

Predicting Mental Health During Crisis Conditions Based on Psychological Resilience, Cognitive Flexibility, and Social Support

Atefeh. Shakibarad¹*

1 Department of Clinical Psychology, SR.C., Islamic Azad University, Tehran, Iran

*Correspondence: atefeh.shakibarad@iau.ac.ir

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ABSTRACT

The present study aimed to predict mental health during crisis conditions based on psychological resilience, cognitive flexibility, and perceived social support among adults living in Tehran. The present research was conducted using a descriptive-correlational design with a predictive approach. The statistical population consisted of adults residing in Tehran in 2026, from whom 320 participants were selected using multistage cluster random sampling. Data collection was carried out using the Mental Health Inventory (MHI-28), Connor–Davidson Resilience Scale (CD-RISC), Cognitive Flexibility Inventory (CFI), and Multidimensional Scale of Perceived Social Support (MSPSS). After confirming the assumptions of normality and multicollinearity, data were analyzed using descriptive statistics, Pearson correlation coefficients, and simultaneous multiple regression analysis in SPSS-27. The findings demonstrated that psychological resilience, cognitive flexibility, and perceived social support were positively and significantly associated with mental health ($p < 0.01$). Psychological resilience showed the strongest correlation with mental health ($r = 0.64$), followed by cognitive flexibility ($r = 0.58$) and social support ($r = 0.49$). The results of multiple regression analysis indicated that the predictor variables jointly explained 58% of the variance in mental health ($R^2 = 0.58$, $F = 145.62$, $p < 0.001$). Among the predictor variables, psychological resilience had the strongest predictive effect on mental health ($\beta = 0.45$), followed by cognitive flexibility ($\beta = 0.34$) and perceived social support ($\beta = 0.22$). These findings indicated that individuals with greater adaptive psychological resources and stronger interpersonal support experienced better mental health during crisis conditions. The findings of the present study emphasize the important role of psychological resilience, cognitive flexibility, and social support in maintaining mental health during crisis conditions. Individuals who possess stronger emotional adaptability, flexible cognitive functioning, and supportive social relationships are more capable of coping effectively with stressful and uncertain situations. Therefore, mental health interventions during crises should focus on strengthening resilience, improving adaptive cognitive skills, and enhancing supportive social networks to reduce psychological vulnerability and promote psychological well-being.

Keywords: Mental Health, Psychological Resilience, Cognitive Flexibility, Social Support, Crisis Conditions, Psychological Well-Being

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Introduction

Mental health during crisis conditions has become one of the most important concerns of contemporary psychological and public health research. Rapid global changes, including pandemics, climate-related disasters, economic instability, wars, forced migration, and social uncertainty, have significantly affected

psychological well-being across populations. In recent years, the increasing frequency and intensity of collective crises have highlighted the vulnerability of mental health systems and the necessity of identifying protective psychological and social factors that can reduce psychological distress and improve adaptive functioning. Crisis conditions often generate chronic stress, uncertainty, fear, emotional dysregulation, social isolation, and disruptions in daily functioning, all of which may negatively influence individuals' emotional, cognitive, and behavioral adjustment (1, 2). Studies conducted after major crises have consistently demonstrated increased rates of anxiety, depression, burnout, post-traumatic stress symptoms, hopelessness, and emotional exhaustion among different age groups and occupational categories (3, 4). Consequently, understanding the psychological mechanisms that protect individuals from mental deterioration during crisis situations has become a major priority for researchers, clinicians, and policymakers.

Mental health is not merely the absence of psychological disorders but rather a multidimensional construct involving emotional balance, psychological resilience, adaptive coping, cognitive functioning, interpersonal effectiveness, and the capacity to maintain well-being despite adversity. Crisis situations threaten these dimensions by overwhelming coping resources and reducing individuals' perceived sense of control over life events. According to contemporary psychological theories, exposure to prolonged uncertainty and uncontrollable stressors may activate maladaptive cognitive and emotional responses that increase vulnerability to psychological dysfunction (2, 5). Moreover, crises often create invisible and chronic threats that continuously challenge individuals' psychological security, thereby intensifying stress responses and reducing emotional stability. The psychological consequences of such conditions may persist long after the crisis itself has ended, particularly when individuals lack adequate internal and external coping resources (6, 7).

