideally, other forms of mental distress) and designation of one or more point people to whom self-injurious youth are referred. Easily accessible therapeutic resources for youth deemed at higher than average risk are also important. As with universal prevention approaches, targeting settings of particular influence on the young person's life outside the institution or group in question, such as families and peer groups, enhances likelihood of success since because parents and peers wield influence. This influence, depending on its nature, may strengthen or undermine targeted prevention efforts.

ISSUES IN PREVENTION: DEVELOPMENT, CULTURE, AND UNINTENDED CONSEQUENCES

All prevention efforts are strengthened when universal, selective, and indicated approaches are pursued simultaneously. Selective and indicated prevention strategies, for example, will be stronger when coupled with efforts to change norms, policies, and practices across the multiple ecologies in which youth develop. Likewise, universal prevention approaches are most powerful when concentrated services for youth at particular risk can be offered in tandem. Similarly, they will be most effective when developmental trajectories of individuals and health conditions are taken into consideration as well. For example, delivering interventions at key periods of transition, such as entry into elementary, middle school, or college helps establish norms and expectations at junctures when youth are particularly receptive to acquiring them. Another approach focuses more on immediate risk factor reduction among those at risk during a critical window relative to the behavior. For example, adolescent drug prevention programs teach social skills and resistance training just before the major period of exposure to drugs (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995). Similar approaches are used in the prevention of HIV/AIDS (Kim, Stanton, Li, Dickersin,

& Galbraith, 1997). Finally, no prevention effort will be successful if it is not undertaken in a manner that is both mindful and respectful of the cultural values in which they are to be a part. As Armando Favazza (1996) so aptly points out in his anthropological study of NSSI that the meaning of NSSI differs radically across time, culture, and context. Although empirical study extending Favazza's observations is sorely lacking, anyone designing prevention efforts in populations other than their own is well advised to understand thoroughly the meanings as well as intended and possibly unintended consequences of their actions.

REFERENCES

- Adler, P. A., & Adler, P. (2007). The demedicalization of self-injury from psychopathology to sociological deviance. *Journal of Contemporary Ethnography*, 36, 537-570.
- Benton, S. A., Robertson, J. M., Tseng, W. C., Newton, F. B., & Benton, S. L. (2003). Changes in counseling center client problems across 13 years. *Professional Psychology: Research and Practice*, 34(1), 66-72.
- Berkman, L. F., & Kawachi, I. (2000). A historical framework for social epidemiology. In L. F. Berkman & I. Kawachi (Eds.), *Social epidemiology*. Oxford, UK: Oxford University Press.
- Birmaher, B., Ryan, N. D., Williamson, D. E., Brent, D. A., Kaufman, J., Dahl, R. E., et al. (1996). Childhood and adolescent depression: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35(11), 1427-1439.
- Botvin, G. J., Baker, E., Dusenbury, L. D., Botvin, E. M., & Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a white middle-class population. *Journal of the American Medical Association*, 273, 1106-1112.
- Brodie, M., Flournoy, R. E., Altman, D. E., Blendon, R. J., Benson, J. M., & Rosenbaum, M. D. (2000). Health information, the Internet, and the digital divide. *Health Affairs*, 19(6), 255-265.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, UK: Harvard University Press.
- Brown, J. H., D'Emidio-Caston, M., & Pollard, J. A. (1997). Students and substances: Social power in drug education. *Educational Evaluation and Policy Analysis*, 19, 65-82.
- Brumberg, J. J. (1992). From psychiatric syndrome to "communicable" disease: The case of anorexia nervosa. In C. Rosenberg & J. Golden (Eds.), *Framing disease* (pp. 134-154). Piscataway, NJ: Rutgers University Press.
- Bushman, B. J., & Huesmann, L. R. (2000). Effects of televised violence on aggression. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media*. Thousand Oaks, CA: Sage.
- Chapman, A. L., Gratz, K. L., & Brown, M. Z. (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behavior Research and Therapy*, 44(3), 371-394.
- Clendenin, W. W., & Murphy, G. E. (1971). Wrist cutting. *Archives of General Psychiatry*, 25, 465-469.

