



PREDICTIVE VALUE OF THE MALADAPTIVE COGNITIVE SCHEMAS IN ADOLESCENTS' SUICIDAL BEHAVIOR DURING THE COVID-19 PANDEMIC

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ABSTRACT

The present work aims to explore the predictive value of maladaptive cognitive schemas such as Defectiveness Shame, Vulnerability to harm or illness, failure, dependence incompetence, social isolation, and enmeshment/ undeveloped self on suicidal ideation and behavior of adolescents in the context of the COVID 19 pandemic. During 2020 -2022, a sample of 58 teenagers, male (61%) and female (39%), with an educational level of at least 9 classes, was selected. Data were collected with the Young Cognitive Schema Questionnaire in its short form (YSQ-S3) and the Beck Scale for Suicidal Ideations (BSSI), respecting ethical aspects regarding data processing and research participation. A multiple linear regression model was performed. The results indicate significant effects of Defectiveness Shame (DS), Vulnerability to harm or illness (VH), and Dependence Incompetence (DI). The model did not demonstrate the predictive value of Failure, Enmeshment/Undeveloped Self, and Social Isolation. Further replications and expansion of the results are needed.

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Introduction

The COVID-19 pandemic started in March 2020 and called worldwide for lockdowns, implicitly having significant effects on the mental health of people [1]. The most vulnerable were teenagers. Anxiety symptoms and depression symptoms were common during that period [2, 3] causing an increase in suicidal behaviors and ideas. The context of the COVID-19 pandemic highlighted psychological distress and vulnerable groups, exposed to a higher risk of developing mental health problems [4]. Atât la nivel al populației cât și la nivel individual [5].

Suicidal ideation during the COVID-19 pandemic has been linked to anxiety, loneliness, impaired family functioning, insomnia, depression, alcohol abuse, and a history of mental health issues and suicide attempts, among other factors [6-9]. Numerous studies have addressed the issue of suicidal behaviors as well as the factors underlying this behavior. Thus, suicidal ideations that refer to thoughts and patterns of thinking that pertain to life being unfulfilling, resulting in self-destruction tendencies, must also be considered. Risk factors commonly associated with suicide include psychiatric history, childhood adversity, and emotional disorders [10] specific unmet emotional needs during childhood can affect mental health and result in serious suicide attempts [11].

Numerous studies [12-14] showed that maladaptive cognitive schemas and dysfunctional schema modes are more common in individuals diagnosed with various psychiatric disorders. A higher prevalence of maladaptive cognitive schemas was identified in patients with depression [15, 16] and anxiety disorders [17, 18].

Numerous research shown that in the context of therapeutic techniques for psychopathology in childhood, particularly via a better knowledge of the function of EMS in this developmental period [17].

Studies of maladaptive cognitive schemas [19-22] suggest that they are individual ways of coping with primary, unconditioned schemas that allow the individual to take control. Thus, the individual may make sacrifices, suppress emotions, and strive to

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meet high standards [23]. Although not a long-term solution, such strategies counteract the triggering of unconditional schemes in the short term. These, in turn, are basic schemas, formed in early childhood and expressed in individual beliefs about oneself and others. They leave the individual without hope, regardless of his actions [24].

Dysfunctional response patterns [25] found in adolescents represent an individual's response to unsatisfied basic emotional needs. Against the backdrop of emotional vulnerability, the tendency is to experience feelings of sadness, hopelessness, fear, overwhelm, or helplessness. In adolescents, the activation of maladaptive cognitive schemas [26] is explicit and unambiguous in its manifestation. Experiencing vulnerability and stress causes emotional pain, and the tendency is to use coping mechanisms [27]. Maladaptive cognitive schemas have also been linked to self-injurious behavior [28]. The degree of emotional inhibition and social isolation may also be associated with self-harm [12]. In addition, emotional deprivation, insufficient self-control, mistrust/abuse, and social isolation present differently in individuals with self-harm tendencies [29]. Studies show that perceived rejection from parents can be associated with maladaptive cognitive schemas and self-harming behavioral tendencies, both interpersonally and intrapersonally [30]. Emotional deprivation, as well as impairment, are determinant factors targeted in suicide prevention measures [31]. Maladaptive cognitive schemas mediate the link between the socio-contextual aspects of suicidality and the emotional state of adolescents [32].

