Perceived Discrimination and Mental Health: The Role of Immigrant Social Connectedness during the COVID-19 Pandemic

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ARTICLE INFO

ABSTRACT

The COVID-19 public health emergency has led to changes in people's attitudes towards minority groups, increasing prejudice and discriminatory behaviors, especially towards migrants. These prejudicial attitudes and discrimination negatively influence migrants' mental health increasing anxiety and depression and loneliness. However, the sense of belonging can be beneficial in mitigating these mental health issues especially in adverse social situations. Within this context, the aim of the study was to examine to what extent overall social connectedness plays a role in immigrant mental health during the COVID-19 crisis, hypothesizing that reduced sense of belonging to the social world will be part of the pathway from the negative effects of perceived discrimination on mental health during the pandemic. We recruited 104 immigrants from Greece who completed online self-report measures of perceived discrimination, social connectedness, depression, anxiety, paranoia, and loneliness, and conducted mediation analyses to test our predictions. Mediation models indicated that perceived discrimination has a negative impact on sense of belonging, which in turn increases anxiety and paranoia symptoms. Findings suggest that while perceived discrimination has a negative impact on mental health, this effect is less severe if participants remain socially connected. Results are discussed with regard to the need for social inclusion practices.

1. Introduction

The 2019 novel coronavirus (COVID-19) spread across the globe affecting all aspects of everyday functioning in nearly every region of the world within a few months. After the first COVID-19 case reported in Greece in late February 2020, the Greek government implemented strict regulations across the country, such as closing all educational institutions, services and entertainment (e.g., cafes, bars, shops, and fitness facilities), leading to a full lockdown which strictly limited movement. The unprecedented public health emergency not only led to changes in people's daily habits, social life and working environment but also changed people's attitudes and behavior, including attitudes towards minority groups. Ethnic minorities with an Asian background have been particularly vulnerable in this sense. During the initial stages of the outbreak, numerous sources reported an increase in discriminatory behaviors in various forms, such as verbal and physical attacks,

suspicion, and avoidance behavior, against Asian ethnic minorities (e.g., Aratani, 2020; Campbell, 2020) with recent empirical evidence across the world confirming this (e.g., Cheah et al., 2020; Haft and Zhou, 2021; Lee and Waters, 2021; Wang et al., 2021). Along with an increase in discriminatory experiences towards ethnic minorities, the pandemic appears to have exacerbated xenophobia. He et al. (2020) conducted research across 70 countries demonstrating that since the outbreak of COVID-19, 25% of Chinese immigrant[1] respondents have experienced some form of discrimination. These results are similar to those reported by Wu et al. (2021) showing that 21% of Asian immigrant respondents in the United States reported that they have encountered discrimination related to COVID-19. This is further supported by Ma and Zhan (2020) who found that, during the initial stages of the outbreak, the majority of Chinese international students in the United states have been stared at due to the stigma associated with mask-wearing and experienced verbal abuse.

Although the majority of research have focused on exploring prejudicial attitudes and discrimination towards people with an Asian ethnic background, the continuation of the pandemic arguably threatens any migrant regardless of identity. The most recent findings suggest that, as the crisis and the uncertainty it has caused persists, xenophobia and anti-immigrant sentiment will likely deteriorate further for reasons, such as fear (Clissold et al., 2020), perceived health threats (Yamagata et al., 2020), and rise in authoritarianism (Hartman et al., 2021). Bartoš and colleagues (2020), in a large nationally representative survey in Czech Republic, found that COVID-19 related concerns increased negative attitudes and hostility towards foreigners. Similarly, in Canada, Newbold et al. (2021) demonstrated that the pandemic has also shaped Canadian views towards immigrants for the worse. The same effect has been evident among people in Japan, particularly for those who report an increase in infection-preventative behaviors (Yamagata et al., 2020).

