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Can Social Concern Theory Explain Quarantine-Related Misbehavior During the COVID-19 Pandemic? An Inquiry in the Urban Context of Iran

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Abstract

The COVID-19 pandemic has precipitated quarantines in many urban settings, and rules have been enforced to ensure that citizens are complying with health-related mandates. However, anecdotal and empirical evidence confirm the prevalence of policy transgressions. Non-compliance with COVID-19 mandates can have severe consequences for individual health, societal fear, and the global economy. Thus, it is important to better understand the etiology of such misbehavior in the hopes of ensuring policy adherence. Using Agnew's social concern theory as a conceptual framework,

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this study investigates quarantine-related misbehavior in the urban context of Rasht, Iran. Survey data of 393 university students indicate that social concern theory can explain quarantine-related misbehavior. Specific findings, implications, limitations, and directions for future research are discussed.

Keywords
social concern theory, COVID-19, quarantine-related misbehavior

Introduction

In December 2019, Wuhan, China, reported the first outbreak of COVID-19 caused by the novel SARS-CoV-2 coronavirus. An outbreak of the disease spread rapidly throughout the world in 2020, resulting in large scale deaths, debilitating illnesses, and significant socioeconomic disruptions (Ihm et al., 2021). COVID-19 was declared a worldwide pandemic by the World Health Organization on March 11, 2020. In light of the following factors, COVID-19 is considered a "once-in-a-century pathogen." It carries a fatality rate of 1%, which is much higher than traditional influenza, since it can kill both healthy and compromised individuals alike. It is comparable to the mortality rate experienced during the 1857 influenza pandemic (0.6%) and the 1918 Spanish flu (2.0%) outbreaks. Due to the absence of pharmaceutical discoveries, however, the actual fatality rate associated with COVID-19 remains a mystery. Given the rate at which this disease is spreading, COVID-19 may prove to be more severe than any other pandemic (Padhan & Prabheesh, 2021).

The 2019 coronavirus pandemic has dramatically penetrated all aspects of human life and global society, both now and for the foreseeable future (Barnes, 2020). The United Nations has described the COVID-19 pandemic as a major social, humanitarian, and economic crisis, the effects of which are affecting both developed and developing countries. Continuing outbreaks will hamper the global health community system, which may give rise to an unseen crisis for the global population (Mollalo et al., 2020). COVID-19 is one of the SARS-CoV-2 viruses that causes various medical symptoms such as cold/flu symptoms, cough, fever, shortness of breath, loss of taste and smell, kidney failure, and even death. Medical statements indicate that this respiratory virus can be transmitted through physical contact, droplets, and aspirates. In general, everyone is susceptible to infection by this dangerous virus (Bhagat et al., 2021; Triberti et al., 2021).

Globally, as of 5 July 2022, there have been 547,901,157 confirmed cases of COVID-19, including 6,339,899 deaths, reported by World Health

Organization (WHO, 2022). Moreover there have been 154.43 total vaccine doses administered per 100 persons as of 5 July 2022. WHO estimates that more than 200 countries, including Iran, are affected by the pandemic. As of 5 July 2022, the latest WHO statistics indicated that 141,404 deaths had been caused by COVID-19, placing Iran among the top eleven countries most affected by this contagious disease. Moreover, Iran is ranked 17th on the list with 7,240,564 confirmed cases of COVID-19 (World Health Organization of COVID-19 Dashboard). Another COVID-19 dashboard, prepared by Johns Hopkins University, reported that as of 5 July 2022, 68.89% of Iranians have fully vaccinated (Johns Hopkins University, 2022).

The outbreak and mortality rate of the virus is such that many governments use strict health laws and protocols to prevent and slow the spread of the virus (Choobdari et al., 2020; Delavar & Shokouhi Amirabadi, 2020). In other words, a primary concern for many governments worldwide has been the preservation of life, which led them to introduce various measures to reduce the number of infections and deaths related to the COVID-19 outbreak. These interventions included national lockdowns, travel restrictions, measures to quarantine and isolate infected individuals, social distancing, and the wearing of personal protective equipment (PPE), including face masks (Chisadza et al., 2021). With respect to these policies, at the community level, social distancing plays a critical role in preventing the spread of infection. By reducing the number of sick individuals and the rates of infection, it helps prevent the overwhelming of global health care systems. However, social distancing and mask mandates have tested the degree of cooperation among individuals (Tabish, 2020). Such public health measures, in particular stay-at-home orders, can have unintended adverse consequences for crime (Ashby, 2020; Boman & Gallupe, 2020). Criminologists argue that the public health measures associated with COVID-19 affect the causal mechanisms of crime in a variety of ways, such as changes in routine activities, (dis)appearance of crime opportunity structures, changes in levels of formal and informal social control, and increased stress and anxiety. Therefore, criminologists anticipated that lockdowns might differentially affect crime types, with certain crimes decreasing (e.g., theft and property crime) and others increasing (e.g., cybercrime; Hardyns et al., 2022). These research questions, and others, have been subjected to empirical testing through a variety of recent studies (e.g., Harris, 2020; Leal, Kurland, et al., 2021; Leal, Piquero, et al., 2021; Meers et al., 2021; Rosli et al., 2021).

