



# Mediating role of binding moral foundations between dogmatism, social dominance orientation and perceived threat from Syrian asylum seekers in Turkey

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Accepted: 21 May 2024 / Published online: 7 June 2024  
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## Abstract

Can attitudes toward social groups be considered in the context of morality? To that purpose, two studies assessed whether dogmatism, social dominance orientation, and moral foundations predict perceived threats from Syrian asylum seekers in Turkey. In the first study, Structural Equation Modeling analyses revealed that dogmatism and social dominance orientation predicted the perception of threat via the mediating role of binding moral foundations, whereas individualizing moral foundations did not ( $N=235$ ). The second study collected data from a larger sample ( $N=438$ ) and used Moral Foundations Scenarios to assess moral concerns, replicating the first study's findings. Furthermore, it was shown that an alternative model in which individualizing and binding moral foundations predicted threat via dogmatism and SDO mediating did not fit the data. The findings are discussed in light of the possibility that moral judgments are a product of motivated social cognition.

**Keywords** Social dominance orientation · Dogmatism · Moral foundations · Intergroup threat perception · Immigration

Since the outbreak of civil war in Syria in 2011, over 6.6 million people have been displaced (United Nations Refugee Agency, 2023). Turkey, one of Syria's border neighbors, is reported to host over 3.6 million registered Syrian refugees and asylum seekers (as of July 25th, 2023; United Nations Refugee Agency). While relations between migrants and host cultures involve complex processes with political, cultural, and psychological repercussions, it is well known that this interaction often has negative consequences, with newcomers becoming targets of prejudice and discrimination (e.g., Croucher, 2016). Over the past decade, the situation for Syrian asylum seekers in Turkey has been challenging. An

increasing number of studies conducted in Turkey have also indicated negative attitudes toward Syrian asylum seekers (e.g., Aktas et al., 2021; Yitmen & Verkuyten, 2018). Likewise, recent studies have shown that threat perceptions toward Syrians have negative consequences, such as decreased positive behavioral intentions, increased ingroup bias, and social distance (e.g., Taşdemir, 2018; Yitmen & Verkuyten, 2018).

Given the lack of decisive migration and diversity policies in Turkey and the ongoing economic crisis, asylum seekers may be more vulnerable to discrimination. It is possible to see the social repercussions of this situation. For example, a new political party based solely on anti-immigrant rhetoric, unexpectedly won over one million votes in the parliamentary elections on 14 May 2023, alongside the mainstream right-wing parties (as of Jan 20th, Supreme Election Council, 2024). The common pattern of these extremist and discriminatory positions is that migrants harm the country. Moreover, a few studies have found that Syrian asylum seekers are perceived as more threatening than other minority groups (Özdemir et al., 2023; Firat & Ataca, 2023). Therefore, this study aims to investigate the perceived threats towards Syrian asylum seekers in Turkey and the factors that may contribute to these perceptions.

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This study derives from the first author's dissertation.

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Intergroup Threat Theory provides a useful framework for explaining negative attitudes toward outgroup members by combining intergroup relations and prejudice theories (Croucher, 2016; Riek et al., 2006). Intergroup Threat Theory distinguishes between realistic and symbolic threats (Stephan et al., 2015). *Realistic threats*—perceived threats from outgroup members to the ingroup’s economic or political power or physical or material well-being; *symbolic threats*—perceived threats to the symbolic resources that keep the ingroup together as a group, such as values, attitudes, beliefs, moral standards, etc., threats brought along with the assumption that the outgroup differs from the ingroup. Perceptions of threats between social groups are associated with adverse outcomes such as hatred, hostility, intolerance, fear, anxiety, anger, conflict, and discrimination (Stephan et al., 2015). It has also been suggested that high-status groups may react relatively more strongly to threats in the context of immigrant groups and the host culture (Stephan et al., 2015). Many studies have shown that intergroup threat perceptions are associated with negative cognitive, emotional, and behavioral consequences for outgroup members (e.g., Obaidi et al., 2018; Renfro et al., 2006). Consistent with these findings, a recent study in Turkey reported strong positive correlations between perceived realistic and symbolic threats from Syrians and prejudices (Firat & Ataca, 2023). According to Intergroup Threat Theory, members of the dominant culture may be concerned that Syrian asylum seekers are causing an economic burden in society or pose a threat to the given norms and values of society. It may well be anticipated that members of the host culture may exaggerate the threats they perceive from asylum seekers due to the assumption that newcomers pose a threat to their ingroup. It has also been argued that increased perceptions of intergroup threat with negative consequences, such as prejudice and discrimination, may be legitimized in the context of morality, i.e., considered morally “right” or “appropriate”, to protect the ingroup from external threats and to promote intergroup cohesion. (Haidt & Joseph, 2004). Moral Foundations Theory (MFT; Haidt & Joseph, 2004) can shed light on this by suggesting that ingroup interests are seen as moral domains. Developed to understand moral behavior MFT proposes that moral judgments have intuitive origins based on universally shared psychological modules and conscious moral reasoning processes. Among these foundations, the binding moral foundations of loyalty, authority, and sanctity focus on the ingroup’s well-being, harmony, and cohesion. Binding foundations safeguard the ingroup against external threats; they help groups and communities to develop and stay together.

On the other hand, in this context, ensuring the safety and well-being of those in danger and fleeing war to seek safety should be the appropriate or “moral” response to

the situation in question. Since the first studies on morality (e.g., Turiel, 1983), the more established view has been that the principles of “avoiding harm to others” and “fairness” are the criteria used to evaluate the moral quality of behavior. MFT suggested that the individualizing moral foundations of harm, fairness, and liberty are concerned with protecting the rights and well-being of individuals through autonomous ethics independent of group belonging. It has been pointed out that the application of individual-level moral interests, values, criteria, or standards to intergroup relations is critical in explaining the disparity between these conflicting moral responses to the same outgroup and how discriminatory responses are morally justified (Baldner & Pierro, 2019; Forsberg et al., 2019; Hadarics & Kende, 2018; Low & Wui, 2016).

Many studies have tested the role of individualizing and binding moral concerns in comprehending intergroup attitudes. For example, studies have consistently reported that an increase in support for individualizing moral concerns is associated with a decrease in negative attitudes toward disadvantaged groups (e.g., poor people, obese people, psychiatric patients, feminists, LGBTQ+ rights activists, immigrants), while an increase in support for binding concerns is associated with an increase in negative attitudes (Baldner & Pierro, 2019; Forsberg et al., 2019; Morris & Stewart, 2022; Stewart & Morris, 2021). Moreover, it has been shown that, in binding concerns, the threat of outgroup differentiation from ingroup is accompanied by discriminative responses (e.g., Dehghani et al., 2016; Jasinskaja-Lahti et al., 2020; Kunst et al., 2019; Masicampo et al., 2014). Thus, prioritizing the ingroup’s integrity, well-being, and interests can legitimize ignoring the needs of outgroup members.