It is important to address the increase of prejudicial attitudes and discrimination because of its negative influence on people's mental health issues, such as depression, anxiety, psychological distress, life satisfaction, and self-esteem (Pascoe and Smart Richman, 2009; Schmitt et al., 2014). Studies conducted during the pandemic are in line with previous research indicating that perceived discrimination among Asian Americans and Asian immigrants is linked to elevated rates of depression and anxiety (Lee and Waters, 2021; Wu et al., 2021). Likewise, Haft and Zhou (2021) reported that an increase in perceived discrimination during the pandemic led to increased levels of anxiety experienced by Chinese American college students.

Previous research has addressed various social and economic factors to improve immigrant mental health. However, a factor that is receiving increased research attention is the sense of belonging. Sense of belonging is not only a fundamental psychological need, but also enables people to live a psychologically healthy life (Cruwys et al., 2013; Cruwys et al., 2014; Haslam et al., 2009) offering many psychological benefits. For instance, the psychological benefits of Syrian refugees belonging to their ethnic identity was explored by Çelebi et al. (2017), who demonstrated that strong ethnic identification is linked with decreased depressive and anxiety symptoms. Other scholars have found lower levels of depressive and anxiety symptoms amongst those immigrants who report greater identification with the host culture (Meca et al., 2019; Tikhonov et al., 2019). These findings are not contradictory as Smeekes et al. (2017) found that preservation of multiple identities after migration can mitigate mental health issues, decreasing the risk of depression and increasing life satisfaction.

To date, the literature exploring the effects of identity on mitigating the impact of discrimination has only focused on ethnic group belonging. Specifically, studies found that ethnic identification buffers the negative impact of perceived discrimination increasing life satisfaction, overall psychological well-being (Cobb et al., 2019), and decreasing depressive symptomatology (Thibeault et al., 2018). Consistent with these findings, the most recent study confirmed that ethnic identification alleviated the effect of COVID-19 related discrimination on immigrant mental health by decreasing depressive symptoms and increasing life satisfaction (Litam & Oh, 2020).

As noted, most of the existing research on the impact of the pandemic on the experiences of migrants has focused on Asian migrants. The present research aims to build on previous findings by studying these effects in a more diverse migrant group. The main objective is to explore immigrant sense of belonging during the pandemic and its benefit in mitigating mental health issues in adverse social situations. First, the study examines whether the onset of COVID-19 pandemic increased perceived discrimination, and the effects it had on immigrant mental health. The study further explores immigrants' global sense of belonging to the social world. It is particularly important to study immigrant sense of belonging in the pandemic because the social distancing and stay-at-home measures have the potential to make people feel more socially isolated and disconnected. Consequently, we aimed to examine to what extent overall social connectedness impacts immigrant mental health in

these adverse circumstances, hypothesizing that sense of belonging to the social world will be important in mediating the negative effects of perceived discrimination on mental health during the pandemic.

2. Methodology

2.1. Participants and procedure

Immigrants living in Greece who are 18 years or older were invited to complete a survey on an online survey platform Qualtrics. Prospective participants were recruited on a social media platform Facebook and online advertisements through CITY College, International Faculty of the University of Sheffield, between April to August 2020. Ethics approval was received from the University of Sheffield ethics committee.

2.2. Design and sampling

The current research is a cross-sectional study. Using convenience sampling, the study recruited any person who migrated regardless of reasons for migration and length of stay in Greece or descendants of migrants and who at the time of completing the online survey resided in Greece. Participants younger than 18 as well as those with no migration status in Greece were excluded from the study.

2.3. Measures

The online survey was available both in English and Greek languages. In order to employ the Greek survey version, all measures were translated to Greek by V.C. and back-translated to English by G.P. to ensure that the meanings of the measure items were conveyed, except PHQ-9 and GAD-7 for which translated standardized versions were available. Any differences in the translations were discussed between the researchers until agreement was reached.

2.3.1. Social identity

2.3.1.1. Social connectedness. Sense of belonging to the social world was assessed using the social connectedness scale – revised (SCS-R; Lee et al., 2001). Participants responded to 20 items on a 6-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree), e.g., "I feel like an outsider", "I am able to connect with other people". A higher total score on the scale indicates greater belongingness to the social world. The SCS-R has been widely used in diverse samples demonstrating good internal consistency (Lee et al., 2001; Yoon et al., 2012) as well as excellent content validity and good structural validity (Cordier et al., 2017). In the present study the scale had strong internal consistency (a = .94).

