RESEARCH PAPER

Beyond The Mask: Insights From Cognitive Science On Human Behavior During Covid-19 Pandemic

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Abstract

Introduction: The covid-19 pandemic has had a profound impact on cognitive functioning and overall well-being across the globe. Although the immediate threat of the pandemic has lessened, it remains essential to understand its lasting psychological effects. This study examines the relationships between cognitive dissonance and cognitive flexibility and their influence on health-related behaviors, with a particular focus on the mediating role of emotional dysregulation.

Methodology: This study employed a positivist approach with a quantitative correlational design, analyzed within a structural equation modeling framework. The sample consisted of 500 adults aged 18 to 55 residing in tehran, selected through convenience sampling during the last quarter of 2022. Data collection instruments included the cognitive flexibility scale (dennis & vanderwal, 2010), the self-care behaviors questionnaire (pouyan fard et al., 2021), the cognitive dissonance arousal and reduction questionnaire (harmon-jones et al., 2009), and the difficulties in emotion regulation scale – short form (björg, 2016). Statistical analyses were performed using spss 26 and smartpls 4.

Findings: The results revealed that cognitive dissonance significantly affected health-related behaviors ($\beta = 0.953$, $t = 15.56$, $p < 0.001$) and emotional dysregulation ($\beta = -0.403$, $t = 7.14$, $p < 0.001$). Similarly, cognitive flexibility had a significant impact on both health-related behaviors ($\beta = -0.138$, $t = 1.98$, $p < 0.05$) and emotional dysregulation ($\beta = -0.314$, $t = 5.07$, $p < 0.001$). Emotional dysregulation also significantly influenced health-related behaviors ($\beta = 0.125$, $t = 2.55$, $p = 0.011$). Moreover, the findings indicated that emotional dysregulation partially mediated the effects of cognitive dissonance and cognitive flexibility on health-related behaviors during the covid-19 pandemic, as depicted in the conceptual model.

Conclusion: These findings underscore the important role of cognitive factors in shaping health-related behaviors in the context of the covid-19 pandemic. The study highlights the need to expand stress and trauma frameworks to incorporate cognitive stressors induced by the pandemic and to develop clinical interventions that support individuals affected by these challenges.

Keywords: Cognitive Dissonance, Cognitive Flexibility, Emotional Dysregulation, Health-Related Behaviors, Covid-19 Pandemic.

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INTRODUCTION

The global COVID-19 pandemic has presented an unprecedented international public health crisis not seen in over a century. By November 2021, more than 200 million cases and over 5 million deaths had been reported worldwide (World Health Organization, 2022). The demand on public health systems has been immense, particularly the urgent need for rapid and accurate testing and critical care resources for patients with severe illness. Beyond the necessity for effective prevention and treatment strategies, the pandemic has imposed extraordinary stress on individuals worldwide. Pandemic-related stressors include direct effects, such as illness diagnosis and treatment, as well as indirect consequences, including job or income loss, disruptions caused by school closures and agencies providing essential family support, social isolation, interpersonal conflicts, and loneliness resulting from adherence to social distancing measures (Kojawa et al., 2020; Taylor et al., 2020).

COVID-19-related stressors have placed individuals at heightened risk for depression, anxiety, and other psychiatric disorders. Given the widespread impact of these stressors, developing coping strategies to manage the numerous challenges associated with COVID-19 has become a public health priority (Zeng et al., 2021). The pandemic has led to increased symptoms of several psychiatric disorders, particularly depression and anxiety (Chow et al., 2020). During the COVID-19 crisis, many individuals experienced cognitive dissonance or dissonance regarding government policies for controlling the pandemic (Fischer et al., 2020). Significant discrepancies were observed between implemented policies and recommended guidelines for health behaviors, which also varied across cities in terms of citizen adherence to protective measures (Li et al., 2020).

