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Meaning in life and non-suicidal self-injury: A follow-up study with participants with Borderline Personality Disorder

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ABSTRACT

Non-suicidal self-injury (NSSI) is considered one of the defining features of people diagnosed with Borderline Personality Disorder (BPD). Longitudinal studies are needed to identify factors predicting future NSSI in BPD participants. Several studies have shown that low meaning in life is associated with mental health problems, addiction problems, depression, hopelessness, and suicide. The purpose of this paper is to examine whether meaning in life predicts the frequency of NSSI behaviors during the one-year follow-up. The sample was composed up of 80 participants with a BPD diagnosis. We assessed the frequency of NSSI behaviors over a 12-month follow-up period. The results suggest that the participants who had low meaning in life had more frequency of NSSI, depression, and hopelessness at baseline, and more frequency of NSSI during the follow-up, than participants with high meaning in life. The predictor variables: Frequency of NSSI at base line, depression, hopelessness, and meaning in life, significantly predicted the frequency of NSSI during the one-year follow-up. Therefore, meaning in life was the only predictor of NSSI during the follow-up period.

1. Introduction

Non-suicidal self-injury (NSSI) includes any deliberate, socially unaccepted, self-harm behaviors that are not intended to end one's life (Rodham and Hawton, 2009). Typical NSSI behaviors are skin cutting, burning, hitting, and severe skin scratching. Estimates of prevalence suggest that in community-based samples, from 13% to 29% of adolescents engage in NSSI (Baetens et al., 2011). In young adults, studies reported lifetime NSSI prevalence rates ranging from 5% to 17% (Nada-Raja et al., 2004; Klonsky, 2011). In psychiatric inpatients, studies estimate a prevalence of lifetime NSSI ranging from 4% to 20% (Briere and Gil, 1998), while the NSSI prevalence in young inpatients is 40% (Jacobson et al., 2008). In clinical and general samples, research has shown that NSSI most commonly occurs between 13 and 15 years of age; thus, adolescence represents a period of increased risk of engaging in NSSI (Hamza et al., 2012). Moreover, studies with long-term follow-ups of adolescents who engaged in NSSI indicated a high prevalence of suicide attempts and high risk of death by suicide in adulthood (Hawton and Harriss, 2007). Thus, NSSI is an especially important risk factor for suicide (Klonsky et al., 2013). These studies suggest the importance of studying risk and protector factors for NSSI.

NSSI behavior is highly associated with Borderline Personality Disorder (BPD) (Glenn and Klonsky, 2011; Tuisku et al., 2014), and NSSI is considered to be one of the defining features of BPD patients (American Psychiatric Association, 2000). The main NSSI behaviors in BPD patients are cutting, bruising, burning, head banging, and biting (Shearer, 1994). Studies in BPD suggest that the main purpose of this NSSI behavior might be: to feel physical pain, to punish oneself for being bad, to control one's feelings, to exert control, express anger, or overcome numbness (Shearer, 1994), to get used to physical and emotional pain (Joiner et al., 2005), and to act as a dysfunctional emotion regulation strategy (Klonsky, 2009). Several cross-sectional studies in participants without BPD diagnoses found that NSSI was correlated with negative emotionality (Klonsky et al., 2003; Franklin et al., 2010; Bresin, 2014), such as depression (Kumar et al., 2004), hopelessness (Andover et al., 2005), and previous NSSI (Hamza et al., 2012).

A large number of studies have been carried out on NSSI, most of them cross-sectional. However, a surprising result is that many cross-sectional correlates of NSSI fail to predict prospective NSSI

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(Glenn and Klonsky, 2011). For these reasons, longitudinal studies are needed to identify factors that predict future NSSI. Specifically in participants with BPD, as far as we know, only one longitudinal study analyzed the predictors of NSSI. Chapman et al., (2009) found that attachment, as a facet of temperament, was consistently associated with prospective NSSI.

In the past decade, there has been increased interest in the study of meaning in life as a resilience factor for negative outcomes such as suicide (Schulenberg et al., 2011; Przepiorka, 2012; Kleiman and Beaver, 2013). Numerous definitions of meaning in life exist, ranging from coherence of life and sense of fulfillment, self-actualization, goal directedness or sense of purpose, to authentic living (Przepiorka, 2012). The feelings of meaning in life are related to the experience of freedom, responsibility, self-determination, a positive view of life, the future and oneself, purpose and accomplishment of existential goals, coping, satisfaction with life, and self-realization. People experiencing meaning in life are better prepared to successfully tackle vital circumstances, and they have a strong sense of autonomy, self-determination, and purpose in life (Frankl, 2006; García-Alandete et al., 2009). By contrast, a low level or absence of meaning in life is a negative cognitive–emotional–motivational state associated with hopelessness, perception of lack of control over one's life, and the absence of vital goals (Lukas, 2001). Several studies showed that poor meaning in life is associated with mental health problems, addiction problems, depression, hopelessness, and suicide (Clarke and Kissane, 2002; Edwards and Holden, 2003; Esposito et al., 2003; Noffsinger and Knoll, 2003; Kleiman and Beaver, 2013), whereas high meaning in life is positively associated with mental health and psychological well-being (Ho et al., 2010; Kleftaras and Psarra, 2012). Schulenberg et al. (2011) examined the sense of meaning in life in people with schizophrenia or major depression, and patients reported lower degrees of meaning in life than participants without these mental disorders. Recently, Marco et al. (2014) showed that meaning in life mediated, and therefore helped explain, the relationship between depression and hopelessness in participants with BPD. However, as far as we know, no studies have examined whether meaning in life is associated with NSSI behavior in participants with BPD.