However, one issue remains to be clarified: Where does the MFT place the moral judgments, and how (or, to what extent) is its assumption valid? MFT prioritizes morality due to its innate belief that moral judgments are founded on universally evolved psychological modules. Conversely, MFT appears to be more cautious about the direction of causality between moral concerns and political attitudes (Graham et al., 2009, p. 1042). Similarly, in MFT, there are individual differences in the moral concerns people prioritize in their judgments, and this variability is explained by underlying personality traits and emotional dispositions beyond cultural acquisitions (Haidt, 2012, pp. 277–81). Indeed, there are studies conducted by both the view that moral concerns shape socio-political attitudes (e.g., Kugler et al., 2014; Morris & Stewart, 2022; Nilsson & Erlandsson, 2015) and the assumption that individual-level socio-political attitudes and tendencies affecting information processing shape moral judgments (Baldner & Pierro, 2019; Baldner et al., 2020; Forsberg et al., 2019; Hadarics & Kende, 2018). However, it has been argued that these correlational analyses do not

eliminate uncertainty about the direction of the relationship between variables (Weber & Federico, 2013, p. 125). Findings from a limited number of longitudinal studies have suggested that moral foundations are viewed as context-dependent states rather than static dispositional traits, as post hoc rationalizations driven by relatively static socio-political attitudes (Smith et al., 2016; Hatemi et al., 2019; Hadarics & Kende, 2021). Likewise, in an experimental study in which group identity and ideology were primed, political ideology influenced moral judgment (Ciuk, 2018). Indeed, Strupp-Levitsky et al. (2020) showed that binding concerns are associated with epistemic and existential needs to reduce the threat of uncertainty and system-legitimizing tendencies. In contrast, individualizing concerns are frequently related to empathic motivation rather than epistemic and existential motives. The authors criticized the MFT for disregarding psychological needs such as eliminating uncertainty, reducing threat, legitimizing the status quo, and individual-level epistemic and existential motives in the moral concerns preferred by conservatives. They argue that moral evaluations can be more than static moral/immoral judgments. Still, they can also interact with epistemic, existential needs: “... *moral intuitions about fairness, harm, loyalty, authority, and purity-like the broader political ideologies in which they are embedded-may be related to the same sets of underlying psychological needs and motives identified in other research programs.*” (p. 5).

Based on the above findings and critiques, the present study aims to test MFT’s hypothesis about the priority of moral judgments in intergroup threats. Specifically, it examines the role of moral foundations in threat perceptions relative to other established variables, such as social dominance orientation (SDO; Pratto et al., 1994) and dogmatism (Altemeyer, 1996). While previous studies have shown that SDO and dogmatism are associated with increased intergroup threat perceptions, it remains to be seen whether they are prioritized over moral judgments. In response to criticisms that MFT neglects the role of epistemic and existential needs, this study seeks to test a holistic model by examining the priority of moral judgments in the context of both motives. Ultimately, the findings will provide a comprehensive understanding of the place of moral judgments in intergroup threat perception. Specifically, it will be examined whether dogmatism predicts perceived threats from Syrian asylum seekers in Turkey with the mediating role of moral judgments in the context of epistemic motives. In an alternative direction, it is proposed to examine whether moral judgments predict perceived threats with the mediating role of dogmatism. Within existential motives, it was proposed to test whether social dominance orientation predicts perceived threats from Syrian asylum seekers with the mediating role of moral judgments. In a different order, the

present study proposed to test whether moral judgments predict threats with the mediating role of social dominance orientation.

## Social dominance orientation and moral judgment

Social dominance orientation, a key predictor of intergroup attitudes, has been defined as a general desire to establish and sustain hierarchically structured intergroup relations regardless of the status of one’s group (Sidanius et al., 2016, p. 152). SDO is founded on the assumption that the social order is a “competitive jungle” in which the strong win and the weak lose (Pratto et al., 1994), thus emphasizing that intergroup hierarchy is natural and unavoidable. Indeed, due to these characteristics, SDO has been shown to predict prejudice and discrimination against immigrants, one of the social groups that are disadvantaged in the hierarchy (e.g., Levin et al., 2012). SDO has also been viewed as an individual-level antecedent of intergroup threat from the perspective of Integrated Threat Theory (Stephan et al., 2015).

SDO is primarily negatively associated with individualizing foundations (Federico et al., 2013; Graham et al., 2011; Kugler et al., 2014; Milojev et al., 2014; Weber & Federico, 2013). Instead of being positively related to binding foundations, SDO’s strong negative relationship with individualizing foundations may be an expected result. Because SDO, with its dimensions of intergroup dominance and intergroup anti-egalitarianism, may combine a desire for hierarchical order and disregard for the needs of group members at the lower level of the hierarchy. An experimental study found that supporting individualizing concerns predicted poor SDO scores and that this relationship was governed by the severe Darwinian competitive conditions of the social environment (Radkiewicz, 2022). As a result, increased competitive rivalry in the social environment weakens the power of increased support for individualizing concerns to predict low scores on SDO. In other words, as competition increases in the social environment, the inclination to suppress SDO in individuals who attach importance to individualizing concerns disappears. This response has been suggested to be a survival strategy in competitive social environments (Radkiewicz, 2022).

## Dogmatic certainty and moral judgment

First conceptualized by Rokeach (1960) based on closed-mindedness, the more accepted definition of dogmatism was made by Altemeyer (1996). This defines dogmatism as “*relatively unchangeable, unjustified certainty*” (191–201).

Dogmatism is a large-scale cognitive phenomenon that affects all domains of thinking. Dogmatic individuals believe they are correct in thinking about major life issues and objective reality. Since they accept their beliefs as unquestionably true, they often refuse to see realities or evidence contradicting them. With these characteristics, dogmatism is associated with disparities in information processing among individuals (e.g., Ottati et al., 2015). Furthermore, it has been argued that the dogmatic mind's resistance to change can eliminate uncertainty and the anxiety that comes with it (Altemeyer, 1996; Rokeach, 1960). Numerous studies have suggested that dogmatic belief systems help individuals see the world more predictably by providing order, coherence, and meaning to the complex social environment (e.g., Kruglanski et al., 2006; McCullough & Willoughby, 2009). In a meta-analysis study, dogmatism was closely related to variables such as uncertainty avoidance, cognitive closedness, lack of openness to experience, and conservatism (Jost et al., 2003).

One can observe that the relationship between epistemic needs and moral judgments has yet to be sufficiently studied. Nevertheless, this section summarises the results of some of the studies conducted in the relevant literature to shed light on the relationship between epistemic needs and morality. Despite the limited number of studies, there are some common insights. Epistemic needs, which refer to different conceptualizations in the literature, influence the way individuals' information process. For example, the need for cognition, which is defined as an individual difference that includes liking cognitive effort and intrinsic motivation to engage in cognitive effort, negatively predicted all of the binding foundations. In contrast, it positively predicted only fairness among individualizing foundations (Tekeş et al., 2021). Likewise, the need for closure, defined as the need to achieve epistemic certainty in ambiguous situations quickly (Webster & Kruglanski, 1994), has been consistently shown to be positively related to binding moral concerns in studies testing its relationship with moral judgments (e.g., Baldner & Pierro, 2019; Baldner et al., 2020; Bianco et al., 2021; De Cristofaro et al., 2019; Dugas et al., 2018; Federico et al., 2016; Giacomantonio et al., 2017). Moreover, intolerance of ambiguity was shown to be related to generalized prejudice through the rejection of individualizing concerns and the promotion of binding concerns, leading to a moral dichotomy that divides people into categories—such as insiders and outsiders, law-abiding citizens and deviants, and the righteous and the impure (Forsberg et al., 2019).