2.3.2. Discrimination

2.3.2.1. Perceived discrimination. Perceived discrimination was assessed twice using the 9-item Everyday Discrimination Scale (Williams et al., 1997). On a 4-point Likert scale ranging from 1 (never) to 4 (often), participants reported how often they experienced mistreatment both in Spring 2019 and at the time of completing the questionnaire, e.g., "You are treated with less respect than other people are", "People act as if they are afraid of you". Higher score indicates greater levels of perceived discrimination. Previous studies show good test-retest reliability (Krieger et al., 2005) and construct validity (Taylor et al., 2004) and reliability was high in this study (a = .87)

2.3.3. Mental health and psychological variables

2.3.3.1. Depression. Depressive symptomatology was measured using the Patient Health Questionnaire (PHQ; Kroenke et al., 2001).

Participants were asked to rate nine items on a 4-point scale ranging from 0 (not at all) to 3 (nearly every day), e.g., "Little interest or pleasure in doing things", "Feeling down, depressed, or hopeless". Responses were summed where higher total score indicates increased levels of depressive symptoms, with total score between 15 and 27 indicate moderately severe to severe depression. The PHQ-9 has previously showed excellent internal and test-retest reliability as well as a good external validity (Kroenke et al., 2001). Reliability was strong in the present study ($a = .92$).

2.3.3.2. Anxiety. Anxiety symptoms were assessed using the General Anxiety Disorder scale (GAD-7; Spitzer et al., 2006). Participants rated seven items on a 4-point Likert scale ranging from 0 (not at all) to 3 (nearly every day), e.g., "Feeling nervous, anxious, or on edge"; "Worrying too much about different things". An increased total score on the scale indicates increased anxiety symptoms; scores between 10 and 21 shows moderate to severe anxiety. Previous research shows that GAD-7 can be used with culturally diverse samples and has an excellent internal consistency and a good test-retest validity (Sousa et al., 2015), which was confirmed in the present study ($a = .95$).

2.3.3.3. Paranoia. Paranoia was assessed using a subscale from the persecution and deservedness scale (PaDS; Melo et al., 2009). Participants rated five items on a 5-point scale, e.g. "I believe that some people want to hurt me deliberately", "You should only trust yourself", ranging from 1 (strongly disagree) to 5 (strongly agree). The present study ($a = .82$) and previous studies report good reliability (McIntyre et al., 2018).

2.3.3.4. Loneliness. Loneliness was assessed by asking participants how often (1) they felt they lack companionship, (2) they felt left out, and (3) they felt isolated from others (Hughes et al., 2004). The three items were rated on a 3-point scale (hardly ever, some of the time, often). Present study ($a = .87$) and previous studies report good internal reliability (Hughes et al., 2004).

2.3.3.5. Sociodemographic control variables. Participants self-reported their age (in years), sex (0 = male, 1 = female) and whether they grew up (spending most of their lives up to 16 years) in Greece (1 = yes, 2 = no).

2.4. Data analyses

All analyses were conducted using SPSS version 24. Pearson's correlations were used to explore associations among main variables. Paired samples *t*-test was conducted to assess whether perceived discrimination increased during the initial stages of the COVID-19 pandemic compared to Spring 2019. Simple regression analyses were conducted to explore whether perceived discrimination predicts four psychological outcomes (depression, anxiety, paranoia and loneliness), entering each dependent variable separately, while controlling for age, gender and time spent in Greece. Mediation analyses were conducted using the PROCESS Macro extension (Hayes, 2018). Model four was estimated four times to test whether social connectedness mediates the effect of perceived discrimination during the COVID-19 pandemic on four psychological variables (depression, anxiety, paranoia and loneliness respectively; see Fig. 1). Mediation was assessed via bootstrapping with 10 000 resamples and using listwise deletion to account for missing values in all analyses.

