Research Paper

Validity of the Integrated Motivational-Volitional Model of Suicidal Behavior in Students: Structural Model

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ABSTRACT

Objectives The current study aimed at validating the Integrated Motivational-Volitional Model of suicidal behavior in Iranian students.

Methods The population of the current descriptive correlational and structural equation model included all students of Ardabil city among which 520 people of Mohaghegh Ardabili University students were selected as the sample. Suicide Attempt Scale, The Suicide Behaviors Questionnaire-Revised (SBQ-R), Implementation Scale, The Short Defeat and Entrapment Scale, Interpersonal Needs Questionnaire, Impulsivity Scale, Exposure to suicidal behavior Scale, Self-Perceived Acquired Capability for Suicide Scale, and Non-suicidal self-injury Scale were used.

Results The study findings showed that the modal had a good fitness in students' community and can explain suicide properly. Defeat and Entrapment play the most roles in forming suicide ideas and interpersonal needs; loneliness has a little effect on forming suicide ideas. Implementation, acquired capability for suicide and suicide ideas are the most important mediators that can explain suicide attempt in this model.

Conclusion Based on the current study findings it can be concluded that Motivational Volitional Model can explain suicide.

Extended Abstract

1. Introduction

The current study aimed at validating the Integrated Motivational-V olitional model of suicidal behavior in Iranian Students. Suicide is a leading cause of death worldwide, killing more than 800,000 people each year. A much larger number of people make suicide attempts, with some researchers estimating that approximately 25 attempts occur for every suicide death. Recent researches suggest that the rate of suicide in Iran increased to 9.9 in the past two decades. Also, 20-25 non-fatal suicide attempts occurred for every fatal one. Therefore, estimate would show that more than 198000 people committed suicide in 2016 in Iran and developing in-depth knowledge for suicide is an imperative issue for Iran. Especially for college students who are more vulnerable to suicide.

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In the past two decades, numerous models of suicidal behavior were formed and led to important developments in understanding the etiology and course of suicidal behavior. As a consequence, there is growing recognition that it is needed to move beyond the classic psychiatric diagnostic categories to further understand the causes of suicidal behavior.

The Integrated Motivational–Volitional (IMV) Model of Suicidal Behavior aimed at discriminating between suicide ideators and suicide attempters. The IMV proposes that suicidal behavior results from a complex interplay of factors, the proximal predictor of which is one's intention to engage in suicidal behavior (behavioral intention). Behavioral intention, subsequently, is determined by feelings of entrapment where suicidality is observed as the salient solution to life circumstances and entrapment is triggered by defeat/humiliation appraisals. The transitions from the defeat/humiliation to entrapment, from entrapment to suicidal ideation/intent, and from ideation/intent to suicidal behavior are determined by state-specific moderators (i.e. factors which facilitate/obstruct movement between states), entitled threat to self, motivational, and volitional moderators, respectively. In addition, background factors (e.g. deprivation, vulnerabilities) and life events (e.g. relationship crises), which collectively comprise the pre-motivational phase (i.e. before the commencement of ideation formation), provide the broader biosocial context for suicide.

Within the IMV model, it is hypothesized that sensitivity to signals of defeat and humiliation are determined by background factors (pre-motivational phase). As an example, this sensitivity to signals of defeat may be increased by what we believe others expect us. In suicidal individuals, such expectations are often excessive and unrealistic, with the suicidal individual believing that they will be considered a failure if they do not achieve certain standards. Although entrapment can be triggered by defeat/humiliation, it is not inevitable that the experience of defeat/humiliation lead to entrapment: Threat to Self-Moderators (TSM) have the potential to increase the likelihood that the former leads to feelings of entrapment. TSMs are defined as any variable that attenuates or strengthens the relationships between threat to self-appraisals, that is, defeat/humiliation, and entrapment. Components within the TSM are activated in response to a defeating or humiliating appraisal (usually following the experience of negative life stress or a change in severity of existing chronic stress).

