The relationship between intergroup emotional similarity and well-being among immigrants:
The role of meta-prejudice and self-categorization

Doctoral Thesis

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Table of contents

Abstract

Emotional similarity - defined as an overlap in emotional experience with other people – fosters a better understanding of others' emotions and an accurate perception of others' intentions and motivations. As such, it might improve relations with others, which is highly relevant for one's well-being. We examined this idea in the context of intergroup relations and migration. Specifically, we tested whether the higher emotional similarity of immigrants to the majority group is linked to higher psychological and relational well-being among immigrants via decreased meta-prejudice (i.e., individuals' perception of what other groups feel about their group) and increased self-categorization (i.e., a process in which people categorize themselves into various social groups or categories) of immigrants. To this end, we conducted three correlational (N_{Study1} = 141; N_{Study2} = 150; N_{Study3} = 161) and three experimental studies (N_{Study4} = 181; N_{Study5} = 198; N_{Study6} = 95), focusing on the relationship between Ukrainian immigrants and the Polish majority. In line with our expectations, higher emotional similarity was related to both higher relational and greater psychological well-being among Ukrainian immigrants in correlational studies. Nevertheless, we found no support for our hypotheses in experimental studies. Moreover, across all six studies, we did not find evidence to support the mediating role of meta-prejudice and self-categorization in these links. The obtained results provide a starting point for a discussion on the concept of emotional similarity, its measurement, and any mechanisms that may underlie the link between emotional similarity and well-being.

Keywords: emotional similarity, meta-prejudice, intergroup relations, well-being, self-categorization

Streszczenie

Podobieństwo emocjonalne, definiowane jako odczuwanie podobnych emocji do innych osób, prowadzi do lepszego rozumienia emocji innych, jak również do rozumienia intencji i motywacji innych. Odczuwanie podobnych emocji może polepszyć relacje z innymi ludźmi, co jest istotne przy utrzymaniu wysokiego poziomu dobrostanu (*well-being*). Sprawdziliśmy tę zależność w kontekście relacji międzygrupowych i migracji. Dokładniej, sprawdziliśmy, czy wyższe podobieństwo emocjonalne imigrantów do grupy większościowej jest związane z wyższym poziomem dobrostanu psychologicznego i relacyjnego wśród imigrantów przez zmniejszone odczuwanie uprzedzeń (*meta-prejudice*) ze strony grupy większościowej wśród imigrantów oraz zwiększone kategoryzowanie siebie (*self-categorization*) jako części grupy większościowej wśród imigrantów. W tym celu przeprowadziliśmy trzy badania korelacyjne ($N_{Study1} = 141$; $N_{Study2} = 150$; $N_{Study3} = 161$) oraz trzy badania eksperymentalne ($N_{Study4} = 181$; $N_{Study5} = 198$; $N_{Study6} = 95$). Skupiliśmy się na relacji między imigrantami z Ukrainy i Polakami jako grupą większościową. Zgodnie z naszymi przewidywaniami, wyższe podobieństwo emocjonalne było związane z wyższym dobrostanem psychologicznym i relacyjnym wśród imigrantów z Ukrainy w badaniach korelacyjnych, ale nie uzyskaliśmy takich wyników w badaniach eksperymentalnych. Ponadto, w żadnym badaniu nie udało nam się potwierdzić występowania w tej relacji mediacyjnej roli odczuwanych uprzedzeń oraz kategoryzowania siebie. Otrzymane wyniki otwierają ważną dyskusję na temat konceptu podobieństwa emocjonalnego, sposobu mierzenia go oraz mechanizmów, które mogą wyjaśniać relacje pomiędzy podobieństwem emocjonalnym a dobrostanem.

Introduction

Migration is understood as the relocation of a person from one country to another for a variety of reasons, many of which include economic, social, or political factors (Urzúa et al., 2020). According to the data from Migration Data Portal (International Organization for Migration, 2020), the number of migrants in 2017 totaled 257.7 million, rising to 280.6 million in 2020; this constitutes approximately 3.6% of the global population (International Organization for Migration, 2020). Looking ahead, it is predicted that, by the year 2050, there will be more than 343 million migrants (Chamie, 2020). This global migration trend, which continues to grow every year, has been particularly noticeable in European countries. In 2020 alone, 3.3 million people immigrated to at least one European country (Eurostat. Statistics Explained, 2022). For instance, in Poland in 2017, the number of immigrants with temporary residence stood at 136,620, while by 2020, this figure had risen to 258,517 (migracje.gov.pl, 2021). Given this massive increase, migration has been seen as one of the most significant challenges for the European Union in recent and coming years (European Union, 2022). As a result, the necessity for research in this area is increasingly urgent, especially as many aspects of the phenomenon remain unexplored.

Moving away from one's own country and adjusting to a new environment and societal conditions can be a daunting undertaking for individuals. Immigrants are forced to tackle many difficulties associated with their relocation, such as addressing the need to belong to a social group, or coping with the distress caused by experiences of discrimination (Noh & Kaspar, 2003). According to the World Health Organization report from 2022, every eighth person in the world is a migrant, and their experience of migration determines their well-being to a great extent (World Health Organization, 2022). Despite the upward trend of migration and the increasing diversity of societies (Vertovec, 2007), social exclusion continues to be a pervasive issue. Several studies have shown that these difficulties can have a negative impact on the well-

being of immigrants and lead to a deterioration in their physical and mental health (e.g., Cavazos-Rehg et al., 2007).

Yet studies focusing on strategies that may improve immigrants' well-being are still few and far between. Indeed, the International Organization for Migration (2020) highlights that most of the existing literature deals with (a) the situation of majority groups, their perceptions and approaches to immigrants, (b) specific health conditions (e.g., HIV), or (c) specific migrant groups (e.g., child migrants). Any existing research available on the topic of migration and well-being is, by comparison, relatively narrow. Furthermore, in a recent report, Ban Ki-moon, the Secretary-General of the United Nations, emphasized that the promotion of well-being is a crucial factor in achieving peace and prosperity for all people by 2030 (World Health Organization, 2022). Undoubtedly, well-being, defined as one's overall quality of life (Maggino, 2015), is vital for proper functioning in society, as well as for establishing and maintaining relations with other people (e.g., Diener et al., 2008). As the need for policies and interventions to improve the well-being of immigrants becomes increasingly urgent, there is a growing demand for evidence-based practices informed by scientific research.

It is well established that specific emotional states play a crucial and influential role in shaping intergroup attitudes and behaviors (e.g., DeSteno et al., 2004), with some research showing that immigrants who experience emotions more similar to those of the majority group (a phenomenon known as *emotional similarity*) report higher well-being (e.g., De Leersnyder et al., 2014). However, research on the link between emotional similarity and well-being has been scarce (e.g., Cho et al., 2018; De Leersnyder et al., 2014). Furthermore, very few of these studies have explored various aspects of well-being, specifically *psychological* well-being – the positive functioning of the person and a state of balance (Dodge et al., 2012) and *relational* well-being – having positive relationships with appropriate support (De Leersnyder et al., 2014; 2015; World Health Organization, 2022); both of these aspects are particularly pertinent for

ensuring a good and well-balanced life for immigrants in the host society. Moreover, the current body of research on emotional similarity and well-being has been restricted to correlational designs, which typically involve verifying emotional similarity using profile correlational methods (De Leersnyder et al., 2014) and performed on a mere handful of groups, some of which were relatively small in size (e.g., Cho et al., 2018; De Leersnyder et al., 2014). Therefore, there is a need for experimental studies on the link between the emotional similarity of immigrants with the host society, and various aspects of immigrants' well-being.

Finally, different processes may account for the link between emotional similarity and well-being. Yet, previous research has not examined the potential underlying mechanisms of this link. For example, when immigrants experience similar emotions to their host group members, they may feel better attuned to people from the host country, think more positively of them, and, as a result, build stronger relationships (McDonald et al., 2017). This, in turn, can eliminate immigrants' negative perceptions of how host group members perceive them (i.e., *meta-prejudice*), which is a significant predictor of well-being (Schmitt et al., 2002). In addition, the emotional similarity of immigrants with host members may lead to a stronger definition of immigrants as being part of the host group (i.e., *self-categorization;* e.g., Livingstone et al., 2011)*,* which has also been recognized as an important factor for well-being (Walter et al., 2015). Hence, the link between emotional similarity and well-being may be mediated by both meta-prejudice and self-categorization mechanisms.

In summary, in the present research, across three correlational and three experimental studies, we examine the link between emotional similarity and both the psychological and relational well-being of immigrants, and investigate the mediating role of meta-prejudice and self-categorization in these links. We conducted the research in the years spanning from 2019 to 2023, in the context of Polish society, by focusing on its largest immigrant group – Ukrainians.

The Well-Being of Immigrants

Throughout the migration process, apart from the myriad new opportunities which may accompany it, many challenges (e.g., adaptation to the new social norms) are encountered. While some immigrants adapt rapidly to a new society, for many this transition can be quite challenging, and they experience difficulties on a daily basis (Berry, 2005). Immigrants may face discrimination and poor conditions (De Jong & Madamba, 2001), experience stigmatization (Pratto & Stewart, 2012), or receive mistreatment, especially from xenophobic groups (Crush & Ramachandran, 2010). Moreover, the act of migration itself may lead to negative consequences, including psychological distress (Rogler, 1994) and overall mental and physical health problems (Urzúa et al., 2018). As a consequence, the deterioration of mental and physical health may result in increased levels of stress, decreased work performance, heightened anxiety, and even depression (Daniels & Harris, 2000; Miller & Chandler, 2002; Oh et al., 2002). Moreover, immigrants experiencing lower levels of well-being may exhibit decreased work performance and motivation, which may lead to economic problems, such as unemployment and marginalization (Urzúa et al., 2018). Hence, the relevance of high level of well-being among immigrants extends beyond the minority groups to include the receiving society as well, as stated by the International Organization for Migration (2020).

In the literature, well-being is recognized as a complex multi-dimensional construct with various domains. The World Health Organization has described it as the quality of life (WHOQOL-group, 1995; Skevington et al., 2004), conceptualized as "individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns." Quality of life includes four domains: physical health, psychological well-being, social relationships, and environment. The physical health domain encompasses facets connected with daily activities, energy levels, mobility, rest, and sleep, while the psychological domain is connected with body image and

appearance, negative and positive feelings, self-esteem, spirituality/religion/personal beliefs, thinking, learning, memory, and concentration. The domain of social relationships pertains to personal relationships, social support, and sexual activity. The environment domain involves financial resources, freedom, safety, health and social care, and the home environment as well as opportunities for acquiring new information, skills and recreation; naturally, it also includes the physical environment (e.g., pollution), and transport (WHOQOL-group, 1995; Skevington et al., 2004). While all aspects of well-being are important, it is critical for an individual to maintain a good quality of life during the migration process (Maggino, 2015). To put it another way, in the words of Dodge and colleagues (2012), "the balance point between an individual's resource pool, including psychological and social resources and the challenges faced" is vital. Thus, psychological and relational well-being may prove particularly relevant for the integration of immigrants into a new society.

Psychological well-being, also known as the positive functioning of the person and a state of balance (Dodge et al., 2012), may facilitate the adaptation of immigrants to a new society (International Organization for Migration, 2020). Similarly, relational well-being, which entails the establishment of good social relationships by immigrants in a new society, is critical for positive everyday functioning (Bobowik et al., 2015; De Leersnyder et al., 2014; Urzúa et al., 2017). Recent research has demonstrated that both psychological and relational well-being can significantly improve immigrants' functioning (Urzúa et al., 2017) as both may positively impact their behaviors, attitudes, and performance (e.g., Daniels & Harris, 2000; Salami, 2010). Specifically, psychological and relational well-being are essential for forging and sustaining social bonds, and maintaining positive mental functioning and outlook (e.g., Ryff, 1989; World Health Organization, 2022). In addition, strong social ties with members of the host community can aid immigrants in feeling a sense of belonging and reduce the likelihood of experiencing feelings of isolation and loneliness. This, in turn, can facilitate

the process of cultural adjustment and ease the transition into a new society (e.g., Repke & Benet-Martínez, 2018; Urzúa et al., 2017). Finally, immigrants with strong social ties may have a higher chance of finding employment and achieving financial stability.

Given the above, while it is evident that psychological and relational well-being play a crucial role in the lives of immigrants, most research focusing on immigrant well-being has investigated the negative outcomes of migration. For example, an association has been observed between migration and increased depressive mood (Fenta et al., 2004; Finch et al., 2000; Kiang et al., 2010; Walsemann et al., 2009), poor mental and physical health (Williams et al., 2008), distress (Huynh & Fuligni, 2010; Moradi & Risco, 2006) and emotional problems (Beiser et al., 2009). By way of contrast, only a handful of studies have investigated factors that may enhance immigrants' mental health (e.g., Delle Fave & Bassi, 2009; Gee et al., 2006); and only in recent years has there been an increased interest in specific aspects of well-being, such as psychological well-being (e.g., Henríquez et al., 2021; Kashima & Abu-Rayya, 2014; Kim et al., 2014, Tartakovsky & Walsh, 2020; Urzúa et al., 2017, 2018, 2020; Wassermann & Hoppe, 2019) and relational well-being (e.g., Bobowik et al., 2015; De Leersnyder et al., 2014; Urzúa et al., 2017).

The majority of studies focusing on improved relational and psychological well-being have demonstrated the links between the well-being of immigrants and various factors, for instance, gender, age, educational level, duration of residency, and marital status (Urzúa et al., 2020). Yet, very few studies have considered the impact of intergroup factors, particularly perceptions that immigrants hold about the host society and their emotional experiences. For example, several studies have shown the positive impact of certain factors on the well-being of immigrants such as the level of integration and a feeling of belonging in the community (e.g., Basabe et al., 2004; Ríos Rodríguez & Moreno Jiménez, 2010; Yañez & Cárdenas, 2010) and taking part in host society events (Nguyen et al., 1999; Ryder et al., 2000; Sanchez & Fernandez,

1993). Moreover, other research has demonstrated that positive social interactions with majority group members (Te Lindert et al., 2021; Urzúa et al., 2020), as well as the perception of social support from the host society (Hovey & Magana, 2000; Shen & Takeuchi, 2001l; Tanaka et al., 1997), are also associated with higher well-being among immigrants. Finally, the relevance of intergroup factors in the well-being of immigrants was further underscored by the World Health Organization (2022), which highlighted the importance of strong social connections with the host country society in promoting migrants' well-being. (Hall et al., 2019).

One of the factors that may play a significant role in the well-being of immigrants is the perception of similarity between immigrants and the host society (e.g., Brown & Lopez, 2001; Feng & Baker, 1994; López-Rodríguez et al., 2017; Wolf et al., 2021). While most previous research on this topic has examined similarities at the individual level such as similarity with a friend or romantic partner (Bonney, 1946; Byrne & Blaylock, 1963; Newcomb, 1956; Precker, 1952; Richardson, 1939, 1940; Schooley, 1936) in terms of, for example, attitudes and values (McDonald et al., 2017), few studies have focused on similarity in terms of intergroup emotions and the well-being of minority group members (Cho et al., 2018; De Leersnyder et al., 2014, 2015). This seems to be a neglected area of research given the importance of specific emotional states in shaping intergroup relations (e.g., DeSteno et al., 2004) and the well-being of immigrants (e.g., Choi & Chentsova-Dutton, 2017). Thus, the present research seeks to investigate the relationship between the emotional similarity of immigrants with the majority group members, and two domains of well-being: psychological and relational well-being.

