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Non-Suicidal Self-Injury—Does social support make a difference? An epidemiological investigation of a Danish national sample

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ABSTRACT

Teenagers and young adults who had experienced child maltreatment, being bullied in school and other serious life events have an increased risk of Non-Suicidal Self-Injury (NSSI), but some individuals manage to escape serious stressful life events. The research question is: does social support make a difference? A national representative sample of 4,718 persons born in 1984 were selected for an interview about their childhood, maltreatment, serious life events and social support in order to test if social support during childhood is a statistical mediator between childhood disadvantages and NSSI. The survey obtained a 67% response rate ($N = 2{,}980$). The incidence rate of NSSI among this sample was estimated at 2.7% among young adult respondents. Participants with a history of child maltreatment, being bullied in school or other traumatic life events reported a rate of NSSI 6 times greater than participants without this history (odds ratio: 6.0). The correlation between traumatic life events during adolescence and NSSI is reduced when low social support is accounted for in the statistical model ($p < 0.01$). The results indicate that social support is a partial mediator for NSSI. The reported low self-esteem indicates the importance of treating adolescents who are engaged in NSSI with respect and dignity when they are treated in the health care system. Results further imply that increasing social support may reduce the likelihood of NSSI.

Introduction

The aims of this study were to determine the prevalence and epidemiology of Non-Suicidal Self-Injury (NSSI) and to explore whether receiving social support in childhood mediates the relationship among childhood abuse, other traumatic life events in childhood, and NSSI among young adults in a Danish national sample. We hypothesize that various types of child maltreatment and other traumatic life events increase the risk of NSSI in young adulthood and that social support in childhood decreases the risk of developing NSSI in young adulthood.

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Prevalence of NSSI among young adults

Scientific studies, observations by clinicians, and the popular media all indicate that NSSI (e.g., repetitious cutting, burning, scratching, hitting oneself) is increasing among young adults (Muehlenkamp & Gutierrez, 2004; Whitlock, Eells, Cummings, & Purington, 2009). The figures on the prevalence and incidence of NSSI, however, vary widely because of differences in study populations and specific definitions of NSSI. Some studies use narrow definitions and thus explicitly exclude self-injurious behavior with suicidal intent. Other studies include a broad range of self-injurious behavior, such as taking an overdose and suicide attempts. Published estimates of the incidence of NSSI in non-clinical populations vary, ranging from 1.9% (Nock & Kessler, 2006) to 46.5% (Lloyd-Richardson, Perrine, Dierker, & Kelley, 2007). The highest figures are found in studies of adolescents and students in high school or college. A Danish survey found that 21.5% of high school students in the Copenhagen area had engaged in NSSI at some point in their lives (Møhl & Skandsen, 2012). These figures are in line with other NSSI studies among students (Laye-Gindhu & Schonert-Reichl, 2005; Messer & Fremouw, 2008; Muehlenkamp & Gutierrez, 2004; Ross & Heath, 2002). In the proposed diagnostic criteria for NSSI in DSM-5, NSSI needs to occur at least five times to be considered pathological, but some studies of the prevalence of NSSI (In-Albon, Ruf, & Schmid, 2013; Selby, Bender, Gordon, Nock, & Joiner Jr, 2012) also include one-time occurrences, which makes the figures hard to compare.

Defining NSSI

The lack of consensus about definition is also reflected in the various terms used for self-harming behaviors: self-injury (SI), self-injurious behavior (SIB), self-mutilation, self-harm or deliberate self-harm (DSH), self-cutting, and NSSI. Some of the terms, such as self-harm, do not differentiate between non-suicidal behavior and behavior with a suicidal intent. In an effort to utilize a definition similar to the DSM-5 diagnosis which excludes suicidal behavior, we applied the definition of self-injury developed by the International Society for the Study of Self-injury (ISSS). ISSS defines NSSI as "the deliberate, self-inflicted destruction of body tissue without suicidal intent and for purposes not socially sanctioned" (Lloyd-Richardson et al., 2007). This definition eliminates indirect self-harm (e.g., drug abuse, eating disorders), self-injurious behavior with a suicidal intent, and socially sanctioned behavior, such as piercing and tattooing. Suicidal behavior in connection with childhood adversities is studied elsewhere (Christoffersen & DePanfilis, 2010). In addition, using the ISSS definition, which is close to the DSM-5 definition, provides a higher clinical relevance when interpreting findings.

Nature and effects of NSSI

Most often NSSI begins between the ages of 12 and 24 with a bimodal peak in onset among 12–14 and 18–19 years of age (Kerr, Muehlenkamp, & Turner, 2010; Nixon, Cloutier, & Jansson, 2008; Yates, 2004). The majority of college students stopped NSSI within five years of starting, but the behavior often continued in adulthood (Whitlock, Eckenrode, & Silverman, 2006). Studies have indicated that NSSI is best understood as a coping strategy and a non-specific symptom of other underlying personal difficulties (Duffy, 2009; Møhl, 2006). NSSI serves to temporarily reduce the psychic tension associated with negative affect such as anger, guilt, depression, intense depersonalization, and feelings of helplessness. These states are commonly seen among survivors of child maltreatment (Briere & Elliott, 1994; Klonsky, 2007). Results from 18 studies provided converging evidence for the affect-regulation model of NSSI which suggests that NSSI works as a strategy to alleviate acute negative affect or affective arousal (Klonsky, 2007). Individuals performing NSSI have a significantly higher incidence of emotional dysregulation than individuals who have better skills for social and emotional regulation (Gratz & Roemer, 2004).

Risk factors for NSSI

In line with these results, several retrospective studies have found that early trauma, maltreatment, physical abuse, or sexual abuse in childhood may cause an increased risk of NSSI in young adulthood (Favazza & Conterio, 1989; Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Nock & Kessler, 2006). Studies of both non-clinical samples (Paivio & McCulloch, 2004) and clinical samples (Ystgaard, Hestetuna, Loeb, & Mehiuma, 2004) have reported increased incidence of sexual childhood abuse among people who self-injure. Other studies suggest that psychological abuse has an even stronger association with NSSI than sexual abuse (Evren & Evren, 2005; Zoroglu et al., 2003). Nada-Raja, Skegg, Langley, Morrison, and Sowerby (2004) found psychiatric disorder as another risk factor for NSSI in a population-based study among 1,000 young people (Nada-Raja et al., 2004). Borderline personality disorder, depression, anxiety, PTSD, and eating disorders were identified as risk factor for NSSI in a National Comorbidity Survey among 1,986 military recruits (Klonsky, Oltmanns, & Turkheimer, 2003; Nock, 2010). Other risk factor for NSSI include an earlier suicide attempt (Andover, Morris, Wren, & Bruzzese, 2012; Lofthouse & Yager-Schweller, 2009) and insecure attachment and dissociation (Gratz, Conrad, & Roemer, 2002).

Childhood adversities and their effects on NSSI can also be more subtle such as growing up in an invalidating environment which increases the risk of emotional dysregulation and maladaptive coping strategies such as NSSI (Linehan, 1993; Martin, Bureau, Cloutier, & Lafontaine, 2011). Erickson and Egeland (2002) found that the social processes in the family that are the most damaging for child development are psychological maltreatment, physical abuse, sexual abuse, and neglect. These