Social problem-solving is a likely candidate as a moderator of the defeat–entrapment relationship, since it is activated in an attempt to resolve the defeating/humiliating situation. Over-general autobiographical memory biases are also included here since they are known to be associated with impaired social problem-solving. The evidence implicating social problem solving and autobiographical memory in the suicidal process is well established. Over-general memories are incomplete, lack specific detail, and often refer to activities/objects without specifying a time period or covering a time period greater than a day. Since people heavily rely on memories to solve interpersonal problems, it is easy to see how this over-general memory bias impairs problem-solving and is more generally implicated in emotional distress.

The IMV model suggests that the presence/absence of Motivational Moderators (MM) increases/decreases the likelihood that entrapment is translated into suicidal ideation and intent. A motivational moderator is broadly defined as any factor (moderator) that changes the likelihood that entrapment leads to suicidal ideation and intent. Absence of positive future thinking, lack of goal re-engagement, and low levels of social support are typical of motivational moderators-as they increase the likelihood that suicidal ideation develops following entrapment. They would include what Williams (2001) described as rescue factors in his arrested flight model. In the following section, some of the evidence for positive future thinking and goal re-engagement are considered.

2. Method

Structural Equation Modeling (SEM) was conducted to examine direct and indirect pathways of the study's model; 520 college students were recruited from the University of Mohaghegh Ardabili. Their age ranged from 17 to 48 years (M=22.4; SD=3.8). Nearly 60% of participants were from Ardebil city, Iran and approximately 40% were from other provinces . Only 17% said that they had any income. Most of the students were bachelor students (87%), not married (79%), and female (70%).

Measures of the current study included Suicide A ttempt, single item adapted from Nock et al. used to assess suicide attempt history. The study used "how many times have you" before "made an actual attempt to kill yourself in which you had at least some intent to die?". The Suicide Behaviors Questionnaire-Revised (SBQ-R) included four items to assess lifetime suicide ideation and/or attempt, suicidal ideation in the past year, the threat of suicide, and the likelihood of committing suicide in future. Implementation, based on the definition by Gollwitzer, 1999, a one-item question was developed: "Have you ever had a plan to kill yourself at a specific time (e.g. Monday or even specific time), a specific place (e.g. home, street), by a specific method (egdrug overdose)?". The Short Defeat and Entrapment Scale is an eight-item scale assessing defeat

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and entrapment as a unified concept. Interpersonal Needs Questionnaire (INQ) contains subscales for Perceived Burdensomeness (7 items; e.g. "These days I think my death would be a relief to the people in my life) and thwarted belongingness (8 items; e.g. "These days, I often feel like an outsider in social gatherings"). Impulsivity, two items based on research by O'Connor et al. were selected from the Plutchik Impulsivity Scale to assess this construct. Exposure to suicidal behavior included two questions about self-harm by close friends and family, Self-Perceived Acquired Capability for Suicide 2016) that include 1 item question "I could kill myself if I wanted to", and Non-suicidal self-injury included three items adapted from the non-suicidal self-injury assessment tool.

4. Discussion

Findings showed that this modal had a good fitness in Iranian community and could predict suicide properly. Defeat and Entrapment (r=0.36) play the most important roles in forming suicide ideas and interpersonal needs (r=0.24), loneliness has a little effect on forming suicide ideas. Implementation (r=0.16), acquired capability for suicide (r=0.14), and suicide ideas (r=0.24) are the most important mediators that can explain suicide attempt in this model.

Based on the study findings, it can be concluded that Motivational Volitional Model can predict suicide. Defeat and Entrapment play most of the roles in forming suicide ideas. In line with previous research, significant relationships were observed between defeat and entrapment with suicidal ideation, and exposure to self-injurious behavior in others and fearlessness about death and suicide attempts. The current article described the theoretical origins of the IMV model, the key premises underpinning the model, empirical tests of the model and future research directions. Finally, suitable intervention, especially cognitive behavioral strategies can be used to cut the link between pre-motivational and motivational phase with volitional phase.

Ethical Considerations

Compliance with ethical guidelines

The participants signed informed consent forms and had the right to leave the study at any time.

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Authors contributions

Conceptualization: Ahmadreza Kiani Chelmardi, Sajjad Rashid; Investigation: Ahmadreza Kiani Chelmardi; Methodology: Sajjad Rashid; Writing and supervision: Ahmadreza Kiani Chelmardi, Resources: Shokoufe Ramezani.

Conflicts of interest

The authors declared no conflict of interests.

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