Research

Exploring the influence of human values on perceptions of immigration: an experimental approach

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Abstract

Researchers have explored human values can effectively induce changes in attitudes and behaviors toward immigrants. This study compared the impact of different human values (self-transcendence and self-enhancement) on individuals' perceptions toward immigrants. A total of 250 participants were included in the study. Each participant was randomly assigned to one of the following conditions: control condition, priming condition on universalism, benevolence, power, or achievement. All participants completed a Scrambled Sentences Task to prime the value saliency, a Short Schwartz's Value Survey for the manipulation check, and a questionnaire assessing their perceptions of threat toward immigrants. One-way ANOVAs were conducted between each value priming condition (achievement, benevolence, power, and universalism) and the control condition, along with planned contrasts. The results did not reveal any statistically significant differences between the conditions across the composite scale and subscales (realistic and symbolic threat). Post Hoc tests indicated that individuals who identified as White were more likely to perceive immigrants as threats compared to Blacks and Hispanics, suggesting racial and ethnic background differences in perception. Across all groups, negative correlations were found between threat perceptions and self-transcendent values, while positive correlations were found between threat perceptions and self-enhancement values. Although experimental evidence using Scrambled Sentences Tak for priming human values was not found, the study supports the correlational associations between human values and attitude toward immigrants.

1 Introduction

The United States has experienced a significant increase in immigration over the past century. Many individuals relocate in search of a higher standard of living, seeking refuge, or fearing persecution. However, they confront the complex realities of the immigration process, which includes the discrimination and prejudice they often encounter upon entering the USA [1]. The general perception associating such prejudice with immigrants stems from the negative beliefs that they contribute to a declining economy, overpopulation in their home country, increased violence, and, in certain cases, terrorist activities [1, 2]. Schwartz [3] introduced the concept of human values as guiding principles that shape one's actions, beliefs, and behaviors. Researchers have turned to human values as potential predictors of individuals' attitudes toward immigrants. Studies examining values may effectively contribute to changing attitudes and behaviors toward immigrants by appealing to universal values [4, 5]. Although previous research has examined the link between human values such as benevolence, universalism, power, achievement, and attitudes toward immigrants in the United States,

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there is limited understanding of the causal effects. This study aims to conduct an experimental design that primes human values and investigates their causal influence on individual perceptions toward immigrants. By understanding the distinctions between these values, we can gain insights into the formation of anti-immigrant attitudes and potentially identify ways to reduce negative sentiments.

1.1 Schwartz value theory

Schwartz [3] introduced values as desirable objectives that act as guiding principles in an individual's life. These objectives can interest social entities, motivate, justify actions, and can be acquired through socialization of group values and unique experiences. The Schwartz Value Theory illustrated the differences among these ten value types, suggesting that they form a continuum of interconnected motivations [3, 6, 7]. The value types within the self-enhancement dimension, such as power and achievement, emphasize social superiority and personal gains. On the other hand, the value types within the self-transcendence dimension, such as benevolence and universalism, prioritize concern for others' well-being. This contrast between self-enhancement and self-transcendence is evident on the Schwartz Value Theory continuum, reflecting incongruent life priorities [3, 6, 7]. Values within the same dimension align congruently, signifying similar motivational goals. Schwartz defined each value in terms of the goals they express, which are grounded in universal concepts. Achievement, for example, is defined as personal success through competence, with individuals striving to showcase their abilities to society. Power, on the other hand, represents dominance over individuals and resources, as well as the attainment of social status and prestige.

Several recent studies have examined the relationship between human values, specifically self-transcendence and self-enhancement values, and their impact on intergroup attitudes. One study conducted by Tittler et al. [8] explored how individual values influenced racial colorblindness and the inclination toward social justice action among undergraduate students. To assess personal values, Tittler et al. employed the Portrait Values Questionnaire-Revised (PVQ-R), which measured the perceived importance of different values. The study found that individuals who valued self-transcendence were less likely to hold colorblind beliefs, which, in turn, predicted a higher inclination toward social justice action compared to individuals who placed more importance on self-enhancement values. Long et al. [9] examined how ethnic affirmation and belonging influence the orientation toward other groups, a factor that is closely associated with self-transcendence values. Similarly, the study found that self-transcendence values, such as benevolence and universalism, showed positive correlations with ethnic affirmation and other-group orientation. Conversely, self-enhancement values, including achievement and power, demonstrated negative associations with ethnic affirmation and other-group orientation. Therefore, social values (self-transcendence and self-enhancement) have the potential to influence intergroup attitudes and beliefs. However, Schwartz noted a distinction between specific values found in each domain [7]. To illustrate, universalism is concerned with the welfare of all individuals, as opposed to benevolence, which prioritizes the welfare of those within a societal "in-group". Universalism encompasses care for the larger society, the world, and all elements of nature, while benevolence places primary emphasis on relationships within the family and other close-knit groups [7]. Furthermore, although self-enhancement values encompass self and social-esteem, achievement values emphasize successful performance through interactions, while power values primarily revolve around achieving dominance [7]. Achievement values are regarded as showcasing competence based on societal standards and norms, while power values strive to fulfill individual needs for control and the preservation of one's public image. Numerous studies conducted across 80 countries have consistently discovered the same distinction in dimensions of human values in various contexts [3, 6, 7, 10–12]. Research on social identity theory also supported this differentiation by suggesting that favoring one's in-group may result in more negative attitudes toward outsiders, such as immigrants [13, 14].