One of the most powerful cognitive mechanisms is emotion, as demonstrated by fMRI research conducted in 2017, which confirms its undeniable role in human behavior (Wang et al., 2017). The term "emotion regulation" refers to the ability to employ strategies for understanding, expressing, and modulating emotional experiences (Garnefski et al., 2001). Emotional dysregulation constitutes a serious threat to mental health, involving maladaptive strategies in response to emotional states (Cole et al., 1994). Such strategies include a lack of awareness of emotional experiences, limited access to adaptive coping strategies, and an inability to maintain goal-directed behaviors (Bacon, 2020). Numerous studies have examined the relationship between emotional dysregulation and health-related behaviors. For example, a 2018 study on individuals attempting to quit smoking found that emotional dysregulation was inversely associated with multiple health-related behaviors, including motivation, expectation management, and coping strategies (Rogers et al., 2018). These findings highlight the relevance of emotional dysregulation to health-related behaviors, suggesting its potential role during the COVID-19 pandemic.

Among studies examining the relationship between cognitive dissonance and health-related behaviors, Helprin (2016) conducted a notable investigation. This study explored the impact of smoking characteristics on cognitive dissonance among current and former smokers. Smoking characteristics, such as the number of cigarettes smoked per day, years of smoking, years since quitting, and health beliefs related to smoking, were collected from over 9,000 adult respondents in 2016. Overall, current smokers exhibited higher cognitive dissonance than former smokers, reflecting more recent health beliefs related to smoking compared to those held in previous decades (Helprin, 2016).

In this context, Radnik et al. (2019) conducted a study to examine the relationship between cognitive flexibility, stress-coping flexibility, quality of life, and health-related behaviors in patients with inflammatory bowel disease undergoing biological treatment. The researchers recruited 80 patients currently receiving biological therapy and assessed their cognitive flexibility, stress-coping flexibility, and health-related behaviors using standardized questionnaires (Radnik et al., 2019). The results indicated that higher levels of cognitive flexibility and health-related behaviors were associated with better quality of life among patients. However, disease activity and duration were not significantly correlated with quality of life. The study also acknowledged limitations, including a small sample size and cross-sectional design, highlighting the need for further research to confirm these findings (Radnik et al., 2019).

Several studies have investigated the relationship between emotional dysregulation and health-related behaviors. One notable study examined the association between emotional dysregulation and health behaviors in individuals attempting to quit smoking. Conducted in 2018, the study assessed the structure and subcomponents of emotional dysregulation in relation to outcomes such as reduced negative affect, counter-motivation, perceived barriers to quitting, and the severity of difficulties experienced during cessation attempts. The results indicated that overall emotional dysregulation scores were significantly associated with each smoking-related outcome, suggesting that emotional dysregulation may serve as a key therapeutic target for promoting behavioral change in smoking cessation (Rogers et al., 2018).

Several studies have examined cognitive dissonance and cognitive flexibility. Ishida (2010) explored the relationship between these constructs and proposed a novel model of cognitive mismatch that incorporates both insight and flexibility. The author argued that previous models primarily conceptualized cognitive dissonance as tension or discomfort arising from holding contradictory beliefs but overlooked the importance of how individuals perceive and interpret their own beliefs (Ishida, 2010). Similarly, Robinson (2017) investigated the relationship between cognitive dissonance and cognitive flexibility in the context of belief change among psychotherapy clients. The study examined why some individuals are able to modify their belief systems to accept change and treatment, while others are not, ultimately proposing a model to explain these differences. Cognitive flexibility was

found to facilitate creative alternative solutions, which may play a critical role in reducing cognitive dissonance through adaptive coping mechanisms (Robinson, 2017).

Pelt et al. (2018) examined the concept of expressive conflict, arguing that it occurs when an individual experiences a mismatch between their internal emotions and the way they outwardly express them. The authors suggested that expressive conflict can lead to cognitive dissonance, ultimately resulting in increased stress, tension, and dissatisfaction. Their article reviewed several studies investigating the effects of expressive conflict. For example, in one study, participants were asked to write a persuasive essay opposing their own personal beliefs. The results indicated that individuals who experienced expressive conflict also reported greater cognitive dissonance and reduced confidence in their own beliefs (Pelt et al., 2018).