3. Results

3.1. Participant characteristics

The final sample included 104 immigrants (77% female, $M_{age} = 39.02$, $SD = 16.8$). The majority of participants (91%) indicated that they were of White/Caucasian ethnic background. Twenty-seven percent of participants had a high school education, 60% had a university degree. In addition, 32% of participants were students, and 34% were employed. Country of origin varies greatly with 25% of the participants coming from the United Kingdom (see Fig. 2). Fifty-one percent of participants migrated to Greece for school or work purposes, 33% identified as 1st generation immigrants (born in a country other than Greece but permanently living there), 7% identified as 2nd generation immigrants (at least one of the parents born outside of Greece) and 2% as refugees. Given that the sample also included descendants of 1st generation migrants, sensitivity analysis was conducted by repeating all statistical tests without these seven participants but there were no material differences for the results and all significant analyses reported below remained significant.

3.2. Correlation findings

Zero-order correlations between social identity, discrimination, and mental health variables are displayed in Table 1. It is notable that there is a very high correlation between current perceived discrimination and recalled discrimination from 2019. Paired samples *t*-test shows a significant difference between perceived discrimination in Spring 2019 ($M = 14.84$, SD = 5.07) and during the COVID-19 pandemic ($M = 12.71$, SD = 4.29); t(90) = 6.02, $p < .01$, indicating that perceived discrimination decreased during the pandemic.

3.3. Direct effects of discrimination

Table 2 summarizes the four simple regression analyses conducted to predict depression, anxiety, paranoia, and loneliness from perceived discrimination. There were significant effects for all outcomes, but these were greater in the case of anxiety (adjusted $R^2 = .30$) and paranoia (adjusted $R^2 = .31$) compared to depression ($R^2 = .21$) and loneliness (adjusted $R^2 = .25$).

3.4. Mediation models

In the case of depression, the direct effect from perceived discrimination to social connectedness (path a) is negative and statistically significant ($B = -1.83$, $SE = .41$, $p < .001$), indicating that persons perceiving greater discrimination are more likely to score lower on
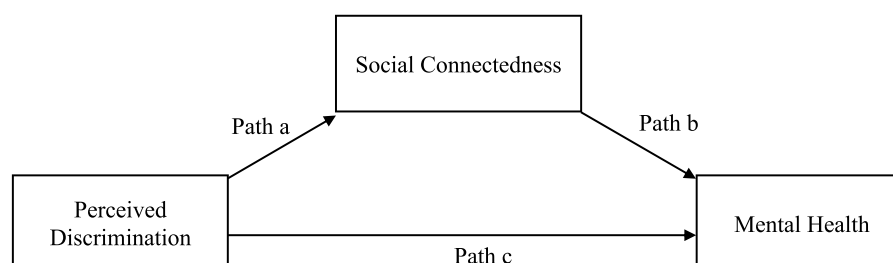