Emotional Similarity

Emotions are an integral component of human experience, influencing cognitive, physiological, and behavioral responses to specific stimuli (Schwarz & Clore, 1996). From the moment of birth, infants express emotions in response to stimuli without conscious awareness

and devoid of any deep analysis of their plight (Izard, 1991). The capacity to comprehend and express emotions is developed throughout a person's lifetime, shaped by new experiences, and intimately connected with their concerns and goals (e.g., Lazurus, 1991). As these capacities develop, the effective communication of emotions not only conveys information about an individual's current emotional state, but also provides insights into the typical behavioral patterns they exhibit that aid in their adaptation to the surrounding environment (Oatley & Jenkins, 2003). Thus, emotions play a pivotal role in building relationships with others, as they facilitate mutual understanding (Łosiak, 2007). Early research on emotions predominantly examined intrapersonal aspects, that is within the person; however, emotions are also dependent on interpersonal interactions and the social environment (Campos et al., 1989; Lazarus, 1991; Mesquita, 2010), highlighting the social nature of emotional responses. (Rimé et al., 1998; Parkinson, 1996). In the social context, emotional responses are influenced by the others' emotions, engendering similar affective experiences (Manstead & Fischer, 2001). Moreover, the social functioning of societies is closely related to cultural norms, which may lead to different emotional experiences in different cultures (Markus & Kitayama, 1991; Mesquita & Frijda, 1992). That is to say, one of the conditions that may shape emotional experience is the surrounding culture since values and goals differ in importance across cultures, and the result of this is that certain emotions are rewarded differently (Schwartz, 1999). Hence, the culture milieu may influence both the experience and expression of certain emotions (De Leersnyder, 2017). For instance, in individualistic cultures where autonomy is emphasized, people tend to experience emotions that align with individualism, such as pride or anger, more frequently than, for example, feelings of embarrassment or closeness; the latter type of emotions are felt more intensely in collective cultures where the emphasis is on interdependence (Boiger et al., 2013; Masuda et al., 2008; Mesquita, 2010). In other words, cultural norms influence the ways in which people experience and express emotions. (Eid & Diener, 2001; Kitayama et al., 2006;

Tsai et al., 2006). The implications are that, in the context of migration, if an individual grows up in one cultural context, all the associated norms with respect to emotions seem natural; however, upon migrating to another country, different emotional norms are seen to impact the way individuals interpret and communicate their emotional experiences. These differences in emotional experiences and the expression of these emotions may be important in the context of immigration.

Every migrant undergoes the acculturation process, which is broadly known as the adaptation to a new culture (Gordon, 1964) and through which, new attitudes, a new sense of cultural identity, and new behaviors and values may arise (Ryder et al., 2000). Previous studies have shown that there are a host of various factors related to the acculturation of immigrants in the host country such as time spent in the new country (Dow, 2011; Shafaei et al., 2016; Titzmann & Lee, 2022). One of the factors which plays a key role in this process is the feeling of similarity between immigrants and majority group members. This perception of intergroup similarity may exist for example in terms of similar values, norms, or attitudes (e.g., López-Rodríguez et al., 2017; Montoya et al., 2008; Turban et al., 2002). Studies have shown that perceiving similarity with the majority group is positively related to intergroup attitudes, relationship duration with majority group members, and interpersonal attraction (e.g., Costa-Lopes et al., 2012). Conversely, some studies have found that intergroup similarity may lead to negative outcomes (e.g., Brown & Lopez, 2001; Jetten et al., 2001), potentially due to the threat posed to one's social identity, particularly when similarity concerns aspects of group identity such as values or norms. Therefore, in our research, we focus on similarity at an emotional level, which in comparison to other previously mentioned aspects, may be one that is less threatening to a person's social identity (McDonald et al., 2017).

Spending time with friends or partners, as well as interacting with members of different groups or cultures may lead to the experience and expression of similar emotions among those

individuals (De Leersnyder et al., 2011). This feeling of similar emotions with other individuals or the group and similar emotional responses in specific situations, which have the same emotional valence, happen in the same social context, and with equal social engagement has been defined as emotional similarity (Barsade, 2002; De Leersnyder et al., 2014; Fischer et al., 2003; Hatfield et al., 1994; Parkinson, 2011; Peters & Kashima, 2015) and has been described as "responding to other group members' emotions with similar emotions" (Goldenberg et al., 2020). In the literature, emotional similarity may be referred to using a collection of terms such as emotional convergence (Anderson et al., 2003; Gonzaga et al., 2007) or emotional fit (De Leersnyder et al., 2014, 2015; Livingstone et al., 2011). This phenomenon has been described among couples (Anderson et al., 2003; Gonzaga et al., 2007), groups (Barsade, 2002; Delvaux et al., 2015; George, 1990; Ilies et al., 2007; Tanghe et al., 2010; Totterdell, 2000) and different cultures (Consedine et al., 2014; De Leersnyder et al., 2015; De Leersnyder et al., 2014). Emotional similarity is characterized by converging frequencies and intensities of emotions, which may give rise to unique emotional patterns that define each group (de Leersnyder et al., 2011). For immigrants, emotional similarity is particularly relevant because their emotional patterns may differ from those of the host group(s).

The emotional adjustment of the newcomers to the host society is considered an important aspect of acculturation (Ryder et al., 2000). In other words, immigrants' emotional responses may change and adjust more towards the emotional norms of their new environments (Leersnyder et al., 2014; de Leersnyder et al., 2017; De Leersnyder et al., 2020). This 'emotional acculturation' occurs owing to the fact that emotions that align with the values and goals of the exact socio-cultural context may be rewarded, leading to these emotions being experienced more frequently (Kitayama et al., 2006; Mesquita et al., 2016; Tsai et al., 2006), and is also influenced by the quality of the interactions with majority group members (Jasini et

al., 2018; Jasini et al., 2019; López-Rodríguez et al., 2017). Accordingly, experiencing emotional similarity with the host society may be beneficial for the immigrants.

Emotional similarity has been extensively studied for the last two decades (e.g., Anderson et al., 2003; De Leersnyder et al., 2014; Jasini et al., 2023), yet most of the research focusing on the consequences of emotional similarity has been done in the context of interpersonal relations, for example, between couples (Anderson et al., 2003, Gonzaga et al., 2007; Sels et al., 2020; Verhofstadt et al., 2008). In general, greater emotional similarity with others has been found to promote a better understanding of their emotions and facilitate accurate perceptions of other people's intentions and motivations (Keltner & Kring, 1998). Moreover, emotional similarity has been found to foster interpersonal cohesion, attraction, mutual understanding (Hatfield et al., 1994; Kemper, 1991) and positively influence relationship satisfaction (Anderson et al., 2003; Fischer & Manstead, 2016; Keltner & Haidt, 1999). Scant research in the literature focuses on the consequences of emotional similarity at the group level (e.g., Cho et al., 2018; De Leersnyder et al., 2014, Jasini et al., 2023; Livingstone et al., 2011; McDonald et al., 2017). The studies that do exist demonstrate positive outcomes of emotional similarity, such as the reduction of dehumanization towards outgroup members and the promotion of conciliatory attitudes towards them (McDonald et al., 2017). In addition, emotional similarity enhances self-categorization with this group, increases the willingness to engage in collective action (Livingstone et al., 2011; Vandermeulen et al., 2022) and results in greater group identification (Delvaux et al., 2015). Nevertheless, research on intergroup perceptions, intergroup emotional similarity and the impact on people's well-being, is still scarce.

In the case of newcomers, increased emotional similarity with the majority may evoke positive feelings and relate to higher well-being. For example, similarity between an individual's emotional response and that of others from the same culture was associated with

higher levels of well-being among both Asian American and European Americans (Cho et al., 2018). Similarly, emotional similarity has been found to be associated with a higher level of relational well-being in three different cultural contexts – in the United States, Belgium, and Korea (De Leersnyder et al., 2014), and to the level of psychological well-being among European Americans, Koreans, and Belgians (De Leersnyder et al., 2015). However, it is important to note that these studies were correlational in nature, and no causal evidence has yet been established linking emotional similarity and well-being.

Moreover, previous studies concerning emotional similarity have addressed emotional similarity in two different ways. One approach has used a correlational procedure to examine emotional patterns, in which emotional similarity is determined by comparing each individual's pattern of emotions to the average emotional pattern of the group (e.g., De Leersnyder et al., 2014). The other approach has been to check emotional similarity in a specific situation using an experimental procedure – manipulating and measuring emotional similarity as a state in real-time (e.g., Livingstone et al., 2011; McDonald et al., 2017). To date, no study has implemented both methods of addressing emotional similarity when endeavoring to answer the same research questions. Finally, there is a lack of research examining the mechanisms that underlie the relationship between emotional similarity and well-being.

In the present research, we address these gaps and examine the relationship between emotional similarity and the well-being of immigrants, using both correlational and experimental design. Moreover, we investigate the possible mechanisms underlying this relationship: meta-prejudice and self-categorization.

The link between emotional similarity and well-being – explanatory mechanisms

The role of meta-prejudice

Meta-perception, which refers to a person's belief about how others view or think of them (Kenny & DePaulo, 1993), is formed based on several aspects, including observing other people's behaviors or projecting others' views (Frey & Tropp, 2006). It can be influenced by factors such as self-esteem, past experiences, social anxiety, social context, and cultural norms (Frey & Tropp, 2006; O'Brien et al., 2018; Shelton et al., 2006; Vorauer et al., 1998; Wout et al., 2010). Prior research on meta-perceptions has primarily focused on interpersonal relations (e.g., Albright & Malloy, 1999; for a review, see Grutterink & Meister, 2022) and it is only recently that there has been a growing interest in meta-perceptions in an intergroup context (e.g., Gordijn et al., 2008; Santuzzi, 2007; Wout et al., 2010). One of the highly relevant types of meta-perceptions for intergroup relations is one's perception or belief that members of some other group feel negatively about one's own group, so-called meta-prejudice (Frey & Tropp, 2006; Gordijn, 2002; Owuamalam et al., 2014; Plant & Devine, 2003; Putra, 2014; Putra & Wagner, 2017; Shelton & Richeson, 2005; Shelton et al., 2005; Stephan, 2014; Vorauer, 2006; Vorauer et al., 1998; Vorauer & Turpie, 2004).

Meta-prejudice is a key factor in shaping intergroup relations (Butz & Plant, 2006) and it can be manifested in various ways such as the perception of being outside the group (Major et al., 2002), of feeling undervalued by others (Pyszczynski et al., 1997), holding the expectation of being rejected by outgroup members (Barlow et al., 2009), and a fear of being perceived unfavorably (Shelton, 2003; Shelton & Richeson, 2005). Hence, meta-prejudice reduces trust towards outgroup members (Tropp et al., 2006) and leads to outgroup hostility (Moore-Berg et al., 2020). Moreover, meta-prejudice may impact not only the beliefs of the person about the outgroup but also the individuals who experience it. For example, the feeling of being treated unfairly or negatively based on group characteristics such as ethnicity or age

may lead to depression, anxiety, and stress (Branscombe et al., 1999; Jasinskaja-Lahti et al., 2006; Mesch et al., 2008; Schmitt & Branscombe, 2002; Schmitt et al., 2002; Schmitt et al., 2014), a deterioration in mental health (Pascoe & Smart Richman, 2009), and evoke depressed emotions (Kaiser et al., 2004). On a behavioral level, a person who believes that he/she is negatively perceived may, for instance, distance themselves from the outgroup (Allport, 1954/1979; Moore-Berg et al., 2020), limit their interactions with them, and even demonstrate aggressive behaviors towards outgroup members (Kteily & Bruneau, 2017; Kteily et al., 2016; Méndez et al., 2007; O'Brien et al., 2018). Moreover, even the mere expectation of being subject to prejudice from outgroup members leads to more negative experiences during interactions with them (Shelton et al., 2005) and a tendency to avoid them (e.g., Mendoza-Denton et al., 2002; Pinel, 1999). Given all these findings, it is not surprising that meta-prejudice is linked to lower well-being (Allport, 1954/1979; Hernández-Plaza et al., 2010; Pyszczynski et al., 1997; Ryff et al., 2003; Shelton, 2003; Shelton & Richeson, 2005, Schmitt & Branscombe, 2002; Tissera & Lydon, 2021) including both emotional well-being (Major et al., 2002, Schmitt et al., 2002) and psychological well-being (e.g., Schmitt & Branscombe, 2002; Schmitt et al., 2014; Urzúa et al., 2018).

In the literature, various strategies have been proposed to reduce meta-prejudice. These include increased self-awareness, understanding, and knowledge about the other group (Stathi et al., 2020), fostering open dialogue, improving communication, cultivating the feeling of empathy toward the outgroup and the feeling of being understood, and challenging negative thoughts (Livingstone et al., 2020; Lun et al., 2008; Reis et al., 2017). By implementing these strategies, the potential is there to diminish levels of meta-prejudice.

Furthermore, fostering positive relationships with outgroup members has been identified as another beneficial approach (Grutterink & Meister, 2022). It is worth noting that the majority of these strategies emphasize the crucial role of mutual understanding and

emotional closeness. This emphasis is rooted in the recognition that meta-perceptions are influenced by psychological processes that establish connections between individuals and a certain group. A pertinent example of this is the feeling of inclusion by other group members (Méndez et al., 2007), which has been found to be linked to emotional similarity (Delvaux et al., 2015), and has been demonstrated to potentially mitigate negative meta-perceptions (Tropp & Bianchi, 2006). Additionally, when individuals share similar emotional experiences, it fosters greater relationship cohesion (e.g., Acitelli et al., 2001) and enhances their ability to understand the emotions of others (Hatfield et al., 1994; Keltner & Kring, 1998; Kemper, 1991). Drawing on existing research, specifically the insights into the emotional underpinnings of meta-prejudice (Putra, 2014), it is reasonable to hypothesize that higher emotional similarity will correlate with reduced levels of meta-prejudice, which would be in turn associated with higher emotional and relational well-being.

The role of self-categorization

Self-categorization is the process by which people categorize themselves into various social groups or categories. This process entails internalizing and identifying with, for instance, the traits and principles associated with a specific social category (Schubert & Otten, 2002). Individuals engage in self-categorization, categorizing both themselves and others, based on shared traits including race, gender, age, religion, and nationality, and these categories play a significant role in shaping how individuals perceive themselves and others (Tajfel et al., 1971). Moreover, Self-categorization Theory posits that every person is both an individual and a group member, and what shifts one's self-perception between "I" and "we" is contingent on situational factors (Turner et al., 1987).

The process of self-categorization, defined as 'the subjective perception of the self in the intergroup situation' (Schubert & Otten, 2002), holds great importance for newcomers during the relocation process, as it addresses the innate human need for social belonging

(Baumeister & Leary, 1995). For example, a sense of community and social support can alleviate feelings of isolation in the new country, enhance coping mechanisms in the face of discrimination, foster the development of a positive identity, and contribute to greater life satisfaction (Hombrados-Mendieta et al., 2013). Additionally, a feeling of belonging (e.g., Basabe et al., 2004; Ríos Rodríguez & Moreno Jiménez, 2010; Yañez & Cárdenas, 2010) and increased self-categorization of an individual with an outgroup may improve well-being (Walter et al., 2015). This positive influence may extend to improvements in mental health, leading to lower levels of anxiety and depression, higher self-esteem (Verkuyten & Nekuee, 2001; Wu & Ou, 2023), as well as better means of coping with stress (Cassidy, 2001; Cobb, 2019); indeed, other studies have shown that shared social identity also positively impacts peoples' well-being (Haslam et al., 2009; Henríquez et al., 2021; Hughes et al., 2015; Jetten et al., 2015; Jetten et al., 2017; Karaś & Cieciuch, 2018; Sharma & Sharma, 2010; Unger, 2011). Overall, the existing literature suggests that self-categorization could be pivotal to the psychological and relational well-being of immigrants. Specifically, when immigrants identify with particular social groups, they are able to cultivate a sense of community and receive valuable support from others. This, in turn, helps them navigate and overcome the challenges associated with adjusting to a new cultural context. Individuals often engage in the practice of categorizing themselves and others based on emotional similarities, such as common emotional experiences or values. This process can engender the formation of communities, wherein individuals develop a sense of affiliation and connection with others who share similar emotions. Consequently, when perceiving emotional similarity, individuals tend to view others as belonging to their ingroup and may have more favorable attitudes and behaviors toward them. Conversely, when perceiving that others are going through emotional experiences divergent from their own, they are more inclined to see them as members of an outgroup.

Indeed, empirical evidence supports the association between emotional similarity and self-categorization (e.g., Livingstone et al., 2011; Mackie & Smith, 2015). For example, immigrants who share similar emotions with the majority expressed a heightened sense of group bonding (Spoor & Kelly, 2004; van der Schalk et al., 2011) and belongingness (Klep et al., 2011; Tanghe et al., 2010). Similarly, emotional similarity between groups and people's self-categorization with the outgroup have been found to be linked (Delvaux et al., 2015; Kessler & Hollbach, 2005; Livingstone et al., 2011; Tanghe et al., 2010; Totterdell et al., 1998; Totterdell, 2000). For example, a study conducted among Belgians revealed a positive, bidirectional link between group identification and emotional similarity between group members and the whole group (Delvaux et al., 2015). Similarly, emotional similarity between individual and ingroup members increased self-categorization among British people (Livingstone et al., 2011). Other research indicates that the shared affective experiences of group members foster unity (Sandelands & St. Clair, 1993) and lead to a sense of connectedness (Damasio, 1994). Finally, some studies showed that emotional synchrony during collective gatherings increases identity fusion within the group (Páez et al., 2015).