Grigoropoulou's research [15] could potentially offer initial empirical evidence that values within the same domain of self-transcendence could influence prejudice in different ways. In the study, participants were subjected to a series of survey questions that probed their perspectives on the economic, cultural, and general impact of immigrants on the host society. These questions also evaluated two self-transcendence values, namely universalism and benevolence, using the PVQ (Portrait Values Questionnaire). The findings revealed that universalism had a negative impact on the perceived threat posed by immigrants, while higher scores of benevolence relative to universalism resulted in more positive effects and stronger feelings of immigrant threat [15]. These findings provided some evidence supporting the contrasting roles that benevolence and universalism values can play in perceiving immigrant threat and prejudice toward immigrants.

1.2 Schwartz value theory and racial bias toward immigrants

In addition to investigating intergroup attitudes and beliefs, researchers have also examined human values within the context of bias and discrimination. In accordance with Schwartz Value Theory [3, 6], the connection between the various aspects of Schwartz Value Theory and bias against immigrants, particularly from a motivational perspective linking these values to the achievement of individuals' specific goals and interests, can be understood through the concepts of self-transcendence and self-enhancement [3, 16].

In a recent study by Wolf, Weinstein, and Maio [17], they examined the impact of perceived value differences on prejudice toward migrants. The study involved British students who were asked to express their own value endorsement as well as their perception of value endorsement (self-transcendence and self-enhancement values) among Muslim migrants, economic migrants, and refugees. The results demonstrated that participants were more likely to hold favorable views toward immigrants if they had a higher endorsement of self-transcendence values and a lower endorsement of self-enhancement values. Additionally, participants were more likely to view immigrants positively if they perceived them to have higher self-transcendence values and lower self-enhancement values [13].

Another study conducted by Saroglou et al. [18] examined the perceptions of the Muslim veil and the prejudice associated with it in relation to values. By utilizing the Schwartz Value Survey, these researchers investigated the correlation between values and negative attitudes toward the veil, discomfort with its presence, and the inclination to prohibit it. The study revealed that anti-veil attitudes demonstrated a positive association with prejudice and values related to personal advancement (such as power and achievement), while displaying a negative association with values tied to transcendence beyond oneself (such as universalism and benevolence).

Souchon et al. [19] employed implicit measures to examine the association between human values and prejudice toward individuals from out-groups in the host society. They found that individuals with higher scores in universalism tended to have more positive associations with ethnic out-groups compared to those with higher scores in power, which was linked to more negative attitudes toward ethnic out-groups. Furthermore, the analysis of mean differences indicated that participants generally favored benevolence values over achievement values. Collectively, these findings underline the importance of considering human values in relation to prejudice. Particularly noteworthy is the finding that universalism values may have the strongest impact on fostering positive attitudes toward ethnic out-groups and subsequently reducing prejudicial attitudes toward those individuals.

Other research studies have corroborated the empirical findings mentioned above regarding the value types associated with prejudice [15, 20]. Feather and Mckee [16] examined prejudice toward the indigenous population of Australia by utilizing Schwartz values. The results revealed significant correlations, indicating that power and security values positively predicted prejudice toward the Australian indigenous people, while universalism values had a negative relationship with prejudice. Therefore, individuals who prioritized social status, prestige, and dominance were more inclined to exhibit prejudiced attitudes toward the indigenous [16]. Conversely, those who scored higher in universalism and benevolence values demonstrated greater concern for the overall welfare of society, making them less likely to express prejudice. The researchers posited that fundamental human values such as universalism, benevolence, and power were also interconnected with prejudice and attitudes toward out-group members, as well as a well-established sense of self.

1.3 The current study

The existing literature has examined empirical studies regarding the association between human values and prejudicial attitudes, beliefs, and behaviors. Specifically, self-transcendence values encompassing universalism and benevolence have shown positive associations with outgroup perceptions. In contrast, self-enhancement values, such as power and achievement, have demonstrated negative relationships [8, 9, 17, 21]. This observation aligns with Schwartz's assertion that these dimensions reside on opposing ends of the Schwartz Value Theory continuum. Building upon prior research, the present study aimed to investigate how distinct values (i.e., universalism, benevolence, power, and achievement) within each dimension (self-transcendence and self-enhancement) influence perceptions of immigrants in the United States. In addition to the conceptual advantages of exploring these variations, examining diverse value domains can shed light on the perception of anti-immigrant sentiments that ultimately impede societal welfare.