- Comtois, K. A. (2002). A review of interventions to reduce the prevalence of parasuicide. *Psychiatric Services*, 53(9), 1138-1144.
- Conterio, K., & Lader, W. (1998). *Bodily harm: The breakthrough healing program for self injurers*. New York: Hyperion Press.
- Cowen, E. L. (1973). Social and community intervention. *Annual Review of Psychology*, 24, 423-472.
- Cowen, E. L. (1983). Primary prevention in mental health: Past, present, and future. In L. A. Jason, J. N. Moritsugu, & S. S. Farber (Eds.), *Preventive psychology: Theory, research, and practice* (pp. 11-25). New York: Pergamon.
- Dahl, R., Spear, L. P., Kelley, A., Shaikh, R., & Clayton, R. (2004). Preface. *Annals of the New York Academy of Sciences*, 1021, xi-xii.
- Donnerstein, E., & Smith, S. (2000). Sex in the media: Theory, influences, and solutions. In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media*. Thousand Oaks, CA: Sage.
- Eccles, J. S., & Gootman, J. A. (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.
- Erdur-Baker, O., Aberson, C. L., Barrow, J. C., & Draper, M. R. (2006). Nature and severity of college students' psychological concerns: A comparison of clinical and nonclinical national samples. *Professional Psychology: Research and Practice*, 37(3), 317-323.
- Erikson, E. H. (1968). *Identity: Youth and crises*. New York: W. W. Norton.
- Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist*, 59(2), 77-92.
- Favazza, A. R. (1996). *Bodies under siege: Self mutilation and body modification in culture and psychiatry* (2nd ed.). Baltimore, MD: Johns Hopkins University Press.
- Favazza, A. R., & Conterio, K. (1989). Female habitual self-mutilators. *Acta Psychiatrica Scandinavica*, 79, 283-289.
- Favazza, A. R., DeRosear, L., & Conterio, K. (1989). Self-mutilation and eating disorders. *Suicide & Life-Threatening Behavior*, 19(4), 352-361.
- Feldman, S. S., & Elliott, G. R. (Eds.). (1990). *At the threshold: The developing adolescent*. Cambridge: Harvard University Press.
- Garbarino, J. (1995). *Raising our children in a socially toxic environment*. San Francisco: Josey-Bass.
- Gould, M., Jamieson, P., & Romer, D. (2003). Media contagion and suicide among the young. *American Behavioral Scientist*, 46(9), 1269-1284.
- Havighurst, R. J. (1972). *Developmental tasks and education*. New York: David McKay.
- Hawton, K., Arensman, E., Townsend, E., Bremner, S., Feldman, E., Goldney, R., et al. (1998). Deliberate self-harm: Systematic review of efficacy of psychosocial and pharmacological treatments in preventing repetition. *British Medical Journal*, 317(7156), 441-447.
- Hawton, K., & Rodham, K. (2006). *By their own young hand: Deliberate self-harm and suicidal ideas in adolescents*. London: Jessica Kingsley.
- Heath, N. L., Toste, J. R., Nedecheva, T., & Charlebois, A. (2008). An examination of non-suicidal self-injury among college students. *Journal of Mental Health Counseling*, 30(2), 1-20.
- Hersch, P. (1998). *A tribe apart: A journey into the heart of American adolescence*. New York: Ballantine.