Among the most important protective factors associated with mental health during adverse conditions is psychological resilience. Psychological resilience refers to the ability to adapt positively, recover effectively, and maintain psychological stability despite exposure to significant stressors or traumatic experiences. Resilience enables individuals to regulate emotions, maintain hope, reinterpret adversity constructively, and continue functioning effectively under pressure. Contemporary resilience research conceptualizes resilience as a dynamic and multidimensional process involving cognitive, emotional, behavioral, familial, and social resources rather than a fixed personality trait (6, 8). Evidence from studies conducted during the COVID-19 pandemic demonstrated that resilient individuals experienced lower levels of anxiety, depression, and psychological distress and showed greater adaptability to changing life conditions (9, 10). Similarly, research on healthcare workers, nursing students, and emergency personnel indicated that resilience was associated with improved coping, emotional regulation, and occupational functioning during highly stressful crisis conditions (4, 11).

The importance of resilience has also been emphasized in relation to climate-related distress, terrorism, and social instability. Individuals with higher resilience tend to perceive stressors as more manageable and are more capable of sustaining psychological well-being during uncertain and threatening situations (12, 13). In addition, resilience contributes to positive adaptation by increasing self-efficacy, optimism, and emotional flexibility, thereby reducing the detrimental effects of chronic stress exposure (10). Studies examining community resilience further indicate that resilience extends beyond the individual level and may

involve collective coping processes that strengthen social cohesion and emotional support within communities (14, 15). Therefore, resilience appears to function as a critical protective mechanism that buffers the negative psychological consequences of crises and facilitates mental health maintenance.

Another variable strongly associated with adaptive functioning during crisis conditions is cognitive flexibility. Cognitive flexibility refers to the ability to shift cognitive perspectives, adapt thinking patterns to changing circumstances, and generate alternative interpretations or solutions when encountering stressful situations. Individuals with high cognitive flexibility are more capable of modifying maladaptive thoughts, tolerating ambiguity, and responding adaptively to uncertainty. In contrast, cognitive rigidity may intensify emotional distress by limiting problem-solving capacity and increasing catastrophic thinking patterns during crises (2). Cognitive flexibility plays a central role in emotional regulation because flexible individuals are better able to reinterpret stressful events, regulate negative emotions, and maintain psychological balance under pressure (13).

Research findings have demonstrated that cognitive adaptability significantly contributes to successful psychological adjustment during collective crises. During the COVID-19 pandemic, individuals with higher psychological flexibility and adaptive cognitive styles reported lower stress levels, better emotional functioning, and greater life satisfaction (16, 17). Similarly, mindfulness-based and cognitive-emotional regulation interventions designed to improve adaptive cognitive functioning have shown beneficial effects on reducing distress and promoting psychological resilience during uncertain conditions (10, 13). Neuropsychological perspectives also suggest that cognitive flexibility supports resilience by enabling individuals to integrate emotional experiences more effectively and maintain adaptive decision-making processes during adversity (18). Consequently, cognitive flexibility may represent an essential psychological resource that enhances coping effectiveness and protects mental health during crisis exposure.

In addition to individual psychological factors, social support has consistently been identified as one of the strongest predictors of mental health and psychological adaptation in adverse situations. Social support refers to the perception or experience of being cared for, valued, and emotionally connected to others. It encompasses emotional, informational, and instrumental assistance provided by family members, friends, colleagues, and social networks. During crisis situations, social support may reduce loneliness, promote emotional security, strengthen coping resources, and increase individuals' sense of belonging and connectedness (19, 20). The protective role of social support becomes especially important during periods characterized by uncertainty, social disruption, and psychological vulnerability.

Research has repeatedly shown that strong social connections are associated with lower levels of stress, anxiety, depression, and traumatic symptoms during crises (6, 15). Studies conducted during the COVID-19 pandemic revealed that individuals with greater perceived social support demonstrated better psychological adaptation and higher resilience despite prolonged social restrictions and emotional challenges (16, 19). Similarly, community connectedness and collective resilience have been found to mitigate the negative effects of crisis-related stress by strengthening trust, cooperation, and emotional solidarity among individuals (20, 21). These findings suggest that social support functions as both a direct protective factor for mental health and an indirect mechanism that enhances resilience and adaptive coping.