Although prior research has explored the correlation between human values and attitudes toward immigrants, there remains a limited understanding of the causal effects. The current study employed an experimental design that primes human values and investigated their causal influence on individual perceptions toward immigrants. Priming, a widely used experimental technique, has been employed by researchers to temporarily activate values. Previous studies have

utilized priming methods to induce self-enhancement and self-transcendence values, and have explored whether different primed groups lead to changes in behavior [22–25]. For instance, Bargh et al. [22, 25] reported that when participants were primed with values related to competition, success, or achievement, they performed better on a subsequent word task compared to participants who were primed with neutral terms. In another study by Maio et al. [23], values were primed through a unique sorting task, where achievement, benevolence, or control condition values were sorted. The group primed with achievement values exhibited greater success in puzzle tasks and displayed reduced helpfulness toward an experimenter. Conversely, the group primed with benevolence values experienced decreased success in puzzle tasks but demonstrated increased helpfulness toward the experimenter. These findings demonstrated that priming is an effective experimental method for investigating value differences and underscore the significance of priming as a manipulation technique.

In the present study, we expected that the saliency of these values during the experimental task would influence perceptions of immigrants across various dimensions of human values (benevolence, universalism, power, achievement).

Hypothesis 1 Participants who were primed with self-transcendent values (benevolence and universalism) were expected to be less likely to perceive immigrants as threats compared to participants primed with self-enhancement values (power and achievement).

Furthermore, the study aimed to investigate group differences in perceptions of immigrants within the self-transcendence (Universalism vs. Benevolence) and self-enhancement (Power vs. Achievement).

Hypothesis 2 Individuals primed with universalism values would display lower levels of perceiving immigrants as threats compared to those primed with benevolence.

Hypothesis 3 Individuals primed with power values were expected to be more inclined toward perceiving immigrants as threats compared to those primed with achievement values.

Additionally, the current study explored differences in perceiving immigrants as threats across all four values.

Hypothesis 4 When comparing universalism, benevolence, power, and achievement values, participants primed with universalism values would have the lowest scores on perception of immigrants as threats, followed by benevolence, achievement, and power values.

2 Method

2.1 Participants

The study was a part of the first author's thesis project using the online platform Qualtrics. A total sample of 250 participants were used for the current study. The sample for the study was calculated using the power analysis tool, G*Power, for a one-way ANOVA with five groups, and a small to medium effect size of 0.25. A medium effect size was thought to be most appropriate based on previous studies that measured value differences between groups along with intergroup attitudes [17, 19, 24]. In order to equally distribute among the five groups, a randomized block design put fifty participants per group. Participants were recruited from Introduction to Psychology classes during the 2022 Spring semester. Participants aged 18 and above were able to enroll through the online SONA sign-up system, where they received course credit for participation. This study was approved by the Institutional Review Board at Seton Hall University, and all participants were provided with and signed a consent form prior to their participation.

2.2 Design

Participants in this study were assigned randomly to one of five conditions—control group, universalism, benevolence, power, and achievement (see Fig. 1). The Scrambled Sentences Task [22] served as the independent variable. After completing the Scrambled Sentences Task, all participants were asked to fill out surveys measuring the influence of the primed value condition they were in, as well as their perceptions of immigrants as threats. All participants
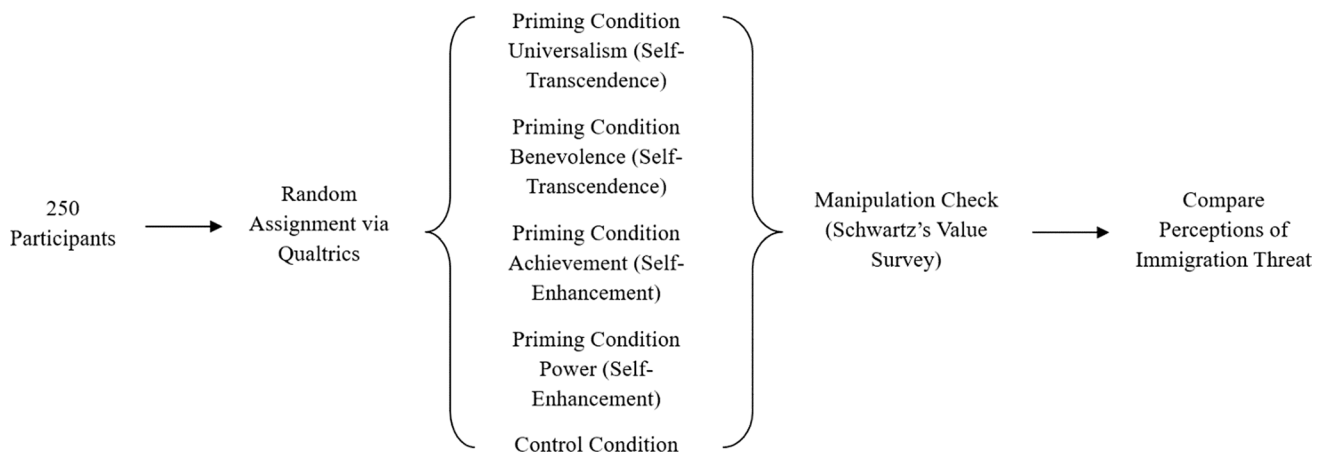
Fig. 1 Experimental design and procedure