In summary, meaning of life could be negatively associated with NSSI for the following reasons: (a) meaning in life is inversely associated with negative emotions such as hopelessness (e.g. García-Alandete et al., 2009) and depression (Psarra and Kleftaras, 2013; Volkert et al., 2014); (b) several studies have found that depression and hopelessness are positively associated with NSSI (Klonsky, 2009; Pérez et al., 2014). In addition, one of the most widely accepted functions of NSSI is to serve as a dysfunctional emotional regulation strategy that allows patients to escape from negative emotions such as depression, hopelessness, loneliness or guilt (Bresin, 2014). Thus, we propose that NSSI could be a dysfunctional strategy to escape from negative emotions associated with low meaning in life.

The aims of this research are as follows: (a) to find out whether participants with BPD with low meaning in life have more NSSI at baseline, and depression, hopelessness and NSSI during the follow-up, than participants with high meaning in life; (b) to examine whether the predictor variables: Frequency of NSSI at base line, depression, hopelessness, and meaning in life, predict the frequency of NSSI behaviors during the one-year follow-up.

2. Methods

2.1. Participants

The sample was drawn from the outpatient program for BPD in three different public mental health services in Spain. The inclusion criteria included patients between 16 and 60 years old who satisfied the DSM-IV-TR diagnostic criteria for BPD (American Psychiatric Association, 2000). The exclusion criteria included psychosis and moderate or severe mental retardation. Participants were white Europeans, and all of them understood Spanish perfectly. The initial sample was made up of 85 participants, but 5 were excluded because they did not meet all the BPD criteria. The final clinical sample consisted of 80 participants, 75 women, 93.7%, and 5 men, 6.3%. In addition, 97.5%, $n=78$, suffered from another disorder: 63.7%, $n=51$, met Eating Disorder criteria; 15%, $n=12$, Substance Dependence; 13.7%, $n=11$, Major Depressive Disorder; 3.8%, $n=3$, Anxiety Disorders; and 1.3%, $n=1$, Body Dimorphic Disorder. The participants' ages ranged from 16 to 60 years old, $M=32.21$, $SD=8.85$. Participation was voluntary, informed consent was required from participants, and no compensation was given to them. Table 1 shows other socio-demographic characteristics of participants.

Table 1
Sociodemographic characteristics of participants.

Variable	Category	*n*	%
Marital status	Single	68	85
	Married	12	15
Children	Yes	16	20
	No	64	80
Educational level	College-level	21	26.3
	High school	42	52.5
	Primary school	17	21.3
Occupational status	Employed	23	28.6
	Unemployed	45	56.4
	Student	12	15

N=80

2.2. Assessment and measures

Structured Clinical Interview for DSM-IV Axis I Disorders (SCID I; First et al., 2002). This interview is used to obtain the major DSM-IV-TR (APA, 2000) Axis I diagnoses. It offers good psychometric properties: Kappa 0.66, demonstrating reliability (Lobbestael et al., 2011).

Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID II; First et al. 1997). This interview is used to obtain DSM-IV-TR (APA, 2000) Axis II Personality Disorder diagnoses. It includes 119 questions and has a κ of 0.74, demonstrating reliability for admitted patients (First et al., 1997).

Relevant Clinical Information Inventory. Made *ad hoc* for this research, it collects the frequency of NSSI (from 0 to the maximum number of NSSI). NSSI was conceptualized as self-injurious behaviors that were not intended to be an attempt to end one's life. The number of NSSI behaviors at baseline (specifically in the 6 months prior to the initial assessment) and the number of NSSI behaviors during the 12-month follow-up were assessed through an open question and categorized by clinical psychologists specialized in BPD.

Purpose In Life (PIL; Crumbaugh and Maholick, 1969). The Spanish version of the PIL-Part A from the original Crumbaugh and Maholick (1969) is a 20-item Likert-type scale with seven response categories (both categories 1 and 7 have specific labels, and category 4 indicates neutrality), offering a measure of the presence of

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