In Iran, protocols such as the cancellation of all sports and cultural events, the closing of stores and restaurants, as well as the shutdown of schools and universities have been implemented over several periods of time beginning in the spring of 2020 (Abdi, 2020; Yoosefi Lebni et al., 2020). Despite the

enactment of social distancing mandates and the restrictions on personal freedoms as possible effective strategies in reducing the diagnosis and mortality rates, many people have violated the established protocols and, thus, jeopardize the health of other citizens (Harris, 2020). In other words, despite the related information provided by the government and media about the observance of health protocols and physical distancing, the violation of the law by some people not only endangers their health and their families, but it also poses a serious risk to the public health of society (Alessandri et al., 2020; Alivernini et al., 2020).

The question is why some individuals break the rules with regard to the COVID-19 restrictions, as the consequences affect everybody, including those violating the measures to combat the pandemic. A few studies have begun to explore this question. For example, Harris (2020) and Meers et al. (2021) both found that techniques of neutralization are useful in examining COVID misbehavior. Following this emerging body of scholarship, it seems prudent to continue to better understand the nature of COVID-19 misbehavior so that effective policies may be put into place to help reduce such deviance.

To that end, we examine COVID-19 misbehavior among 393 university students in Iran during a period of lockdown. One such criminological theory that may be applicable to help explain such antisocial behavior is Agnew's (2014) social concern theory. Briefly, his theory suggests that concern for others (rather than pursuing self-interest) acts as a protective factor against deviance. Thus, we utilize the concepts of social concern theory as a theoretical backdrop in an attempt to better understand COVID-19 misbehavior.

Theoretical Framework

As the breaking of rules to restrict the pandemic can be seen as a special case of moral rule-breaking, contemporary criminological theories can be applied to explain individual differences in the frequency of breaking the COVID-19 restrictions. One of the theories that can potentially explain this antisocial and morally wrong behavior—condemned by the public and punished by the state—is Agnew's (2014) social concert theory (SCT). Agnew (2014) argues that people with lower levels of social concern are more likely to engage in different kinds of rule-breaking behavior due to (1) low levels of empathy and sympathy, (2) low personal moral standards, (3) low desire for emotional and social bonds with others, and (4) low conformity to others and society. In other words, low levels of social concern decrease psychologically altruistic tendencies in humans. On the other hand, individuals displaying high levels of social concern tend to have a sociable personality and tend to consider the well-being, welfare, and health of others when deciding to break or follow rules.

Social concern theory has an important merit. It is based on a more nuanced image of human nature (see Agnew, 2011). According to Agnew (2011), every well-developed theory should take a position on a different number of key issues, such as human nature, social order, and crime definition. In that sense, Agnew (2011) builds on results found outside the field of criminology and moves beyond his formerly stated general strain theory. Agnew (2011) stresses that humans are not rational and self-interested actors, are not just good people corrupted by societal condition, and are not blank slates (see Pinker, 2002).

The key construct of SCT is social concern. According to Agnew, social concern has multiple dimensions: (1) the care of others' welfare, (2) the desire for close bonds to others, (3) inclinations to follow society's rules and conventional individuals, and (4) moral intuitions (see also Haidt, 2012; Silver & Silver, 2021). An overwhelming body of research from moral and evolutionary psychology shows that most people care for others and feel distress when others are hurt (Baumeister & Leary, 1995). Empathy, the care for others' welfare, is a central aspect of human nature (see Buss, 2019; De Buck & Pauwels, 2021; Jolliffe & Farrington, 2021). The desire for close bonds or ties is also central to human nature. Humans are a social species, and not a solitary species (Sapolsky, 2017). In social species, one wishes to belong and to be respected and trusted. Indeed, in social species, social behavior has had an evolutionary advantage over antisocial behavior. The conditions for survival and reproduction lead to an increase in social behavior. What has longtime been an evolutionary puzzle (Dawkins, 2016; Ridley, 2016), seems to have found a solution: morality has evolved as a way to increase cooperation between kin (through kin selection) and between strangers (through direct and indirect reciprocity).