Overall, the classification of oneself and others based on shared characteristics, particularly emotional experiences and expressions, is recognized as a key component of both emotional similarity and self-categorization. Thus, it is plausible to anticipate that any perception of emotional similarity is linked to greater self-categorization with an outgroup, subsequently resulting in enhanced relational and psychological well-being.

The Present Research

In the present research, we examined 1) the link between emotional similarity between immigrants and their host group, and immigrant well-being and 2) two potential underlying

mechanisms of this link: meta-prejudice and self-categorization (see Figure 1). This research makes significant contributions by surpassing previous studies in four key aspects.

Firstly, while previous studies provided solely correlational evidence regarding the link between emotional similarity and well-being, we extend this investigation by employing both correlational and experimental designs. This approach allows for a more comprehensive understanding of the relationship.

Secondly, previous studies primarily focused on certain dimensions of well-being (e.g., collective self-esteem). In contrast, our study encompasses two aspects: psychological and relational well-being, both of which are highly relevant for immigrants' adaptation to the host society. We hypothesize that higher emotional similarity will correspond to higher psychological and relational well-being (H1).

Thirdly, the explanatory mechanisms that connect emotional similarity to immigrant well-being remain unexplored in the existing literature. We address this gap by examining meta-prejudice and self-categorization as potential mediators linking emotional similarity and well-being. Specifically, we expect that greater emotional similarity will be related to reduced meta-prejudice, stronger self-categorization with the host group, and subsequently higher psychological and relational well-being (H2).

Lastly, previous studies assessed emotional similarity in two ways: (a) by comparing an individual's emotional pattern with that of the group and (b) by manipulating emotional similarity in a specific situation as a form of a state. In our research, we adopt a comprehensive two-fold approach to emotional similarity, investigating it both as a state in a specific situation through experimental studies, and as more objective measure – using emotional patterns in correlational studies. By employing this two-fold approach, we aim to provide a more nuanced understanding of the role of emotional similarity in immigrant well-being.

Figure 1

The Link Between Emotional Similarity and Well-Being via Meta-Prejudice and

Self-Categorization
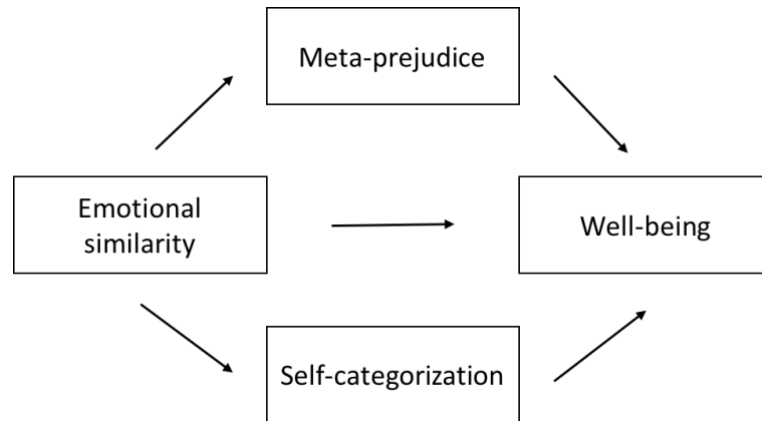
In order to examine our hypotheses, we carried out six studies focusing on immigrants from Ukraine in Poland and their relationship with the members of the host society (Poles), using a correlational design (Part I: Studies 1 – 3) and an experimental design (Part II: Studies 4 – 6). With the exception of Study 3, all of our studies were conducted prior to 2022, predating the outbreak of the Ukraine-Russia conflict and the subsequent increased influx of Ukrainians to Poland.

All of the materials, data, and codes associated with our research can be accessed on the Open Science Framework: (https://osf.io/3mrke/).

All analyses, unless otherwise indicated, were performed using the statistical software R 1.4.1106 (2021). In our correlational studies, we performed path analyses using the statistical package Lavaan (Rossel, 2012) to examine our hypotheses. To assess mediating effects, we utilized bootstrapping with 5,000 resamples to estimate 95 % confidence intervals. In our experimental studies, we performed Analysis of Variance (ANOVA) and T-tests to evaluate the effects of experimental manipulations on the variables of interest.

Research Context

In recent years, Poland has emerged as a prime destination for migrants (migracje.gov.pl, 2021). Among the diverse group of migrants arriving in Poland, Ukrainians constitute the largest portion, accounting for approximately 56% of all immigrants (migracje.gov.pl, 2021). The surge in Ukrainian migration can be attributed to significant events such as the fall of the Soviet Union, and the annexation of Crimea by the Russian Federation – a territory of Ukraine – in 2014. This geopolitical development has propelled the mass movement of Ukrainians, who are drawn to Poland due to shared linguistic, cultural, and religious ties, as well as the advantages of geographical proximity and potential for improved financial prospects. Since 2014, this migratory trend has grown inexorably (Lesyk, 2017). As of 2021, the Ukrainian population in Poland stood at 285,434, marking an increase of approximately 53,000 people compared to the previous year (migracje.gov.pl, 2021). In 2022, the ongoing war in Ukraine further intensified migration such that, as of 2022, there are at least 1.4 million Ukrainians residing in Poland (otwarte dane, n.d.). Given the substantial Ukrainian population in Poland, it becomes particularly relevant to understand factors that can contribute to their well-being.

While Ukrainians have generally been received positively by Polish society, they still face challenges or even instances of intolerance within the host community. One notable manifestation of this is the prevalence of anti-Ukrainian sentiment on social media platforms. Notably, Facebook hosts several groups with anti-Ukrainian themes, such as the widely subscribed "A Ukrainian is NOT my brother" boasting over 60,000 members; another group, "Stop the 'Ukrainianisation' of Poland", has garnered over 3000 members. In the public arena in Poland, certain political factions, including 'Ruch Narodowy', 'Obóz Narodowo-Radykalny ONR' or 'Kukiz'15', openly discuss their anti-Ukrainian stance by organizing demonstrations and disseminating anti-Ukrainian statements. In public discourse, many instances can be

observed where Poles openly express negative sentiments towards Ukrainians. A particularly noteworthy case involves the deliberate rental of a billboard adjacent to a major highway, orchestrated and funded by a group of Poles originating from a Facebook group. The billboard prominently displayed a poster making reference to "Ukraine's genocide on the Polish people" (Mierzynska, 2018).

Furthermore, in recent years, the increased presence of Ukrainians in Poland has generated concerns among the Polish population regarding the increased cost of living, as reflected in rising rental prices (Ambroziak, 2022) and a more competitive labor market. Overall, a report conducted by CBOS [the Public Opinion Research Center] in 2018 revealed that while 56% of Polish people display openness towards immigrants from Ukraine, 35% remain opposed to this influx, indicating a relatively stable trend. Considering the current conflict situation, a substantial majority of the Polish population (84%) in 2022 demonstrated a strong willingness to welcome Ukrainians in Poland. However, a significant proportion (78%) indicate a preference for Ukrainians to return to Ukraine following the conclusion of the war.

Conversely, Ukrainians also hold certain preconceived notions about Poles perceiving them as intolerant or exhibiting harsher treatment towards Ukrainians compared to other groups (Dąbrowska, 2018). It is worth noting that the war in Ukraine and the large-scale relocation of Ukrainians to Poland has had an impact on the dynamics between the two groups as well, with an improved perception of Poles by Ukrainians. A survey conducted by the Public Opinion Research Center in 2022 indicates that 83% of Ukrainians hold a positive or very positive opinion about Poles, and 73% of Ukrainians report an enhanced view of Polish people (Info Sapiens – the Public Opinion Research Center, 2022).

Given the wealth of evidence in the research literature, surveys, and social media, it is apparent that there are ongoing challenges in achieving mutual understanding between both groups. As Ukrainians constitute the predominant immigrant group in Poland, it becomes

imperative to study these intergroup dynamics. Moreover, the current challenging circumstances faced by Ukrainians, including the ongoing conflict and economic crisis, have an untold impact on their mental health and overall well-being (World Health Organization, 2022). Therefore, it is crucial to investigate strategies that may improve the well-being of immigrants and foster positive relations with the host society.

Part I

Study 1

In Study 1, we aimed to examine the relationship between emotional similarity vis-à-vis immigrants and their host group, and its impact on immigrants' well-being. Additionally, we explored the mediating role of meta-prejudice and self-categorization in this relationship. To assess emotional similarity, we employed a methodology similar to previous studies conducted by De Leersnyder et al. (2011, 2015) and Delvaux et al. (2015). Specifically, we matched the overall emotional state of immigrants with that of the Polish nation for the previous year. To obtain information on the emotional state of Poles, we used a report from the Public Opinion Research Center (CBOS) in Poland regarding the overall emotional state of the Polish population in 2020. For the data on Ukrainians, we conducted an online study where Ukrainian participants responded to the same questions as Poles in the aforementioned report. In addition to this, the Ukrainian participants answered questions pertaining to meta-prejudice and self-categorization.

Method

Participants and Procedure

The study included a sample of 1010 Polish adults (47.82% male, $M_{age} = 50.08$; $SD = 18.47$) and 141 Ukrainian adults (23.40% male; $M_{age} = 34.12$; $SD = 9.66$) residing in Poland. Ukrainian participants were recruited by posting links to the questionnaire on various Facebook

groups. To incentivize participation in the study, participants were entered into a lottery with a chance to win a monetary prize of either 50 PLN or 100 PLN. Prior to data collection, we conducted a power analysis using G*Power (Faul et al., 2007) which indicated that a sample size of N=115 would provide sufficient power (95%) to detect a medium effect size. All questionnaires were translated into Ukrainian using a rigorous back-translation procedure to ensure accuracy and equivalence. The entire study was conducted using the online survey software qualtrics.com, which facilitated the administration of the questionnaires and data collection process.

Measures

  Emotional similarity. The assessment of emotional similarity involved CBOS questionnaire administered to both Polish and Ukrainian participants. Twelve questions examined specific emotional states in 2020, using a scale from 1 (very often) to 4 (not at all), (e.g., "How often have you felt irritated in the past year?").

  To establish emotional similarity, three steps were taken. First, the mean value of each item from the "Subjective well-being among Polish people" dataset in the CBOS database of Polish responders was calculated. In the second step, the obtained mean values were correlated with individual (i.e., for each respondent) ratings provided by Ukrainian respondents using the Pearson correlation coefficient. Finally, the correlation coefficients were mapped onto a Z-scale using the Fisher transformation. These transformed correlation coefficients constituted the emotional similarity score (for a similar procedure, see De Leersnydeer, 2017).

  Meta-prejudice. To assess meta-prejudice, two different measures were employed. Firstly, an adapted version of the Social Distance Scale (Bogardus, 1933) was utilized. Participants rated their agreement with statements reflecting the attitudes of Polish people toward Ukrainians on a 5-item scale ranging from 1 (strongly agree) to 5 (strongly disagree) (e.g., "Polish people would be willing to accept Ukrainian as a close personal friend.") The

internal consistency of the scale was acceptable, with a reliability coefficient of α = .71. Secondly, a Feeling Thermometer was used as an additional index of meta-prejudice. Participants indicated how "warm/cold" Polish people feel towards Ukrainians on a scale ranging from 0 (cold) to 10 (warm).

Self-categorization. Self-categorization was assessed using The Overlap of Self, Ingroup and Outgroup Scale (Schubert & Otten, 2002). Participants were presented with seven diagrams, each displaying two circles, one on the left labeled "self" and the other on the right labelled "they." From diagrams 1 to 7, the two circles become gradually closer: they are completely separated in diagrams 1 and 2, tangential in diagram 3, overlapping in diagrams 4, 5, and 6, and concentric in diagram 7. Participants were instructed to select one of the seven diagrams that best represented their sense of closeness to the Polish group.

General well-being. To evaluate the general well-being of Ukrainian participants, a single question was adapted from the CBOS study 'Subjective well-being among Polish people'. Participants were asked to rate the overall quality of their previous year on a scale ranging from 1 (very good) to 7 (very bad) (namely, "Could you say how the last year was for you overall?"). This reverse-scored item was subjected to recoding to ensure consistency in the scoring and interpretation of responses.

Results

Means, standard deviations, and correlations of all variables are reported in Table 1.

Table 1

Means, Standard Deviations, and Correlations of Emotional Similarity, Meta-Prejudice, Self-Categorization, and General Well-Being (N = 141, Study 1)

	M	*SD*	1	2	3	4	5
1. Emotional similarity	0.51	0.38	–				
2. Meta-prejudice - social distance	2.26	0.47	-.09	–			
3. Meta-prejudice - thermometer	5.78	2.47	.23**	-.38**	–		
4. Self-categorization	3.61	1.49	.11	-.25**	.43**	–	
5. General well-being	4.04	1.26	.53**	.04	.10	.01	–

Note. $^*p <.05$, $^{**}p < .01$.

Subsequently, a path analysis was performed to examine the relationships among emotional similarity (predictor), well-being (outcome variable), and the parallel mediators of meta-prejudice and self-categorization.[1] We allowed same-level mediators to correlate. To account for the utilization of two distinct measures of meta-prejudice (as presented in Table 2), we performed two separate path analyses.

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[1] Additionally, we computed the same model while including covariates for age and gender. The obtained results exhibited a consistent pattern to those observed in the model without covariates.

Table 2

The Link Between Emotional Similarity and General Well-Being Mediated by Self-Categorization and Meta-Prejudice

Emotional similarity – General well being	Meta-prejudice - social distance			Meta-prejudice – feeling thermometer		
	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*
Total effect (H1)	**[1.22, 2.29]**	**1.78**	**.27**	**[1.21, 2.28]**	**1.77**	**.27**
Indirect effect (H2)						
via self-categorization	[-0.11, 0.03]	-0.01	.03	[-0.14, 0.03],	-0.02	.04
via meta-prejudice	[-0.15, 0.02]	-0.02	.04	[-0.13, 0.11]	-0.01	.06

The findings demonstrated a significant positive total effect of emotional similarity on the well-being of immigrants, providing support for H1. However, H2, which posited the presence of indirect effects through self-categorization or meta-prejudice, was not supported, regardless of the scale employed.

Overall, the results from Study 1 showed that higher levels of emotional similarity between Ukrainian immigrants and Poles were associated with the greater overall well-being of Ukrainians. Nonetheless, the hypothesized mechanisms of meta-prejudice and self-categorization did not appear to play a role in mediating this relationship. It is important to acknowledge that Study 1 had a notable limitation, namely, the reliance on a single-item measure of general well-being. Thus, to overcome this limitation, we included additional measures of well-being in the following study.

Study 2

Study 2 adopted a procedure similar to that of Study 1, with the evaluation of emotional states referring to the year 2021. In addition to assessing general well-being,

(as was the case in Study 1), Study 2 examined psychological and relational well-being as separate constructs.

Method

Participants and Procedure

The sample of Poles consisted of 1063 adults (46.3% male, $M_{age} = 50.89$; $SD = 17.16$). For the Ukrainian sample, two people who did not identify as Ukrainians, two people who did not pass the attention check (i.e., "Please select number four in this question"), and three participants who spent less than four minutes on the questionnaire were excluded. Prior to conducting the study, we verified the time needed to fill in the whole questionnaire, confirming that at least four minutes were necessary to complete the entire questionnaire. The Ukrainian sample comprised 150 adults (25.3% male; $M_{age} = 29.09$; $SD = 9.77$) residing in Poland. The recruitment, compensations, and translation procedures were identical to those employed in Study 1.

Measures

The measures used in Study 2 were the same as those employed in Study 1, unless stated otherwise.

Meta-prejudice. The scale demonstrated acceptable reliability, $\alpha = .84$.

General Well-being. General well-being was assessed using a single item, identical to the measure utilized in Study 1.

Psychological and Relational Well-being. Psychological and relational well-being were measured using nine items from the short version of the World Health Organization's Quality of Life Questionnaire (WHOQOL-group, 1995; Skevington et al., 2004). A five-point scale ranging from 1 (not at all) to 5 (an extreme amount) was used. Relational well-being was measured by three items (e.g., "How satisfied are you with your personal relationships?",

$\alpha = .46)^2$, while psychological well-being was assessed with six items (e.g., "To what extent do you feel your life to be meaningful?", $\alpha = .62$). Results were multiplied four times to align with the original scale when comparison across scales was necessary.