- Kim, N., Stanton, B., Li, X., Dickersin, K., & Galbraith, J. (1997). Effectiveness of the 40 adolescent AIDS-risk reduction interventions: A quantitative review. *Journal of Adolescent Health, 20*(3), 204-215.
- Klonsky, E. D. (2006). The functions of deliberate self-injury: A review of the evidence. *Clinical Psychology Review, 27*, 226-239.
- Knox, K., Litts, D. A., Talcott, G. W., Feig, J. C., & Caine, E. D. (2003). Risk of suicide and related adverse outcomes after exposure to a suicide prevention programme in the US Air Force: Cohort study. *British Medical Journal, 327*: 1376-1380.
- Konicki, P. E., & Shulz, S. C. (1989). Rationale for clinical trials of opiate antagonists in treating patients with personality disorders and self-injurious behavior. *Psychopharmacology Bulletin, 25*, 556-563.
- Kress, V. E. W., Gibson, D. M., & Reynolds, C. A. (2004). Adolescents who self-injure: Implications and strategies for school counselors. *Professional School Counseling, 7*(3), 195-200.
- Lenhart, A., Madden, M., & Hitlin, P. (2005). Youth are leading the transition to a fully wired and mobile nation. *Pew Internet and American Life Project, Teens and Technology*, 1-48.
- Lerner, R. M. (1991). Changing organism-context relations as the basic process of development: A developmental contextual perspective. *Developmental Psychology, 27*(1), 27-32.
- Lerner, R. M. (1995). *America's youth in crisis: Challenges and options for programs and policies*. Thousand Oaks: Sage.
- Lerner, R. M., & Steinberg, L. (Eds.). (2004). *Handbook of adolescent psychology* (2nd ed.). Hoboken, NJ: John Wiley & Sons.
- Levine, M. (2006). *The price of privilege: How parental pressure and material advantage are creating a generation of disconnected and unhappy kids*. New York: Harper Collins.
- Levine, M. P., & Smolak, L. (2006). *The prevention of eating problems and eating disorders*. Mahwah, NY: Lawrence Erlbaum Associates.
- Linehan, M. M., Armstrong, H. E., Suarez, A., Allmon, D., & Heard, H. L. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Archives of General Psychiatry, 48*(12), 1060-1064.
- Lynam, D. R., Milich, R., Zimmerman, R., Novak, S. P., Logan, T. K., Martin, C., et al. (1999). Project DARE: No effects at 10-year follow-up. *Journal of Consulting and Clinical Psychology, 67*(4), 590-593.
- Malamuth, N. M., & Impett, E. A. (2000). Research on sex in the media: What do we know about effects on children and adolescents? In D. G. Singer & J. L. Singer (Eds.), *Handbook of children and the media*. Thousand Oaks, CA: Sage.
- Matthews, P. C. (1968). Epidemic NSSI in an adolescent unit. *International Journal of Social Psychiatry, 14*, 125-133.
- McKenna, K. Y. A., & Bargh, J. A. (2000). Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personality and Social Psychology Review, 4*(1), 57-75.
- Mrazek, P. J., & Haggerty, R. J. (Eds.). (1994). *Reducing the risks for mental disorders: Frontiers for prevention intervention research (report of the Institute of Medicine's Committee on Prevention of Mental Disorders)*. Washington, DC: National Academy Press.