Based on these findings examining epistemic needs, binding foundations stemming from ingroup norms

internalized in the face of uncertainty may predict prejudiced and discriminatory reactions in intergroup attitudes by providing dichotomic certainty. Individualizing moral concerns, on the other hand, entails looking out for the well-being of individuals regardless of the group they belong to. In this sense, it can be assumed that dogmatism, characterized by certainty in one's beliefs, will negatively predict support for individualizing concerns and positively predict support for binding concerns. Dogmatism, which is seen as an epistemic need in the context of individual tendencies that help to organize complex social relations and the environment to make them simple and understandable, can affect moral judgment, has not, as far as we know, been examined in the literature in terms of its direct relationship with moral foundations. Bell and Showers (2021) conducted a factor analysis with 34 scales used in the literature on morality, and one of the factors they obtained was dogmatism, defined as “*rigid adherence to a set of beliefs with little openness to other perspectives.*” Another study found that dogmatic certainty is negatively related to perspective-taking, which is the cognitive component of empathy (Friedman & Jack, 2017). An increase in dogmatic certainty about one's beliefs was linked with a shortage of empathy, which is critical for recognizing the needs of others.

Certainty is essential in dogmatic thinking, and anything that threatens certainty is rejected. Moreover, as this protective mechanism is a feature of dogmatism, dogmatic beliefs can be prevalent in any sample, regardless of political orientation or religious beliefs (Jost et al., 2003; Rokeach, 1960). Since dogmatism is an ideologically neutral construct that affects all domains of thinking, we aimed to test dogmatism as a predictor of moral judgment. A sense of certainty about reality does not unexpectedly lead to patterns of intolerance toward different or opposing views that contradict one's reality. A lack of respect for fundamental rights and choices may accompany this intolerance.

## Aim of the study

The primary purpose of this study was to examine whether dogmatism and social dominance orientation predict perceived threats from Syrian asylum seekers in Turkey via the mediating roles of individualizing and binding moral foundations (Fig. 1). In addition, the directions of these relationships (SDO-moral foundations and dogmatism-moral foundations) were also investigated via an alternative model.

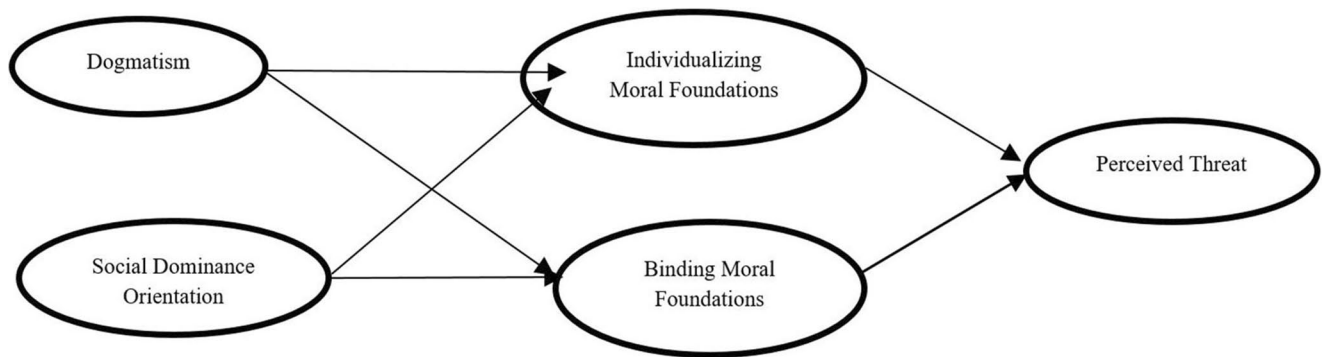


Fig. 1 Hypothesized model

## Study I

### Method

### Participants

The sample included 235 volunteer university students<sup>1</sup> (156 females, 75 males, and 4 participants did not specify their gender). The participants' ages ranged from 18 to 37, with a mean age of 21.05 ( $SD = 2.55$ ). The participants evaluated their level of religiosity on a 7-point Likert-style scale (1-never religious, 7-very religious). Accordingly, the sample's mean religiosity was 3.74 ( $SD = 1.51$ ). When the participants also evaluated their political orientation on a 7-point Likert-style scale (1-right, 7-left), the sample mean was estimated as 4.78 ( $SD = 1.61$ ).

The study was conducted using structural equation modeling and followed Kline's classic sample size theory (2016), which suggests that the number of participants should be five times the degrees of freedom under normal distribution, ten times the degrees of freedom if there is no normal distribution, and, ideally, 20 times the degrees of freedom. Since the assumption of normal distribution was valid in the given data, the number of participants should be around 420 with 84 degrees of freedom. Therefore, according to Kline's criteria, the research sample size ( $n = 235$ ) can be considered lower than the recommended size.

<sup>1</sup> Initially, 262 people participated, of whom 16 were excluded from data analysis due to missing responses. Based on single outlier analyses, 9 participants with scores exceeding the critical value of  $\pm 3.29$  [ $p < .001$ ] were removed from the data. Based on multiple outlier analyses, 2 participants were removed from the data due to Mahalanobis distance values exceeding the critical value [ $\chi^2 > 29.58$ ;  $p < .001$ ].

### Measures

**Dogmatism scale** The study utilized Altemeyer's (1996) Dogmatism Scale, which consists of 20 items. It comprises items requiring individuals to evaluate their belief systems and is scored on a 9-point Likert-style scale (-4 strongly disagree, +4 strongly agree). The Dogmatism Scale, which has a unidimensional factor structure, was translated into Turkish by Bozkuş and Akgün (2016). The Cronbach Alpha reliability coefficient of the scale was calculated as 0.83.

**Social dominance orientation scale** The SDO Scale developed by Pratto et al. (1994) and adapted into Turkish by Karaçanta (2002) was utilized. The scale's Cronbach Alpha reliability coefficient was calculated to be 0.87.

**Moral foundations Questionnaire (MFQ)** Within the framework of Moral Foundations Theory, the Turkish adaptation of the Moral Foundations Questionnaire (Graham et al., 2011; Yılmaz et al., 2016) was used to assess which moral foundations the participants were more sensitive to. The Moral Foundations Questionnaire consists of 30 items with five subscales corresponding to five moral foundations (care, fairness, loyalty, authority, and sanctity). Additionally, Cronbach's Alpha reliability coefficient for individualizing moral foundations was 0.76, and for binding moral foundations was 0.87.

