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A structural test of the Integrated Motivational-Volitional model of suicidal behaviour

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ABSTRACT

Suicidal behaviours are highly complex, multi-determined phenomena. Despite this, historically research has tended to focus on bivariate associations between atheoretical demographic and/or psychiatric factors and suicidal behaviour. The aim of this study was to empirically test the Integrated Motivational-Volitional model of suicidal behaviour using structural equation modelling. Healthy adults ($N=1809$) completed anonymous self-report surveys. The fit of the proposed model was good, and explained 79% of variance in defeat, 83% of variance in entrapment, 61% of variance in suicidal ideation, and 27% of variance in suicide attempts. All proposed paths were significant except for those between goal re-engagement and two factors of suicide resilience (Internal Protective and External Protective) and suicidal ideation; and impulsivity and discomfort intolerance and suicide attempts. These findings represent a preliminary step towards greater clarification of the mechanisms driving suicidal behaviour, and support the utility of basing future research on the Integrated Motivational–Volitional model of suicidal behaviour.

1. Introduction

Each year approximately 6000 people in the U.K. and approximately 804,000 people worldwide die by suicide, making it the 14th leading cause of death globally (Office for National Statistics, 2013; World Health Organization [WHO], 2014). A history of suicidal behaviour is one of the most robust predictors of future suicide (Hawton and van Heeringen, 2009), and is, therefore, frequently the focus of research efforts to better understand the aetiology of suicide (Suominen et al., 2004). Although our knowledge of distal suicide risk factors (e.g., mental disorders) has increased considerably in recent decades (O'Connor and Nock, 2014), how and why certain factors work together to increase suicide risk is unclear. Results of psychological autopsy studies suggest that more than 90% of people who die by suicide have a mental disorder before their death. However, most people with a mental disorder never become suicidal (i.e., experience suicide ideation, make suicide attempts, or die by suicide; Bostwick and Pankratz, 2000; O'Connor and Nock, 2014). Thus, distal factors are not sufficiently specific to be clinically useful. For this reason, it is crucial that we advance our understanding of how distal risk factors may be translated into suicidal thoughts and behaviour via proximal psychological risk processes, as well as the psychological processes that underpin both suicidal ideation and the decision to act on suicidal thoughts. Such work is needed to inform the development of evidence-informed treatment interventions in this area.

Many theorists have sought to explain suicide (e.g., Baumeister, 1990; Shneidman, 1985; Williams, 2001; Williams et al., 2008), and although these theories have been useful in guiding research and prevention efforts, there is no evidence of sustained reductions in suicide rates (WHO, 2014). A commonality between these theories that may be limiting progress in our understanding suicide is that they do not account for why most people who have thoughts of suicide do not attempt suicide (Klonsky and May 2014; O'Connor and Nock, 2014). Indeed, with only a few notable exceptions, these models have failed to differentiate between those who develop suicidal ideation (but do not attempt suicide) from those who go on to engage in suicidal behaviour.

The Integrated Motivational–Volitional (Fig. 1) Model of suicidal behaviour (O'Connor, 2011) attempts to address this very issue. Integrating predominant factors from existing theoretical models, the Integrated Motivational–Volitional model conceptualises suicide as a behaviour (rather than a by-product of mental disorders)

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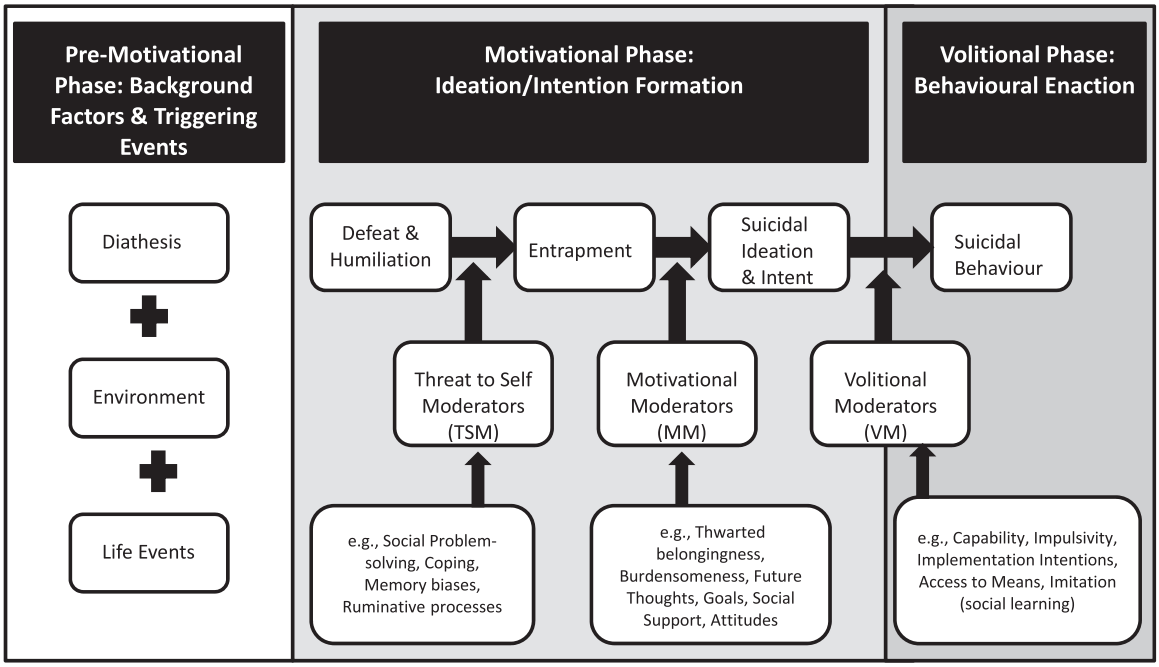