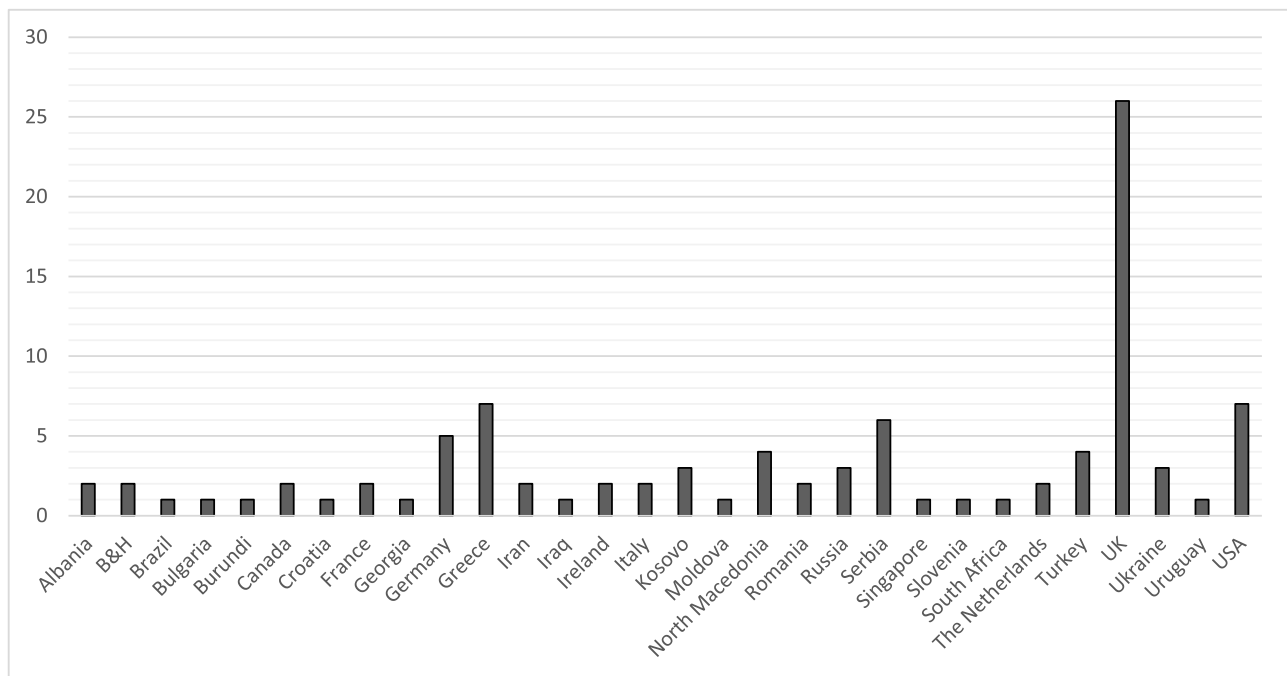**Fig. 1.** Conceptual Model of Mediation Effect.

Fig. 2. Countries of Origin of the Participants.
Note. B&H – Bosnia and Herzegovina; UK – The United Kingdom; USA – The United States of America.

Table 1
Correlations for Social identity, Discrimination and Mental Health Variables.

	Variable	1.	2.	3.	4.	5.	6.	7.
1.	Social connectedness	–	– .33**	– .42**	– .50**	– .42**	– .46**	– .43**
2.	Perceived discrimination 2019		–	.76**	.27*	.35**	.58**	.36**
3.	Perceived discrimination 2020			–	.33**	.46**	.51**	.36**
4.	Depression				–	.85**	.43**	.50**
5.	Anxiety					–	.42**	.41**
6.	Paranoia						–	.48**
7.	Loneliness							–

**p < .01; *p < .05.

Table 2
Simple Regression Analyses Summary for Perceived Discrimination Predicting Mental Health Outcomes and Loneliness.

Independent variable	Dependent variable	Unstandardized B	Standard Error	Standardized B	t	p	Regression results
Perceived discrimination during the COVID-19 pandemic	Depression	.59*	.20	.32*	3.01	p < .01	$R^2 = .21$ $R = .45$ $F (4,77) = 4.74$
	Anxiety	.66**	.16	.42**	4.18	p < .001	$R^2 = .30$ $R = .55$ $F (4,78) = 8.07$
	Paranoia	.67**	.13	.52**	5.11	p < .001	$R^2 = .31$ $R = .55$ $F (4,75) = 7.85$
	Loneliness	.22**	.06	.42**	3.95	p < .001	$R^2 = .25$ $R = .50$ $F (4,73) = 5.70$

*p < .01, **p < .001.