Results

The calculation of emotional similarity followed the same procedure as in Study 1. The means, standard deviations, and correlations of all variables are reported in Table 3.

Table 3

Means, Standard Deviations, and Correlations of Emotional Similarity, Meta-Prejudice, Self-Categorization, General Well-Being, Psychological and Relational Well-Being (N = 150, Study 2)

	M	*SD*	1	2	3	4	5	6
1. Emotional similarity	0.59	0.47	–					
2. Meta-prejudice -social distance	2.21	0.74	-.08	–				
3. Meta-prejudice - thermometer	6.17	2.30	.20*	-.37**	–			
4. Self-categorization	3.76	1.37	.19*	-.25**	.40**	–		
5. General well-being	4.71	1.51	.55**	-.07	.16	.19*	–	
6. Psychological well-being	14.31	2.24	.63**	-.07	.30**	.22**	.43**	–
7. Relational well-being	16.19	3.07	.49**	-.00	.14	.16	.36**	.43**

Note. *$p < .05$, **$p < .01$.

Similar to Study 1, we conducted a path analysis with emotional similarity as a predictor, well-being as an outcome variable, while considering meta-prejudice and self-categorization as

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[2] Additional analyses were conducted for individual items of the relational well-being scale, and the obtained results were consistent with those presented in the main text. It is worth noting that this particular domain of the scale demonstrated relatively low reliability, as indicated by previous studies (Skevington et al., 2004).

parallel mediators.[3] Correlation between mediators at the same level was permitted. We conducted six separate path analyses due to the two different measures of meta-prejudice being used and the three distinct well-being outcomes being examined, namely, general well-being, relational and psychological well-being.

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[3] The same model was also computed with the inclusion of covariates, namely mood, age, and gender. The obtained results exhibited a consistent pattern, mirroring those observed in the model without covariates.

Table 4

The Link Between Emotional Similarity and General Well-Being, Relational and Psychological Well-Being, Mediated by Self-Categorization and

Meta-Prejudice

Emotional similarity	General well-being						Relational well-being						Psychological well-being					
	Meta-prejudice SD			Meta-prejudice FT			Meta-prejudice SD			Meta-prejudice FT			Meta-prejudice SD			Meta-prejudice FT		
	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*
Total effect (H1)	**[1.36, 2.25]**	**1.80**	**.23**	**[1.36, 2.23]**	**1.79**	**.22**	**[2.05, 4.29]**	**3.2**	**0.57**	**[2.05, 4.31]**	**3.22**	**.57**	**[2.37, 3.60]**	**3.01**	**.31**	**[2.33, 3.57]**	**2.96**	**.31**
Indirect effect (H2)																		
via meta-prejudice	[-0.04, 0.05]	.00	.02	[-0.06, 0.10],	.007	.04	[-0.20, 0.08]	-.01	.06	[-0.11, 0.22]	.01	.08	[-0.06, 0.07]	.00	.03	[-0.003, 0.33]	.10	*.08*
via self-categorization	[-0.02, 0.19]	.06	.05	[-0.03, 0.19]	.05	.05	[-0.03, 0.33]	.08	.08	[-0.08, 0.31],	.08	.10	[-0.01, 0.22]	.07	.05	[-0.05, 0.19]	.04	.06

Note. SD – Social Distance; FT – Feeling Thermometer.

There was a significant positive total effect of emotional similarity on the general well-being, as well as on the relational and psychological well-being, of immigrants, providing support for H1. Interestingly, regardless of the two scales used, we found no indirect effects via meta-prejudice for any of the three outcomes. Additionally, there were no indirect effects of self-categorization in the link between emotional similarity and general well-being, relational or psychological well-being, thereby not supporting H2.

Consistent with the findings from Study 1, Study 2 confirmed that a higher level of emotional similarity between Ukrainian immigrants and Poles was associated with the greater general well-being of Ukrainians. Moreover, we observed the same pattern concerning psychological and relational well-being. In line with Study 1, we did not find evidence supporting meta-prejudice and self-categorization as underlying mechanisms in the link between emotional similarity and well-being.

Building upon the previous studies, our next investigation aimed to validate the results obtained from the two first studies regarding the relationship between emotional similarity and well-being (general, psychological, relational). Furthermore, we sought to explore emotional similarity using a different, self-developed measure.

Study 3

Study 3 followed a procedure similar to that of Study 2. In this study, the evaluation of emotional state referred to the year 2022. Notably, this study incorporated the ongoing war in Ukraine and the increased presence of Ukrainians in Poland as contextual factors. Additionally, as an exploratory component, we included a self-developed measure of emotional similarity to examine and validate the hypothesized associations.

Method

Participants and Procedure

The sample for the Polish group comprised 1018 adults (45.5% male, M_{age} =52.28; SD = 17.30). From the Ukrainian sample, we excluded three individuals who did not identify as Ukrainians, four who did not pass the attention check (i.e., "Please select number four in this question"), and four participants who spent less than five minutes on the questionnaire. Prior to conducting the study, we performed a time verification process to determine the necessary duration for completing the entire questionnaire, which revealed that a minimum of five minutes was required. The Ukrainian sample consisted of 161 adults residing in Poland (13.7% male; M_{age} = 33.47; SD = 10.73). The recruitment and translation procedures followed those employed in Studies 1 and 2. As a reward for participating in the study, participants were entered into a lottery with a chance to win a monetary prize worth 100 PLN or 150 PLN.

Measures

The measures were identical to those used in Study 2.

Meta-prejudice. The scale demonstrated acceptable reliability, $\alpha = .80$.

General Well-being. Consistent with Studies 1 and 2, we utilized a single item to assess General Well-being.

Psychological and Relational Well-being. The reliability of the Psychological well-being scale was found to be: $\alpha = .44$. However, upon removing an item which was reversed coded, there was an increase in alpha coefficient ($\alpha = .56$). We analyzed the results both with and without this item and the pattern of results remained consistent. The Relational well-being scale demonstrated an acceptable reliability of $\alpha = .51$

Emotional Similarity (self-developed scale). We employed three questions to gauge emotional similarity, with a seven-point scale ranging from 1 (not at all) to 7 (completely): "Poles and Ukrainians have similar emotional responses in the same situations.", "Poles and

Ukrainians emotional reactions in the same situations resemble each other's.", "Poles and

Ukrainians express similar emotions in the same situations.", α = .92.

Results

Emotional similarity was calculated following the same methodology as in Study 2.

Means, standard deviations, and correlations of all variables are reported in Table 5.

Table 5

Means, Standard Deviations, and Correlations of Emotional Similarity, Meta-Prejudice, Self-Categorization, General Well-Being, Psychological and Relational Well-Being (N = 161, Study 3)

	M	SD	1	2	3	4	5	6	7
1. Emotional similarity	0.31	0.38	–						
2. Meta-prejudice -social distance	2.15	0.71	-.13	–					
3. Meta-prejudice - thermometer	6.83	2.40	.25**	-.52**	–				
4. Self-categorization	3.87	1.53	.29**	-.37**	.53**	–			
5. General well-being	3.04	1.61	.51**	-.09	.07	.11	–		
6. Psychological well-being	16.68	2.53	.40**	-.05	.10	.19*	.25**	–	
7. Relational well-being	20.25	5.84	.25**	-.09	.19*	.20**	.07	.48**	
8. Emotional similarity (self-developed scale)	4.48	1.49	.19*	-.30**	.23**	.38**	.15	.12	.09

Note. $^*p < .05$, $^{**}p < .01$.

Following the approach adopted in Study 2, we conducted a path analysis with

emotional similarity as a predictor, well-being as an outcome variable. Meta-prejudice and self-

categorization were considered parallel mediators in the model. We allowed the same level

mediators to correlate. To account for the two distinct measures of meta-prejudice and the three

outcomes (i.e., general well-being, relational well-being, and psychological well-being), a total

of six separate path analyses were conducted.

Table 6

The Link Between Emotional Similarity and General Well-Being, Relational and Psychological Well-Being, Mediated by Self-Categorization and Meta-Prejudice

Emotional similarity	General well-being						Relational well-being						Psychological well-being					
	Meta-prejudice SD			Meta-prejudice FT			Meta-prejudice SD			Meta-prejudice FT			Meta-prejudice SD			Meta-prejudice FT		
	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*
Total effect (H1)	**[1.56, 2.73]**	**2.15**	**.03**	**[1.62, 2.77]**	**2.20**	**.30**	**[1.30, 6.25]**	**3.79**	**1.28**	**[1.16, 6.15]**	**3.61**	**1.29**	**[1.65, 3.81]**	**2.68**	**.54**	**[1.67, 3.83]**	**2.71**	**.54**
Indirect effect (H2)																		
via meta-prejudice	[-0.04, 0.12]	.00	.03	[-0.17, 0.03],	-.03	.05	[-0.18, 0.27]	.00	.10	[-0.13, 0.90]	.20	.23	[-0.15, 0.05]	-.01	.04	[-0.27, 0.10]	-.04	.10
via self-categorization	[-0.30, 0.10]	-.07	.10	[-0.24, 0.16]	-.02	.10	[-0.03, 1.53]	.06	.37	[-0.31, 1.44],	.45	.43	[-0.12, 0.57]	.18	.17	[-0.12, 0.65]	.20	.19

Note. SD – Social Distance; FT – Feeling Thermometer.

In line with Study 2, the findings of Study 3 revealed a significant positive total effect of emotional similarity on the general well-being, the relational well-being and psychological well-being of immigrants providing support for hypothesis H1. However, we did not observe any indirect effects via self-categorization and meta-prejudice, regardless of the two scales used, for any of the three outcomes (H2 not supported).

In addition, as part of an exploratory analysis, we conducted a path analysis using the self-developed scale of emotional similarity as a predictor. The results indicated that the total effects were significant only for General well-being (see Table 7).[4]

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[4] We also conducted the same model while including covariates such as mood, age, gender, and time spent in Poland. The results obtained from this analysis exhibited a consistent pattern with those obtained from the model without covariates.

Table 7

The Link Between Emotional Similarity (Self-Developed Scale) and General Well-Being, Relational and Psychological Well-Being, Mediated by Self-Categorization and Meta-Prejudice

Emotional similarity (self-developed scale)	General well-being						Relational well-being						Psychological well-being					
	Meta-prejudice SD			Meta-prejudice FT			Meta-prejudice SD			Meta-prejudice FT			Meta-prejudice SD			Meta-prejudice FT		
	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*	95% CI	*Effect*	*SE*
Total effect (H1)	**[0.01, 0.32]**	**0.16**	**.08**	**[0.002, 0.32]**	**0.16**	**.08**	[-0.26, 1.01]	0.36	0.32	[-0.36, 0.94]	0.27	0.33	[-0.09, 0.52]	0.22	.16	[-0.11, 0.53]	.21	.16
Indirect effect (H2)																		
via meta-prejudice	[-0.03, 0.07]	.01	.02	[-0.01, 0.03],	.00	.01	[-0.14, 0.16]	.01	.07	[-0.05, 0.18]	.01	.05	[-0.08, 0.05]	-.01	.04	[-0.03, 0.04]	.00	.02
via self-categorization	[-0.05, 0.10]	.02	.04	[-0.06, 0.10]	.02	.04	**[0.07, 0.61]**	**.30**	**.13**	[-0.06, 0.55],	.21	.15	**[0.02, 0.26]**	**.11**	**.06**	[-0.01, 0.26]	.11	.07

Note. SD – Social Distance; FT – Feeling Thermometer.

In Study 3, we corroborated the findings from Studies 1 and 2, demonstrating that a higher emotional similarity between Ukrainian immigrants and Poles is associated with the greater general well-being of Ukrainians. We also observed the same pattern in relation to psychological and relational well-being. Similar to Studies 1 and 2, our results did not provide support for meta-prejudice and self-categorization as underlying mechanisms.

When using the self-developed scale to measure emotional similarity, we found a significant association with general well-being, but not to relational and psychological well-being. Furthermore, we identified an indirect effect of self-categorization in the relationship between emotional similarity and relational well-being, and psychological well-being but not general well-being. Importantly, it is worth noting that the correlation between emotional similarity measured with the profile correlation method vs the self-developed scale was modest, at only 0.19. These findings provide us with a starting point for a discussion on how to effectively measure emotional similarity in correlational studies, considering factors such as emotional pattern vs. emotional similarity in specific situations; for a more detailed analysis, refer to the General Discussion section.

Taken together, these three studies provide initial evidence supporting the link between emotional similarity and the well-being of immigrants. This link association remains consistent across a three-year span, encompassing changes in the immigration context, including the particular reasons for immigration (economic reasons vs. fleeing war) and the length of stay in Poland.

However, it is important to note that these studies do not allow for causal inferences. Therefore, in subsequent studies, we employed experimental designs to further investigate the causal relationship between emotional similarity and immigrants' well-being.

Part II

Study 4

In Study 4, we experimentally tested the link between emotional similarity and immigrants' well-being focusing on the mediating role of self-categorization and meta-prejudice. Specifically, we explored emotional similarity in terms of a single emotion – anger, as it is an emotion highly relevant for intergroup relations (e.g., McDonald et al., 2017, for a similar procedure, see Livingstone et al., 2011) due to its constructive role in conflict resolution (e.g., Halperin et al., 2011), and, as a negative affect, its importance for forming social attachments (Klep et al., 2011). Drawing on intergroup emotion theory (IET: Smith, 1993), which suggests that identification with one group may influence the experience of group-based emotions (e.g., anger) and may predict intergroup action tendencies, in this study, we also investigated whether group membership (i.e., ingroup vs outgroup) moderates the relationship between emotional similarity and other variables. To guide our experimental design, we followed a similar procedure, to Livingstone et al. (2011).

Method

Participants and Procedure

The participants consisted of adult Ukrainians living in Poland recruited through Facebook groups. The sample included 181 participants (M_{age} = 29.60; SD = 8.41, 22.65% male). Every participant had the chance to win one of four prizes (50 PLN) as an incentive for their participation in the study. Using G*Power (Faul et al., 2007), we estimated a sample size of N = 180, ensuring 80% power to detect minimum to medium effect size. Data collection continued until we reached the estimated sample size. All questionnaires were translated into Ukrainian using a back-translation procedure. The study was conducted online using qualtrics.com – a software for online studies.

Measures and Manipulation

After reading the informed consent form, participants were asked to provide demographic information. They were then exposed to anger-eliciting images depicting groups of Polish people protesting against immigrants. Subsequently, participants rated their emotional reaction of anger to the images on a 7-point scale ranging from 1 (not at all) to 7 (extreme); for example, they were asked, "Does the perception of immigrants among some groups in Poland make you feel angry/furious/resentful/bitter/annoyed/frustrated?". The mean score was $M = 3.44$ with a standard deviation of $SD = 1.56$, and the scale demonstrated good internal consistency ($\alpha = .91$).

Next, participants were randomly assigned to one of the four conditions, where they viewed one of four graphs displaying high or low anger-related emotional reactions of either Ukrainians or Poles in response to the same images they had previously viewed before the manipulation. More precisely, the graphs showed anger and furiousness (for details on the procedure, see Appendix, attachment 1).[5] One group of participants saw a graph indicating that Polish people reacted with high anger to those images, a second group saw a graph showing that Polish people reacted with low anger, a third group saw a graph showing high anger among Ukrainians, and the fourth and final group saw a graph indicating low anger among Ukrainians.

Following the manipulation, participants completed manipulation checks and other measures in the order presented below.

Manipulation checks. To assess the effectiveness of the experimental manipulation, we used two items to measure whether participants understood that the graphs were intended to present high and low anger reactions (e.g., "According to the findings presented in the graph, to what extent does the perception of immigrants among some groups in Poland make

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[5] The graph also included two additional emotions, namely indifference and unconcern, which were depicted as low in the high anger conditions and high in the low anger conditions. However, these emotions were not utilized for the purpose of manipulation checks.

Polish/Ukrainian people feel angry/furious?" on a 7-point scale (1-not at all; 7-extremely). The items demonstrated high internal consistency ($r = .94$, $p < .001$).