The third component consists of the inclination to conform to the behavior of others in society. According to Agnew (2011), the need to conform to others—and society in general—is so strong that people will conform even at a personal cost to themselves. This is partly understood by the distress people may feel who do not conform; they may be left behind, ostracized, and socially excluded. Lastly, SCT places a key focus on empathy and morality (see also Trivedi-Bateman & Crook, 2021; Wikström et al., 2012). Thus, the final aspect of SCT stresses the inclination to follow moral intuitions (see e.g., Haidt, 2012). The theory postulates a universal consensus of individual morality around the idea of not hurting others (e.g., not killing or harming others, not stealing or robbing, and treating individuals equitably).

Researching social concern theory is still in its infancy; consequently, there have not been too many empirical investigations yet on the relationship between social concern and deviance. Of the few that have been undertaken,

the general finding is that an individual's level of social concern is negatively related to one's deviant involvement. For example, using a nationally-representative sample of American adults, TenEyck and Barnes (2018) found that social concern was negatively related to a variety scale of criminal behavior. In a study of Iranian high school students, Shadmanfaat et al. (2021) found that the social concern components had both direct and indirect effects on students' cyberbullying perpetration. Chouhy et al.'s (2017) study of adolescent delinquency found mixed results. Care for others and moral intuitions were negatively associated with delinquency, but desire for close ties and conformity were unrelated to delinquency. Other studies have found that SCT has predictive utility in examining white-collar crime (Craig, 2017) and workplace deviance (Kabiri et al., 2021). Given the wide scope of deviant behaviors that SCT has been successfully able to predict, it should also be applicable to explaining COVID-19 misbehavior during a period of lockdown.

Current Study

Most survey studies are based on so-called "WEIRD-people" (Western, Educated, Industrialized, Democratic countries, see J. Henrich et al., 2010). Therefore, it is an important challenge to adequately translate the key constructs of Agnew's theory in a non-Western context. In Iran, the National Headquarters of Administrating COVID-19 announced that "red cities" in the country, including Rasht, would be quarantined for a period of 2 weeks starting Saturday, December 22, 2020. Three weeks after the start of the quarantine period, the present study was conducted to see whether it was possible to explain individual differences in misbehaviors during the urban lockdown. Specifically, the current study attempts to examine the utility of SCT in explaining quarantine-related misbehavior in an urban context during a period of quarantine.

Based on theory (Agnew, 2014) and prior research (e.g., Chouhy et al., 2017; Shadmanfaat et al., 2021; TenEyck & Barnes, 2018), it is hypothesized social concern will be negatively related to COVID-19 misbehavior (H1). Agnew (2014) also put forth that social concern would not only have a direct, negative effect on deviance, but that the social concern components would have indirect effects on crime. For example, having a high level of morality leads to an increase in empathy for others (i.e., care for others). A prior test of SCT revealed that the effect of moral intuitions to deviant behavior was mediated by the care for others component. Moreover, low desire to close ties had a significant effect on low levels of conformity to rules and conforming adults and indirectly impacts on cyberbullying

perpetration (Shadmanfaat et al., 2021). To investigate whether this study could replicate this finding, direct and indirect effects are empirically examined. Based on theory and prior research, it is hypothesized that desire for close ties (though through conformity to others) and moral intuitions (through care for others) will have indirect effects on deviance (H2).

Methods

Data and Sample

The cross-sectional sample consisted of 393 Iranian students of Azad University, Rasht Branch. According to statistics provided by the Rasht Branch of Azad University, approximately 16,000 students were studying at this university during the time of the survey. From this list, we utilized Krejcie and Morgan's (1970) sample size table, and 430 students were randomly selected. After random selection, the respondents were contacted and a questionnaire was delivered to them at home. Among the sample list, 54 students were not available and were replaced by random re-sampling. To facilitate easy access to the questionnaire, a copy of the questionnaire in PDF format was also sent to the respondents through the WhatsApp software. A total of 156 respondents preferred this questionnaire-submission alternative. Out of 430 distributed questionnaires, 393 questionnaires were used for analysis, representing a 91% response rate. Before distributing the questionnaire, the purpose of the study was discussed and informed consent was provided by the respondents. Each in-person respondent was given a health care package consisting of gloves, face mask, and hand sanitizer. See Table 1 for sample characteristics.