social connectedness The direct effect of social connectedness on depression (path b) is also negative and significant ($B = - .15, SE = .04, p < .001$), indicating that persons with increased social connectedness are more likely to report lower depressive symptoms. The direct effect of perceived discrimination on depression (path c) is not statistically significant ($B = .28, p = .09$) but the indirect effect ($B = .28$) is: 95% CI = [.10, .47]. The model explained 13% of the variance in depression scores ($F(1,84) = 12.52; p < .001$). In the case of anxiety, path a was negative

and significant ($B = - 1.80, SE = .42, p < .001$), as was the direct effect of social connectedness on anxiety (path b; $B = - .08, SE = .03, p < .05$). The direct effect of perceived discrimination on anxiety (path c) was positive and statistically significant ($B = .49, SE = .14 p < .001$) as was the indirect effect ($B = .15$): 95% CI = [.01, .29]. The model explained 23% of the variance ($F(1,84) = 24.95; p < .001$). For paranoia, the direct effect from perceived discrimination to social connectedness ($B = - 1.84, SE = .44, p < .001$), and the direct effect of social connectedness on

paranoia ($B = -.08$, $SE = .03$, $p < .01$), were both negative and significant. Both the direct effect of perceived discrimination on paranoia ($B = .48$, $SE = .12$ $p < .001$) and the indirect effect ($B = .14$: 95% CI = [.03, .27] were significant, and the model explained 27% of the variance (F (1,83) = 31.21; $p < .001$). Finally, in the case of loneliness, again the direct effect from perceived discrimination to social connectedness ($B = -1.83$, $SE = .44$, $p < .001$) and from social connectedness to loneliness (path b) ($B = -.04$, $SE = .01$, $p < .01$) is negative and significant. However, the direct effect of perceived discrimination on loneliness (path c) is not statistically significant ($B = .09$, $p = .07$) but the indirect effect ($B = .07$) is: 95% CI = [.03, .12], and the model explained 12% of the variance in loneliness scores (F(1,81) = 11.40; $p < .001$). See Fig. 3 for all direct and indirect effects between variables.

4. Discussion

As the pandemic endures with multiple sources reporting increased prejudicial attitudes and discrimination towards minority groups, we investigated immigrant's perceptions of discrimination in Greece, whether discrimination experiences predict poorer mental health outcomes, and whether this associations was mediated by sense of belonging to the social world. This work is notable in its focus on various white European immigrants in Greece, who are often understudied compared to refugees and asylum seekers since the 2015 crisis, and its focus on sense of belonging during the pandemic, which has made social connections with people more challenging.

In contrast to earlier findings during the pandemic (e.g., Bartoš et al., 2020; Cheah et al., 2020), our results did not confirm an increase in perceived discrimination among immigrants in Greece; indeed participants reported less discrimination during the pandemic than in 2019. This could be explained by various reasons. Given that the sample consisted of predominantly white participants underrepresenting people of Asian descent, which was a group with the highest risk of experiencing discrimination during the pandemic, it is possible that our sample did, indeed, experience reduced discrimination. Considering the changes in people's social behavior and the limited physical social contact people were allowed to have due to COVID-19 outbreak, it is

also possible that discrimination reduced because of the nation-wide lockdown, which created less opportunities for people to be exposed to adverse social situations. Our results could also be explained either by memory bias or because the perceived discrimination measured used might have not assessed the particularly discriminatory situations experienced during the pandemic. Nonetheless, consistent with previous research, our results demonstrate that perceiving the self as a target of discrimination predicts depressive, anxiety and paranoia symptoms as well as loneliness (Pascoe and Smart Richman, 2009; Schmitt et al., 2014).

With regards to the proposed mediation model, our results confirm the hypothesis that perceived discrimination has a negative impact on sense of belonging, which in turn increases anxiety and paranoia symptoms. Hence both perceived discrimination and lack of sense of belonging contribute to mental ill- health. The greater effect for anxiety model could be explained due to the increased uncertainty about various aspects in people's lives caused by the COVID-19 pandemic. These findings contribute to literature by demonstrating that not only identification with specific group memberships, such as ethnic or national groups (Çelebi et al., 2017; Meca et al., 2019; Tikhonov et al., 2019), but also interpersonal closeness to the social world is important in determining the consequences of adverse experiences such as discrimination.