A critical challenge in this study is the difficulty in measuring morality. Morality is complex and abstract, and therefore difficult to define or quantify. Moreover, the validity of the scales developed in the context of MFT in non-English-speaking cultures is questionable (e.g., Yılmaz et al., 2016). Therefore, in the second study of this research, alternative measurements will be used in addition to mainstream scales to measure morality.

**Realistic threat scale** Threat measures inspired by Stephan et al.'s (1999) Realistic Threats Scale (Balaban, 2013;

Yanbolloğlu, 2018) were utilized to measure the realistic dimension of the perceived threats from outgroup members. In addition to adapting some of the scale’s items to Syrian asylum seekers (e.g., “*Syrians harm Turkey economically.*” and “*Crime rates increase in the environment where Syrians are present.*”), items with current and situation-specific content were added to the scale (e.g., “*The right to enter university without an official exam given to Syrians is a very unfair practice.*” and “*The arrival of Syrians has increased rent and house prices.*”).

The Realistic Threats Scale comprises ten items assessed on a 7-point Likert-style scale, including economic, political, and social threats. High scores on the scale indicate a high perceived threat level from the outgroup. The factor loadings of the scale items were found to be acceptable, and the scale unidimensionally explained 57.02% of the total variance. The current study calculated Cronbach’s Alpha reliability coefficient as 0.91.

**Symbolic threat scale** The perceived threats from outgroup members against the ingroup’s values and beliefs were assessed using the Turkish version of the Symbolic Threats Scale (Kunduz, 2009), initially developed by Stephan et al. (2002). The Symbolic Threats Scale consists of 12 items assessed on a 7-point Likert-style scale to determine whether the outgroup’s differentiation from the ingroup in areas such as worldview, norms, and moral values represent a threat. The scale items were adapted for Syrian asylum seekers. The Cronbach’s Alpha coefficient of the scale was calculated as 0.90.

**Analysis strategy** The study’s hypothesis was tested via Structural Equation Modeling (SEM) based on covariance matrices and maximum likelihood estimation parameters in LISREL 8. Chi-square ( $\chi^2$ ),  $\chi^2/df$  the Root Mean-Square Error of Approximation (RMSEA), Adjusted of Goodness of Fit Index (AGFI), Comparative Fit Index (CFI), Goodness

of Fit Index (GFI), Standardized Root Mean Residual (SRMR) were used to assess the models’ fit to the data.

For the latent variables defined in the models, indicators were created from observed variables, as suggested by Little et al. (2002). Since the Dogmatism Scale and SDO Scale have a single-factor structure, observed variables were created from the scales by the balanced parceling method based on item-total test correlation coefficients. Furthermore, per the MFT, the latent variable of individualizing foundations was constructed using the foundations of care and fairness, and the latent variable of binding foundations was constructed by using the foundations of loyalty, authority, and sanctity as observed variables. Finally, the latent variable of threat perceptions was defined using the scores obtained from the Realistic Threats Scale and Symbolic Threats Scale, as observed variables.

## Results

Table 1 shows descriptive statistics and Pearson correlation coefficients between variables.

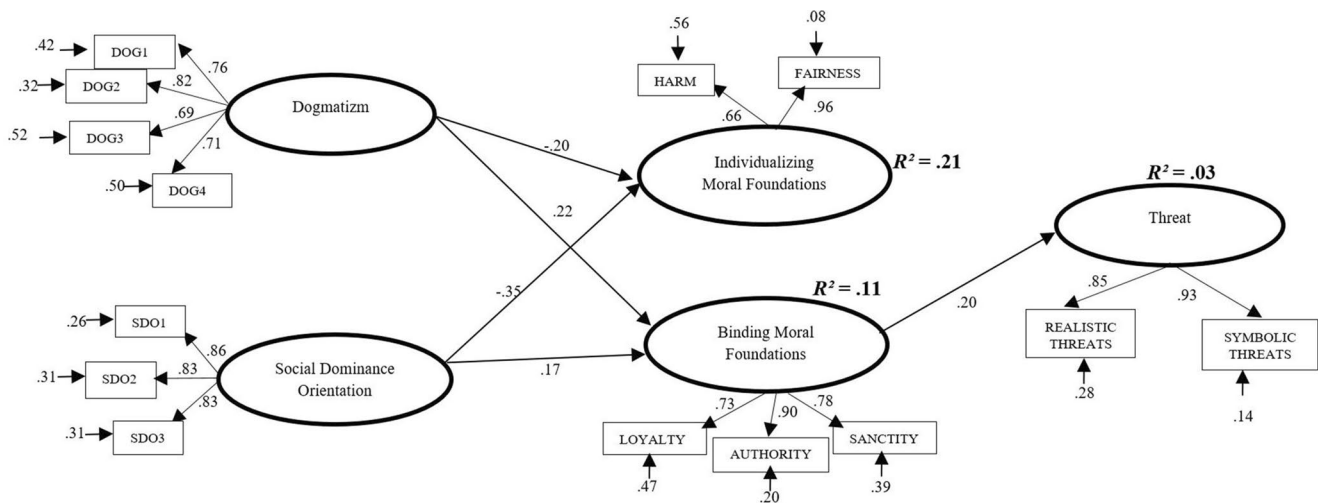
The first SEM model specified to be tested examined whether dogmatism and SDO, exogenous variables, predict threat via the mediating role of individualizing and binding foundations. The measurement model was tested initially and model’s goodness-of-fit results indicated that the model fit the data well [ $\chi^2=141.92$ ,  $df=67$ ,  $p<.001$ ,  $\chi^2/df=2.11$ , RMSEA=0.06 (90% CI 0.05-0.08), GFI=0.92, AGFI=0.88 CFI=0.95, SRMR=0.06]. Following the validation of the measurement model, the model’s fit constructed by adding the paths defining the relationships between the latent variables to the data was tested [ $\chi^2=182.80$ ,  $df=70$ ,  $p<.001$ ,  $\chi^2/df=2.61$ , RMSEA=0.08 (90% CI 0.06-0.09), GFI=0.90, AGFI=0.85, CFI=0.92, SRMR=0.09] and individualizing foundations did not predict threat ( $t=0.83$ ,  $p>.05$ ).