Zarei et al. (2018) examined cognitive flexibility, shame, and emotional dysregulation in relation to depression and neuroticism. Their study was conducted on 300 students at Shahid Beheshti University in Tehran, who completed multiple questionnaires. The results indicated that cognitive flexibility, shame, and emotional dysregulation partially mediated the relationship between neuroticism and depression (Zarei et al., 2018). Similarly, Gash and Holder (2020) investigated the relationship between cognitive flexibility and emotion regulation in 30 young adults aged 18 to 25 of both genders. The findings revealed a significant association between cognitive flexibility and emotion regulation, with most participants employing reappraisal strategies during the regulation process (Gash & Holder, 2020). In a more recent study, Den et al. (2023) explored the relationship between emotion regulation and cognitive-behavioral flexibility in individuals with eating disorders. The results showed that lower cognitive-behavioral flexibility was associated with more severe disorder-related thoughts and a higher frequency of compensatory behaviors. These associations remained significant even after controlling for individual differences in emotion regulation and mood (Den et al., 2023). Considering the COVID-19 pandemic and its potential psychological and cognitive impacts, the present study aims to examine the relationships between cognitive dissonance and cognitive flexibility with health-related behaviors, with emotional dysregulation serving as a mediating variable.

METHODOLOGY

The present study is classified as fundamental research with respect to its objectives and as descriptive-correlational in terms of data collection. Given the aim of examining relationships among multiple variables, a correlational research design was adopted. The accessible population consisted of individuals aged 18 to 55 residing in Tehran during the final quarter of 2022. Participants were recruited through convenience sampling. The sample size was determined using the method proposed by Wolf et al. (2013), which integrates several approaches for estimating sample sizes in structural equation modeling (SEM). Following this guideline, a minimum of 480 participants was considered adequate, while a total sample of 500 was selected to ensure robustness.

Inclusion criteria required participants to have at least a middle school education to ensure comprehension of the questionnaires, be aged between 18 and 55 years, and possess proficiency in the official language. Participants who left more than 15% of questionnaire items unanswered or incomplete were excluded from the study.

Research Instruments

Self-Care Behaviors Questionnaire

One of the most widely used tools for assessing self-care behaviors is the Self-Care Behavior Questionnaire developed by David Irwin (2001). In addition, a context-specific questionnaire was developed in Iran to evaluate self-care behaviors during the COVID-19 pandemic, with its validity and reliability well-established (Pouyan Fard et al., 2020). This 15-item instrument specifically addresses pandemic-related self-care behaviors, including practices such as social distancing and vaccination, making it highly appropriate for the present study. Participants respond using a five-point Likert scale ranging from 1 (very low) to 5 (very high), yielding total scores between 15 and 75, where lower scores reflect greater adherence to self-care behaviors. The internal consistency reported by Pouyan Fard et al. was Cronbach's alpha = 0.78, whereas in the current study, it was 0.90.

Cognitive Flexibility Scale

The Cognitive Flexibility Scale, developed by Dennis and VanderWal (2010), is a 20-item self-report instrument rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), with total scores between 20 and 140. Higher scores reflect greater cognitive flexibility. The scale comprises two subscales: problem-solving processing and perceived controllability. In the original validation study, Cronbach's alpha for the total scale and the subscales were 0.91, 0.91, and 0.84, respectively, with test-retest reliability ranging from 0.75 to 0.81. Iranian validation studies reported comparable internal consistencies

(Kahandani & Abu-Maali, 2017; Nouri et al., 2022), and in the present study, Cronbach's alpha for the total scale was 0.91.

Cognitive Dissonance Arousal and Reduction Questionnaire

This 25-item scale, developed by Harmon-Jones et al. (2009) based on an action-oriented model of cognitive dissonance, assesses participants' experiences of cognitive dissonance. Items are rated on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). The scale comprises two higher-order factors: dissonance-arousal (α = 0.86) and dissonance reduction (α = 0.76). An Iranian validation study by Safari Nia and Zandi (2010) reported a total scale internal consistency of α = 0.87. In the current study, Cronbach's alpha for the total scale was 0.867.

Difficulties in Emotion Regulation – Short Form (DERS-16)

This 16-item self-report scale evaluates negative emotional dysregulation. Participants indicate how often they have experienced each item over the past month using a 5-point Likert scale from 1 (almost never) to 5 (almost always). The scale has demonstrated excellent psychometric properties, with Cronbach's alpha of 0.97 in the original study by Dolan et al. (2020). In Iran, Shi (2021) validated the instrument, reporting Cronbach's alpha = 0.91 and test-retest reliability r = 0.92. In the present study, Cronbach's alpha for the total scale was 0.931.