completed the same surveys regarding the influence of the primed value conditions and perceptions toward immigrants. The primary analysis for this study involved conducting a one-way ANOVA to investigate any group differences among the five independent groups. The one-way ANOVA aimed to determine whether there were any statistically significant differences between these groups. While previous research has utilized the Scrambled Sentences Task in a within-subjects design for pre- and post-tests, we chose a between-subjects design for our study, guided by the methodology employed by Fischer and Karl [26] in their recent work on using the Scrambled Sentences Task for value priming. Perceptions regarding immigrants were measured as the dependent variable in the study through a questionnaire. Following the priming condition, a manipulation check was conducted using the short Schwartz's value survey [27] to assess the significance of each value within Schwartz's value theory to participants' identity. The subsequent measurement involved evaluating perceptions toward immigrants using the Perceived Immigrant Threat scale [28].

2.3 Materials and measures

The Scrambled Sentences Task, based on Bargh and Chartrand [21], was used to prime participants for their respective Schwartz Value conditions (universalism, benevolence, power, or achievement) in order to enhance the saliency of the value during the study. In each group, participants were given eight sets of words to form grammatically correct sentences. The task refrained from using gender-specific pronouns (she/he) by framing sentences as gender-neutral individuals. For instance, in the universalism priming condition, the eight keywords "compassionate, fair, just, accepting, open-minded, empathic, non-judgmental, and tolerant" were employed. Scrambled words such as "people/tolerated/dissimilar/he or she/is" were given for each keyword. The unscrambled sentence could be "they tolerated dissimilar people." In the control condition, random words were chosen for the task. Value keywords were adapted from previous studies [22, 26, 29].

Short Schwartz's Value Survey [27] consists of 10 value items that represent ten different motivational domains. Participants were asked to rate the importance of these values as guiding principles in their life using a scale from 1 (not important at all) to 7 (supremely important). For instance, the value of power is characterized by attributes such as "social power, authority, wealth."

The Perceptions of Immigration Threat [28] scale consists of eight items for realistic-threat and seven items for symbolic-threat of immigrants. Realistic threats are defined as threats perceived by the in-group, where the out-group is seen as a risk to their safety, economy, politics, health, or overall well-being. For example, "Immigration has led to reduced availability of social services for Americans." Symbolic threats are defined as threats to the group's meaning system, such as religion, values, belief system, ideology, philosophy, morality, and world view. For instance, "Upon arrival, immigrants should quickly adapt to the rules and norms of American society." Participants were asked to rate their agreement or disagreement with each statement on a 7-point scale, ranging from 1 (strongly disagree) to 7 (strongly agree). To obtain a composite score for the perception of immigrant threat, the realistic and symbolic threat subscales were averaged. Statements representing non-threatening perceptions were reverse scored for both the symbolic and realistic threat subscales.

2.4 Procedure

Participants were required to complete the informed consent form online. Once the participants signed the consent form and agreed to participate, they were given access to start the study. Each participant was randomly assigned one out of the five conditions (control, universalism, benevolence, power, or achievement) for the Sentence Scrambled Task by Qualtrics. Following the task, they were presented with the Short Schwartz's Value Survey to ensure the manipulation was successful, a questionnaire to measure perceptions toward immigrant threat, and a demographics questionnaire. In each condition, participants completed the Short Schwartz's Value Survey after the priming task as a manipulation check. After the manipulation check, they completed a questionnaire assessing their perceptions of immigration threat. The demographics questionnaire included questions about gender, date of birth, ethnicity, race, age, country of birth. Once participants finished the study, they were asked to write or guess the purpose of the study. Finally, all participants received a debriefing form.

3 Results

3.1 Descriptive results

Please note that 78 participants did not receive the demographic questionnaire due to a technical error in Qualtrics. Out of 172 participants, there were 72.6% female respondents and 27.4% male respondents in the sample. The majority ethnicity was reported as White (47.2%), followed by Latinx (19.1%), Asian (14.1%), Black (14.1%), Other (4.0%), and Native Hawaiian or Other Pacific Islander (1.5%). A one-way ANOVA was performed to compare the effect of ethnicity on perceptions of immigrant threat. There was a statistically significant difference in the composite score of threat (realistic and symbolic), $F(3, 143) = 3.362$, $p = 0.02$. Post Hoc LSD Tests for multiple comparisons found that the mean value for threat was significantly higher for those who identified as White, compared with those who identified as Black ($p = 0.007$, 95% CI = [0.1248, 0.7577]) and those who identified as Latinx ($p = 0.002$, 95% CI = [0.1970, 0.8119]). In other words, those who identified as White were more likely to perceive immigrants as threats compared to people of color (e.g., Black and Latinx).