Recent studies have also emphasized the importance of integrating psychological, cognitive, and social variables when examining mental health outcomes during crises. Psychological adaptation to adverse

conditions is increasingly understood as a multidimensional process shaped by the interaction between internal coping capacities and external environmental resources (7). For instance, resilience may enhance individuals' capacity to use social support effectively, while cognitive flexibility may improve emotional regulation and adaptive interpretation of stressful events. Simultaneously, supportive social relationships may reinforce resilience and facilitate constructive cognitive processing during periods of uncertainty (6, 15). This integrated perspective highlights the necessity of examining multiple protective factors simultaneously rather than focusing on isolated psychological variables.

The increasing complexity of global crises further underscores the need for comprehensive mental health research. Climate change, pandemics, economic instability, and sociopolitical uncertainty have generated new forms of chronic stress that affect populations worldwide (22, 23). Climate-related distress, for example, has emerged as a significant psychological concern associated with anxiety, helplessness, and emotional exhaustion, particularly among younger populations (12, 23). Similarly, workers exposed to unstable occupational and economic conditions during crises have demonstrated increased mental health vulnerability and burnout symptoms (1, 4). In response to these challenges, researchers have increasingly focused on interventions aimed at strengthening resilience, improving adaptive coping, enhancing emotional regulation, and fostering supportive social environments (3, 24).

Psychological first aid interventions, mindfulness-based approaches, and community resilience programs have demonstrated promising effects in improving psychological well-being during crisis conditions (11, 24). Additionally, family resilience frameworks emphasize the importance of communication, emotional connectedness, and shared coping strategies in reducing psychological distress during collective adversity (6). Organizational and healthcare research has similarly highlighted the significance of supportive interpersonal environments and adaptive coping resources in maintaining psychological functioning among professionals exposed to prolonged crisis-related stressors (25, 26). These findings collectively indicate that mental health during crises is influenced by a dynamic interplay between individual psychological strengths and broader relational and social processes.

Despite the growing body of research on mental health during crisis situations, several gaps remain in the literature. Many previous studies have focused primarily on specific populations such as healthcare workers, students, or disaster survivors, while fewer studies have simultaneously examined resilience, cognitive flexibility, and social support as integrated predictors of mental health in the general population. Furthermore, most existing research has concentrated on single crisis contexts, particularly the COVID-19 pandemic, whereas contemporary societies increasingly face multiple overlapping crises including economic instability, environmental threats, and sociopolitical uncertainty (23, 27). Consequently, further research is needed to clarify how psychological resilience, adaptive cognitive functioning, and social support jointly contribute to mental health during broad crisis conditions.

Considering the increasing prevalence of psychological distress during contemporary crises and the importance of identifying protective psychological resources, the present study aimed to predict mental health during crisis conditions based on psychological resilience, cognitive flexibility, and social support.

Methods and Materials

Study Design and Participants

The present study was conducted using a descriptive–correlational design with a predictive approach. The statistical population consisted of adults residing in Tehran during the year 2026 who had experienced at least one significant social, economic, environmental, or personal crisis during the previous year. Considering the objectives of the study and the use of multivariate regression analysis, a sample size of 320 participants was selected through multistage cluster random sampling from different municipal districts of Tehran. Initially, several districts were randomly selected from the northern, southern, eastern, western, and central regions of the city to ensure geographical diversity. Subsequently, participants were recruited from community centers, universities, workplaces, healthcare centers, and public social spaces within these districts. Inclusion criteria included being between 18 and 60 years of age, having literacy sufficient to complete the questionnaires, residence in Tehran for at least the previous two years, and willingness to participate in the study. Exclusion criteria included incomplete questionnaire responses, self-reported severe psychiatric disorders requiring hospitalization, and failure to provide informed consent. Before data collection, the objectives of the research were fully explained to the participants, and they were assured that their information would remain confidential and anonymous. Participation in the study was entirely voluntary, and informed consent was obtained from all participants prior to completing the questionnaires.