Data were analyzed using structural equation modeling (SEM), including both measurement and structural models, with SPSS 26 and SmartPLS 4 software.

RESULTS

Descriptive information regarding participants' gender, education level, age, and marital status is presented in Table 1.

Table 1. Descriptive Statistics of Participants' Demographic Variables

	Gender	Frequency	ChatGPT said:	Cumulative Frequency
Gender	Female	375	Percentage	6.77
	Male	108	6.77	100
Education	Secondary school / High school diploma	65	4.22	5.13
	Bachelor's degree	278	5.13	0.71
	Master's degree and above	140	6.57	100
Age	18–30 years	178	0.29	9.36
	31–45 years	252	9.36	0.89
	46 years and above	53	2.52	100

Table 2. Descriptive Statistics of the Study Variables

variables	M	SD	Kurtosis	Skewness	Kolmogorov–Smirnov Test		
					Statistic	df	Statistical Significance
Cognitive dissonance	81.52	12.17	-0.38	0.30	0.057	483	<0.001
Cognitive Flexibility	98.68	17.18	-0.15	-0.22	0.034	483	<0.01
Health-Related Behaviors	50.49	12.11	-0.43	-0.15	0.060	483	<0.001
Emotional Dysregulation	42.30	14.38	-0.44	-0.57	0.080	483	<0.001

As reported in Table 2, indicators of the normality of the study variables (skewness and kurtosis), along with the Kolmogorov-Smirnov test, indicated that the distribution of the study variables deviated from normality.

Table 3. Reliability and Validity Indicators for the Study Variables

variables	α	rho	CR	AVE
Cognitive Dissonance	0.869	0.890	0.868	0.734
Cognitive Flexibility	0.904	0.922	0.870	0.631
Emotional Dysregulation	0.930	0.932	0.930	0.728
Health-	1	1	1	1

Related Behaviors				

Based on the Cronbach's alpha coefficients, composite reliability, and convergent validity indicators presented in Table 3, it can be concluded that the variables of cognitive dissonance, cognitive flexibility, emotional dysregulation, and health-related behaviors demonstrate acceptable internal consistency. Convergent validity is used to assess the extent to which a latent variable is explained by its observed indicators. Given that the acceptable threshold for the average variance extracted (AVE) is > 0.50, the findings indicate that the present study exhibits satisfactory convergent validity.

Table 4. Fornell-Larcker Criterion for Assessing Discriminant Validity

variables	1	2	3	4
Health-Related Behaviors	1			
Cognitive Flexibility	0.462	0.794		
Emotional Dysregulation	-0.388	-0.599	0.853	
Cognitive dissonance	-0.776	0.709	0.625	0.856

In Table 4, the Fornell-Larcker matrix was constructed based on the correlation matrix and the square root of the AVE of the latent variables along the main diagonal. As observed, the square root of the AVE for each latent variable is greater than its correlations with the other variables, confirming the discriminant validity of the variables in the present study.

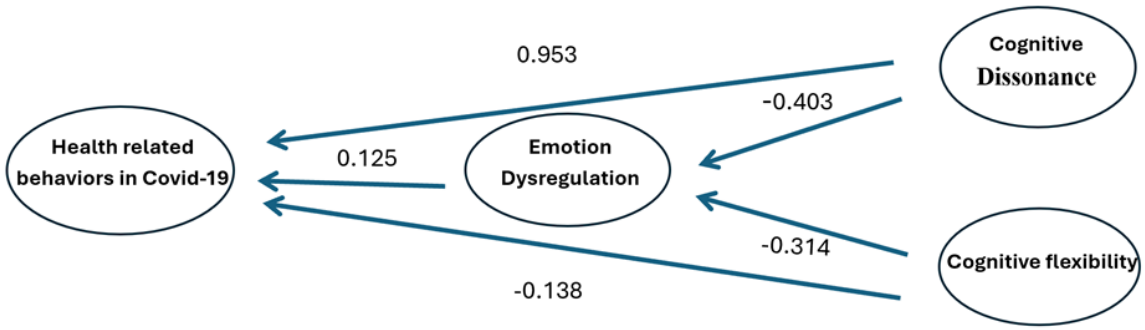

Figure 1. Research Model with Standardized Path Coefficients (Structural Model Assessment)