Fig. 1. Integrated Motivational–Volitional model of suicidal behaviour (O'Connor, 2011).

that develops through motivational and volitional phases. The motivational phase describes the factors that govern the development of suicidal ideation and intent; whereas, the volitional phase outlines the factors that determine whether an individual attempts suicide. Extending the "arrested flight" model of Williams (2001), the theory posits that suicidal thoughts derive from feelings of entrapment where suicidal behaviour is seen as the salient solution to life circumstances, and entrapment is triggered by defeat/humiliation appraisals. Feelings of entrapment are exacerbated by specific state moderators (i.e., factors that facilitate/obstruct movement between stages), such as brooding (ruminative cognitions which repetitively compare one's present situation with another unachieved benchmark), poor problem solving, and attribution biases. In the presence of motivational moderators such as interpersonal states (i.e., perceived burdensomeness and thwarted belongingness), impaired subjective goals, and disrupted future positive thinking, such appraisals lead to suicidal ideation. The translation from thoughts to actions is determined by behavioural enaction factors (volitional moderators) which include access to the means of suicide, acquired capability (fearlessness about death and pain insensitivity), exposure to the suicidal behaviour of others, and impulsivity.

Although relatively new, different aspects of the Integrated Motivational–Volitional model have already been tested empirically, yielding a number of encouraging findings. For instance, one study found that entrapment was a proximal predictor of repetition of suicidal behaviour over time. Specifically, whereas, suicide ideation, past suicide attempts, depression, hopelessness, defeat and entrapment were each univariate predictors of suicide attempts four years after an index attempt, entrapment was the only modifiable predictor (alongside frequency of previous suicide attempts) in multivariate analysis (O'Connor et al., 2013). Different components of the motivational phase of the model have also received empirical support. For example, in a number of studies, impaired positive future thinking (anticipation of positive experiences in the future) has been found to be a key factor within the suicidal process (e.g., Hunter and O'Connor, 2003; O'Connor et al., 2000; O'Connor et al., 2004; O'Connor et al., 2015). Indeed, within a sample of adults hospitalised following a suicide attempt, impaired positive future thinking was a better predictor of Time 2 suicidal ideation (approximately 2.5 months following discharge) than global hopelessness (O'Connor et al., 2008). The way in which individuals respond to unachievable goals (i.e., goal regulation) has also been found to predict repetition of self-harm/suicide (O'Connor et al., 2012b, O'Connor et al., 2009). O'Connor et al. (2012a), for instance, found evidence to suggest that suicide attempters who tend not to re-engage with new goals (in the face of existing unattainable goals) were at increased risk of readmission to hospital after self-harm, and that this association was further affected by the extent of existing goal disengagement.

Although the Integrated Motivational–Volitional model was developed with suicidal ideation and behaviour in mind, the central tenets of the model can, and have been, applied to self-harm irrespective of intent. For instance, in a sample of 5604 adolescents, as predicted by the Integrated Motivational–Volitional model, motivational phase variables did not distinguish between adolescents who only thought about self-harm (i.e., ideators-only) and those who actually engaged in self-harm (i.e., enactors); whereas, the volitional phase variables did (O'Connor et al., 2012a). In other words, volitional moderators bridged the intention-behaviour gap.

Other research findings are consistent with the Integrated Motivational–Volitional model and its contention that pre-motivational/motivational and volitional phase variables should differentially predict suicidal ideation and behaviour (May and Klonsky, in press; Séguin et al., 2004; Taliaferro and Muehlenkamp, 2014; Taylor et al., 2011). Séguin et al. (2004) did not find significant differences between adolescents who attempted suicide from those who only experienced suicidal ideation on measures of depression, self-esteem, irrational beliefs, reasons for living, parent–child relationships, or family functioning. Taliaferro and Muehlenkamp (2014) found that hopelessness and depression were higher among adolescent ideators than non-suicidal adolescents, but comparable between ideators and attempters; conversely, a self-injury history (a volitional phase factor) was more likely among attempters than ideators. There is also evidence to suggest that suicide capability is elevated among suicide attempters relative to suicide ideators (Smith et al., 2010; Van Orden