- Muehlenkamp, J. J., & Gutierrez, P. M. (2004). An investigation of differences between self-injurious behavior and suicide attempts in a sample of adolescents. *Suicide and Life-Threatening Behavior*, 34, 12-23.
- Nock, M. K., Joiner, T. E., Gordon, K. H., Lloyd-Richardson, E., & Prinstein, M. J. (2006). Non-suicidal self-injury among adolescents: Diagnostic correlates and relation to suicide attempts. *Psychiatry Research*, 144(1), 65-72.
- Nock, M. K., & Prinstein, M. J. (2004). A functional approach to the assessment of self-mutilative behavior. *Journal of Consulting and Clinical Psychology*, 72(5), 885-890.
- Pattison, E. M., & Kahan, J. (1983). The deliberate self-harm syndrome. *American Journal of Psychiatry*, 140(7), 867-872.
- Phillips, D. P. (1974). The influence of suggestion on suicide: Substantive and theoretical implications of the Werther effect. *American Sociological Review*, 39, 340-354.
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck (Ed.), *Handbook of personal relationships* (pp. 367-389).
- Rideout, V. (2002). Generation Rx.com: What are young people really doing online? *Marketing Health Services, Spring*, 27-30.
- Ross, S., & Heath, N. (2002). A study of the frequency of self-mutilation in a community sample of adolescents. *Journal of Youth and Adolescence*, 31(1), 66-77.
- Ross, R. R., & McKay, H. B. (1979). *Self mutilation*. Lexington, MA: Lexington Books.
- Sameroff, A. J., & Siefer, R. (1995). Accumulation of environmental risk and child mental health. In H. E. Fitzgerald, B. M. Lester & B. S. Zuckerman (Eds.), *Children of poverty: Research, health, and policy issues* (pp. 233-254). New York: Garland.
- Steinberg, H., & Cauffman, E. (1996). Maturity of judgment in adolescence: Psychosocial factors in adolescent decision-making. *Law and human behavior*, 20, 249-272.
- Steinberg, L. (2004). Risk taking in adolescents: What changes, and why? *Annals of the New York Academy of Sciences*, 1021, 51-58.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: W. W. Norton.
- Symons, F. S. (2002). Self-injury and pain: Models and mechanisms. In S. R. Schroeder, M. L. Oster-Granite, & T. Thompson (Eds.), *Self-injurious behavior: Gene-brain-behavior relationships* (pp. 223-234). Washington, DC: American Psychological Association.
- Taiminen, T. J., Kallio-Soukainen, K., Nokso-Koivisto, H., Kaljonen, A., & Helenius, H. (1998). Contagion of deliberate self-harm among adolescent inpatients. *Journal of the American Academy of Child & Adolescent Psychiatry*, 37(2), 211-217.
- Twenge, J. M. (2000). The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952-1993. *Journal of Personality and Social Psychology*, 79(6), 1007-1021.
- Twenge, J. M. (2006). *Generation me: Why today's young Americans are more confident, assertive, entitled—and more miserable than ever before*. New York: Free Press.
- Walsh, B. W. (2006). *Treating NSSI: A practical guide*. New York: Guilford Press.

- Weissman, M. (1975). Wrist cutting: Relationship between clinical observations and epidemiological findings. *Archives of General Psychiatry*, 32(9), 1166-1171.
- Whitlock, J., Eckenrode, J., & Silverman, D. (2006). Self-injurious behaviors in a college population. *Pediatrics*, 117, 1939-1948.
- Whitlock, J. L., & Knox, K. (2007). The relationship between suicide and self-injury in a young adult population. *Archives of Pediatrics and Adolescent Medicine*, 161(7), 634-640.
- Whitlock, J. L., Lader, W., & Conterio, K. (2007). "The role of virtual communities in self-injury treatment: Clinical considerations." *Journal of Clinical Psychology/In Session*, 63, 1135-1143.
- Whitlock, J. L., Powers, J. L., & Eckenrode, J. (2006). The cutting edge: The Internet and adolescent NSSI. *Developmental Psychology*, 42(3), DOI: 10.1037/0012-1649.1042.1033.1000.
- Whitlock, J. L., Purington, A., Eells, G., & Cummings, N. (2008). *Self-injurious behavior in college populations: Perceptions and experiences of college mental health providers*. Manuscript submitted for publication.
- Whitlock, J. L., Purington, A., & Gershkovich, M. (in press). Influence of the media on self injurious behavior. In M. Nock (Ed.), *Understanding non-suicidal self-injury: Current science and practice*. Washington, DC: American Psychological Association Press.
- Wilson, J. L., Peebles, R., Hardy, K. K., & Litt, I. F. (2006). Surfing for thinness: A pilot study of pro-eating disorder web site usage in adolescents with eating disorders. *Pediatrics*, 118(6), 1635-1643.
- Yates, T. M. (2004). The developmental psychopathology of self-injurious behavior: Compensatory regulation in posttraumatic adaptation. *Clinical Psychological Review*, 24, 35-74.
- Young, R., Sweeting, H., & West, P. (2006). Prevalence of deliberate self harm and attempted suicide within contemporary Goth youth subculture: Longitudinal cohort study. *British Medical Journal*, 332, 1058-1061.