The model was re-tested by removing the path between individualizing foundations and threats (Fig. 2). The newly

**Table 1** Correlations between the variables (Study I)

	M	SD	1	2	3	4	5	6	7	8	9
1. Dogmatism	3.08	0.99	-								
2. Social Dominance Orientation	2.30	0.93	0.31**	-							
3. Harm	5.54	0.86	-0.12	-0.22**	-						
4. Fairness	5.90	0.76	-0.27**	-0.37**	0.67**	-					
5. Loyalty	4.56	1.06	0.17**	0.16*	0.34**	0.11	-				
6. Authority	3.95	1.08	0.24**	0.22**	0.24**	0.02	0.64**	-			
7. Sanctity	4.23	1.32	0.24**	0.20**	0.28**	0.08	0.57**	0.70**	-		
8. Realistic Threats	4.75	1.15	-0.06	0.09	0.08	0.08	0.23**	0.16*	0.01	-	
9. Symbolic Threats	4.32	1.01	-0.04	0.19**	-0.01	0.01	0.20**	0.17**	0.01	0.78**	-

\* $p<.05$ , \*\* $p<.001$ ,  $N=235$



**Fig. 2** The mediating role of binding moral foundations between dogmatism, social dominance orientation, and threats (Study I,  $N=235$ , Model fit values:  $[\chi^2=183.98, df=71, p<.001, \chi^2/df=2.59, RMSEA=0.08$  (90% CI 0.06-0.09),  $GFI=0.90, AGFI=0.85, CFI=0.92, SRMR=0.09]$ )

defined model's goodness-of-fit statistics showed that model's goodness-of-fit statistics were at acceptable levels [ $\chi^2=183.98, df=71, p<.001, \chi^2/df=2.59, RMSEA=0.08$  (90% CI 0.06-0.09),  $GFI=0.90, AGFI=0.85, CFI=0.92, SRMR=0.09]$ , and all paths were significant.

To test for indirect effects in the mediation model depicted in Fig. 2, new paths from dogmatism to threat and SDO to threat were prospectively added, and the model was re-tested for each new path. Only one path was added at a time to assess the unique contribution of the newly added paths, allowing the models to be tested separately. Firstly, the model was tested by defining a direct path from dogmatism to threat [ $\chi^2=179.56, df=70, p<.001, \chi^2/df=2.56, RMSEA=0.08$  (90% CI 0.06-0.09),  $GFI=0.90, AGFI=0.85, CFI=0.93, SRMR=0.08]$ , the regression coefficient of the new paths defined between dogmatism and threat ( $t=-1.46, p>.05$ ) was not statistically significant.

The model was re-tested by defining a direct path in which SDO, another exogenous variable, predicts threat [ $\chi^2=180.74, df=70, p<.001, \chi^2/df=2.58, RMSEA=0.08$  (90% CI 0.06-0.09),  $GFI=0.90, AGFI=0.85, CFI=0.93, SRMR=0.09]$ . The regression coefficient of the new paths defined between SDO and threat ( $t=1.83, p>.05$ ); binding foundations, and threat ( $t=1.30, p>.05$ ) were not statistically significant. Therefore, the partial mediation models did not fit the data, and the model was rejected.

**Alternative model analysis** An alternative model has been specified in which individualizing and binding moral foundations predicted threat via dogmatism and SDO mediating roles [ $\chi^2=147.95, df=70, p<.001, \chi^2/df=2.11, RMSEA=0.06$  (90% CI 0.05-0.08),  $GFI=0.92,$

$AGFI=0.88, CFI=0.95, SRMR=0.06]$ . It was found that the regression coefficient of the paths from dogmatism to threat ( $t=-0.99, p>.05$ ) and were SDO to threats not significant ( $t=1.73, p>.05$ ), and the model was rejected.

## Discussion

The first study revealed that dogmatism and SDO predict threat via the mediating role of individualizing and binding moral foundations. However, this study has some limitations. First, the psychometric properties of the Moral Foundations Questionnaire (Graham et al., 2011) are questioned in the literature. Although studies using the MFQ have found that there is a model that points to the five-dimensional structure (care, fairness, loyalty, authority, and sanctity) as suggested by MFT, they report that the model's goodness-of-fit indices remain at marginal levels (Davies et al., 2014; Graham et al., 2011; Iurino & Saucier, 2018; Nilsson & Erlandsson, 2015; Yilmaz et al., 2016). Besides, the fact that the scale items are based on context-free, abstract statements has also been criticized, and it has been argued that it may not be able to measure actual moral responses (Clifford, 2015; Curry et al., 2018, p. 111; Frimer et al., 2013, p. 1053). Another criticism leveled at the MFQ is that it addresses controversial issues that polarise society based on political ideologies; these items may merely reflect an individual's political position rather than a moral response (Frimer et al., 2013). Accordingly, it was planned to re-test the model by measuring moral foundations with a different instrument.

## Study II

A second study aimed to replicate Study I's findings by assessing the moral foundations with a different instrument. Many alternative instruments to the MFQ have been developed in line with MFT's theoretical framework. One is the Moral Foundations Vignettes (MFV; Clifford et al., 2015). In each of these scenarios, a violation of a moral foundation is concretely described. Participants are asked to imagine witnessing these situations and evaluate how morally wrong the described behavior is. It has been argued that the MFV has some advantages over the MFQ, such as that participants are observers rather than perpetrators of moral violations and contain concrete daily life examples far from the already polarised political debates (Clifford et al., 2015). Data were collected in 2019.

## Participants

The study sample consisted of 389 volunteer university students<sup>2</sup> (254 female, 117 male, and 18 participants did not specify their gender). The participants' ages ranged from 18 to 34, with the mean age of the sample calculated as 21.02 ( $SD=2.96$ ). As in the first study, participants' level of religiosity was evaluated with a 7-point Likert-style scale (1-never religious, 7-very religious). Accordingly, the sample's mean religiosity level was 3.55 ( $SD=1.63$ ). In addition, participants were also asked to evaluate their political orientation on a 7-point Likert-style scale (1-right, 7-left), with the sample mean calculated as 4.97 ( $SD=1.49$ ).

## Measures

For the research, the measures introduced in the first study were also utilized in the second study. However, unlike the first study, Moral Foundations Scenarios were utilized to measure moral foundations.

**Moral Foundations Vignettes (MFV)** Moral Foundations Vignettes (Clifford et al., 2015) were used to identify which moral foundations participants were sensitive to when making moral judgments. The MFV consists of more than one hundred short stories, and for practical reasons, researchers are advised to use one or more scenarios for each moral foundation. Each scenario portrays a single violation of a moral norm. Participants were asked to imagine that they

witnessed the norm violation described in the scenario and evaluate the moral wrongness of this behavior (1-not at all wrong, 5-extremely wrong).

For the present study, 23 scenarios were selected from MFV. During the selection process, care was taken to ensure that the situation described in the moral violation scenarios was comprehensible in Turkish and corresponded to a meaningful representation of the culture. The selected moral scenarios were translated into Turkish separately by two social psychologists fluent in English, and the items were discussed and finalized (see Appendix). Confirmatory Factor Analysis was conducted in LISREL for the MFV. A model with six latent variables (harm, fairness, liberty, loyalty, authority, and sanctity) was defined (Clifford et al., 2015), where the behavior described in each scenario was an indicator of the moral foundation violated. It was observed that the model fit the data well [ $\chi^2=457.50$ ,  $df=215$ ,  $p<.001$ ,  $\chi^2/df=2.12$ , RMSEA=0.05 (90% CI 0.04-0.06), GFI=0.91, AGFI=0.88, CFI=0.86, SRMR=0.06]. The Cronbach's alpha reliability coefficients were calculated as 0.74 for individualizing foundations and 0.78 for binding foundations.

## Results

Table 2 shows descriptive statistics for the variables and correlations between variables. The paths followed in the first study were maintained while defining indicators for the latent variables from the observed variables to test the study's hypotheses. In addition to the first study, the latent variable of individualizing foundations was developed by identifying the liberty foundation as an indicator along with the care and fairness foundations from the MFV.