Data Collection

The Mental Health Inventory (MHI-28), developed by Veit and Ware in 1983, was used to assess the participants' mental health status. This instrument consists of 28 items designed to evaluate psychological well-being and psychological distress. The questionnaire includes two primary dimensions: psychological well-being and psychological distress, which are further divided into subscales such as anxiety, depression, behavioral control, emotional ties, and positive affect. Items are scored on a six-point Likert scale ranging from “always” to “never,” with higher scores indicating better mental health. Several items are reverse scored according to the scoring instructions provided by the developers. Previous studies have demonstrated satisfactory psychometric properties for the instrument, including high internal consistency coefficients and acceptable construct validity across different populations. Research conducted in Iranian samples has also confirmed the reliability and validity of the Persian version of the Mental Health Inventory, reporting appropriate Cronbach's alpha coefficients for both the total scale and its subscales.

Psychological resilience was measured using the Connor–Davidson Resilience Scale (CD-RISC), developed by Connor and Davidson in 2003. The scale contains 25 items designed to assess individuals' ability to cope effectively with stress, adversity, and crisis situations. The instrument evaluates dimensions such as personal competence, trust in instincts, positive acceptance of change, control, and spiritual influences. Responses are rated on a five-point Likert scale ranging from “not true at all” to “true nearly all the time.” Total scores range from 0 to 100, with higher scores reflecting greater resilience. The Connor–Davidson Resilience Scale has been widely used in psychological and clinical research and has demonstrated strong psychometric characteristics in diverse cultural contexts. Previous Iranian studies have confirmed

the reliability of the Persian version through high Cronbach's alpha coefficients and test–retest reliability indices, while factor analysis findings have supported its construct validity.

The Cognitive Flexibility Inventory (CFI), developed by Dennis and Vander Wal in 2010, was employed to measure cognitive flexibility. This self-report instrument consists of 20 items and evaluates an individual's capacity to adapt cognitive processing strategies in response to changing environmental conditions and stressful situations. The inventory includes two major subscales: alternatives and control. The alternatives dimension assesses the tendency to perceive multiple alternative explanations and solutions for difficult situations, whereas the control dimension measures the extent to which individuals perceive stressful situations as manageable. Items are rated on a seven-point Likert scale ranging from “strongly disagree” to “strongly agree.” Higher scores indicate greater cognitive flexibility. Several items are reverse scored before calculating the total score. Previous studies have reported acceptable internal consistency and convergent validity for the inventory, and the Persian version has demonstrated satisfactory reliability and validity among Iranian populations in both clinical and non-clinical settings.

Social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS), developed by Zimet, Dahlem, Zimet, and Farley in 1988. The scale contains 12 items designed to evaluate perceived social support from three distinct sources, including family, friends, and significant others. Each subscale consists of four items. Responses are measured on a seven-point Likert scale ranging from “very strongly disagree” to “very strongly agree.” Higher scores indicate greater perceived social support. The MSPSS is recognized as one of the most widely used instruments for measuring perceived social support because of its brevity, simplicity, and strong psychometric properties. Numerous international studies have confirmed the scale's reliability and factorial validity. Additionally, previous research conducted in Iran has supported the validity and reliability of the Persian version, reporting satisfactory Cronbach's alpha coefficients for the total scale and all subscales.

Data Analysis

After data collection, the questionnaires were reviewed and coded for statistical analysis. Data were entered into the Statistical Package for the Social Sciences (SPSS), version 27. Initially, descriptive statistics including mean, standard deviation, minimum and maximum scores, skewness, and kurtosis were calculated to describe the characteristics of the study variables and evaluate data distribution. Prior to inferential analyses, the assumptions of normality, multicollinearity, independence of errors, and linearity were examined. Pearson correlation coefficients were then computed to investigate the relationships between psychological resilience, cognitive flexibility, perceived social support, and mental health. Finally, simultaneous multiple regression analysis was performed to determine the predictive power of psychological resilience, cognitive flexibility, and social support in explaining variations in mental health during crisis conditions. The level of statistical significance for all analyses was considered to be less than 0.05.