Meta-prejudice. We utilized the scale developed by Putra (2014) to assess meta-prejudice. This scale consisted of questions concerning meta-prejudice (e.g., Do you think that in Poland Poles perceive Ukrainians as…) with participants rating six adjectives on a 6-point scale, ranging from one extreme to another (e.g., threatening – trustworthy, hostile – friendly). The scale's reliability demonstrated acceptable reliability ($\alpha = .87$).

Self-categorization. To measure self-categorization, we employed the same measure used in the previous studies, namely the Overlap of Self, Ingroup and Outgroup Scale.

Psychological and Relational well-being. For assessing psychological and relational well-being, we utilized the same measure as in the previous study (the World Health Organization's Quality of Life Questionnaire WHOQOL group, 1995; Skevington, Lotfy, & O'Connell, 2004). Relational well-being and psychological well-being were assessed separately, with reliabilities of $\alpha = 0.66$ and $\alpha = 0.76$, respectively.

Results

Means, standard deviations, and correlations of all variables are reported in Table 8.

Table 8

Means, Standard Deviations, and Correlations of Meta-Prejudice, Self-Categorization, Psychological and Relational Well-Being (N = 181, Study 4)

	M	SD	1	2	3
1. Meta-prejudice	3.46	1.03			
2. Self-categorization	3.58	1.60	-.38**		
3. Psychological well-being	14.76	2.40	-.16*	.13	
4. Relational well-being	14.03	3.39	-.18*	.15*	.42**

Note. *p < .05, **p < .01. All coefficients are regardless of experimental manipulations.

In order to evaluate the effectiveness of our manipulation in influencing the perceived level of anger presented in graphs, we conducted a 2x2 Analysis of Variance (ANOVA), with nationality (Polish vs Ukrainian), and emotional reaction (high anger vs low anger) as independent variables.[6] The manipulation with the emotional reaction (high anger vs. low anger) had a strong, significant effect on the perceived level of anger presented in the graphs, $F(1, 177) = 53.30$, $p < .001$, $\eta2 = 0.42$, indicating that we had successfully induced the perception of anger. However, the experimental manipulation with Polish vs Ukrainians (outgroup vs ingroup) did not have a significant effect on the perceived level of anger experienced by those groups, $F(1, 177) = 0.43$, $p = .515$. Furthermore, the interaction between nationality and emotional reaction was not statistically significant, $F(1, 177) = 1.28$, $p = .259$.

Table 9

Means and Standard Deviations of Manipulation Checks with Anger Levels Across Four Conditions in Study 4.

		Manipulation checks - anger levels *M* (*SD*)
Polish (outgroup)	Low anger condition	2.43 (1.18)
	High anger condition	4.78 (1.67)
Ukrainians (ingroup)	Low anger condition	2.12 (1.17)
	High anger condition	4.99 (1.99)

Next, we proceeded to assess the congruence between participants' initial emotional reactions of anger and the emotional reaction presented on the manipulation graphs they were exposed to. Based on this assessment, we created two groups representing emotional similarity (0 – low emotional similarity and 1 – high emotional similarity), categorized as follows:

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[6] We further examined the model by including covariates such as mood, age, and gender. Notably, the results from this analysis aligned with those obtained from the model without covariates, indicating a consistent pattern of findings across both analyses.

participants who reported higher anger than the mean ($M = 3.44$, $SD = 1.56$) in response to pictures and were in the high anger conditions were classified as "high similarity", while participants who reported anger lower than the mean and were in high anger condition were classified as "low similarity". Similarly, participants who reported higher anger than mean and were in low anger condition were categorized as "low similarity", and participants who reported anger lower than mean and were in low anger condition were categorized as "high similarity".[7]

Finally, we performed a 2x2 Analysis of Variance (ANOVA) to examine the impact of emotional similarity on meta-prejudice, self-categorization, and psychological and relational well-being. The results indicated that emotional similarity had no effect on meta-prejudice, self-categorization, or psychological and relational well-being. Furthermore, no difference in the effects were observed based on ingroup or outgroup categorization (Table 10). Given the lack of significant effects of manipulation on the expected mediators, we did not proceed with further testing of the mediation hypotheses (both H1 and H2 not supported).

Table 10

The Effect of Nationality and Emotional Similarity on Dependent Variables (Two-Way ANOVA)

	Nationality			Emotional similarity			Nationality*Emotional similarity		
	$F (1, 177)$	p	η^2	$F (1, 177)$	p	η^2	$F (1, 177)$	p	η^2
Meta-prejudice	2.47	.118	<.001	0.28	.60	<.001	2.57	.111	0.01
Self-categorization	1.74	.189	<.001	0.02	.883	<.001	0.53	.47	<.001
Psychological well-being	0.13	.722	<.001	1.79	.182	0.01	0.14	.709	<.001
Relational well-being	0.00	.953	<.001	0.13	.716	<.001	0.03	.867	<.001

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[7] In addition, we categorized participants based on their scores ± 1 standard deviation from the mean and proceeded to examine our hypotheses using this categorization. The pattern of results obtained in this analysis aligned with the findings presented in the main text.

Table 11

Means and Standard Deviations of All Variables Across Four Conditions in Study 4.

		Meta-prejudice M (SD)	Self-categorization M (SD)	Psychological well-being M (SD)	Relational well-being M (SD)
Polish (outgroup)	Low similarity	3.56 (1.26)	3.69 (1.96)	14.4 (2.52)	13.9 (3.17)
	High similarity	3.45 (0.98)	3.74 (1.38)	15.1 (2.28)	14.1 (3.57)
Ukrainians (ingroup)	Low similarity	3.21 (0.92)	3.23 (1.59)	14.6 (2.51)	13.8 (3.49)
	High similarity	3.59 (0.95)	3.63 (1.47)	15.0 (2.33)	14.3 (3.37)

In Study 4, our findings did not provide support for our hypotheses. However, this outcome prompted a valuable methodological discussion regarding the procedure we applied. In this study, we observed that the manipulation procedures, which involved presenting different emotional reactions (high vs low anger) on charts, strongly affected the perceived level of anger. Conversely, the manipulation involving nationality had no impact on the perceived anger levels. It is worth noting that the anger elicitor we used, which depicted Polish people protesting against immigrants, may have evoked a general anger towards Polish people. Consequently, this sense of anger could have overshadowed the effects of emotional similarity on well-being; in other words, the feelings elicited might have potentially overpowered the emotional similarity we sought to evoke through our subsequent manipulation later in the study. In fact, given that participants were already angry at Poles, it may have been unattainable to induce any emotional similarity with this particular group. Moreover, the topic presented, as conveyed by the images of Polish people protesting against immigrants, might only have accentuated any existing conflict, rendering it more salient. These findings align with previous suggestions that emotion-arousing topics must be unrelated to the conflict between groups in order to effectively evoke and verify emotional similarity (McDonald et al., 2017).

Furthermore, the manipulation involving nationality, specifically comparing Polish vs Ukrainians as outgroup and ingroup members respectively, did not yield any discernible effect on the perceived level of anger experienced by these groups. This finding implies that the perception of others' emotions may not be influenced by their group affiliation, regardless of whether they are categorized as ingroup or outgroup members.

Stemming from these results, our subsequent study aimed to elicit anger by employing a text whose subject matter focused exclusively on Ukrainians and the circumstances and conditions pertaining to their country. This approach was chosen to further verify the connection between the perception of emotional similarity and group affiliation.

Study 5

The purpose of Study 5 was to examine the link between emotional similarity and well-being using a different elicitor of anger compared to the previous study.

Method

Participants and procedure

Similar to Study 4, the participants in Study 5 were adult Ukrainians living in Poland recruited via Facebook groups. Every participant had the opportunity to win one of four prizes (50 PLN) for participation in the study. The final sample consisted of 198 participants (M_{age} = 32.41; SD = 8.68, 17.68% male).

As in Study 4, sample size estimation was conducted using G*Power (Faul et al., 2007) to estimate sample size (N = 180) with 80% power and a minimum to medium effect size. All questionnaires were translated into Ukrainian using a back-translation procedure. The study was conducted using qualtrics.com, a software platform for online studies.

Measures and Manipulation

After reading the informed consent form and providing demographic information (see the procedure of Study 4), participants were exposed to an anger elicitor in the form of a text

describing the current situation in Ukraine (for details, see Appendix, attachment 2). Later, participants were asked to rate the level of anger generated by the text on a 7-point scale ranging from 1 (not at all) to 7 (extremely) with six items (e.g., "Does Ukraine's situation make you feel angry/furious/resentful/bitter/ annoyed/frustrated?"), resulting in an overall measure of anger ($M = 4.35$, $SD = 1.70$, $\alpha = .93$).

Participants were then randomly assigned to one of the four conditions, where they were presented with one of four graphs depicting the emotional reaction of Ukrainians or Poles in response to the same text to which Ukrainian participants were exposed to before the manipulation (for detailed procedure see Study 3).

Manipulation checks. Manipulation checks were employed, consisting of two sets of questions. The first set, adapted from Study 4, contained two questions: "According to these findings, to what extent does Ukraine's situation make Polish/Ukrainian people feel angry/furious?" ($r = .80$, $p < .01$). The second set of manipulation checks focused on emotional similarity and was made up of two questions: "Do you think you would answer the question about Ukraine's situation in a similar way as the majority of Polish/Ukrainian people?" and "Do you feel similar emotions as Polish/Ukrainian people when thinking about Ukraine's situation?" These questions were rated on a 7-point scale (1-not at all; 7-extremely, $r = .79$, $p < .01$).

The remaining procedure mirrored that of Study 4. First, participants completed a meta-prejudice scale (with acceptable reliability, $\alpha = .88$), followed by self-categorization and well-being scales (relational well-being, $\alpha = .72$; psychological well-being, $\alpha = .70$).

Results

Means, standard deviations, and correlations of all variables are reported in Table 12.

Table 12

Means, Standard Deviations, and Correlations of Meta-Prejudice, Self-Categorization, Psychological and Relational Well-Being (N = 198, Study 5)

	M	*SD*	1	2	3
1. Meta-prejudice	3.06	1.12			
2. Self-categorization	3.73	1.59	-.27**		
3. Psychological well-being	15.04	2.23	-.35**	.25**	
4. Relational well-being	14.44	3.43	-.32**	.22**	.43**

Note. $^*p < .05$, $^{**}p < .01$.

In order to evaluate the effectiveness of our anger manipulation, we conducted a 2x2 Analysis of Variance (ANOVA), with nationality (Polish vs Ukrainian), and emotional reaction presented on the chart (high anger vs low anger) as independent variables.[8] The results revealed a strong and significant effect of the emotional reaction manipulation (high anger vs low anger) on the perceived level of anger, $F(1, 194) = 122.17$, $p < .001$, $\eta2 = 0.53$. In contrast, the experimental manipulation involving nationality (Polish vs Ukrainians), representing the outgroup vs ingroup distinction had no discernible impact on the perceived level of anger experienced by the respective groups, $F(1, 194) = 0.20$, $p = .653$, $\eta2 = 0.01$. The interaction of the two factors was not statistically significant, $F(1, 194) = 0.73$, $p = .394$, $\eta2 < 0.001$.

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[8] We further examined the model by incorporating covariates such as mood, age, and gender. Notably, the results obtained from this extended model closely aligned with those from the original model without covariates, demonstrating a consistent pattern.

Table 13

Means and Standard Deviations of Manipulation Check with Anger Levels Across Four

Conditions in Study 5.

		Manipulation checks - anger levels
		M (*SD*)
Polish (outgroup)	Low anger condition	1.99 (1.01)
	High anger condition	5.13 (1.39)
Ukrainians (ingroup)	Low anger condition	2.45 (1.37)
	High anger condition	5.25 (1.63)

As was the case in Study 4, we matched the initial emotional reactions of the anger of participants (i.e., high vs low anger), with the experimental condition (i.e., high vs low anger), resulting in the formation of two groups representing emotional similarity (0 – low emotional similarity and 1 – high emotional similarity; for details, see Study 4). Next, we checked whether our experimental manipulation did in fact induce a perception of emotional similarity (second manipulation check). In line with our expectations, participants in the low emotional similarity condition reported a lower perception of emotional similarity compared to those in the high similarity condition[9], $F(1, 194) = 11.65$, $p < .001$, η2 = 0.12. Participants exhibited a slightly greater emotional similarity with Ukrainians (ingroup members) than with Polish people, although the effect size was small, $F(1, 194) = 3.66$, $p = .057$, η2 = 0.04. Notably, the interaction between the two factors was not statistically significant, $F(1, 194) = 0.14$, $p = .705$, η2 < 0.001 (see Table 14).

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[9] We assessed participants' perception of emotional similarity immediately after the experimental manipulation and again towards the end of the questionnaire, specifically prior to the administration of the well-being scales. The assessment involved a single question: "Do you feel similar emotions as other participants when thinking about the situation in Ukraine?" However, neither the experimental manipulation with nationality ($F(1, 194) = 7.52$, $p = .007$, η2 = 0.02) nor the manipulation of high/low emotional similarity ($F(1, 194) = 0.40$, $p = .527$, η2 = 0.04) yielded a significant effect. Additionally, the interaction between these factors was not statistically significant ($F(1, 194) = 2.92$, $p = .089$, η2 = 0.01).

Finally, we performed four separate 2x2 Analysis of Variance (ANOVA) tests to examine the effect of emotional similarity on meta-prejudice, self-categorization, and psychological and relational well-being. Similar to the findings in Study 4, emotional similarity did not yield any significant effect on meta-prejudice, self-categorization, or psychological and relational well-being. Additionally, no significant differences based on nationality (ingroup vs outgroup members) were observed in terms of the effects (Table 15). As we did not obtain the effect of manipulation on expected mediators, we did not proceed with further testing of the mediation hypotheses.

Table 14

Means and Standard Deviations of All Variables Across Four Conditions in Study 5.

		Manipulation checks - emotional similarity M (SD)	Meta-prejudice M (SD)	Self-categorization M (SD)	Psychological well-being M (SD)	Relational well-being M (SD)
Polish (outgroup)	Low similarity	2.09 (1.17)	3.06 (1.23)	3.90 (1.77)	15.3 (2.42)	14.6 (3.57)
	High similarity	3.30 (1.96)	3.11 (1.28)	3.67 (1.49)	14.9 (2.44)	14.3 (3.65)
Ukrainians (ingroup)	Low similarity	2.75 (1.66)	3.08 (1.03)	3.98 (1.59)	15.0 (1.84)	14.6 (3.12)
	High similarity	4.15 (1.95)	2.99 (0.98)	3.40 (1.49)	14.9 (2.26)	14.2 (3.46)

Table 15

The Effect of Nationality and Emotional Similarity on Dependent Variables

(Two-way ANOVA)

	Nationality			Emotional similarity			Nationality*Emotional similarity		
	F (1,194)	p	η^2	F (1,194)	p	η^2	F (1,194)	p	η^2
Meta-prejudice	0.00	.944	<.001	0.03	.855	<.001	0.17	0.678	<.001
Self-categorization	0.07	.791	<.001	0.46	.499	0.02	0.64	0.424	<.001
Psychological well-being	0.56	.456	<.001	0.79	.375	<.001	0.29	0.591	<.001
Relational well-being	0.00	.998	<.001	0.28	.596	<.001	0.00	0.981	<.001

Overall, the results from Study 5 supported those obtained in Study 4, even though a different anger elicitor was employed. Once again, no significant effects of emotional similarity were observed on any of the outcomes measured, including meta-prejudice, self-categorization and well-being. However, it is noteworthy that the manipulation of emotional similarity did indeed influence the perception of emotional similarity. Specifically, in the high similarity conditions, participants perceived a greater degree of emotional similarity. These results could be attributed to the choice of anger elicitor utilized in the study. By focusing on a topic unrelated to the intergroup conflict between groups, we aimed to minimize any potential biases. Nevertheless, the effect size observed was relatively weak, which could be attributed to the strong group identity maintained by disadvantaged groups who feel the need to differentiate themselves from the majority group (Tajfel & Turner, 1986). It might have been the case that the anger-eliciting article we used might have rendered their disadvantaged position in the world more salient. Hence, the emotional similarity manipulation may have led to the need for differentiation from the dominant group and, as a consequence, may have diminished the effect of emotional similarity.

Additionally, it is important to note that the effect of experimental manipulation on emotional similarity, when measured closer to the end of the questionnaire rather than immediately afterwards, did not yield significant results. Taking this into account, in the subsequent study, we addressed this issue by utilizing a topic as an anger-elicitor that was unrelated to both the ingroup and the outgroup. Moreover, we piloted the topic in advance and streamlined the procedure to minimize the duration of the study.