A mediated model was specified in which dogmatism and SDO predict individualizing and binding moral foundations; afterward, individualizing and binding moral foundations predict threat. The measurement model's goodness-of-fit indices showed that the model fit the data well [ $\chi^2=157.29$ ,  $df=80$ ,  $p<.001$ ,  $\chi^2/df=1.96$ , RMSEA=0.05 (90% CI 0.03-0.06), GFI=0.95, AGFI=0.92, CFI=0.97, SRMR=0.04].

Following the validation of the measurement model, the SEM model proposed in line with the study's hypothesis was tested. The goodness-of-fit statistics showed that the model fit the data well [ $\chi^2=165.92$ ,  $df=83$ ,  $p<.001$ ,  $\chi^2/df=1.99$ , RMSEA=0.05 (90% CI 0.03-0.06), GFI=0.95, AGFI=0.92, CFI=0.96, SRMR=0.05]; however, the regression coefficient for the direct path between individualizing foundations and threat was not statistically significant ( $t=0.09$ ,  $p>.05$ ).

The model was re-tested by removing the path between individualizing foundations and threats (Fig. 3). The newly

<sup>2</sup> Initially, 438 people participated, of which 24 were excluded from data analysis due to missing responses. Based on single outlier analyses, 9 participants with scores exceeding the critical value of  $\pm 3.29$  [ $p<.05$ ] were removed. According to the multiple outlier analyses, 16 participants were removed from the data due to Mahalanobis distance values above the critical value [ $\chi^2>31.26$ ;  $p<.001$ ].



**Table 2** Correlations between the variables (Study II)

	M	SD	1	2	3	4	5	6	7	8	9	10
1. Dogmatism	2.98	0.98	-									
2. Social Dominance Orientation	2.21	0.94	0.32**	-								
3. Harm	4.61	0.40	-0.21**	-0.35**	-							
4. Fairness	4.53	0.48	-0.18**	-0.33**	0.38**	-						
5. Liberty	4.67	0.40	-0.30**	-0.37**	0.49**	0.40**	-					
6. Loyalty	2.84	0.91	0.19**	0.21**	0.03	-0.03	-0.13**	-				
7. Authority	2.87	0.87	0.14**	0.14**	0.06	0.03	-0.13**	0.46**	-			
8. Sanctity	3.31	1.04	0.15**	0.12*	0.11*	0.06	-0.12*	0.47**	0.59**	-		
9. Realistic Threats	4.84	1.25	0.00	0.15**	0.04	-0.01	-0.00	0.20**	0.16**	0.16**	-	
10. Symbolic Threats	4.37	1.16	0.07	0.15**	0.04	-0.01	-0.01	0.28**	0.21**	0.17**	0.78**	-

\* $p < .05$ , \*\* $p < .001$ ,  $N = 389$ 

defined model's goodness-of-fit statistics showed that the model fit the data well [ $\chi^2=165.80$ ,  $df=84$ ,  $p < .001$ ,  $\chi^2/df=1.97$ , RMSEA=0.05 (90% CI 0.03-0.06), GFI=0.95, AGFI=0.92, CFI=0.96, SRMR=0.05].

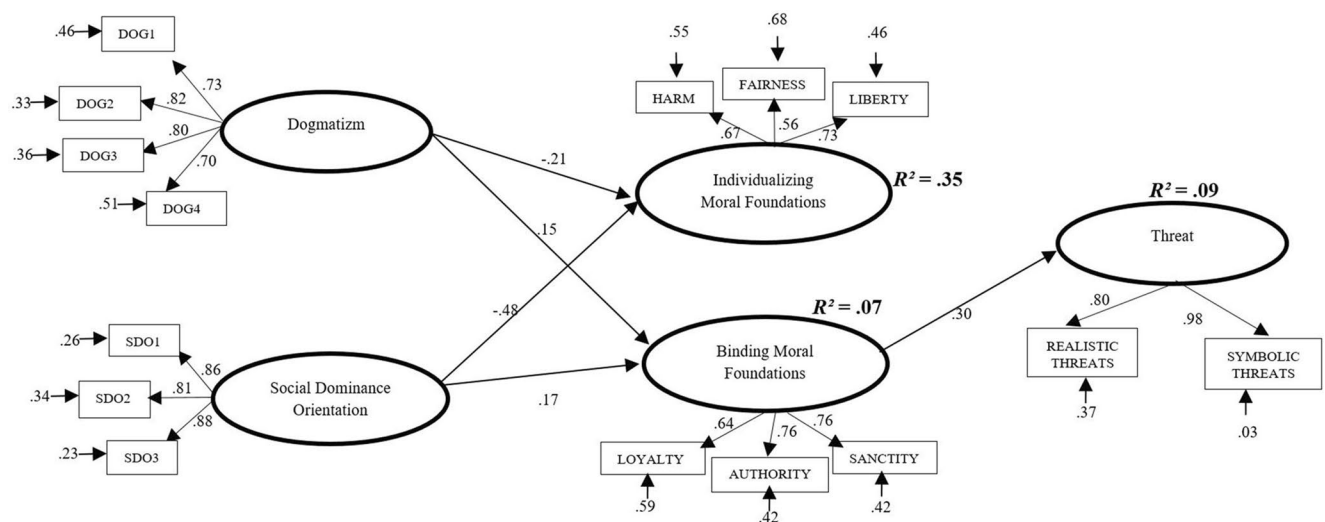
The indirect effects of dogmatism and SDO were investigated to determine better the nature of the relationships proposed in the model. Firstly the model tested by defining a direct path from dogmatism to threat. Although the goodness-of-fit statistics were at acceptable levels [ $\chi^2=165.38$ ,  $df=83$ ,  $p < .001$ ,  $\chi^2/df=1.99$ , RMSEA=0.05 (90% CI 0.03-0.06), GFI=0.95, AGFI=0.92, CFI=0.96, SRMR=0.05], the regression coefficient of the new paths defined between dogmatism and threat ( $t=0.23$ ,  $p > .05$ ) was not statistically significant.

The model was re-tested by defining a direct path in which SDO predicts threat [ $\chi^2=161.31$ ,  $df=83$ ,  $p < .001$ ,  $\chi^2/df=1.94$ , RMSEA=0.04 (90% CI 0.03-0.06), GFI=0.95, AGFI=0.92, CFI=0.96, SRMR=0.05]. The regression coefficient of the new paths defined between SDO and threat ( $t=1.75$ ,  $p > .05$ ) was not statistically significant. Therefore, the partial mediation models did not fit the data, and the model was rejected.