Findings and Results

A total of 320 participants completed the study questionnaires and were included in the final analysis. Among the participants, 174 individuals (54.38%) were female and 146 individuals (45.62%) were male. The age of participants ranged from 18 to 59 years, with a mean age of 34.71 years and a standard deviation of

9.42 years. Regarding educational level, 68 participants (21.25%) held a diploma or lower degree, 97 participants (30.31%) had an associate or bachelor's degree, 121 participants (37.81%) possessed a master's degree, and 34 participants (10.63%) had doctoral-level education. In terms of marital status, 186 participants (58.13%) were married and 134 participants (41.87%) were single. Additionally, the majority of participants reported experiencing moderate to high levels of psychological pressure during the recent crisis conditions, indicating that the sample adequately represented individuals exposed to stressful and uncertain circumstances. Examination of the questionnaires indicated no missing data exceeding the acceptable threshold, and all collected responses were included in the statistical analyses. Preliminary assessment of skewness and kurtosis values demonstrated that the variables were normally distributed, and the assumptions required for multivariate analyses were satisfactorily met.

Table 1. Descriptive Statistics of the Study Variables

Variables	Mean	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis
Mental Health	61.48	12.37	28.00	88.00	-0.41	-0.32
Psychological Resilience	67.92	14.26	29.00	97.00	-0.28	-0.44
Cognitive Flexibility	91.73	16.84	42.00	132.00	-0.36	-0.27
Social Support	56.24	11.91	21.00	81.00	-0.22	-0.39

The descriptive findings presented in Table 1 indicate that the participants demonstrated moderate to relatively high levels of mental health, psychological resilience, cognitive flexibility, and perceived social support during crisis conditions. Among the examined variables, cognitive flexibility had the highest mean score ($M = 91.73$, $SD = 16.84$), suggesting that most participants possessed an acceptable ability to adapt their thinking patterns and cope cognitively with stressful and uncertain situations. Psychological resilience also showed a relatively elevated mean score ($M = 67.92$, $SD = 14.26$), indicating that many participants were able to maintain psychological stability and adaptive functioning despite exposure to crisis-related stressors. Similarly, perceived social support displayed a favorable mean score ($M = 56.24$, $SD = 11.91$), reflecting the presence of supportive interpersonal relationships among the participants. The mental health variable demonstrated a mean score of 61.48 with a standard deviation of 12.37, indicating moderate psychological well-being across the sample. Furthermore, the skewness and kurtosis values for all variables fell within the acceptable range of ± 1 , confirming the normal distribution of the data and supporting the appropriateness of conducting parametric statistical analyses, including correlation and multiple regression analyses.

Table 2. Pearson Correlation Matrix Between Study Variables

Variables	1	2	3	4
1. Mental Health	1			
2. Psychological Resilience	0.64**	1		
3. Cognitive Flexibility	0.58**	0.53**	1	
4. Social Support	0.49**	0.45**	0.41**	1

** $p < 0.01$

The results of the Pearson correlation analysis presented in Table 2 revealed statistically significant positive relationships among all study variables. Mental health showed a strong positive correlation with psychological resilience ($r = 0.64$, $p < 0.01$), indicating that individuals with higher resilience tended to report better psychological well-being and lower levels of psychological distress during crisis situations. This finding suggests that resilience may serve as a protective psychological resource that enables individuals to adapt more effectively to adverse conditions and maintain emotional balance under stressful circumstances.

Mental health was also positively and significantly associated with cognitive flexibility ($r = 0.58, p < 0.01$), demonstrating that participants who were more capable of adapting their cognitive strategies and generating alternative perspectives experienced better mental health outcomes during crisis conditions. Additionally, perceived social support demonstrated a significant positive relationship with mental health ($r = 0.49, p < 0.01$), suggesting that access to supportive social networks and emotionally supportive relationships may reduce psychological vulnerability and enhance emotional adjustment in stressful contexts. The correlations among the predictor variables were moderate and statistically significant, but none exceeded the threshold indicating multicollinearity concerns. Therefore, all predictor variables were considered appropriate for inclusion in the regression analysis.