Dependent Variables

The dependent variable is quarantine-related misbehavior. Participants were asked to indicate how often they complied with official preventive measures toward COVID-19 infection in the past 3 weeks. The behavior scale consisted of six items, and it was adapted from Alessandri et al. (2020). The survey items were: (1) I keep the recommended distance from people and avoid crowded places, (2) I've limited my social interactions, (3) I'm strictly following the guidelines issued by the Government, (4) I have continued my life normally, without special precautions, (5) I paid attention to cover my mouth and nose when sneezing, and (6) I avoided contact with people suffering from acute respiratory infections. The items were originally measured on a 5-point Likert scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often, and 4 = always).

Table 1. Sample Characteristics.

Variables	Percentage of sample
Gender	
Male	51.1
Female	48.9
Age (years)	
Below 20	21.1
20–25	37.4
26–30	26.2
Above 30	15.3
Education	
Associate's degree	16.5
Bachelor's degree	31.8
Master's degree	42.2
Doctoral degree	9.3
Marital status	
Single	64.9
Married	35.1
Family member COVID-19 death	
Yes	64.1
No	35.9
Family member medical condition	
Yes	28.0
No	72.0
Personal medical condition	
Yes	10.4
No	89.6

For these analyses, the items (except #4) were reverse coded so that higher scores reflected *non*-compliance (i.e., misbehavior).

Independent Variables

Four components of Agnew's SCT were measured: (1) care for others, 2) desire for close ties, (3) moral intuitions, and (4) conformity to others.[1] Previous research (Shadmanfaat et al., 2021) demonstrated that SCT and its four components have a good predictive validity in Iranian society and successfully could predict 40% of the individual differences in respondents' self-reported deviant behavior. The social concern variables consist of a higher-order social concern scale as well as the four social concern

subscales. Social concern was measured with a total of 21 items, and all of the items were measured on a 5-point Likert scale (1 = completely disagree, 5 = completely agree). Higher values on the items (and the scales) indicate greater levels of social concern.

The dimensionality of the social concern scale was examined trough exploratory factor analysis (EFA). The results indicated that the social concern items could be reduced to the four major distinct factors of the theory: care for others (four items), desire for close ties (five items), moral intuitions (eight items), and conformity to others (four items). The 4-factor solution accounted for 74.66% of the explained variance, which is larger than the 60% threshold suggested by Hair et al. (2009). Similarly, the factor loadings for all 21 items were greater than 0.50 (0.67–0.93) as recommended by Kaiser (1996). The moral intuitions factor (32.64%) explains the highest total explained variance; in contrast, the lowest total explained variance was the care for others factor with 9.38% of total variance (Kaiser–Meyer–Olkin [KMO] = 913, *df* = 210, sig. = .001).

The *care for others* variable was captured by a four-item scale. The items were borrowed from Shadmanfaat et al. (2021). Respondents were asked how much they agreed with the following statements: (1) I can easily understand how people are feeling even before they tell me, (2) I can tell when others are angry, happy of anxious, even if they try to hide it, (3) In general, the negative emotions of others (feelings like fear, anger, sadness, and embarrassment) greatly affect me, and (4) I feel concerned about people who are sick or treated unfairly.

The *desire for close ties* variable was measured with five items from Shadmanfaat et al. (2021). The items include: (1) I want to be accepted by intimates (family members, relatives, or close friends), (2) I desire to be accepted by those I communicate with them or their opinion impressed me (members of the social and prestigious groups, adult authority figure, police officers, or neighbors), (3) I consider important others reactions when making important decisions, (4) when I have not done very well on something that is very important to me or I feel upset about something, I can get to feeling better simply by being around other people, and (5) I try hard not to do things that will make other people avoid or reject me.

The short form of moral disengagement produced by Moore et al. (2012) was used to capture *moral intuitions*. The original version of moral disengagement developed by Bandura et al. (1996) that consisted of 32 items which evaluates eight moral disengagement' subscales. The short version of the scale represents each of the eight mechanisms with one of the following items: (1) It is okay to spread rumors to defend those you care about (moral justification), (2) Taking something without the owner's permission is okay

as long as you're just borrowing it (euphemistic labeling), (3) Considering the ways people grossly misrepresent themselves, it's hardly a sin to inflate your own credentials a bit (advantageous comparison), (4) People shouldn't be held accountable for doing questionable things when they were just doing what an authority figure told them to do (displacement of responsibility), (5) people can't be blamed for doing things that are technically wrong when all their friends are doing it too (diffusion of responsibility), (6) Taking personal credit for ideas that were not your own is no big deal (distortion of consequences), (7) Some people have to be treated roughly because they lack feelings that can be hurt (dehumanization), and (8) People who get mistreated have usually done something to bring it on themselves (attribution of blame). For this subscale, items were reverse coded so that higher values represented greater morality.