**Alternative model analysis** An alternative model has been specified in which individualizing and binding moral foundations predicted threat via dogmatism and SDO mediating roles. When the alternative model's fit to the data was tested, it was found that the regression coefficient of the path from dogmatism to threat was not significant ( $t=-17$ ,  $p > .05$ ). When the model was re-tested by removing the path as mentioned earlier, it was noted that the model's goodness-of-fit indices were at acceptable levels [ $\chi^2=181.33$ ,  $df=84$ ,  $p < .001$ ,  $\chi^2/df=2.15$ , RMSEA=0.05 (90% CI 0.04-0.06), GFI=0.94, AGFI=0.92, CFI=0.95, SRMR=0.06]. The alternative model was compared with the model that tested the study's hypothesis (Fig. 3), and it was investigated which model was better at describing the relationships between variables. While the model testing the research hypothesis had an Expected Cross-Validation Index (ECVI) value of 0.61, and an Akaike's Information Criterion (AIC) value of 237.80, the alternative model had an ECVI value of 0.65 and an AIC value of 253.33. It was accepted that the model testing the study's hypothesis (Fig. 3), which had lower values in these indices, fit the data better (Byrne, 2016, p.100).

## Discussion

A second study was conducted to address the limitations mentioned earlier in Study 1. The findings of the structural equation modeling indicated relationships in a pattern



**Fig. 3** The mediating role of binding moral foundations between dogmatism, social dominance orientation, and threats (Study II,  $N=389$ , Model fit values:  $[\chi^2=165.80, df=84, p<.001, \chi^2/df=1.97, RMSEA=0.05 (90\% CI 0.03-0.06), GFI=0.95, AGFI=0.92, CFI=0.96, SRMR=0.05]$ )

parallel to the findings of the first study. Accordingly, while the mediating role of binding foundations was found in the relationship between SDO, dogmatism, and perceived threats, the mediating role of individualizing moral foundations was not significant. Thus, the findings of the first study can be said to have been replicated in a different sample, in which moral foundations were measured using a different instrument. The replication of the first study’s findings may also indicate that the Moral Foundations Scenarios used in the second study provide a valid measure of moral foundations, at least in Turkey.

One of the limitations of the first study was that the Moral Foundations Scale did not include items for the liberty foundation, which was added to the theory as a sixth moral foundation. For this purpose, scenarios related to the liberty foundation were added and measured in the second study. In addition, in the analyses, the liberty foundation was included in the model as an observed variable in defining individualizing foundations, as suggested by the theory. Thus, the liberty foundation was found to be a significant indicator in defining individualizing moral foundations. The liberty foundation was also found to have strong positive correlations with the other indicators describing individualizing moral foundations, namely the care and fairness foundations (see Table 2).

**General discussion**

Can moral judgments play an essential role in intergroup attitudes? Recently, a growing number of studies have sought to explain intergroup processes through moral evaluations (e.g., Baldner & Pierro, 2019; Federico et al., 2016; Forsberg et al., 2019; Hadarics & Kende, 2018; Low & Wui,

2016). In this context, the present study sought to investigate whether dogmatism, SDO and the mediating roles of moral concerns predict perceived threat from Syrian asylum seekers in Turkey, besides addressing the threat, which is a result of intergroup processes, at the morality level. The findings revealed that dogmatism and SDO negatively predicted support for individualizing moral concerns but positively predicted increased binding moral concerns. Furthermore, binding moral foundations were found to mediate between dogmatism, SDO, and threat, and an increase in support for binding moral foundations positively predicted threat.

MFT assumes that morality is not only universal through innate modules but also cultural, implying that culture determines when, how, and to what degree a moral foundation is activated (Haidt & Joseph, 2004). However, the theory has been primarily tested in educated and upper socio-economic level samples in the West. From the MFT perspective, more studies are needed to be conducted on non-Western samples. Thus, this study aims to contribute to the literature by testing MFT in the context of a current issue in Turkey.

In constructing the mediation model tested in this study, it was assumed that dogmatism and SDO, which are relatively stable personality tendencies, predict moral judgment. In addition, an alternative model in which moral foundations predict threat through dogmatism and SDO was also proposed and tested. In line with the view in the literature that individual dispositions determine moral judgments (e.g., Baldner & Pierro, 2019; Ciuk, 2018; Hadarics & Kende, 2018; Hatemi et al., 2019; Strupp-Levitsky et al., 2020), the findings supported the research hypothesis. It was observed that the model in which dogmatism and SDO predicted moral foundations fit the data better than the alternative model in which moral foundations predicted SDO

and dogmatism as exogenous variables. Although the current study's findings are insufficient to identify the direction of causality and the relationships between variables, they can provide data for this ongoing debate on the relationship between moral concerns and individual dispositions.

Specifically, SDO, which corresponds to a general desire for intergroup inequality, negatively predicts the individualizing foundations of care and fairness. In the second study, liberty was added to individualizing foundations. This result is consistent with some of the literature (e.g., Federico et al., 2013; Hadarics & Kende, 2018). On the other hand, there seems to be confusion in the literature about the direction of the relationships between moral concerns individual dispositions, and socio-political attitudes. The approach of this study may be more systematic and informative, as it is based on testing and comparing both directions. This result may also undermine the hypothesis that MFT prioritizes moral concerns over other psychological constructs.

Consistent with the finding that SDO negatively predicts the individualizing foundations, many studies have found that SDO based on “the competitive-jungle beliefs” is associated with high levels of Machiavellianism (Hodson et al., 2009), low levels of empathy (Choma et al., 2020; Holler et al., 2021), and increased aggression (Swami et al., 2013; Thomsen et al., 2008), which lead to hostile intergroup relations. Moreover, SDO has been linked to utilitarian reasoning, which determines the value of moral action solely based on the consequences it produces (Bostyn et al., 2016, pp. 164–165). This situation is claimed to arise when SDO affects moral cognition by suppressing emotional restraints to avoid harming others, which is related to individualizing moral foundations (Greene, 2007). Individualizing moral foundations, on the other hand, are concerned with caring for the well-being of individuals regardless of their group membership. Based on the findings, we can conclude that individuals with high levels of SDO, as opposed to those with low levels of SDO, may see individualizing moral concerns that do not refer to any group and are directly related to the individual's well-being and rights as expendable to preserve the prevalent hierarchy in society (e.g., at the expense of the disadvantaged position of asylum seekers and migrants).

The findings also indicated that SDO has a stronger relationship with individualizing moral foundations than binding moral foundations. Indeed, it has been shown that SDO is primarily negatively related to individualizing moral foundations and relatively weakly related to binding moral foundations (Federico et al., 2013; Graham et al., 2011; Kugler et al., 2014). SDO is a need for a more general hierarchical organization rather than an individual's desire for his or her particular group to have an advantageous position in the social hierarchy. Binding concerns, on the other hand,

refer to the pursuit of the concerns of a particular ingroup: the concerns of the ingroup to which the individual belongs. Thus, binding moral concerns associated with loyalty to the ingroup, deference to the ingroup's authority figures, and sensitivity to ingroup sanctity, are related to supporting traditions and sanctifying normative hierarchical roles (Graham et al., 2009, 2011). As a result, despite the non-significant relationship between binding concerns and SDO, RWA, which is closely related to supporting traditional relationships and roles, is shown to have a strong positive relationship with the basis of authority (Federico et al., 2013; Graham et al., 2011; Kugler et al., 2014).