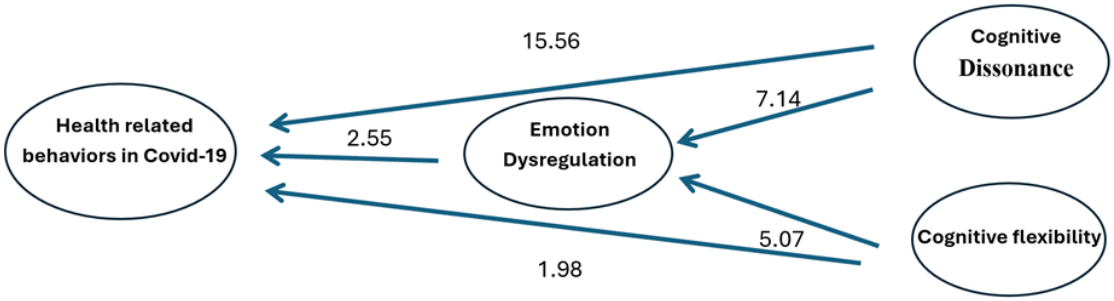

Figure 2. t-Value Estimates for the Research Model

Table 5. Testing the Direct Hypotheses of the Study within the Structural Model Framework

Path ependent Latent Variable ← Predictor Latent Variable	$\boldsymbol{\beta}$	T_value	P	Result
Cognitive Dissonance → Emotion Dysregulation	0.953	15.56	< 0.001	Statistically significant

Cognitive Dissonance → Emotion Dysregulation	-0.403	7.14	< 0.001	Statistically significant
Cognitive Flexibility → Health-related Behaviors	-0.138	1.98	0.048	Statistically significant
Cognitive Flexibility → Emotion Dysregulation	-0.314	5.07	< 0.001	Statistically significant
Emotion Dysregulation → Health-related Behaviors	0.125	2.55	< 0.011	Statistically significant

Based on the findings shown in Table 5 and Figures 1 and 2, the first hypothesis, which proposed that cognitive dissonance influences health-related behaviors ($\beta = 0.953$, $T = 15.56$, $p < 0.001$), was supported. The relationship was significant at the 99% confidence level, with a positive direction. The second hypothesis, stating that cognitive dissonance affects emotional dysregulation ($\beta = -0.403$, $T = 7.14$, $p < 0.001$), was also confirmed, indicating a significant negative effect at the 99% confidence level. The third hypothesis, suggesting that cognitive flexibility influences health-related behaviors ($\beta = -0.138$, $T = 1.98$, $p = 0.048$), was supported, showing a significant negative relationship at the 95% confidence level. The fourth hypothesis, which examined the effect of cognitive flexibility on emotional dysregulation ($\beta = -0.314$, $T = 5.07$, $p < 0.001$), was confirmed, indicating a significant negative or indirect effect. Finally, the fifth hypothesis, proposing that emotional dysregulation affects health-related behaviors ($\beta = 0.125$, $T = 2.55$, $p = 0.011$), was supported, showing a positive and significant effect at the 99% confidence level.

As shown in Figure 1, the R^2 value for emotional dysregulation was 0.440, indicating a moderate-to-strong explanatory power. The R^2 value for health-related behaviors was 0.627, reflecting a strong model fit.