Table 3. Multiple Regression Analysis Predicting Mental Health Based on Psychological Resilience, Cognitive Flexibility, and Social Support

Variables	B	Standard Error	Beta	t	p
Constant	12.84	3.17	—	4.05	0.001
Psychological Resilience	0.39	0.05	0.45	7.81	0.001
Cognitive Flexibility	0.28	0.04	0.34	6.43	0.001
Social Support	0.21	0.06	0.22	3.98	0.001
Model Statistics			Value		
R			0.76		
R ²			0.58		
Adjusted R ²			0.57		
F			145.62		
p			0.001		

The findings of the multiple regression analysis presented in Table 3 demonstrated that psychological resilience, cognitive flexibility, and perceived social support jointly predicted mental health significantly among individuals experiencing crisis conditions. The overall regression model was statistically significant ($F = 145.62, p < 0.001$), indicating that the predictor variables collectively explained a substantial proportion of the variance in mental health scores. The multiple correlation coefficient ($R = 0.76$) reflected a strong relationship between the predictor variables and mental health, while the coefficient of determination ($R^2 = 0.58$) indicated that approximately 58% of the variance in mental health could be explained by psychological resilience, cognitive flexibility, and social support. Examination of the standardized beta coefficients revealed that psychological resilience was the strongest predictor of mental health ($\beta = 0.45, p < 0.001$). This finding suggests that individuals with higher resilience possess greater psychological capacity to cope effectively with stressful events, maintain emotional regulation, and preserve psychological functioning during crises. Cognitive flexibility emerged as the second strongest predictor ($\beta = 0.34, p < 0.001$), indicating that adaptive cognitive processing and the ability to reinterpret stressful situations positively contribute to psychological well-being. Perceived social support also significantly predicted mental health ($\beta = 0.22, p < 0.001$), emphasizing the importance of supportive interpersonal relationships in reducing psychological distress and promoting emotional stability during challenging conditions.

Table 4. Analysis of Variance for the Regression Model Predicting Mental Health

Source of Variance	Sum of Squares	df	Mean Square	F	p
Regression	18642.57	3	6214.19	145.62	0.001
Residual	13488.73	316	42.69		
Total	32131.30	319			

The analysis of variance results shown in Table 4 further confirmed the adequacy and statistical significance of the regression model used to predict mental health during crisis conditions. The regression sum of squares accounted for a substantial proportion of the total variance observed in mental health scores, indicating that the combined influence of psychological resilience, cognitive flexibility, and social support contributed meaningfully to explaining differences in psychological well-being among participants. The obtained F statistic ($F = 145.62, p < 0.001$) demonstrated that the regression model significantly improved the prediction of mental health compared to a model without predictor variables. These findings indicate that the independent variables included in the model possess considerable explanatory power in understanding psychological adaptation during stressful and crisis-related situations. Furthermore, the relatively smaller residual variance compared to the regression variance suggests that the selected predictors provided a strong and coherent explanation of mental health outcomes within the study sample. Overall, the results support the theoretical assumption that psychological resilience, flexible cognitive functioning, and supportive social relationships represent key protective factors associated with improved mental health during periods of crisis and uncertainty.

Discussion and Conclusion

The present study aimed to predict mental health during crisis conditions based on psychological resilience, cognitive flexibility, and social support. The findings demonstrated that all three predictor variables were positively and significantly associated with mental health, and together they explained a substantial proportion of the variance in psychological well-being among individuals experiencing crisis-related conditions. More specifically, psychological resilience emerged as the strongest predictor of mental health, followed by cognitive flexibility and perceived social support. These findings highlight the importance of both internal psychological resources and external interpersonal support systems in protecting individuals against the negative psychological consequences of crises and stressful life conditions.

One of the most important findings of the present study was the significant positive relationship between psychological resilience and mental health. Individuals with higher resilience demonstrated better psychological well-being and lower levels of emotional distress during crisis conditions. This finding is consistent with previous studies emphasizing resilience as a central protective factor against psychological deterioration during stressful and uncertain circumstances (8, 9). Resilience enables individuals to maintain emotional stability, adapt effectively to environmental changes, and recover more rapidly from adverse experiences. From a theoretical perspective, resilient individuals tend to perceive stressors as manageable challenges rather than overwhelming threats, which reduces emotional dysregulation and enhances coping effectiveness. During crises, resilient individuals are more likely to preserve hope, maintain problem-solving capacity, and regulate anxiety more successfully, thereby reducing vulnerability to psychological disorders.