In both experimental studies, the significant impact of nationality (ingroup vs. outgroup members) on our variables of interest did not reach statistical significance. Consequently, in the subsequent study, we focused exclusively on investigating the impact of emotional similarity on the variables.

Additionally, it is important to acknowledge that both experimental studies were conducted online, which limits our certainty regarding the true level of participant engagement, since no attention checks were employed. Furthermore, the duration of the studies, approximately 20 minutes, represents a lengthy period to sustain engagement for an online environment; this factor may also have influenced the participants' concentration and, in turn, the obtained results. To address these concerns, our next study was conducted in a lab environment, providing a more controlled setting for data collection.

Study 6

In this study, we aimed to investigate our hypotheses in a controlled environment – a laboratory setting. Similar to previous studies, we focused on the emotion of anger; however, this time we compared it with the emotion of fear, which could be also evoked by the text used. This approach is in line with a study carried out by McDonald et al. (2017). A crucial distinction in this study, in contrast to our previous ones, was that the anger-eliciting topic was unrelated to the relations between groups or the specific group itself (here: Ukrainians) and was tested before the experiment (see Appendix, attachment 3).

Method

Participants and procedure

The participants were adult Ukrainians living in Poland recruited via Facebook groups, several Ukrainian foundations, and advertisements distributed within the city. The final sample consisted of 95 participants ($M_{age} = 22.91$; $SD = 7.10$, 29.47% male). We excluded four people who did not identify as Ukrainians, three people who failed the attention check (i.e., "Please select number four in this question"), and three participants who did not correctly answer the manipulation check question ("According to the graph Polish people felt indifferent // scared // angry in response to the text."). Each participant was rewarded with 25 PLN for participation in the study. Sample size estimation using G*Power (Faul et al., 2007) indicated the need for a sample of 102 participants to achieve adequate power (80%) with a medium effect size. Data collection was concluded once the estimated sample size was reached. All questionnaires were translated into Ukrainian using a back-translation procedure. The study was conducted using qualtrics.com – a piece of software for online studies.

Measures and Manipulation

After reading the informed consent form, participants provided demographic information. Subsequently, they were presented with an anger-eliciting text about a drunk driver killing a young man. Having read the text, participants indicated their emotional reactions to the text by responding to three items: "I feel angry/scared/indifferent" using a 7-point scale ranging from 1 (not at all) to 7 (extremely) (McDonald et al., 2017). As anticipated, in response to the anger-eliciting text, participants displayed a higher level of anger $M = 4.75$, $SD = 1.71$, than fear, $M = 4.00$, $SD = 1.96$; $t(94) = 3.91$, $p < .001$, and a higher level of anger compared to indifference $M = 2.28$, $SD = 1.71$; $t(94) = 7.86$, $p < .001$.

To induce emotional similarity, first, we employed a cover story, informing participants that past studies had confirmed that observing other participants' responses encouraged critical

thinking about their own answers (McDonald et al., 2017). At that point, participants were randomly assigned to one of two experimental conditions. Each condition involved the presentation of one of two bar graphs illustrating the ostensible findings concerning the alleged emotional reactions of Polish people responding to the same text which Ukrainian participants had been exposed to before the manipulation. Specifically, one group of participants viewed a graph indicating high anger and low fear among Polish people in reaction to the text; meanwhile, the second group viewed a graph showing high fear and low anger[10] on the part of Polish people in response to the text (for details on the manipulation, see Appendix, attachment 5).

Manipulation checks. After exposure to the manipulation, participants answered three questions; these served as manipulation checks. The first question required participants to select how, in their opinion, Poles felt after reading the text: "According to the graph, Polish people felt indifferent / scared / angry in response to the text." This question acted as a filter to exclude participants who failed to correctly interpret the graphs. Specifically, the correct answer was "angry" when the participants were exposed to graphs depicting a high level of anger and a low level of fear, and "scared" when the graph displayed a high level of fear and a low level of anger.[11]

The subsequent two questions required participants to indicate their agreement on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), with the following statements: "I believe the Polish participants and I experienced similar emotions in response to the text" and "I had the same feelings as Polish people after reading the text." The mean value derived from the second and third questions was used for analysis as a manipulation check.

Following the manipulation check, participants completed several questionnaires (a meta-prejudice scale, self-categorization questions, and a well-being scale).

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[10] In both conditions, the reaction of indifference was presented as low.
[11] Note that the reaction of indifference was not included in the analysis for either condition.

Meta-prejudice. The same scales used in the previous studies were employed to measure meta-prejudice: the Social Distance Scale, $\alpha = .86$ and the Feeling Thermometer.

Self-categorization. The same measure of self-categorization as in the previous study was utilized.

Relational and Psychological Well-being. Once again, we used the same measures as in the previous study (relational well-being $\alpha = .49$ [12]; psychological well-being $\alpha = .81$).

<div align="center">

Results

</div>

Means, standard deviations, and correlations of all variables are reported in Table 16.

Table 16

Means, Standard Deviations, and Correlations of Meta-Prejudice, Self-Categorization,

Psychological and Relational Well-Being (N = 95, Study 6)

	M	*SD*	1	2	3	4
1. Meta-prejudice - social distance	2.25	0.85				
2. Meta-prejudice - thermometer	6.20	1.99	-.38**			
3. Self-categorization	4.19	1.27	-.03	.35**		
4. Psychological well-being	15.07	2.53	-.07	.16	.03	
5. Relational well-being	15.10	2.83	-.18	.09	.00	.61**

Note. $^*p < .05$, $^{**}p < .01$.

We meticulously examined the alignment between participants' emotional reactions to the text and the emotional reactions presented on the manipulation graphs they were exposed to. Based on this verification process, we established two distinct groups representing emotional similarity (0 – low emotional similarity and 1 – high emotional similarity), following the

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[12] We conducted supplementary analyses for individual items from the relational well-being scale, and the findings aligned with those reported in the main text. It is worth noting that this particular domain of the scale exhibits relatively low reliability, as noted in previous research (Skevington et al., 2004).

approach proposed by McDonald et al. (2017). Unlike our previous studies, in this investigation, we compared two emotions – anger and fear. Specifically, we categorized participants as follows: those who reported higher levels of anger than fear in response to the text and were assigned to the high anger and low fear condition were categorized as "high similarity", while those who reported higher levels of fear than anger and were in the high anger and low fear condition were categorized as "low similarity". Similarly, participants who reported higher levels of anger than fear, and were in the high fear and low anger condition, were categorized as "low similarity", and those reporting higher fear than anger and were in the high fear and low anger condition were categorized as "high similarity". Participants who gave equal points of anger and fear in both conditions were categorized as low-similarity (following McDonald et al., 2017).[13]

Next, in order to assess the efficacy of our manipulation, we conducted an independent samples t-test. The perception of emotional similarity with Polish people was significantly higher in the high similarity condition ($M = 5.38$, $SD = 1.64$) compared to the low-similarity condition ($M = 3.41$, $SD = 1.62$), [$t(76.12) = -5.71$, $p < .001$, $d = -1.20$], indicating the successful implementation of our experimental manipulation of emotional similarity.

After that, we performed an analysis of variance (ANOVA) to examine the impact of emotional similarity on meta-prejudice (measured with a social distance scale and with a thermometer), self-categorization, and psychological and relational well-being.[14] The results revealed that emotional similarity did not have a significant effect on meta-prejudice (using both scales), self-categorization, or psychological and relational well-being. Since we did not

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[13] In order to ensure the robustness of our findings, we conducted additional analyses by excluding participants who provided equal ratings for both anger and fear. Importantly, the results from these analyses upheld the same pattern of findings, indicating the consistency and stability of our results.

[14] To account for potential confounding variables, namely mood, age, and gender, we performed additional analyses by including these covariates in the model. The results obtained from this extended analysis demonstrated a consistent replication of the patterns observed in the initial model without covariates.

observe the anticipated effects of manipulation on the expected mediators, we did not proceed

with further testing of the mediation hypotheses.

Table 17

Analysis of Variance with Dependent Variables

	Emotional similarity		
	F (1, 93)	p	η^2
Meta-prejudice - social distance	2.31	.132	0.02
Meta-prejudice - thermometer	1.79	.185	0.02
Self-categorization	0.68	.413	<0.001
Psychological well-being	0.73	.395	<0.001
Relational well-being	3.24	.08	0.03

Table 18

Means, Standard Deviations, and Correlations of Meta-Prejudice, Self-Categorization,

Psychological and Relational Well-Being (N = 95, Study 6) for Low Similarity and High

Similarity Conditions.

	Low similarity					High similarity				
	1	2	3	4	5	1	2	3	4	5
1. Meta-prejudice - social distance	-					-				
2. Meta-prejudice - thermometer	-.41**	-				-.38**	-			
3. Self-categorization	.11	.30*	-			-.03	.35**	-		
4. Psychological well-being	-.04	.09	.05	-		-.07	.16	.03	-	
5. Relational well-being	-.17	.05	.01	.65**	-	-.18	.09	.00	.61**	-
M	2.36	5.98	4.10	14.90	14.69	2.25	6.20	4.19	15.07	15.10
SD	0.86	2.19	1.39	2.64	2.85	0.85	1.99	1.27	2.53	2.83

Note. * $p < .05$, ** $p < .01$

General Discussion

Within this project, we conducted three correlational and three experimental studies to investigate the relationship between emotional similarity vis-á-vis Ukrainian immigrants and host society members in Poland, and the immigrants' general well-being. Our focus was particularly on two types of well-being – relational and psychological (Studies 2–6). Moreover, we explored potential underlying mechanisms, including meta-prejudice and self-categorization. While we found a positive correlation between emotional similarity and all types of well-being in the correlational studies, in neither of the studies was support found for the mediating roles of meta-prejudice or self-categorization in these relationships.

Previous research has shown that higher similarity in emotional responses is connected with higher well-being (Cho et al., 2018), especially when it comes to relational and psychological well-being (De Leersnyder et al., 2014; De Leersnyder et al., 2015). We extended this line of inquiry by examining these links in a different context using a similar correlational approach, thereby contributing to the generalizability of previous results. Importantly, we also tested the causal relationship between emotional similarity and well-being. The results of our correlational studies were in line with previous research, revealing that Ukrainian immigrants who felt greater emotional similarity with Polish people reported higher general as well as relational and psychological well-being. However, none of the experimental studies supported these findings. One possible explanation could be that our applied procedure was not robust enough to evoke emotional similarity. In our research, we aimed to evoke intergroup emotional similarity by utilizing an experimental method superior to simply providing participants with information about their emotional similarity outgroup members (McDonald et al., 2017). Nevertheless, it remains a question whether a single "emotional similarity situation" is sufficient to induce emotional similarity. Indeed, prior research suggests that individuals hold

more positive perceptions of others they perceive as having similar characteristics (e.g., Acitelli et al., 2001; Anderson et al., 2003). Future research should strive to develop this approach further by exposing participants to multiple situations involving different emotions and reflecting on the context and stimuli that elicit emotions.

Another potential explanation for the lack of support in our experimental studies could be the specific choice of emotion. Anger plays a significant role in intergroup relations as it has a constructive role in conflict resolution and reconciliation (Halperin et al., 2011). However, it is plausible that the valence of anger (e.g., Kuppens et al., 2008) influenced our experimental manipulation. Interpersonal research suggests that individuals perceive others as less attractive when in a negative emotional state (e.g., Mehrabian & Blum, 1997), which could extend to more negative perceptions of outgroup members. Given that more negative attitudes toward the outgroup are associated with a lower perception of intergroup similarity (e.g., Hodson et. al, 2013; O'Brien et. al., 2018), evoking anger may have negatively influenced participants' attitudes towards the majority group and weakened their perception of emotional similarity.

Furthermore, the variability in the strength of the similarity effect depending on the emotional contexts might explain why we found no support for the examined hypotheses in the experimental studies. Specifically, in Study 4, we used images showing groups of Polish people protesting against immigrants in Poland to evoke anger. This imagery may have elicited negative feelings towards all Poles, thus diminishing the perception of similarity with the entire group. In Study 5, we presented a story illustrating a challenging situation in Ukraine. In this case, Ukrainians may have felt that their social identity was threatened, prompting them to differentiate themselves from the Polish group, and thus, again, reducing the perception of similarity with Poles. However, in Study 6, we employed a story unrelated to any specific group to evoke anger, and our results followed the same pattern.

Finally, the divergence between correlational and experimental findings may also be attributable to the method of measuring emotional similarity. In the correlational study, we adopted an objective approach, comparing individuals' emotional patterns with the average emotional pattern of the whole group using profile correlation (e.g., De Leersnyder et al., 2011, 2015; Delvaux et al., 2015). This approach has the advantage of considering various emotions and constructing emotional patterns by capturing emotional intensities at the group level. In the experimental studies, we made use of a more subjective approach, manipulating and measuring emotional similarity as an individual participant's state in a given moment (Livingstone et al., 2011; McDonald et al., 2017). This approach provides detailed information about a person's reactions and emotional similarity in relation to a single strong, action-oriented emotion on an individual level. While our initial intention was for these two methodological approaches to complement each other in terms of findings on the link between emotional similarity and well-being, it is possible that they stressed the difference in the findings. These findings serve to open a debate about how emotional similarity should be assessed, handled, and precisely defined.

Future research should prioritize the development of standardized measures of emotional similarity applicable across diverse populations and contexts. This could help establish consistent methodologies and enable more meaningful comparisons across studies. Additionally, it is essential to adopt a broader perspective on emotional similarity, given its complexity and multifaceted nature. Therefore, future investigations should incorporate a range of methodologies to assess this phenomenon. As exemplified in Study 3, we employed a self-developed scale to measure emotional similarity based on shared emotional responses between groups (e.g., "Poles and Ukrainians have similar emotional responses in the same situations."). Measuring emotional similarity in this fashion, no link to relational and psychological well-being was observed, and its link with the emotional similarity measured with the profile

correlational method was rather weak (.19). These findings underscore the importance of exploring different dimensions of emotional similarity, determining the most effective approaches for promoting well-being.

Previous research has overlooked the underlying mechanisms that may elucidate the link between emotional similarity and various outcomes. We hypothesized that greater emotional similarity would be associated with reduced meta-prejudice and stronger self-categorization with the host group, which, in turn, would be linked to higher psychological and relational well-being. However, our hypotheses received no support in either the correlational or experimental studies. While there were consistent correlations between emotional similarity and meta-prejudice as well as self-categorization, the links were not robust, ranging from .11 to .29. Interestingly, in Study 3, the self-developed scale for measuring emotional similarity demonstrated stronger links: .23 for meta-prejudice and .38 for self-categorization. These findings emphasize that emotional similarity is a multifaceted construct that can be assessed using various methods, including those not employed in our research, such as facial expressions, vocal intonation, physiological responses, and neural activity. To gain a comprehensive understanding of emotional similarity, future studies should explore multimodal approaches, combining and integrating several modalities.

Implications

While our project focuses primarily on Ukrainians – the largest immigrant group in Poland – we propose that our model is one that can be more broadly applicable to minority-majority relationships, with potential practical applications. Yet, given that we obtained only correlational evidence, the following suggestions should be taken with caution.

Considering the link between emotional similarity and the well-being of immigrants, providing emotional support within immigrant communities can play a crucial role in improving immigrants' well-being. Social workers, policymakers, or psychologists could create

and implement initiatives that offer immigrants emotional support. These interventions could take the form of peer support groups or therapy programs that offer immigrants a safe space to express and explore their feelings while gaining a better understanding of the emotional patterns within the majority group. Additionally, greater attention should be given to cultural awareness, benefiting both immigrants and the majority group. Both sides should strive to learn more about each other's cultures and emotional patterns to facilitate emotional communication between groups and to create a safe environment for experiencing emotional similarity between them. Specialized training programs for professionals, community members and immigrants could be initiated to enhance their understanding of cultural differences, especially differences in emotional communication, which can significantly influence emotional similarity. Moreover, integration and inclusion initiatives should be implemented, as the degree of assimilation into the host society can impact the sense of emotional similarity. Promoting greater emotional resemblance between immigrants and the host society may lead to improved mental and emotional health. Policymakers should therefore concentrate on creating and implementing integration programs that cultivate a sense of belonging to the host society. These initiatives may include language classes or cultural orientation meetings, along with the presentation of the inclusion policies that promote diversity, equity and an inclusive and supportive environment.