Discussion

The findings indicated that cognitive dissonance significantly affects health-related behaviors during the COVID-19 pandemic, with a positive and direct relationship. These results are consistent with previous research in this field (Krikorian et al., 2022; Dai-Domenico et al., 2022). For example, Pierce and Cooper (2021) conducted a study during the pandemic to increase compliance with COVID-19 safety measures using cognitive dissonance as a guiding framework. Participants who were reminded of instances in which they had not adhered to health protocols experienced cognitive dissonance, which subsequently increased their compliance with behaviors such as social distancing, mask-wearing, and vaccination. Cognitive dissonances often arise when individuals face complex decisions under conditions of incomplete or contradictory information. The study also found that cognitive flexibility has a significant effect on health-related behaviors during COVID-19, with a negative or indirect relationship. These findings are in line with prior research linking cognitive flexibility to mental health and well-being (Fukuzaki & Takeda, 2022; Babaei et al., 2023). Higher cognitive flexibility and self-compassion are associated with lower emotional distress (Marshall & Brookman, 2016). Cognitive flexibility refers to the capacity to switch between independent ideas, consider multiple perspectives simultaneously, and adapt behaviors to changing environmental demands (Diamond, 2016). Research has shown that cognitive flexibility negatively correlates with depression, anxiety, and neuroticism (Babaei et al., 2023). During the COVID-19 pandemic, studies in the UK demonstrated that higher cognitive flexibility was positively associated with well-being and negatively associated with anxiety, depression, and neuroticism (Dawson & Moghadam, 2020). These findings suggest that in addition to identifying vulnerability factors, psychologists increasingly focus on factors that enhance resilience when coping with stress (Yi, 2021). Adaptation to adverse circumstances requires flexible responses to changing conditions (Wang, 2021). Coping strategies should be applied flexibly according to contextual demands (Bonanno & Burton, 2013). For instance, Troy et al. (2013) showed that cognitive reappraisal is more effective under uncontrollable stressors than in situations where individuals perceive greater control, highlighting the importance of flexibility in the selection of coping strategies.

The results further indicated that cognitive dissonance significantly affects emotional dysregulation, with a negative or indirect relationship. This aligns with theoretical and empirical frameworks, including the Sanchino-Montesinos model (2018, 2020). According to cognitive dissonance theory, individuals experience negative emotions upon recognizing a conflict, motivating them to reduce the tension by alleviating the dissonance. The process of recognizing dissonance operates according to similar principles as emotional

appraisal of other significant stimuli; thus, emotion appraisal theories are relevant in explaining dissonance recognition. Strategies used to reduce cognitive dissonance, such as attitude change, trivialization, or denial of responsibility, can be conceptualized as emotion regulation techniques. This approach helps reconcile conflicting perspectives in the literature on dissonance reduction. According to Festinger's original theory, when cognitions are perceived as inconsistent: (a) individuals experience negative emotions, (b) they are motivated to reduce these emotions and restore consistency, and (c) they avoid information or situations that may increase dissonance. An example of cognitive dissonance is when one's behavior strongly contradicts personal beliefs, such as consuming meat despite holding strong anti-meat-industry views. In most situations, individuals experience both conflicting and consistent cognitions—for example, a family dinner may align with social goals but conflict with personal dietary beliefs or values (Harmon-Jones et al., 2015).

The results indicated that cognitive flexibility significantly influences emotional dysregulation, with the relationship being negative or indirect. According to emotion appraisal theories (Scherer, 2009; Morris et al., 2013), emotions elicited by specific events, such as the COVID-19 pandemic, arise from individuals' cognitive evaluation of those events. Initially, people make rapid assessments of the relevance of stimuli to their goals. This early-stage evaluation occurs at a lower cognitive level, where stimuli are classified based on novelty (familiar or unfamiliar) and intrinsic valence (pleasant or unpleasant). Subsequent higher-level cognitive processes involve evaluating the stimuli in terms of goal outcomes and coping resources. Consequently, before engaging in strategies to reduce dissonance, individuals interpret the stimuli, and since these interpretations vary across people and situations, the appraisal framework provides insights into individual and situational differences in dissonance recognition. The emotion regulation processes associated with dissonance recognition correspond to what researchers have traditionally termed cognitive dissonance reduction. However, since dissonance is alleviated by mitigating negative emotions, it can also be conceptualized as an emotion regulation process. The complex interaction between emotion generation and subsequent regulatory activity following an event is captured by the process model of emotion regulation. This model, grounded in appraisal theory, identifies five points during emotion generation at which individuals can regulate emotions: situation selection, situation modification, attentional deployment, cognitive reappraisal, and response modulation. For example, a negative emotional event might begin with a situation capable of eliciting emotions, such as making an irreversible decision between two equally desirable or undesirable options. The first available strategy is to avoid the situation. If avoidance is impossible, the individual may modify the environment to alter its emotional impact (e.g., seeking assistance from a friend during a difficult decision). If modification fails, directing attention away from the situation (e.g., thinking about something else) can help regulate emotions.