The current study intends to investigate the predictive impact of maladaptive cognitive schemas on suicide behavior among teenagers during the COVID-19 pandemic. It started from the premise that adolescents are at an age that implies a significant emotional vulnerability. At the same time, the pandemic context involves social isolation which, in association with a series of individual peculiarities, determines a suicidal potential. The importance of determining the risk factors that have a significant impact on adolescents is required to develop prevention programs in this regard.

Materials and Methods

Instruments

To examine maladaptive cognitive schemas, data was gathered using the Young Cognitive Schema Questionnaire in its short form (YSQ-S3). The Beck Scale for Suicidal Ideations (BSSI) is one of the most often used questionnaires to assess suicidality.

Procedure

The selection of relevant instances with ethical implications took place between 2020 and 2022. The participants were subjected to a psychological evaluation within the CIP Cristian Delcea. The age group of 17-19 years was established to evaluate the particularities specific to the latest adolescent or young adulthood period [33].

Inclusion/Exclusion Criteria

The eligibility criteria for participating in the research were the following: to be between 17 and 19 years old, and not to suffer from neurodevelopmental or neurocognitive disorders.

Ethical Aspects

To be included in the research, all participants gave their consent in the consent form regarding the purpose of the research and their participation in the testing, as well as the aspects related to Regulation (EU) 2016/679 on the protection of natural persons about the processing of personal data and the free circulation of this data and the repeal of Directive 95/46/CE (General Data Protection Regulation) and Law no. 506/2004 regarding the processing. Given that underage players were also present in the studio, consent was granted by their legal representatives.

Participants

Fifty-eight teenagers aged between 17 and 19, female (39%) and male (61%), were included in the research, the educational level being at least 9 classes.

Data Processing

The data were processed using SPSS (Statistical Package for the Social Sciences) version 2.6. Descriptive statistics and comparison tests were conducted. The significance threshold is chosen at $p < 0.05$.

Results and Discussion

The statistical analysis included suicidal behaviors and following maladaptive cognitive schemas such as *Defectiveness/Shame*, *Vulnerability to harm or illness*, *Failure*, *Social Isolation*, *Dependence Incompetence*, and *Emotional Inhibition*.

We performed a linear regression to verify to what extent maladaptive cognitive schemas could predict suicidal behaviors during the pandemic period. Thus descriptive indicators are centralized in **Table 1**, as follows:

Table 1. Descriptive indicators

| | Mean | Std. Dev | N |
|---------------------------------------|-------|----------|----|
| Beck suicidal scale | 23,5 | 1,42 | 58 |
| Defectiveness Shame (DS) | 14,21 | 1,89 | 58 |
| Vulnerability to harm or illness (VH) | 16,32 | 1,55 | 58 |
| Failure (FA) | 13,72 | 2,93 | 58 |
| Dependence Incompetence (DI) | 15,85 | 2,12 | 58 |
| Social Isolation (SI) | 14,27 | 1,23 | 58 |
| Enmeshment/ Undeveloped Self (EM) | 17,14 | 2,19 | 58 |

The descriptive analysis shows us that the averages obtained in the case of maladaptive cognitive schemes indicate a medium to high prevalence of the cognitive schemes included in the analysis.

Also, the assumptions of the regression model were verified to evaluate correctly the obtained data of the model. No multicollinearity was identified between the independent variables, all coefficients obtained being below the accepted threshold of 0.7. The correlations identified between the independent variables (Maladaptive cognitive schema) and suicidal risk were analyzed and centralized in **Table 2**.

Table 2. Correlations between maladaptive cognitive schemas and suicidal behaviors

| | r | Sig. |
|---------------------------------------|------|------|
| Defectiveness Shame (DS) | .689 | .000 |
| Vulnerability to harm or illness (VH) | .712 | .000 |
| Failure (FA) | .591 | .021 |
| Enmeshment/ Undeveloped Self (EM) | .611 | .000 |
| Social Isolation (SI) | .584 | .035 |
| Dependence Incompetence (DI) | .810 | .000 |

Thus, the maladaptive cognitive schemes proposed in the model show correlations with values above 0.5 with suicidal behavior. The strongest association is identified between Dependence Incompetence (DI) ($r=.810/p=0.000$) and suicidal behavior and the weakest between Social Isolation (SI) ($r=.584/p=.035$) and suicidal behavior.