Overall, our project holds relevance at both local and global levels as it identifies and describes the factors influencing the well-being of immigrants, thereby contributing to improvements in their lives. Positive relationships with others and a sense of belonging are vital features of everyday life satisfaction and comfort. Furthermore, our findings contribute to understanding the significance of emotions in daily communication, improving social interactions and informing the creation of inclusion policies, interventions programs, and immigrant integration strategies.

Limitations and future directions

Our research has several limitations. In correlational studies, we measured general well-being using just one item. However, we addressed this limitation in Studies 2 and 3 by employing additional measures of relational and psychological well-being. Another limitation lies in our investigation of meta-prejudice and self-categorization as underlying mechanisms of emotional similarity through correlational design in Studies 1-3, given the ongoing criticism of assessing mediating mechanisms in correlational studies (Fiedler et al., 2011; Rohrer et al., 2022). The relationship between intergroup emotional similarity, meta-prejudice, and self-categorization is a complex and dynamic process. While it is plausible to expect that increased meta-prejudice and self-categorization would lead to greater intergroup emotional similarity, there are reasons to believe that greater intergroup emotional similarity can also influence meta-prejudice and self-categorization. Specifically, similar emotional experiences foster greater relationship cohesion (e.g., Acitelli et al., 2001) and a better understanding of others' emotions (Hatfield et al., 1994; Keltner & Kring, 1998; Kemper, 1991), potentially reducing meta-prejudice. Furthermore, experiencing similar emotions with outgroup members is associated with a stronger sense of group bonding (Spoor & Kelly, 2004; van der Schalk et al., 2011). We also addressed this issue in Part II of the project by applying experimental designs to examine the causal relations between emotional similarity and meta-prejudice, self-categorization, and well-being. Moreover, we conducted multiple studies to replicate our findings, and in each controlled for factors that could be related to emotional similarity, meta-prejudice and self-categorization, thereby strengthening the robustness of our findings. Finally, we provided theoretical arguments that support the proposed causal chain.

As previously emphasized, one of the main limitations present in experimental studies is the focus on only one primary, negative emotion, i.e. anger, in eliciting emotional similarity. Future studies should manipulate emotional similarity using different emotions, including both

positive and negative, as well as primary and secondary ones. Additionally, in our experimental studies, we adopted three different approaches to anger-eliciting stimuli: Studies 4 and 5 utilized topics related to ingroup and outgroup, while Study 6 used a topic unrelated to either group. Although the results across all experimental studies consistently showed no significance, subsequent studies should follow up on this topic and examine whether the emotion-eliciting stimuli should be related or unrelated to the group conflict. Overall, more research, including experimental studies, is required to determine the boundary circumstances under which the manipulation of emotional similarity is successful.

Furthermore, two out of three of our experimental studies were conducted online and were relatively lengthy (~20 minutes). The online environment does not guarantee participant involvement, despite the use of attention checks, and it raises questions about the outcomes. Future studies should focus on verifying emotional similarity as a state applying different procedures in both online and offline environments.

Moreover, Study 3 differed in context compared to other studies, as it was conducted during the war in Ukraine, and many of our participants had relocated to Poland due to the conflict rather than for economic reasons. Despite this contextual difference, the pattern of results remained consistent with other correlational studies, even after controlling for the duration of these Ukrainians' stay in Poland.

Furthermore, the sample of immigrants could be more diverse. On the one hand, future research could include a representative sample of various immigrants from various countries. On the other hand, future studies could focus on more homogeneous groups, such as those with similar age, gender, or other demographic features. It could be that evoking emotional similarity among immigrants and host society groups that already share similar features could be more effective.

It is additionally important to note that our experimental studies lacked a genuine control condition. Therefore, future studies should include an experimental design that includes a condition where no emotional similarity is manipulated, or anger is induced, in addition to low and high similarity conditions. Lastly, in our research, aside from demographics, we did not account for potential factors that may influence the link between emotional similarity and well-being. This link may be complex and influenced by a variety of factors, including acculturation strategies, cultural distance, or individual factors. Acculturation strategies, for example, may be related to varying levels of emotional similarity in relationships as well as varying levels of well-being. To balance their cultural identity with the ideals of the new culture, immigrants who adopt an assimilation vs separation approach may be more likely to seek emotional similarity in their interactions with the host society members. The significance of emotional similarity in relationships may also vary across cultures. For instance, whereas some cultures value emotional restraint and similarity, others may prioritize emotional expressiveness. Thus, when evoking emotional similarity, its effectiveness and importance for well-being may depend on the culture of both the immigrant group and the host society. Finally, individual differences in emotional regulation may also be relevant. Individuals who struggle with regulating their emotions may be more inclined to seek out emotional similarity in their relationships as a means to achieve emotional stability and support. Thus, for such immigrants, evoking emotional similarity with the host society may be particularly relevant to their well-being. Further research is needed to gain a better understanding of these factors and their interactions with emotional similarity in shaping well-being.

References

Acitelli, L. K., Kenny, D. A., & Weiner, D. (2001). The importance of similarity and understanding of partners' marital ideals to relationship satisfaction. *Personal Relationships*, *8*(2), 167–185. https://doi.org/10.1111/j.1475-6811.2001.tb00034.x

Albright, L., & Malloy, T. E. (1999). Self-observation of social behavior and metaperception. *Journal of Personality and Social Psychology*, *77*(4), 726–734. https://doi.org/10.1037/0022-3514.77.4.726

Allport, G. W. (1954/1979). *The nature of prejudice.* Perseus Books.

Ambroziak, A. (2022, kwiecień 02) *Dostępność najmu spada, ceny wariują. Bez interwencji państwa Polsce grozi fala bezdomności.* Oko.press. https://oko.press/dostepnosc-najmu-spada-ceny-wariuja-bez-interwencji-panstwa-polsce-grozi-fala-bezdomnosci

Anderson, C., Keltner, D., & John, O. P. (2003). Emotional convergence between people over time. *Journal of Personality and Social Psychology, 84*(5), 1054–1068. https://doi.org/10.1037/0022-3514.84.5.1054

Barlow, F. K., Louis, W. R., & Hewstone, M. (2009). Rejected! Cognitions of rejection and intergroup anxiety as mediators of the impact of cross-group friendships on prejudice. *British Journal of Social Psychology*, *48*(3), 389-405. https://doi.org/10.1348/014466608X387089

Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative Science Quarterly*, *47*(4), 644-675. https://doi.org/10.2307/3094912

Basabe, N., Zlobina, A., & Páez, D. (2004). *Integración socio-cultural y adaptación psicológica de los inmigrantes extranjeros en el País Vasco*. Servicio Central de Publicaciones del Gobierno Vasco. http://www.lehendakaritza.ejgv.euskadi.eus/contenidos/documentacion/cuaderno_sociologico_vasco_15/es_cu_soc15/adjuntos/csv15.pdf

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Beiser, M., Hamilton, H., Rummens, J. A., Oxman-Martinez, J., Ogilvie, L., Humphrey, C., & Armstrong, R. (2010). Predictors of emotional problems and physical aggression among children of Hong Kong Chinese, Mainland Chinese and Filipino immigrants to Canada. *Social Psychiatry and Psychiatric Epidemiology*, *45*, 1011-1021. https://doi.org/10.1007/s00127-009-0140-3

Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations*, *29*, 697–712. https://doi.org/10.1016/j.ijintrel.2005.07.013

Bobowik, M., Basabe, N., & Páez, D. (2015). The bright side of migration: Hedonic, psychological, and social well-being in immigrants in Spain. *Social Science Research*, *51*, 189-204. https://doi.org/10.1016/j.ssresearch.2014.09.011

Bogardus, E. S. (1933). A social distance scale. *Sociology & Social Research, 17,* 265–271.

Boiger, M., Mesquita, B., Uchida, Y., & Feldman Barrett, L. (2013). Condoned or Condemned: The Situational Affordance of Anger and Shame in the United States and Japan. *Personality and Social Psychology Bulletin*, *39*(4), 540–553. https://doi.org/10.1177/0146167213478201

Bonney, M. E. (1946). A sociometric study of the relationship of some factors to mutual friendships on the elementary, secondary, and college levels. *Sociometry*, *9*, 21–47. https://doi.org/10.2307/2785509

Branscombe, N. R., Schmitt, M. T., & Harvey, R. D. (1999). Perceiving pervasive discrimination among African Americans: Implications for group identification and well-being. *Journal of Personality and Social Psychology, 77*(1), 135–149. https://doi.org/10.1037/0022-3514.77.1.135

Brown, L. M., & Lopez, G. E. (2001). Political contacts: Analyzing the role of similarity in theories of prejudice. *Political Psychology*, *22*, 279–292. https://doi.org/10.1111/0162-895X.00239

Butz, D. A., & Plant, E. A. (2006). Perceiving outgroup members as unresponsive: Implications for approach-related emotions, intentions, and behavior. *Journal of Personality and Social Psychology, 91*(6), 1066–1079. https://doi.org/10.1037/0022-3514.91.6.1066

Byrne, D., & Blaylock, B. (1963). Similarity and assumed similarity of attitudes between husbands and wives. *The Journal of Abnormal and Social Psychology, 67*(6), 636–640. https://doi.org/10.1037/h0045531

Campos, J. J., Campos, R. G., & Barrett, K. C. (1989). Emergent themes in the study of emotional development and emotion regulation. *Developmental Psychology, 25*(3), 394–402. https://doi.org/10.1037/0012-1649.25.3.394

Cassidy, T. (2001). Self-categorization, coping and psychological health among unemployed mid-career executives. *Counselling Psychology Quarterly*, *14*(4), 303-315. https://doi.org/10.1080/09515070110102800

Cavazos-Rehg, P. A., Zayas, L. H., & Spitznagel, E. L. (2007). Legal Status, Emotional Well-Being and Subjective Health Status of Latino Immigrants. *Journal of the National Medical Association*, *99*(10), 1126-1131.

Chamie, J. (2020). International migration amid a world in crisis. *Journal on Migration and Human Security*, *8*(3), 230-245. https://doi.org/10.1177/23315024209487

Cho, S., Doren, N. V., Minnick, M. R., Albohn, D. N., Adams, R. B., & Soto, J. A. (2018). Culture Moderates the Relationship Between Emotional Fit and Collective Aspects of Well-Being. *Frontiers in Psychology*, *9*, 1509–1068. https://doi.org/10.3389/fpsyg.2018.01509

Choi, E., & Chentsova-Dutton, Y. E. (2017). The relationship between momentary emotions and well-being across European Americans, Hispanic Americans, and Asian Americans.

Cognition and Emotion, *31*(6), 1277–1285.

https://doi.org/10.1080/02699931.2016.1210571

Cobb, C. L., Meca, A., Branscombe, N. R., Schwartz, S. J., Xie, D., Zea, M. C., Fernandez, C. A., & Sanders, G. L. (2019). Perceived discrimination and well-being among unauthorized Hispanic immigrants: The moderating role of ethnic/racial group identity centrality. *Cultural Diversity and Ethnic Minority Psychology, 25*(2), 280–287. https://doi.org/10.1037/cdp0000227

Consedine, N. S., Chentsova-Dutton, Y. E., & Krivoshekova, Y. S. (2014). Emotional acculturation predicts better somatic health: Experiential and expressive acculturation among immigrant women from four ethnic groups. *Journal of Social and Clinical Psychology*, *33*(10), 867–889. https://doi.org/10.1521/jscp.2014.33.10.867

Costa-Lopes, R., Vala, J. & Judd, C. (2012). Similarity and dissimilarity in intergroup relations: Different dimensions, different processes. *Revue Internationale de Psychologie Sociale*, 25, 31-65. https://www.cairn.info/revue--2012-1-page-31.htm

Crush, J., & Ramachandran, S. (2010). Xenophobia, international migration and development. *Journal of Human Development and Capabilities*, *11*(2), 209-228. https://doi.org/10.1080/19452821003677327

Damasio, A. R. (1994). *Descartes' error: Emotion, reason, and the human brain*. Avon Books.

Daniels, K., & Harris, C. (2000). Work, psychological well-being and performance. *Occupational Medicine*, *50*(5), 304-309. https://doi.org/10.1093/occmed/50.5.304

Dąbrowska A. (2018). *Polacy, Ukraińcy – Mity, plotki I fake newsy*. Wydawca Petit SK.

De Jong, G. F., & Madamba, A. B. (2001). A double disadvantage? Minority group, immigrant status, and underemployment in the United States. *Social Science Quarterly, 82*(1), 117–130. https://doi.org/10.1111/0038-4941.00011

Delle Fave, A., & Bassi, M. (2009). Sharing optimal experiences and promoting good community life in a multicultural society. *The Journal of Positive Psychology*, *4*(4), 280–289. http://dx.doi.org/10.1080/17439760902933716

De Leersnyder, J. (2017). Emotional acculturation: A first review. *Current Opinion in Psychology*, *17*, 67–73. https://doi.org/10.1016/j.copsyc.2017.06.007

De Leersnyder, J., Kim, H. S., & Mesquita, B. (2020). My emotions belong here and there: extending the phenomenon of emotional acculturation to heritage culture fit. *Cognition and Emotion*, *34*(8), 1573-1590. https://doi.org/10.1080/02699931.2020.1781063

De Leersnyder, J., Kim, H., & Mesquita, B. (2015). Feeling right is feeling good: Psychological well-being and emotional fit with culture in autonomy- versus relatedness-promoting situations. *Frontiers in Psychology*, *06*. https://doi.org/10.3389/fpsyg.2015.00630

De Leersnyder, J., Mesquita, B., & Kim, H. S. (2011). Where do my emotions belong? a Study of immigrants' emotional acculturation. *Personality and Social Psychology Bulletin*, *37*(4), 451–463. https://doi.org/10.1177/0146167211399103

De Leersnyder, J., Mesquita, B., Kim, H., Eom, K., & Choi, H. (2014). Emotional fit with culture: A predictor of individual differences in relational well-being. *Emotion*, *14*(2), 241–245. https://doi.org/10.1037/a0035296

Delvaux, E., Meeussen, L., & Mesquita, B. (2015). Feel like you belong: On the bidirectional link between emotional fit and group identification in task groups. *Frontiers in Psychology*, *6*. https://doi.org/10.3389/fpsyg.2015.01106

DeSteno, D., Dasgupta, N., Bartlett, M. Y., & Cajdric, A. (2004). Prejudice From Thin Air. The Effect of Emotion on Automatic Intergroup Attitudes. *Psychological Science*, *15*(5), 319–324. https://doi.org/10.1111/j.0956-7976.2004.00676.x

Diener, E., Kesebir, P., & Lucas, R. (2008). Benefits of Accounts of Well-Being—For Societies and for Psychological Science. *Applied Psychology*, *57*, 37–53. https://doi.org/10.1111/j.1464-0597.2008.00353.x

Dodge, R., Daly, A., Huyton, J., & Sanders, L. (2012). The challenge of defining well-being. *International Journal of Well-being*, *2*(3), 222–235.

Dow, H. D. (2011). The acculturation processes: The strategies and factors affecting the degree of acculturation. *Home Health Care Management & Practice*, *23*(3), 221-227. https://doi.org/10.1177/1084822310390877

Eid, M., & Diener, E. (2001). Norms for experiencing emotions in different cultures: Inter- and intranational differences. *Journal of Personality and Social Psychology, 81*(5), 869–885. https://doi.org/10.1037/0022-3514.81.5.869

European Union. (2022). *Conference on the Future of Europe. Report on the Final Outcome.* *https://futureu.europa.eu/en/pages/reporting?locale=en*

Eurostat. Statistics Explainded. (2022). *Migration and migrant population statistics.* *https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Migration_and_migrant_population_statistics*

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*, 175-191.

Feng, D., & Baker, L. (1994). Spouse similarity in attitudes, personality, and psychological well-being. *Behavior Genetics*, *24*, 357-364.

