

# NON SUICIDAL SELF-INJURY AND EATING DISORDERS

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## SUMMARY

Epidemiological data on non-suicidal self-injury (NSSI) in the context of eating disorders (ED) are limited, with estimates varying widely across studies and reviews being primarily narrative.

Self-injurious behaviour is present in various psychiatric disorders of adolescents and young adults, including eating disorders. A study conducted on the general population of adolescents showed that 30% of females and 24% of 16-year-old males with an eating disorder had engaged in acts of self-harm compared with 8.3% of females and 4.0% of males without an eating disorder. In particular, self-harm behaviours, including Non-Suicidal Self-Injury (NSSI), suicide attempts (SA), and suicidal ideations (SI), are common among individuals with Anorexia Nervosa (AN) and Bulimia Nervosa (BN). Presence of eating disorders and self-injurious behaviours in the same individual is associated with more severe psychopathology increasing the risk of more severe depressive and anxiety symptoms and suicide attempts.

**Key words:** eating disorders - non-suicidal self-injury - suicide attempts - suicidal ideations - anorexia nervosa - bulimia nervosa

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## INTRODUCTION

Anorexia nervosa and Bulimia nervosa are influenced by socio-cultural factors, family dynamics, negative emotions, low self-esteem, and body dissatisfaction (Polivy et al. 2002). They also have the highest mortality rates among psychiatric disorders, with suicide being a significant cause of death after medical complications (Arcelus et al. 2011, Fedorowicz et al. 2007). Eating disorders often involve characteristics such as high perfectionism, alexithymia (difficulty in identifying and expressing emotions), low self-esteem, obsessions, and rigidity. These traits can serve as predisposing, precipitating, or maintaining factors for eating disorders. Among these, alexithymia is particularly noted for its association with a high prevalence of self-injurious thoughts and behaviours, leading to non-suicidal self-harm (Claes et al. 2013).

## NON SUICIDAL SELF-INJURY

Adolescence is a critical period for the onset of both EDs and self-injury (Grilo et al. 2021). In fact, both NSSI and ED typically emerge in adolescence or early adulthood and predominantly affect females. Suicide is on the rise especially among young people aged 15 to 24 years old and eating disorder patients have suicide rates up to 18 times higher than the general population (Keshaviah et al. 2014). One of the most important predictors of suicidal behaviour in adolescents is the non-suicidal self-harm (Ribeiro et al. 2016, Franklin et al. 2017), which consist in deliberate behaviour aimed at causing harm to the surface of the body without suicidal intent including cutting the skin,

burning, stabbing, beating, scratching, scraping, or carving (Klonsky et al. 2011, Muehlenkamp et al. 2004). A common factor between ED and non-suicidal self-harm is body dissatisfaction with negative attitudes towards the body and self-image and the body as an object of contempt resulting in self-harm (Anderson et al. 2002, Svirko et al. 2007, Walsh et al. 2007). They share several psychosocial risk factors, such as childhood adversity and sexual abuse, and are believed to involve similar neurobiological and psychological mechanisms, including noradrenergic dysfunction, impulsivity, obsessive-compulsive traits, affect dysregulation, dissociation, self-criticism, and a need for control. Both conditions are also associated with psychiatric comorbidities like depression, anxiety, suicidality, and substance abuse. NSSI, suicide attempts, substance abuse, alcohol abuse, shoplifting and sexual disinhibition are behaviours often observed together. Therefore, they are identified in a "multi-impulsive" subgroup of eating disorder patients (Cucchi et al. 2016). Indeed, several research showing higher levels of impulsive behaviours, including substance abuse, among ED and NSSI patients compared to those with ED alone (Islam et al. 2015).

Up to 72% of individuals with eating disorders also engage in NSSI. Within the ED, NSSI was more prevalent among those with BN than those with AN (Cucchi et al. 2016). In particular, evidence suggests NSSI is more common in those with binge and purge behaviours, such as BN or the binge-eating/purging subtype of AN (Svirko et al. 2007), with higher lifetime frequencies observed in those with the binge-purge subtype (AN-BP/BN) compared to the restrictive subtype (AN-R) (Perez et al. 2018).

## MULTIFACTORIAL VARIABLES

The multifactorial variables contributing to self-harm behaviours among individuals with eating disorders include binge eating, depression, impulsivity, ruminations, and loss aversion. Impulsivity is defined as a tendency to act without forethought, often leading to negative outcomes. Research shows a strong relationship between impulsivity and eating disorders (Waxman et al. 2009) also individuals with the binge-purge subtype of Anorexia Nervosa and Bulimia Nervosa report higher levels of impulsive behaviour compared to those with the restrictive subtype of Anorexia (Claes et al. 2005). Various studies have shown impulsivity to be a major risk factor for non-Suicidal Self-Injury and suicide attempts (Lockwood et al. 2016). Instead, loss aversion (LA) is the tendency to avoid losses rather than seeking equivalent gains. It is postulated that there is a profound relationship between LA and self-harm behaviours, including NSSI and suicidal ideation (Sagiv et al. 2020). Rumination is a response to distress characterized by repetitive and passive focus on symptoms, their potential causes, and consequences and is closely linked to depression (Sagiv et al. 2020). Ruminating on concerns about nutrition, weight, and fitness exacerbates eating disorder symptoms but also anxiety and depression. Recent studies have shown a link between ruminant thought patterns and self-injurious behaviours. Lastly, depression is linked to various self-harm behaviours, including non-suicidal self-harm, suicidal ideation, and suicide attempts. Research indicates that depression leads to cognitive deficits that impair decision-making. Specifically, impulsivity moderates the relationship between depression and SI.

Several reasons can be for the high co-occurrence of non-suicidal self-harm and eating disorders such as:

- Emotion regulation: both NSSI and ED can serve to regulate emotions, reducing negative emotions and adverse tensions;
- Inflicting damage: both behaviours involve a willingness to harm one's body, due to dissatisfaction with one's body;
- Impulsivity: both NSSI and ED are associated with impulsivity, particularly negative urgency (You et al. 2014).

## CONCLUSIONS

Eating disorders are serious disorders with high prevalence and mortality that affect both the mental and physical health of a person. ED are aggravated when combined with non-suicidal self-injury.

A greater scientific understanding of the relationship between NSSI and ED is critical to improve health care practices and develop effective treatment plans. These include psychotherapy and drug therapy. Psychotherapy

should intervene in areas such as emotion regulation, problem-solving skills, and self-control. On the other hand, about pharmacological treatment, drugs acting on the serotonergic, dopaminergic, and opioid systems have shown some benefits in the management of NSSI (Turner et al. 2014).

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Rebecca Juli: conceptualization, data curation, formal analysis, investigation, methodology, project administration, visualization, validation, writing original draft, writing review & editing, supervision.

Luigi Juli, Alfredo Juli & Giada Juli: conceptualization, visualization, writing original draft, writing review & editing.

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