3.2 Manipulation check—short Schwartz's value survey

The Short Schwartz's Value Survey was administered directly after the Scrambled Sentences Task to check if the priming manipulation was successful. A One-way ANOVA was performed to compare the targeted values (benevolence, universalism, achievement, and power) between the priming conditions and the control condition to see if the targeted values succeeded in priming participants for their respective values. Planned contrasts revealed no statistically significant differences in the targeted values were found between each priming condition and the control condition. The results appear in Table 1 for mean value comparisons, standard deviations, and the t-tests for the planned contrast.

Table 1 Manipulation check on short Schwartz's value survey between conditions

Targeted value	Priming vs. control (mean and SD)	Planned contrast
Universalism	Priming = 6.14(1.65) Control = 5.69(2.07)	$t(250) = 1.158, p = 0.248$
Benevolence	Priming = 6.80(1.55) Control = 6.78(1.25)	$t(250) = 0.295, p = 0.946$
Achievement	Priming = 6.57(1.43) Control = 6.53(1.37)	$t(250) = 0.149, p = 0.895$
Power	Priming = 3.78(2.03) Control = 3.94(1.92)	$t(250) = -0.16, p = 0.653$

3.3 Main results

Regardless of the experimental and control groups, the composite score for the perception of immigrant threat was negatively correlated with universalism ($r = -0.174$, $p = 0.004$) and benevolence ($r = -0.127$, $p = 0.036$); but positively correlated with power ($r = 0.143$, $p = 0.018$) and achievement ($r = 0.135$, $p = 0.025$). These results support past research on the correlation between human values and attitudes toward immigration.

One-way ANOVAs among the value groups (achievement, benevolence, power, and universalism), along with planned contrasts revealed no statistically significant differences among any of the value groups, across the composite scale and subscales (realistic and symbolic threat). For mean value comparisons and standard deviations, see Table 2.

Hypothesis 1 It was anticipated that participants who were primed with self-transcendence values, specifically benevolence and universalism, would be less inclined to view immigrants as potential threats compared to participants who were primed with self-enhancement values such as power and achievement. ANOVA with the planned contrast between the self-transcendence and self-enhancement groups revealed there was no statistically significant differences for the composite score of threat, $t(250) = 1.082$, $p = 0.280$, or for each subscale of threat: symbolic, $t(250) = 1.434$, $p = 0.153$; and realistic, $t(250) = 0.447$, $p = 0.656$.

Hypothesis 2 Participants primed with the universalism value were expected to perceive immigrants as less of a threat compared to those primed with the benevolence value. Overall, the planned contrast between universalism and benevolence revealed no statistically significant difference for the composite score of threat, $t(250) = 0.612$, $p = 0.541$ and for both subscales of threat: symbolic, $t(250) = 0.816$, $p = 0.415$; and realistic, $t(250) = 0.447$, $p = 0.656$.

Hypothesis 3 It was anticipated that participants who were primed with the power value would exhibit a higher tendency to view immigrants as threats compared to those who were primed with the achievement value. The planned contrast between the two values revealed no statistically significant difference for the composite score of threat, $t(250) = 1.333$, $p = 0.184$ and for both subscales of threat: symbolic, $t(250) = 1.073$, $p = 0.285$; and realistic, $t(250) = 1.290$, $p = 0.198$.

Hypothesis 4 It was hypothesized that the participants who were primed with the power value were more likely to perceive immigrants as threats compared to those who were primed with the universalism value. The planned contrast between power and universalism revealed no statistically significant difference for the composite score of threat, $t(250) = 0.612$, $p = 0.541$; and for both subscales of threat: symbolic, $t(250) = 0.816$, $p = 0.415$; and realistic, $t(250) = -0.003$, $p = 0.997$.

4 Discussion

The aim of this study was to investigate the influence of various human values (e.g., benevolence, universalism, power, and achievement) on individuals' perceptions of immigrants as threats in the United States. Earlier studies proposed that individuals with higher self-transcendence values positively influenced perceptions toward immigrants, while those with self-enhancement values had a more negative impact [17, 18, 20]. Additionally, research indicated that individuals scoring higher in universalism and benevolence values would be more concerned with the overall welfare of society, and consequently, would be less likely to express prejudice. Those who score high in power and achievement values tend to show positive correlations with prejudice. Moreover, Grigoropoulou's [15] study presented evidence of variations in values within the same domain (such as benevolence and universalism). Given that previous studies were correlational, we

Table 2 Composite threat, realistic threat, and symbolic threat mean value and (standard deviation) comparisons	Threat (composite)	Realistic threat	Symbolic threat
Universalism	3.22 (0.76)	2.90 (0.95)	3.53 (0.77)
Benevolence	3.12 (0.87)	2.82 (1.05)	3.42 (0.85)
Achievement	2.95 (0.72)	2.67 (0.93)	3.24 (0.67)
Power	3.15 (0.71)	2.91 (0.90)	3.40 (0.78)
Control	3.15 (0.75)	3.02 (0.79)	3.29 (0.83)

intended to examine the causal influence using priming as an experimental design. We expected that priming individuals with values connected to benevolence, universalism, power, or achievement could differentially shape their perceptions of immigrants. However, the results showed no statistically significant differences among the value priming on the composite scale and subscales (realistic and symbolic threat). Thus, the current experiment did not demonstrate a causal link.