Since dogmatism is a mindset reflecting general epistemic attitudes rather than endorsing particular political ideology-specific views, it is deemed a predictor of moral judgments in this study. Contrary to the pattern in the literature showing that RWA is related explicitly to binding moral foundations and SDO is primarily related to individualizing foundations, dogmatism, as a broader cognitive phenomenon, accounted for both individualizing and binding moral foundations. As expected across the two studies, dogmatism negatively predicted individualizing moral concerns and positively predicted binding concerns. The findings also support the view demonstrated in previous studies (e.g., Federico et al., 2016; Forsberg et al., 2019) that individuals with a need for certainty, simplicity, and stability are drawn to a clear, external moral order for a straightforward guideline defining how to behave toward those who pose a threat to security, values, traditions, and institutions, or deviants who are seen as morally inferior to the ingroup. This may be related to dogmatism's conception of ingroup values/moral standards as fixed belief systems. Thus, while dogmatism positively predicts binding foundations, it may negatively predict individualizing foundations that focus on the rights and well-being of individuals free from group identity and require specialized, detailed, in-depth processing and treatment. In other words, epistemic needs may, in a sense, determine the nature of contact with outgroup members by attempting to reach public morality through dichotomous and biased judgments.

Another prominent result of the study showed that moral concerns at the individual level shape intergroup attitudes. Consistent with the literature (Baldner et al., 2020; Kugler et al., 2014; Low & Wui, 2016), across the two ongoing studies, binding moral foundations positively predicted perceived threats from Syrian asylum seekers, an outgroup, as defined by the Intergroup Threat Theory framework. Individualizing foundations were also shown to predict threat perceptions negatively (e.g., Kugler et al., 2014; Low & Wui, 2016). However, contrary to the literature, the findings revealed that individualizing foundations did not predict the threat from Syrian asylum seekers in both

studies. Theoretically, individualizing foundations protect the well-being and rights of people being evaluated regardless of their group membership. On the other hand, Haidt and Joseph (2004) noted that most traditional cultures lack a developed notion of individual rights. People who grow up in these cultures and internalize them do not value creating equality (Boehm, 1999). It has been noted how rare egalitarian societies are and how difficult it is for individuals in egalitarian societies to work to suppress their tendency toward hierarchy. In this sense, when the outgroup context is salient, including threats, whether realistic or symbolic, individualizing moral judgment can be more complex and demanding than binding moral judgment (Haidt & Kesebir, 2010).

One of the most notable limitations of the present study is that the findings provide correlational information regarding the relationships between the variables; therefore, these links need to be investigated with more sophisticated methods. Another limitation was concerned with the measurement of moral judgment. Since morality has a very complex nature, it is equally challenging to conceptualize. Some critics argue that the conceptualization of MFT needs to be completed or corrected (e.g., Curry et al., 2018; Gray & Keeney, 2015). In addition, the Moral Foundations Questionnaire, which is the Moral Foundations Theory's measurement instrument that was used in the first study, is known to have difficulties when measuring in many non-English speaking languages (e.g., Davies et al., 2014; Iurino & Saucier, 2018; Kim et al., 2012). Furthermore, as is accepted in studies collecting data with self-report instruments, it was assumed that the present study participants provided sincere responses free from social desirability. On the other hand, the scale structure that requires scoring moral principles, i.e., not diverging from one's self-theories of morality and self-bias, may be related to socially desirable responses. The Moral Foundations Scenarios utilized in the second study depict more contextual situations and are based on participants' evaluation of the moral wrongness of behavior witnessed by an outside observer. Therefore, it can be claimed that, compared to the MFQ, it is more successful in dealing with socially desirable reactions and, in a sense, overcomes this problem.

A further limitation of the study is the following: Previous studies have examined the relationship between socio-political dispositions and moral judgments by scrutinizing the effects of both social dominance orientation and right-wing authoritarianism (RWA) together, using the Dual-Process Model (Duckitt & Sibley, 2009). For the current study, however, it was decided to represent only SDO as one of the existential motives in the models. There are several possible explanations for this decision: First, the study aims to test a comprehensive model that explores the directions of the relationships between existential, epistemic

needs, and moral judgments. Therefore, a parsimonious approach was taken by not including RWA in the model to be tested. Another notable reason for not including RWA in the research model is the attributions of asylum seekers. It has been shown that immigrants are often perceived as being less warm and competent, and may be categorized as a derogated group and are categorized as a derogated group (Duckitt & Sibley, 2007). Moreover, research has found that attitudes towards members of derogated groups, such as the disabled, the unemployed, and the mentally ill, are predicted by SDO rather than RWA. These findings have recently been replicated in Turkey (Birdir et al., 2022). Another reason is that in cultures where authority and power are consolidated in a single figure, such as Turkey, RWA has been assumed to be inseparable from contextual factors. This means that people's attitudes towards asylum seekers may reflect the political dispositions of the authority at the respective time, which may be time-specific and influenced by the authority's immigration policies rather than the existential motives of individuals. Therefore, RWA was considered as a context-specific characteristic and was not included in the analysis.

Although the participants' SDO and dogmatism scores followed a normal distribution, the group means were relatively low, and the deviation from the mean was significant for the religiosity and political orientation variables. In this sense, the findings need to be replicated in more diverse samples. Similarly, the target group in which prejudice is studied needs to be diversified, and the model proposed to explain prejudice toward different social groups (e.g., LGBTQ+ individuals or atheists) needs to be tested.

## Conclusions

The results of examining the effects of moral judgments and cognitive and socio-political variables in a single structural model in interpreting perceived outgroup threats can provide a multidimensional, inclusive explanation. In addition, it is hoped that the research findings will provide applicable recommendations for Syrian asylum seekers and other social groups to reduce hostile outgroup relations. For example, although supporting binding moral principles has positive effects that improve the cohesiveness of the ingroup and keep the group together, it can also lead to ignoring universal moral principles that protect the well-being and rights of individuals who do not belong to the ingroup. Individuals' awareness that group biases or obedience to authority figures are not always related to desirable outcomes may, in this sense, establish a common sense to control their reactions to possible adverse consequences. Moreover, given that the group emphasizing morality differs in its values from culture to culture, social arrangements in which virtues

such as compassion, empathy, fairness, and respect for the rights of others are ordinary may shift the focus of morality in society. Indeed, a recent study showed that striving to improve empathy boosted support for individualizing moral foundations over time (Hannikainen et al., 2020). In the face of the prevalence of hierarchical structures, equality or justice may appear unattainable ideals; nonetheless, cultural arrangements to ensure equality mean that individuals will internalize and use these values over time.

**Supplementary Information** The online version contains supplementary material available at <https://doi.org/10.1007/s12144-024-06179-y>.

**Funding** Open access funding provided by the Scientific and Technological Research Council of Türkiye (TÜBİTAK). This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

## Declarations

**Ethical approval** Was obtained from Mersin University Social Sciences and Humanities Research Ethics Committee.

**Conflict of interest** The authors declare that there is no conflict of interest.

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