The *conformity to others* variable was assessed with four items from Shadmanfaat et al. (2021). The items were: (1) I rarely obey social norms, which are against my desires. (2) I follow my family members (parents, wife, relatives) wishes even when it means not doing something I want to do. (3) Considering situations that I might find myself in with my close friends, I may break the rules because of what my friends expect of me. (4) Considering situations that I might find myself in with my close friends, I would be breaking the rules because my friends did it too.

Control Variables

Six variables were controlled for in the multivariate analyses. Gender was a nominal variable (male = 1). Age was measured through an ordinal variable with four response options (below 20, 20–25, 26–30, and above 30). Marital status was a nominal variable (1 = married). Personal and family member's medical condition that could be exacerbated by COVID-19 were both nominal variables (1 = yes). Lastly, having a family member pass away from COVID-19 was measured as a nominal variable (1 = yes). Please see Table 1 for descriptive statistics.

Validity and Reliability of Study Variables

Validity and reliability statistics for all scaled variables in this study can be found in Table 2. Cronbach's alpha coefficient and construct reliability were used to evaluate the reliability of the variables, and the findings indicated all scales have high internal consistency ($\alpha > .70$; $CR > .70$) as suggested by Nunally (1978). The validity of measures was checked by convergent and discriminant validity and confirmatory factor analysis (CFA). The results

Table 2. Reliability and Validity Statistics for Scaled Variables.

Variables	Factor loadings	AVE (MSV)	CR	α
	Minimum–maximum			
COVID-19 misbehavior	0.675–0.792	.537 (.220)	.874	.873
Social concern				.896
Moral intuitions	0.753–0.880	.672 (.204)	.937	.931
Desire close ties	0.726–0.874	.663 (.220)	.910	.909
Care for others	0.750–0.859	.659 (.204)	.894	.887
Conform to others	0.812–0.939	.772 (.181)	.921	.915

Note. Model fit summary: CMIN/DF = 1.419, CFI = 0.979, SRMR = 0.036, RMSEA = 0.035, PClose = 1.000.

suggested that the average variance extracted (AVE) exceeded the value of .50 and the maximum shared value (MSV) was lower than AVE value (Fornell & Larcker, 1981; Hair et al., 2009). Likewise, the factor loadings of the CFA model showed that all items were placed above 5.00 as suggested by Kline (2015).

Results

Table 3 reports the zero-order correlations between the social concern variables and COVID-19 misbehavior. The findings show that there is a significant relationship between all four components of social concern theory and quarantine-related misbehavior ($r > |.36|$; $p < .01$). Specifically, COVID-19 misbehavior was inversely related to care for others ($r = -.41$, $p < .01$), desire for close ties ($r = -.42$, $p < .01$), moral intuitions ($r = -.40$, $p < .01$), conformity to others ($r = -.36$, $p < .01$), and overall social concern ($r = -.60$, $p < .01$). In other words, individuals displaying higher levels of social concern were less likely to break the measures taken by the government to restrict the pandemic during the periods of lockdown. These results provide initial support for the first study hypothesis.

In order to examine the applicability of social concern theory in predicting COVID-19 misbehavior, both OLS regression and structural equation models (SEM) were estimated. Model fit statistics demonstrated that both OLS models were good-fitting models. The results of the first OLS regression model (see Table 4) indicated that the social concern variables accounted for 38% of the individual differences in COVID-19 misbehavior. All four social concern variables were statistically significant and in the expected (i.e., negative) direction. Standardized beta coefficients show that desire for close ties

Table 3. Zero-Order Correlations Among Independent and Dependent Variables.

Variables	*M*	*SD*	1	2	3	4	5
1. COVID-19 misbehavior	6.02	4.22	—				
2. Moral intuitions	27.65	7.60	–.40**	—			
3. Care for others	15.30	3.05	–.41**	.42*	—		
4. Desire for close ties	18.40	4.06	–.42**	.12**	.18**	—	
5. Conform to others	13.69	4.14	–.36**	.15**	.14**	.39**	—
6. Social concern	75.04	12.63	–.60**	.58**	.80**	.59**	.56**

*$p < .05$. **$p < .01$.