Consistent with the main findings, there were no statistically significant differences observed between each priming condition and control condition in the manipulation check. The lack of significant results in this study could be attributed to the method employed in priming participants for a specific value. The manipulation check, conducted using the Short Schwartz's Value Survey [27], indicated no significant variations between the value groups and the control group. This implies that the Scrambled Sentences task did not effectively prime participants for the particular value group they were randomly assigned to. While previous studies have demonstrated the ability of the Scrambled Sentences Task to induce saliency [24, 25], this study failed to achieve the same result. A similar outcome was found in the study conducted by [26], where values were not successfully activated through the priming method, although significant correlations between values and behavior were identified.

The ineffectiveness of the Scrambled Sentences Task in priming participants' values might be related to the complex nature of values as an intersection between traits and states. Values, as enduring beliefs, often function as traits: they are stable over time and resistant to change. However, they can also be contextually activated and expressed in a state-like manner, depending on the situation [30, 31]. For example, Maio et al. [32] demonstrated that priming can affect values and value-consistent behaviors, suggesting that even stable traits can be activated and potentially altered through motivational relations. Recently, Russo et al. [33] conducted a systematic review and found that it is possible to alter personal values through specific tasks in experimental settings, as informed by Schwartz's theory of basic human values. These suggest that while values have a certain stability, they can be changed and manipulated under experimental conditions. Furthermore, the idea that values are unchangeable is challenged by findings that values are cognitively similar to knowledge units that can be altered at any stage of life [34]. Therefore, the Scrambled Sentences Task might be ineffective as a method for priming human values. Future research should explore alternative techniques for value priming.

We found differences in threat scores among racial and ethnic groups, with individuals identifying as White being more likely to perceive immigrants as threats compared to Blacks and Hispanics. This finding was supported by a previous study done by Murray and Marx [33] on perceptions and attitudes toward immigrants and refugees in the United States. Their research revealed that White participants had higher scores of realistic threats toward immigrants compared to non-White participants. Recently, there has been a shift in focus among researchers toward the threat perceived by racial and ethnic minority populations in the U.S. In a study by Zou and Cheryan [32], the concept of foreign cultural threat, defined as a threat to American culture or way of life, was explored in predominantly White neighborhoods experiencing an increase in minority populations. The findings demonstrated that White individuals do perceive a foreign cultural threat within these neighborhoods, surpassing both realistic and symbolic threats when expressing their concerns. The study also revealed that White individuals perceived a greater foreign cultural threat toward Arab Americans, Latino Americans, and Asian Americans compared to Black Americans, which could be attributed to stereotypes that these groups are more foreign or unfamiliar [32]. Similarly, Chirco and Buchanan [34] examined the influence of skin tone and color on immigration-related practices in the U.S. Their findings indicated that individuals with brown skin were more likely to be perceived as undocumented immigrants compared to those with white or black skin tones. Furthermore, this perception was found to predict higher levels of support for stricter immigration policies targeted toward groups with brown skin. These studies shed light on the impact of ethnic backgrounds on immigration perceptions and highlight the variations that exist based on these differences.

4.1 Limitations

This study has several limitations. Specifically, the majority of our participants were female, which does not accurately reflect the diversity of the nation. According to Henrich, Heine, and Norenzayan [35], American college students tend to be more WEIRD, which could have influenced their perceptions toward immigrants in our study. It would be ideal to replicate the study using a more representative sample [36] and to re-examine the null results [37]. Due to a technical error in the Qualtrics platform, approximately 20% of the participants did not receive the demographics questionnaire. Limited time constraints prevented additional data collection, and as a result, the study may be limited by incomplete data reported by participants. Therefore, although the study observed differences in threat scores between ethnicities, the results may not fully align with the complete demographic data. In addition, the manipulation checks revealed shortcomings in our value priming task. We suggest future studies include robust pilot testing to refine experimental techniques and

enhance study outcomes. Furthermore, the current study did not investigate different types of immigration status, which could significantly impact perceptions toward immigrants. Previous research has demonstrated varying attitudes toward documented and undocumented immigrants [32]. Given that immigration status was not manipulated, it is possible that perceptions toward immigrants may have skewed toward a more positive outlook. This can be attributed to considering both realistic and symbolic threats, as well as the composite threat score. A potential follow-up study could explore perceptions toward immigration by considering the various types of status held by individuals upon entering the U.S.