The study is not without limitations, mostly reflecting the requirement to conduct the research online because of the pandemic restrictions. Firstly, the study is cross-sectional and, based on descriptive statistics, such as migration status, occupation and ethnic background, it could be argued that participants were a relatively well-adjusted sample, perhaps underrepresenting the most vulnerable groups during the pandemic. This might be due to the shortcomings of an online survey, which prevents us from speculating about the population to which the survey was distributed. Nonetheless, future research should incorporate larger and more diverse samples as well as incorporate longitudinal designs to explore changes in social connectedness over time while taking into account migration status and length of stay in the host country. Lastly, research aiming to capture discriminatory experiences during public emergencies should adapt measures to the appropriate circumstances. Nonetheless, it is novel in its focus on white European
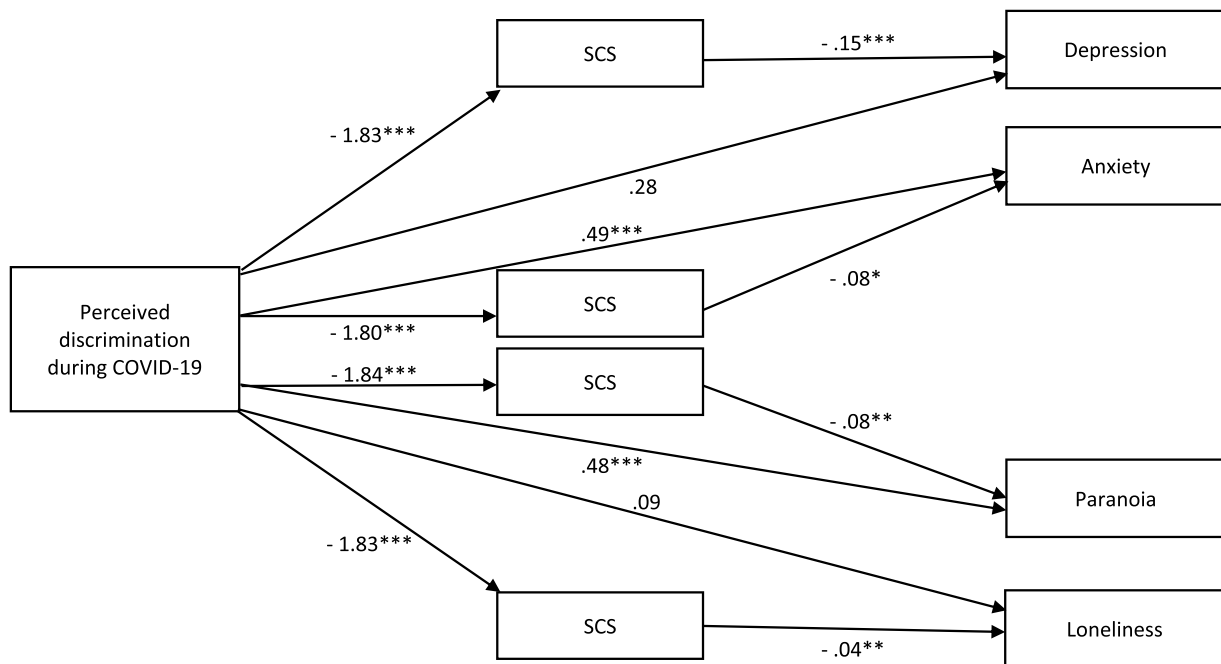

Fig. 3. Mediation Effects of Social Connectedness between Perceived Discrimination and Mental Health Outcomes.
Note. SCS = social connectedness.
*$p < .05$, **$p < .01$, ***$p < .001$.

immigrants in Greece, who are often understudied compared to refugees and asylum seekers since the 2015 crisis, especially with regards to sense of belonging during the pandemic, which has made integration and networking with people more challenging.

5. Conclusion

In conclusion, the study contributes and extends our understanding of the role sense of connection to the social world plays on mental health, showing that it plays an important role in the experience of adverse events during a public health emergency crises. We hope that the study assists in contributing to the importance of developing interventions that focus on strengthening interpersonal relationships and providing a framework for social mechanisms that encourage integration of immigrants to get connected with their social environment. A further implication is that public health measures need to promote social integration and a sense of belonging, especially with regards to vulnerable minority groups such as immigrants.

Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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