Table 4. OLS Regression Models Predicting COVID-19 Misbehavior.

	Model 1	Model 2
Variables	*b* (β)	*b* (β)
Moral intuitions	–.13** (–.24)	–.11** (–.19)
Desire for close ties	–.29** (–.28)	–.24** (–.23)
Care for others	–.34** (–.24)	–.30** (–.22)
Conform to others	–.18** (–.18)	–.19** (–.18)
Gender (1 = male)		1.04** (.12)
Age		.17 (.04)
Marriage status (1 = married)		–.38 (.04)
Education		–.39* (.08)
Personal risky condition (1 = yes)		–1.68** (.12)
Death experience from COVID-19 in family (1 = yes)		–1.23** (.14)
Family members risky condition (1 = yes)		–1.31** (.14)
Model diagnostics		
R^2	.38	.47
F	***59.35	***30.84

*$p < .05$. **$p < .01$. ***$p < .001$.

(β = −.28, $p < .01$) was the strongest predictor of individuals' quarantine-related misbehavior, while conformity to others (β = −.18, $p < .01$) was the weakest—yes, still statistically significant—predictor.

In Model 2, we included the control variables. The results of the second OLS regression model demonstrated that the social concern and control variables accounted for 47% of the individual differences in COVID-19

Table 5. Direct and Indirect Effects of Social Concern on COVID-19 Misbehavior ($N = 393$).

		Direct effect	Indirect effect
IV	DV	*B* (β)	*B* (β)
Desire for close ties	COVID-19 misbehavior	–.29** (–.28)	–.08** (–.07)
Moral intuitions	COVID-19 misbehavior	–.13** (–.24)	–.06** (–.10)
Care for others	COVID-19 misbehavior	–.33** (–.24)	—
Conform to others	COVID-19 misbehavior	–.18** (–.18)	—
Model R^2		.364	
Desire for close ties	Conform to others	.42** (.40)	—
Model R^2		.164	
Moral intuitions	Care for others	.17** (.42)	—
Model R^2		.174	

*$p < .05$. **$p < .01$.

misbehavior. Once again, all four social concern variables were negatively related to COVID-19 misbehavior, net of control variables. These results provide evidence in support of the first study hypothesis. And, once again, desire for close ties ($\beta = -.23$, $p < .01$) was the strongest predictor of individuals' quarantine-related misbehavior, while conformity to others ($\beta = -.18$, $p < .01$) was the weakest predictor. With respect to the control variables, being male significantly increased the likelihood of transgressing COVID-19 quarantine rules. Conversely, education level, personal medical condition, family member medical condition, and family member death caused by COVID-19 all diminished the likelihood of misbehavior.

Based on theory (Agnew, 2014) and prior research (Shadmanfaat et al., 2021), we also investigated indirect effects of social concern on deviance (see Table 5 and Figure 1). To do so, we employed SEM with bootstrapping. For the fitted AMOS model, the summary statistics indicated that the models were a good fit for the data. The main SEM model (i.e., direct and indirect effects on COVID-19 misbehavior) accounted for 36% of the variation in quarantine transgression during the period of lockdown. These SEM findings indicated that the effect of moral intuitions on misbehavior was partially mediated by care for others (Direct $\beta = -.24$, $p < .01$; Indirect $\beta = -.10$, $p < .01$). Likewise, the effect of desire for close ties on misbehavior was partially mediated by conformity to others (Direct $\beta = -.28$, $p < .01$; Indirect $\beta = -.07$, $p < .01$). These results demonstrate empirical support for the second study hypothesis.