5 Conclusion

The current investigation aimed to compare human values (benevolence, universalism, power, and achievement) in relation to individual perceptions of immigrants in the U.S. Although previous research has extensively used Schwartz Value Theory to predict actions, perspectives, and behaviors, its causal influence has been limited. In the study, we investigated the impact of each value and domain on the attitude toward immigrants using priming. Overall, the findings from the study suggest that there are no statistically significant variations between different value groups in terms of perceiving attitudes toward immigrants in an experimental design. While we found significant correlations between perceived threat and human values, it's important to note that these findings do not establish a causal relationship. It is important to acknowledge that the lack of significant causal effects might be attributed to the utilization of the priming task as a means to evoke value saliency in this particular study. A significant distinction was observed among races and ethnicities, with individuals identifying as White being more likely to perceive immigrants as threats compared to other racial backgrounds. This result was supported in earlier research, indicating differences in attitudes toward immigrants based on race and ethnicity in the U.S. To better understand the dimensions of self-transcendence and self-enhancement, as well as the impact of ethnicity on perceptions, future studies should consider exploring racial and ethnic differences from a value-based perspective. Despite the lack of differences observed in this study between the self-transcendence and self-enhancement dimensions, further research should aim to dissect the underlying reasons for the fluctuations in perceptions toward immigration. In conclusion, this study highlights the complex relationship between human values, perceptions of immigrants, indicating the need for various experimental designs to explore strategies to counter negative sentiments toward immigration.

Data availability The data presented in this study are available on request from the corresponding author. The data was based on the first author's unpublished master thesis that can be found here. https://scholarship.shu.edu/dissertations/3024/.

Code availability Not applicable.

Declarations

Ethics approval and consent to participate This study was approved by the Institutional Review Board at Seton Hall University (#2022301). All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional review committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Consent for publication Informed consent was obtained from all individual participants included in the study.

Competing interests The authors declare no competing interests.