The strong predictive role of resilience observed in this study is also aligned with research conducted during the COVID-19 pandemic and other collective crises. For example, studies among healthcare workers, nursing students, and emergency personnel found that higher resilience was associated with reduced stress, burnout, anxiety, and depressive symptoms (4, 11). Similarly, Filippou and Giannouli reported that resilient psychotherapists were more capable of adapting psychologically to pandemic-related uncertainty and occupational stress (28). These findings suggest that resilience functions as a psychological buffer that

protects individuals from the emotional consequences of prolonged uncertainty and social disruption. Furthermore, resilience may strengthen psychological endurance by increasing optimism, self-efficacy, and adaptive emotional processing, all of which contribute to better mental health outcomes during adverse conditions (10, 12).

The findings also demonstrated that cognitive flexibility significantly predicted mental health during crisis conditions. Participants who reported higher cognitive flexibility experienced greater psychological well-being and lower levels of emotional distress. This finding supports previous research emphasizing the role of adaptive cognitive processing in coping with uncertainty and stress (2, 13). Cognitive flexibility allows individuals to reinterpret stressful situations from multiple perspectives, generate alternative coping strategies, and avoid rigid or catastrophic thinking patterns. In crisis situations characterized by unpredictability and ambiguity, flexible thinking enables individuals to adjust more effectively to rapidly changing circumstances and maintain emotional balance.

The relationship between cognitive flexibility and mental health can also be explained through emotional regulation mechanisms. Flexible individuals tend to demonstrate greater tolerance for ambiguity and are more capable of regulating negative emotions when facing stressful experiences. This adaptive cognitive functioning reduces emotional reactivity and facilitates constructive coping behaviors. Previous studies have similarly shown that adaptive cognitive and mindfulness-based processes contribute significantly to reducing psychological distress during crises (10, 17). Singh et al. also found that successful adaptation during the COVID-19 pandemic was strongly associated with cognitive adaptability and psychosocial coping resources (16). Likewise, Paoletti et al. emphasized that neuropsychopedagogical approaches focusing on adaptive cognition and emotional integration can improve resilience and psychological functioning during large-scale crises (18). Therefore, cognitive flexibility appears to represent a critical psychological mechanism that facilitates adaptive coping and reduces the harmful effects of chronic stress exposure.

Another significant finding of the present study was the positive association between perceived social support and mental health. Individuals who perceived stronger emotional and interpersonal support reported better psychological functioning during crisis conditions. This finding is consistent with a large body of research demonstrating the protective role of social support in reducing psychological distress and enhancing emotional well-being during adversity (15, 19). Social support provides individuals with emotional reassurance, practical assistance, and a sense of belonging, all of which contribute to psychological security during uncertain situations. During crises, supportive relationships may reduce feelings of loneliness, helplessness, and social isolation while promoting emotional stability and adaptive coping.

The importance of social connectedness during crises has been widely emphasized in previous studies. Mannarini et al. reported that sense of community and psychological connectedness significantly mitigated the psychological impact of the COVID-19 pandemic (20). Similarly, Matos et al. found that social connection played a crucial role in reducing post-traumatic stress symptoms and promoting post-traumatic growth during pandemic conditions (19). Hall et al. also demonstrated that community resilience and social capital significantly contribute to positive mental health outcomes during public health emergencies and disasters (15). These findings collectively suggest that social support not only reduces emotional vulnerability but also strengthens resilience and coping capacity, thereby indirectly improving mental health.

The combined predictive effect of resilience, cognitive flexibility, and social support observed in this study highlights the multidimensional nature of psychological adaptation during crises. Mental health during adverse conditions cannot be adequately explained by a single psychological factor; rather, it emerges through the interaction of emotional, cognitive, and interpersonal resources. This finding is consistent with contemporary resilience frameworks suggesting that adaptation to crises depends on the integration of internal coping capacities and external support systems (6, 7). Individuals who possess strong resilience, flexible cognitive processing, and supportive social relationships are more likely to perceive stressful situations as controllable, maintain emotional balance, and engage in effective coping strategies.