The findings also showed that emotional dysregulation has a significant direct effect on health-related behaviors during COVID-19, with the relationship being positive. Recent research highlights that much of emotion regulation occurs outside conscious awareness (Kool & Rotermund, 2011; Kool et al., 2015). In a model comparing explicit and implicit emotion regulation (Brownstein et al., 2017), strategies are organized along two dimensions: regulation goal (implicit to explicit) and regulatory process (automatic to controlled). These dimensions create a framework in which strategies range from highly deliberate (explicit goal, controlled process) to largely automatic (implicit goal, automatic process). Bonanno and Burton (2013) argue that the use of different regulatory strategies over time varies based on feedback regarding their effectiveness, which helps individuals adapt to repeated stressors. Individual differences in strategy flexibility are influenced by three components: sensitivity to social context, the repertoire of available strategies, and the ability to monitor feedback on effectiveness (Weick, 1968). The initial intensity of negative arousal is the first factor affecting how individuals reduce cognitive dissonance (see Sheps' model). This intensity depends on the magnitude of dissonance (the proportion of inconsistent versus consistent cognitions) and whether the situation is novel or familiar. Higher levels of dissonance or novelty produce stronger negative arousal. Novel situations may evoke stronger emotional reactions because individuals lack automatic coping responses. Both the magnitude of dissonance and the novelty-familiarity dimension independently influence negative arousal in emotion regulation models. For instance, repeatedly eating meat while attempting a vegetarian diet generates a similar degree of cognitive dissonance each time, but repeated exposure facilitates easier management of dissonance.

Finally, when cognitive dissonance is low and the situation is highly familiar, dissonance reduction tends to be largely implicit (e.g., an automatic distraction response). In this model, the evaluation of novelty or

familiarity occurs at a higher cognitive level, affecting the subsequent regulatory process rather than the initial detection of dissonance. This is consistent with Gross's (2014) process model of emotion regulation.

The findings of the present study confirmed the mediating role of emotional dysregulation in the effect of cognitive dissonance and cognitive flexibility on health-related behaviors during COVID-19 within the proposed conceptual model, albeit to a partial extent. These results align with the findings of Kalia et al. (2019). One explanation for this finding is that during the first year of the pandemic, the global prevalence of anxiety and depression increased by approximately 25%. This rise in psychological distress has been documented in numerous systematic reviews and meta-analyses, highlighting that the COVID-19 pandemic has generated significant mental health challenges worldwide (Robinson et al., 2022). Currently, evidence suggests that many individuals have recovered from pandemic-related psychological distress and largely returned to their baseline mental health. Nevertheless, a small but notable portion of the population continues to experience mental health issues (Saunders et al., 2021; Robinson et al., 2022). Furthermore, COVID-related mental health problems are expected to persist long-term and may become chronic (Lopez-Leon et al., 2021). Although individuals may face stressful events, such as COVID-19, there are notable individual differences in the experience and regulation of negative emotions (Gross & John, 2003). Recent studies indicate that during the pandemic, several factors acted as moderators or mediators between stressful experiences and mental health outcomes. Examples include individuals' sense of meaning in life (Schnell & Crump, 2020), locus of control, psychological flexibility (Smith et al., 2020), personality traits (Smith et al., 2020; Liu et al., 2021), and emotion regulation abilities (Zhou et al., 2020; Liang et al., 2021). These findings suggest that how individuals manage negative emotions in daily life and during prolonged crises, such as a pandemic, can either facilitate coping or adversely affect mental health and overall well-being.

CONCLUSION

Based on the present study, cognitive variables can be considered significant determinants of health-related behaviors during the COVID-19 pandemic. These factors warrant serious attention from mental health professionals and policymakers. Cognitive variables also play a critical role in managing stress after infection, understanding the illness accurately, and adhering to self-care and coping strategies. The results of this study can inform interventions aimed at improving treatment outcomes and rehabilitation for patients affected by COVID-19 and other pandemic-related illnesses, providing guidance for physicians, nurses, psychologists, psychiatrists, and relevant decision-making authorities both now and in the future. A limitation of this study is that the research population was restricted to residents of Tehran within a specific age range; therefore, the findings may not be generalizable to other demographic or clinical groups.

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