References

1. Yakushko O, Watson M, Thompson S. Stress and coping in the lives of recent immigrants and refugees: considerations for counseling. Int J Adv Counselling. 2008;30:167–78. https://doi.org/10.1007/s10447-008-9054-0.
2. Cowan G, Martinez L, Mendiola S. Predictors of attitudes toward illegal Latino immigrants. Hisp J Behav Sci. 1997;19:403–15. https://doi.org/10.1177/07399863970194001.
3. Schwartz SH. Are there universal aspects in the structure and contents of human values? J Soc Issues. 1994;50:19–45. https://doi.org/10.1111/j.1540-4560.1994.tb01196.x.
4. Weston A. For a meta-ethics as good as our practice. New Dir Adult Contin Educ. 2009;2009:7–18. https://doi.org/10.1002/ace.339.
5. Bardi A, Goodwin R. The dual route to value change: individual processes and cultural moderators. J Cross Cult Psychol. 2011;42:271–87. https://doi.org/10.1177/0022022110396916.
6. Schwartz SH. Universalism values and the inclusiveness of our moral universe. J Cross Cult Psychol. 2007;38:711–28. https://doi.org/10.1177/0022022107308992.
7. Schwartz SH. An overview of the Schwartz theory of basic values. Online Readings Psychol Cult. 2012;2:11. https://doi.org/10.9707/2307-0919.1116.
8. Tittler MV, Lannin DG, Han S, Wolf LJ. Why Personal values matter: values, colorblindness, and social justice action orientation. Curr Psychol. 2022;41:5075–87. https://doi.org/10.1007/s12144-020-01006-6.
9. Long Y, Zhu S, Quan F, Yang Y, Zheng Y. The impact of ethnic affirmation and belonging on other-group orientation: the mediating role of personality traits and values in different ethnic groups. Personality Individ Differ. 2020;152: 109574. https://doi.org/10.1016/j.paid.2019.109574.
10. Bilsky W, Janik M, Schwartz SH. The structural organization of human values-evidence from three rounds of the European Social Survey (ESS). J Cross Cult Psychol. 2011;42:759–76. https://doi.org/10.1177/0022022110362757.
11. Steinmetz H, Schmidt P, Tina-Booh A, Wieczorek S, Schwartz SH. Testing measurement invariance using multigroup CFA: differences between educational groups in human values measurement. Qual Quant. 2009;43:599–616. https://doi.org/10.1007/s11135-007-9143-x.
12. Jia F, Soucie K, Alisat S, Curtin D, Pratt M. Are environmental issues moral issues? Moral identity in relation to protecting the natural world. J Environ Psychol. 2017;52:104–13. https://doi.org/10.1016/j.jenvp.2017.06.004.
13. Wojcieszak M, Garrett RK. Social identity, selective exposure, and affective polarization: how priming national identity shapes attitudes toward immigrants via news selection. Hum Commun Res. 2018;44:247–73. https://doi.org/10.1093/hcr/hqx010.
14. Pfeifer JH, Ruble DN, Bachman MA, Alvarez JM, Cameron JA, Fuligni AJ. Social identities and intergroup bias in immigrant and nonimmigrant children. Dev Psychol. 2007;43:496–507. https://doi.org/10.1037/0012-1649.43.2.496.
15. Grigoropoulou N. The, "Malevolent" benevolence: what happens to perceived immigrant threat when value priorities collide? Ethn Racial Stud. 2021;44:126–48. https://doi.org/10.1080/01419870.2021.1877763.
16. Davidov E, Meuleman B. Explaining attitudes towards immigration policies in European countries: the role of human values. J Ethn Migr Stud. 2012;38:757–75. https://doi.org/10.1080/1369183X.2012.667985.
17. Wolf LJ, Weinstein N, Maio GR. Anti-immigrant prejudice: understanding the roles of (perceived) values and value dissimilarity. J Pers Soc Psychol. 2019;117:925–53. https://doi.org/10.1037/pspi0000177.
18. Saroglou V, Lamkaddem B, Van Pachterbeke M, Buxant C. Host society's dislike of the Islamic veil: the role of subtle prejudice, values, and religion. Int J Intercult Relat. 2009;33:419–28. https://doi.org/10.1016/j.ijintrel.2009.02.005.
19. Souchon N, Maio GR, Hanel PHP, Bardin B. Does spontaneous favorability to power (vs. universalism) values predict spontaneous prejudice and discrimination? J Personality. 2017;85:658–74. https://doi.org/10.1111/jopy.12269.
20. Feather NT, McKee IR. Values and prejudice: predictors of attitudes towards Australian aborigines. Aust J Psychol. 2008;60:80–90. https://doi.org/10.1080/00049530701449513.
21. Albada K, Hansen N, Otten S. Polarization in attitudes towards refugees and migrants in the Netherlands. Euro J Social Psych. 2021;51:627–43. https://doi.org/10.1002/ejsp.2766.
22. Bargh JA, Chartrand TL. The mind in the middle: a practical guide to priming and automaticity research. In: Reis HT, Judd CM, editors. Handbook of research methods in social and personality psychology. Cambridge: Cambridge University Press; 2014. p. 311–44.
23. Curtin D, Jia F. Cooperation and competition impact environmental action: an experimental study in social dilemmas. Sustainability. 2020;12:1249. https://doi.org/10.3390/su12031249.
24. Maio GR, Hahn U, Frost J-M, Cheung W-Y. Applying the value of equality unequally: effects of value instantiations that vary in typicality. J Pers Soc Psychol. 2009;97:598–614. https://doi.org/10.1037/a0016683.
25. Bargh JA, Gollwitzer PM, Lee-Chai A, Barndollar K, Trötschel R. The automated will: nonconscious activation and pursuit of behavioral goals. J Pers Soc Psychol. 2001;81:1014–27. https://doi.org/10.1037/0022-3514.81.6.1014.
26. Fischer R, Karl JA. Two pre-registered priming studies to unpackage value and behavior correlations. PsyArXiv. 2020.
27. Lindeman M, Verkasalo M. Measuring values with the short Schwartz's value survey. J Pers Assess. 2005;85:170–8. https://doi.org/10.1207/s15327752jpa8502_09.
28. Gamez-Djokic M, Waytz A. Concerns about automation and negative sentiment toward immigration. Psychol Sci. 2020;31:987–1000. https://doi.org/10.1177/0956797620929977.
29. Krettenauer T, Murua LA, Jia F. Age-related differences in moral identity across adulthood. Dev Psychol. 2016;52:972–84. https://doi.org/10.1037/dev0000127.
30. Parks-Leduc L, Feldman G, Bardi A. Personality traits and personal values: a meta-analysis. Pers Soc Psychol Rev. 2015;19:3–29. https://doi.org/10.1177/1088868314538548.

31. Bilsky W, Schwartz SH. Values and personality. Eur J Pers. 1994;8:163–81. https://doi.org/10.1002/per.2410080303.
32. Maio GR, Pakizeh A, Cheung W-Y, Rees KJ. Changing, priming, and acting on values: effects via motivational relations in a circular model. J Pers Soc Psychol. 2009;97:699–715. https://doi.org/10.1037/a0016420.
33. Murray KE, Marx DM. Attitudes toward unauthorized immigrants, authorized immigrants, and refugees. Cultur Divers Ethnic Minor Psychol. 2013;19:332–41. https://doi.org/10.1037/a0030812.
34. Chirco P, Buchanan TM. The (Un)Making of a citizen: the role of skin tone in perceived immigrant status and support for hostile immigration policy. Transl Issues Psychol Sci. 2021;7:378–91. https://doi.org/10.1037/tps0000283.
35. Henrich J, Heine SJ, Norenzayan A. Most people are not WEIRD. Nature. 2010;466:29–29. https://doi.org/10.1038/466029a.
36. Delios A, Clemente EG, Wu T, Tan H, Wang Y, Gordon M, Viganola D, Chen Z, Dreber A, Johannesson M, et al. Examining the generalizability of research findings from archival data. Proc Natl Acad Sci USA. 2022;119: e2120377119. https://doi.org/10.1073/pnas.2120377119.
37. Hertz U, Jia F, Francis KB. Moral judgement and decision-making: theoretical predictions and null results. Sci Rep. 2023;13:7688. https://doi.org/10.1038/s41598-023-34899-x.