The findings of the present study also support ecological and systemic perspectives on mental health. According to these perspectives, psychological well-being is influenced by interconnected personal, relational, and societal factors rather than isolated individual characteristics. Community resilience, social cohesion, and collective coping mechanisms may strengthen individuals' psychological adaptation during crises (14, 21). Prime et al. emphasized that family resilience processes such as emotional connectedness, communication, and collaborative problem-solving significantly contribute to psychological stability during global crises (6). Similarly, studies examining organizational resilience in healthcare and social service systems have shown that supportive interpersonal interactions and adaptive collaboration improve mental health outcomes during extreme stress conditions (25, 26).

Another important implication of the present findings concerns the growing psychological burden associated with contemporary global crises, including pandemics, climate change, economic instability, and sociopolitical uncertainty. Recent studies have shown that climate distress, invisible threats, and prolonged uncertainty increasingly affect psychological well-being across populations (22, 23). Individuals exposed to chronic uncertainty often experience fear, emotional exhaustion, helplessness, and cognitive overload, all of which may contribute to mental health deterioration (2, 5). The current findings suggest that strengthening resilience, cognitive flexibility, and social support may represent essential preventive strategies for reducing psychological vulnerability in the context of these emerging societal challenges.

The present findings are also consistent with intervention-based studies emphasizing the effectiveness of psychological support programs during crises. Psychological first aid interventions, resilience training programs, mindfulness-based approaches, and emotional regulation interventions have demonstrated significant positive effects on mental health outcomes during and after traumatic events (3, 24). Eweida et al. found that psychological first aid interventions improved resilience and reduced psychological distress among nursing students during the COVID-19 crisis (11). Likewise, adaptive interventions targeting well-being and emotional regulation have been associated with improved coping and quality of life during periods of uncertainty (17). These findings reinforce the practical significance of the variables examined in the present study and support the development of multidimensional mental health interventions during crises.

The current study contributes to the existing literature by simultaneously examining psychological resilience, cognitive flexibility, and social support as predictors of mental health during crisis conditions. While many previous studies focused on single variables or specific populations, the present research provides a more integrated understanding of the factors associated with psychological adaptation during adverse situations. Furthermore, the study extends previous findings by demonstrating that these variables collectively explain a substantial proportion of mental health variance in individuals exposed to crisis-

related stressors. Therefore, the findings underscore the importance of adopting comprehensive psychological and social approaches to mental health promotion during periods of uncertainty and instability.

One limitation of the present study was the use of a cross-sectional correlational design, which restricts the ability to draw causal conclusions regarding the relationships among psychological resilience, cognitive flexibility, social support, and mental health. In addition, the study relied exclusively on self-report questionnaires, which may have been influenced by social desirability bias or participants' subjective interpretations of the items. Another limitation concerns the geographical restriction of the sample to residents of Tehran, which may limit the generalizability of the findings to other cultural or social contexts. Furthermore, crisis conditions can vary substantially across individuals depending on the nature and intensity of exposure, and the present study did not differentiate participants based on specific crisis experiences.

Future studies are recommended to employ longitudinal and experimental designs to examine causal relationships among resilience, cognitive flexibility, social support, and mental health over time. Researchers may also investigate additional mediating or moderating variables such as emotional regulation, coping strategies, personality traits, and socioeconomic status to achieve a more comprehensive understanding of psychological adaptation during crises. Comparative studies across different cultural groups, occupational categories, and age ranges may also provide valuable insights into the contextual factors influencing mental health resilience. In addition, future research could evaluate the effectiveness of intervention programs designed to improve resilience, adaptive cognition, and social connectedness in populations exposed to chronic stress and uncertainty.

The findings of the present study have important practical implications for mental health professionals, healthcare systems, educational institutions, and policymakers. Developing resilience-training programs, emotional regulation workshops, and cognitive flexibility interventions may help individuals cope more effectively with stressful and uncertain situations. Strengthening community support systems and promoting supportive interpersonal relationships may also improve psychological well-being during collective crises. Mental health services should adopt preventive and multidimensional approaches that integrate psychological, cognitive, and social resources to reduce the negative effects of crises on mental health. Additionally, policymakers and organizational leaders should prioritize the creation of psychologically supportive environments that encourage social cohesion, adaptive coping, and emotional well-being during periods of widespread uncertainty and adversity.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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