Analyzing the coefficients in the model the tolerance describes how much variability for each independent variable is, the values obtained do not exceed the accepted threshold of 1.0. also, the variance inflation factor does not exceed the accepted threshold of 10. The results of the value inflation factors (VIF) showed no evidence of multicollinearity in the dataset.

It employed a multiple linear regression analysis at a 95% confidence interval. The analysis showed a good model fit: $F(5,194)=153.32$, $P=.000$, $Adj R^2=0.79$, and $R^2=0.79$.

The analysis showed that a direct influence on suicidal behavior was Defectiveness/Shame (DS) ($\beta=0.28$, $t=5.62$, $P<0,001$), Dependence Incompetence(DI) ($\beta=0.32$, $t=6.53$, $P<0,001$), Vulnerability to the harm of illness (VH) ($\beta=0.42$, $t=8.81$, $P<0,001$). Regarding the other variables, the analysis showed that we do not have evidence of effects of Failure (FA)($\beta= 0.08$, $t=1.60$, $P< 0.,11$), Enmeshment/Undeveloped Self (EM) ($\beta=0.05$, $t=1.44$, $P<0,15$) and Social Isolation (EM) ($\beta=0.12$, $t=1.93$, $P<0,21$)

Although, in the proposed model a series of maladaptive cognitive schemas were proposed as predictors, significant effects on behaviors and suicidal ideation were identified for Defectiveness Shame (DS), Vulnerability to harm or illness (VH), and Dependence Incompetence(DI).

As a result, the Defectiveness Shame (DS) cognitive frameworks are associated with the belief that something is wrong or defective about oneself, as well as with social actions. Adolescents who are still in an emotionally vulnerable period, in the context of social isolation generated by the pandemic, feel unworthy and exhibit strong fear about their defects [34]. They also feel ashamed of who they are and how they are, experiencing high insecurity. Persistent emotions of guilt and concern about one's defectiveness have an impact on social and romantic relationships, leading to suicide ideation.

In the pandemic context, the 'vulnerability to harm or illness' implies catastrophic thinking notions and exaggerated worries of absurdly negative forecasted life events (such as imminent medical, emotional, or external catastrophes), which could act as a separate risk component for suicidal ideation among anxious or depressed individuals. Suicidality and suicidal thoughts have been hypothesized to represent a certain pattern of data processing, which emerges from emotions of entrapment and a sensation of no escape [35, 36]. This schema is also related to the belief that one is unable to defend oneself against foreseen calamities, like the COVID-19 pandemic, that one will lack the ability to stop bad things from taking place, and that once the disaster comes, one will be unable to deal with it.

Dependence/incompetence refers to the notion that one is unable to fulfill one's daily tasks competently, with no significant aid from others, and displays very often helplessness [36]. All these factors appear to be determinants of suicidal behaviors during this period.

Enmeshment / Undeveloped Self implies that people do not have a strong and consistent sense of self. They are so strongly connected to the "enmeshed figures" that in adolescence can present dubious characters [37]. In the context of the isolation imposed by the pandemic, teenagers who show emotional vulnerability anyway experience significant ruptures as well as strong feelings of emptiness.

Regarding the proposed maladaptive cognitive schemes, such as Failure, which implies the belief that the individual will inevitably fail, or is fundamentally inadequate relative to one's peers, in areas of achievement, the concrete effects on suicidal behavior [38-47] could not be demonstrated on the present research sample, the statistical results being insignificant. The significant effect of this cognitive schema on suicidal behavior could not be demonstrated in the case of the proposed sample.

Conclusion

The present study opens a research perspective on the predictive value of maladaptive cognitive schemas associated with catastrophizing beliefs on suicidal behaviors and ideation in the pandemic context in adolescents. Suicidal behaviors represent a significant threat, it is necessary to explore the determined factors and at the same time require the development of preventive measures in this regard. Further replication and extension of the results are required before applying these findings.

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Written informed consent was obtained from all subjects enrolled in the study.

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