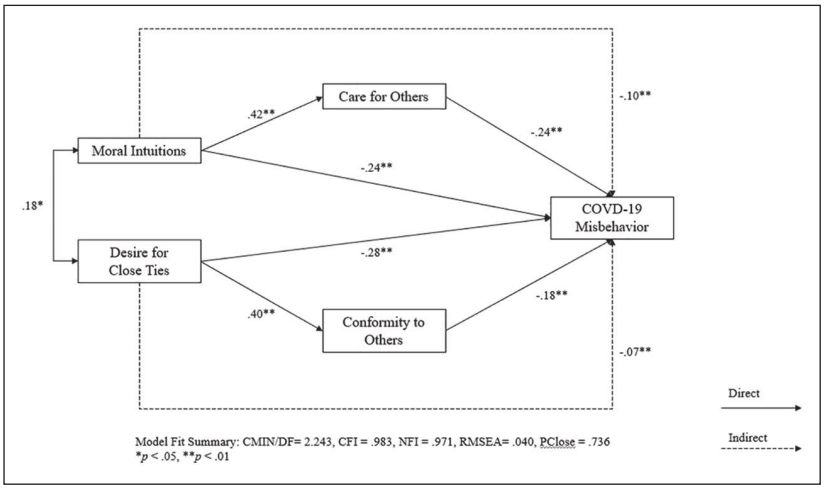

Figure 1. Path diagram for COVID-19 misbehavior.
Note. Model fit summary: CMIN/DF = 2.243, CFI = 0.683, NFI = 0.971, RMSEA = 0.040, PClose = 0.736.
*$p < .05$. **$p < .01$.

Discussion

The COVID-19 pandemic has greatly impacted global society. Restrictions (e.g., quarantine) have been widely implemented around the world to reduce the frequency of transmission, but not all have adhered to policy mandates. Recent research has begun to assess the nature and extent of COVID-19, as well as its causes and effects (e.g., Harris, 2020; Leal, Kurland, et al., 2021; Leal, Piquero, et al., 2021; Meers et al., 2021; Rosli et al., 2021). Building on this scholarship, the present study explored the utility of social concern theory in explaining why some people engage in COVID-19 misbehavior during a period of lockdown. Analyses were based on data from 393 university students in Rasht, Iran. According to Agnew (2014), SCT argues that people with social personalities prioritize the interests of others over their own. Consistent with this premise, the findings of the current study demonstrated that having a high level of morality, caring for others, having a high desire for close ties, and having high levels of conformity to social norms significantly decreased the likelihood of displaying COVID-19 quarantine misbehavior. This was illustrated through bivariate and multivariate analyses, and they provided support for the first study hypothesis. These results were also generally consistent with previous tests of SCT (Chouhy et al., 2017; Craig, 2017;

Hong et al., 2019; Shadmanfaat et al., 2021; TenEyck & Barnes, 2018). Our study explicitly used measures of social concern as developed by Agnew (2014) and was the first, as far as we know, to use SCT in the explanation of individual differences in COVID-19 misbehavior. It is becoming increasingly clear that the key constructs of social concern have the ability to act as constraining factors.

Moreover, we tested both direct and indirect effects as stipulated by Agnew (2014) and as previously tested by Shadmanfaat et al. (2021) in their examination of cyberbullying perpetration. Our findings provided evidence for the fact that the effects of moral intuitions and desire close ties on COVID-19 misbehavior are mediated by, respectively, care for others and conformity to others. In the present study, socially concerned individuals were more likely to act in a prosocial way. As theoretically stipulated, socially concerned individuals consider the interest of others over their own. When making a decision they do consider others' wellbeing and safety. Having moral codes, paying attention to the health and well-being of others, having a willingness to have close relationships, and being accepted by prosocial others will, therefore, decrease the likelihood of participating in deviant behavior. And, as was shown here, social concern predicted a decrease in the likelihood of COVID-19 misbehavior during an urban quarantine in Iran. These latter results demonstrated support for the second study hypothesis.

Policy Implications

As stated by Agnew (2014, p. 22), policy implications guided by SCT should attempt to prevent crime "through such mechanisms as reducing severe strain, strengthening the emotional and instrumental bonds between people, reducing the costs and increasing the benefits of social concern, and expanding the circle of social concern." However, directly implementing crime preventive measures based on a cross-sectional study (and not a study of interventions meant to alter the levels of social concern) we need to be careful in extrapolating our findings. Crime prevention usually distinguishes between situational and social crime prevention (Welsh & Farrington, 2012). The latter is often referred to as consisting of developmental crime prevention and community crime prevention. It is important for crime preventive measures to target causal mechanisms that can be related to changes in criminogenic interactions between the person and the environment in which decisions are taken (Wikström & Treiber, 2017).

Changing the key components of social concern for the better, can be done through preventive initiatives of moral education, as social concern is, like most personality traits and preferences determined by a complex interplay

between the (actual and perceived) environment and the individual (Elbau et al., 2019; Simons et al., 2011). From a developmental preventive point of view, implications should focus on increasing individuals' moral capacities, empathy, connections with others, and care for others (Campbell-Phillips, 2020; Eisenberg et al., 2010; Kavussanu et al., 2020; Malti et al., 2016; Romero-Martínez et al., 2019; Stepien & Baernstein, 2006). Courses of moral education and empathy/sympathy training, especially among adolescents, can lead to the institutionalization of moral rules guiding prosocial behavior and provide the basis for increasing attention to the welfare and wellbeing of others. It is the merit of scholars like Agnew (2014) and Wikström et al. (2012) to point to the fact that human nature goes beyond psychological self-interest, but rather rule-guided actors. Learning to apply rules related to social preferences and empathic concern when tempted to break COVID-19 restrictions, or other forms of deviance, is therefore valuable. Similarly, effective socialization and parental monitoring in childhood, especially by the primary institutions of socialization, such as family/caretakers (Flanagan et al., 2019; Hardie, 2021) and the school (Gaffney et al., 2019; Park-Higgerson et al., 2008) can also help improve the social skills of adolescents and create an environment for improving relationships with conventional people (Beelmann & Lösel, 2021).

Lastly, one might consider to apply social concern theory in the process of rehabilitation, to avoid re-offending (e.g., volunteer programs, restorative justice programs). However, one should always bear in mind that prevention policy, even when focused on causal factors and mechanisms require preventive actors to make choices, as one cannot target all possible mechanisms in one preventive project. The general idea that prevention and policy-making inevitably is related to making choices in an uncertain world (Manski, 2013) also applies to the use of SCT in crime prevention. The translation of causal claims into criminal policy is a tough issue (for a discussion, see Sampson et al., 2013).

Study Limitations and Directions for Future Research

Despite the promising results, the current study has a number of limitations that should be taken into account. First, the study relied on cross-sectional data, hampering causal interpretations. Future research should collect longitudinal data in an effort to investigate the causality of these relationships as well as to examine trends in quarantine-related misbehavior over time. Second, future inquiries might want to include measures of self-control, which is distinct from social concern (see Agnew, 2014). Of course, there are limits to adding control variables. The problems of both under- and overcontrolling have been acknowledged for a long time, but are

sometimes neglected (Lieberson, 1987). As most tests of criminological theories rely on non-experimental data, there may be a bias toward statistically overcontrolling.

Third, SCT theory has the possibility to be used to test both criminal decision-making (why do some individuals decide to break rules in order to obtain goals under some circumstances and not under other circumstances, and when do socially concerned individuals decide to break rules) and the development of proclivities or propensities to commit crimes. This latter research question refers to a developmental hypothesis, which implies the study of the development and change of social concern measures and changes in rule-breaking behavior using panel data. The former could also be studied using randomized scenario studies in which individuals make decisions to break rules, such as COVID-19 restrictions.

Fourth, self-report delinquency studies are known to have some problems related to social desirability and willingness to report rule-breaking or socially unacceptable behavior. To what extent this is the case regarding quarantine-related misbehavior is an open question, but future research should attempt to collect data from multiple sources rather than just self-report. Fifth, the generalizability of this study is limited due to the single-university, single-city sample. Although random sampling strengthened our ability to have a representative sample, the findings still may not generalize beyond the study site. Future studies should attempt to replicate our results with more diverse samples. Despite these limitations, an important conclusion from this study is that SCT has the potential to explain individual differences in rule-breaking, beyond traditional and typical juvenile delinquency. It deserves further attention of scholars who are interested in testing and applying criminological theories to antisocial behavior.

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Note

1. As suggested by a reviewer, readers may be concerned about the conceptual and operational overlap between Agnew's social concern theory (SCT) and Gottfredson and Hirschi's (1990) notion that a lack of concern for others as a key component of low self-control. SCT asserts that individuals are naturally inclined to show concern for the welfare of others, desire close ties to others, follow certain moral intuitions, and conform to the behavior and views of others and to social norms (Agnew, 2014; Chouhy et al., 2017). SCT takes a more complex and modern evolutionary psychological approach to human nature that allows for social concern and social/environmental influences (i.e., "blank slate") to comprise our nature. As such, concern for the welfare of others, the desire for close ties, trust, empathy, altruism, and conformity to social norms are elements of human nature according to Agnew. Conversely, control theorists assume a unidimensional human nature dominated by the pursuit of self-interests. Gottfredson and Hirschi (1990) reject the idea that there is any natural inclination to conform (p. 88) and that any sensitivity to the needs and feelings of others is the consequence or training/socialization (p. 97). In the absence of such socialization, people will pursue their self-interests with little regard for others. Moreover, Agnew (2014) notes the multi-dimensional nature of social concern, while control theorists, especially self-control theorists, are less vested in the dimensionality of social concern. The present study specifically operationalizes social concern in a manner that is respectful of its multi-dimensional nature as presented by Agnew (2014).

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