Fenta, H., Hyman, I., & Noh, S. (2004). Determinants of depression among Ethiopian

immigrants and refugees in Toronto. *The Journal of Nervous and Mental

Disease*, *192*(5), 363-372. http://dx.doi.org/10.1097/01.nmd.0000126729.08179.07

Fiedler, K., Schott, M., & Meiser, T. (2011). What mediation analysis can (not) do. *Journal of

Experimental Social Psychology*, *47*(6), 1231-1236.

https://doi.org/10.1016/j.jesp.2011.05.007

Finch, B. K., Kolody, B., & Vega, W. A. (2000). Perceived discrimination and depression

among Mexican-origin adults in California. *Journal of Health and Social Behavior*,

41(3), 295-313. https://doi.org/10.2307/2676322

Fischer, A. H., & Manstead, A. S. R. (2016). Social functions of emotion and emotion

regulation. In L. F. Barrett, M. Lewis, & J. M. Haviland-Jones (Eds.), *Handbook of

emotions* (4th ed., pp. 424–439). Guilford.

Fischer, A. H., Manstead, A., & Zaalberg, R. (2003). Social influences on the emotion

process. *European Review of Social Psychology*, 14, 171–201.

http://dx.doi.org/10.1080/10463280340000054

Frey, F. E., & Tropp, L. R. (2006). Being seen as individuals versus as group members:

Extending research on metaperception to intergroup contexts. *Personality and Social

Psychology Review*, *10*(3), 265-280. https://doi.org/10.1207/s15327957pspr1003_5

Gee, G.C., Ryan, A., Laflamme, D.J., & Holt, J. (2006). Self-reported discrimination and

mental health status among African descendants, Mexican Americans, and other Latinos

in the New Hampshire REACH 2010 initiative: the added dimension of immigration.

American Journal of Public Health, *96*(10), 1821–1828.

http://dx.doi.org/10.2105/AJPH.2005.080085

George, J. M. (1990). Personality, affect, and behavior in groups. *Journal of Applied

Psychology, 75*(2), 107–116. https://doi.org/10.1037/0021-9010.75.2.107

Goldenberg, A., Garcia, D., Halperin, E., Zaki, J., Kong, D., Golarai, G., & Gross, J. J.

    (2020). Beyond emotional similarity: The role of situation-specific motives. *Journal of*

    Experimental Psychology: General, 149(1), 138–

    159. https://doi.org/10.1037/xge0000625

Gonzaga, G. C., Campos, B., & Bradbury, T. (2007). Similarity, convergence, and

    relationship satisfaction in dating and married couples. *Journal of Personality and*

    Social Psychology, 93(1), 34–48. https://doi.org/10.1037/0022-3514.93.1.34

Gordijn, E. H. (2002). Meta-stereotypes and meta-prejudice: Some suggestions for future

    research. *Revista de Psicología Social*, *17*(3), 283–286.

    https://doi.org/10.1174/02134740260372991

Gordijn, E., Finchilescu, G., Brix, L., Wijnants, N., & Koomen, W. (2008). The influence of

    prejudice and stereotypes on anticipated affect: Feelings about a potentially negative

    interaction with another ethnic group. *South Africa Journal of Psychology*, *38*(4), 589–

    602. https://doi.org/10.1177/008124630803800401

Gordon, M. M. (1964). *Assimilation in American life: The role of race, religion, and national*

    origins. Oxford University Press.

Grutterink, H., & Meister, A. (2022). Thinking of you thinking of me: An integrative review

    of meta-perception in the workplace. *Journal of Organizational Behavior*, *43*(2), 327-

    341. https://doi.org/10.1002/job.2516

Hall, B. J., Pangan, C. A. C., Chan, E. W., & Huang, R. L. (2019). The effect of

    discrimination on depression and anxiety symptoms and the buffering role of social

    capital among female domestic workers in Macao, China. *Psychiatry Research*, *271*,

    200-207. https://doi.org/10.1016/j.psychres.2018.11.050

Halperin, E., Russell, A. G., Dweck, C. S., & Gross, J. J. (2011). Anger, hatred, and the quest

for peace: Anger can be constructive in the absence of hatred. *Journal of Conflict*

Resolution, *55*(2), 274-291. https://doi.org/10.1177/0022002710383670

Haslam, S. A., Jetten, J., Postmes, T., & Haslam, C. (2009). Social identity, health and well-

being: An emerging agenda for applied psychology. *Applied Psychology*, *58*(1), 1-23.

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1994). *Emotional contagion*. Cambridge

University Press.

Henríquez, D., Urzúa, A., & López-López, W. (2021). Indicators of Identity and

Psychological Well-Being in Immigrant Population. *Frontiers in Psychology*, *12*.

https://www.frontiersin.org/articles/10.3389/fpsyg.2021.707101

Hernández-Plaza, S., García-Ramírez, M., Camacho, C., & Paloma, V. (2010). New

settlement and wellbeing in oppressive contexts: A liberation psychology approach. *The*

Psychology of Global Mobility, 235-256.

Hodson, G., Choma, B. L., Boisvert, J., Hafer, C. L., MacInnis, C. C., & Costello, K. (2013).

The role of intergroup disgust in predicting negative outgroup evaluations. *Journal of*

Experimental Social Psychology, *49*(2), 195-205.

https://doi.org/10.1016/j.jesp.2012.11.002

Hovey, J. D., & Magana, C. (2000). Acculturative stress, anxiety, and depression among

Mexican immigrant farmworkers in the Midwest United States. *Journal of Immigrant*

Health, *2*, 119–131. https://doi.org/10.1023/A:1009556802759

Hughes, M., Kiecolt, K. J., Keith, V. M., & Demo, D. H. (2015). Racial Identity and Well-

Being among African Americans. *Social Psychology Quarterly*, *78*(1), 25–

48. https://doi.org/10.1177/0190272514554043

Huynh, V. W., & Fuligni, A. J. (2010). Discrimination hurts: The academic, psychological, and physical well-being of adolescents. *Journal of Research on adolescence*, *20*(4), 916-941. http://dx.doi.org/10.1111/j.1532-7795.2010.00670.x

Ilies, R., Wagner, D. T., & Morgeson, F. P. (2007). Explaining affective linkages in teams: Individual differences in susceptibility to contagion and individualism-collectivism. *Journal of Applied Psychology, 92*(4), 1140–1148. https://doi.org/10.1037/0021-9010.92.4.1140

Info Sapiens – the Public Opinion Research Center. (2022). *Social and Political Research.* https://www.sapiens.com.ua/en/socpol-category?id=0

International Organization for Migration. (2020). *World Migration Report.* https://worldmigrationreport.iom.int/wmr-2020-interactive/

Izard, C.E. (1991). *The Psychology of Emotions*. Plenum Press.

Jasini, A., De Leersnyder, J., Gagliolo, M., Kende, J., Phalet, K., & Mesquita, B. (2023). Show me your friends, I'll tell you your emotions: Emotional fit of immigrant-origin minority youth in cross-cultural friendship networks. *British Journal of Social Psychology*. https://doi.org/10.1111/bjso.12640

Jasini, A., De Leersnyder, J., & Mesquita, B. (2018). Feeling 'right' when you feel accepted: emotional acculturation in daily life interactions with majority members. *Frontiers in Psychology*, *9*, 1093. https://doi.org/10.3389/fpsyg.2018.01093

Jasini, A., De Leersnyder, J., Phalet, K., & Mesquita, B. (2019). Tuning in emotionally: Associations of cultural exposure with distal and proximal emotional fit in acculturating youth. *European Journal of Social Psychology*, *49*(2), 352-365. https://doi.org/10.1002/ejsp.2516

Jasinskaja-Lahti, I., Liebkind, K., & Perhoniemi, R. (2006). Perceived discrimination and

   well-being: A victim study of different immigrant groups. *Journal of Community &*

   Applied Social Psychology, *16*(4), 267-284. https://doi.org/10.1002/casp.865

Jetten, J., Branscombe, N. R., Haslam, S. A., Haslam, C., Cruwys, T., Jones, J. M., Cui, L.,

   Dingle, G., Liu, J., Murphy, S., Thai, A., Walter, Z., & Zhang, A. (2015). Having a Lot

   of a Good Thing: Multiple Important Group Memberships as a Source of Self-Esteem.

   PLOS ONE, *10*(5), 1–29. https://doi.org/10.1371/journal.pone.0124609

Jetten, J., Haslam, S. A., Cruwys, T., Greenaway, K. H., Haslam, C., & Steffens, N. K.

   (2017). Advancing the social identity approach to health and well-being: Progressing

   the social cure research agenda. *European Journal of Social Psychology*, *47*(7), 789-

   802. https://doi.org/10.1002/ejsp.2333

Jetten, J., Spears, R., & Manstead, A. S. R. (2001). Similarity as a source of discrimination:

   The role of group identification. *European Journal of Social Psychology*, *31*, 621–640.

   https://doi.org/10.1002/ejsp.72

Kaiser, C. R., Major, B., & McCoy, S. K. (2004). Expectations about the future and the

   emotional consequences of perceiving prejudice. *Personality and Social Psychology*

   Bulletin, *30*(2), 173-184. https://doi.org/10.1177/0146167203259927

Karaś, D., & Cieciuch, J. (2018). The relationship between identity processes and well-being

   in various life domains. *Personality and Individual Differences*, *121*, 111-119.

   https://doi.org/10.1016/j.paid.2017.09.027

Kashima, E. S., & Abu-Rayya, H. M. (2014). Longitudinal Associations of Cultural Distance

   With Psychological Well-Being Among Australian Immigrants From 49

   Countries. *Journal of Cross-Cultural Psychology*, *45*(4), 587–

   600. https://doi.org/10.1177/0022022113519857

Keltner, D., & Haidt, J. (1999). Social functions of emotions at four levels of analysis.

    Cognition & Emotion, *13*(5), 505–521. https://doi.org/10.1080/026999399379168

Keltner, D., & Kring, A. M. (1998). Emotion, social function, and psychopathology. *Review*

    of General Psychology, *2*(3), 320–342. https://doi.org/10.1037/1089-2680.2.3.320

Kemper, T. D. (1991). Predicting emotions from social relations. *Social Psychology*

    Quarterly, 54, 330 –342. https://doi.org/10.2307/2786845

Kenny, D. A., & DePaulo, B. M. (1993). Do people know how others view them? An

    empirical and theoretical account. *Psychological Bulletin, 114*(1), 145–

    161. https://doi.org/10.1037/0033-2909.114.1.145

Kessler, T., & Hollbach, S. (2005). Group-based emotions as determinants of ingroup

    identification. *Journal of Experimental Social Psychology*, *41*(6), 677-685.

    https://doi.org/10.1016/j.jesp.2005.01.001

Kiang, L., Grzywacz, J. G., Marín, A. J., Arcury, T. A., & Quandt, S. A. (2010). Mental

    health in immigrants from nontraditional receiving sites. *Cultural Diversity and Ethnic*

    Minority Psychology, 16(3), 386–394. https://doi.org/10.1037/a0019907

Kim, E., Hogge, I., & Salvisberg, C. (2014). Effects of Self-Esteem and Ethnic Identity:

    Acculturative Stress and Psychological Well-Being Among Mexican

    Immigrants. *Hispanic Journal of Behavioral Sciences*, *36*(2), 144–

    163. https://doi.org/10.1177/0739986314527733

Kitayama, S., Mesquita, B., & Karasawa, M. (2006). Cultural affordances and emotional

    experience: Socially engaging and disengaging emotions in Japan and the United States.

    Journal of Personality and Social Psychology, *91*(5), 890–903.

    https://doi.org/10.1037/0022-3514.91.5.890

Klep, A., Wisse, B., & Van der Flier, H. (2011). Interactive affective sharing versus non-

    interactive affective sharing in work groups: Comparative effects of group affect on

work group performance and dynamics. *European Journal of Social Psychology*, *41*(3), 312–323. https://doi.org/10.1002/ejsp.775

Kteily, N., & Bruneau, E. (2017). Backlash: The politics and real-world consequences of minority group dehumanization. *Personality and Social Psychology Bulletin*, *43*(1), 87-104. https://doi.org/10.1177/0146167216675334

Kteily, N., Hodson, G., & Bruneau, E. (2016). They see us as less than human: Metadehumanization predicts intergroup conflict via reciprocal dehumanization. *Journal of Personality and Social Psychology, 110*(3), 343–370. https://doi.org/10.1037/pspa0000044

Kuppens, P., Realo, A., & Diener, E. (2008). The role of positive and negative emotions in life satisfaction judgment across nations. *Journal of Personality and Social Psychology, 95*(1), 66–75. https://doi.org/10.1037/0022-3514.95.1.66

Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford Univeristy Press.

Lesyk, Y. (2017). Emigracja zarobkowa obywateli Ukrainy do Polski w latach 2014-2017. Aspekty prawne i ekonomiczne. In M. Lubicz Miszewski (Eds.), *Emigracja obywateli Ukrainy do Polski po 2013 roku i jej wpły na bezpieczeństwo* (pp. 27–45). Wydawnictwo Akademii Wojsk Lądowych

Livingstone, A. G., Spears, R., Manstead, A. S. R., Bruder, M., & Shepherd, L. (2011). We feel, therefore we are: Emotion as a basis for self-categorization and social action. *Emotion*, *11*(4), 754–767. https://doi.org/10.1037/a0023223

Livingstone, A. G., Windeatt, S., Nesbitt, L., Kerry, J., Barr, S. A., Ashman, L., Ayers, R., Bibby, H., Boswell, E., Brown, J., Chiu, M., Cowie, E., Doherr, E., Douglas, H., Durber, L., Ferguson, M., Ferreira, M., Fisk, I., Fleming, B., … Wu, J.-C. (2020). Do you get us? A multi-experiment, meta-analytic test of the effect of felt understanding in

intergroup relations. *Journal of Experimental Social Psychology*, *91*, 104028. https://doi.org/10.1016/j.jesp.2020.104028

López-Rodríguez, L., Cuadrado, I., & Navas, M. (2017). I will help you because we are similar: Quality of contact mediates the effect of perceived similarity on facilitative behaviour towards immigrants. *International Journal of Psychology*, *52*(4), 273-282. https://doi.org/10.1002/ijop.12212

Lun, J., Kesebir, S., & Oishi, S. (2008). On feeling understood and feeling well: The role of interdependence. *Journal of Research in Personality*, *42*(6), 1623–1628. https://doi.org/10.1016/j.jrp.2008.06.009

Łosiak, W. (2007). *Psychologia emocji*. Wydawnictwa Akademickie i Profesjonalne.

Mackie, D. M., & Smith, E. R. (2015). Intergroup emotions. In M. Mikulincer, P. R. Shaver, J. F. Dovidio, & J. A. Simpson (Eds.), *APA Handbook of Personality and Social Psychology, Vol. 2. Group Processes* (pp. 263–293). American Psychological Association. https://doi.org/10.1037/14342-010

Maggino, F. (2015). Assessing the Subjective Well-being of Nations. In W. Glatzer, L. Camfield, V. Møller, & M. Rojas (Eds.), *Global Handbook of Quality of Life* (pp. 803–822). Springer Netherlands. https://doi.org/10.1007/978-94-017-9178-6_37

Major, B., Quinton, W. J., & McCoy, S. K. (2002). Antecedents and consequences of attributions to discrimination: Theoretical and empirical advances. In M. P. Zanna (Eds.), *Advances in Experimental Social Psychology* (Vol.34, pp. 251-330). Academic Press.

Manstead, A., & Fischer, A. H. (2001). Social appraisal: The social world as object of and influence on appraisal processes. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Emotion: Theory, Methods, Research* (pp. 221–232). Oxford University Press.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*(2), 224–253. https://doi.org/10.1037/0033-295X.98.2.224

Masuda, T., Ellsworth, P. C., Mesquita, B., Leu, J., Tanida, S., & Van de Veerdonk, E. (2008). Placing the face in context: Cultural differences in the perception of facial emotion. *Journal of Personality and Social Psychology, 94*(3), 365–381. https://doi.org/10.1037/0022-3514.94.3.365

McDonald, M., Porat, R., Yarkoney, A., Reifen Tagar, M., Kimel, S., Saguy, T., & Halperin, E. (2017). Intergroup emotional similarity reduces dehumanization and promotes conciliatory attitudes in prolonged conflict. *Group Processes & Intergroup Relations*, *20*(1), 125–136. https://doi.org/10.1177/1368430215595107

Mehrabian, A., & Blum, J. S. (1997). Physical appearance, attractiveness, and the mediating role of emotions. *Current Psychology*, *16*, 20-42.

Méndez, E., Gómez, Á., & Tropp, L. R. (2007). When metaperceptions are affected by intergroup processes. *International Journal of Psychology and Psychological Therapy*, *7*(2), 237-250.

Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A., & Pietrzak, J. (2002). Sensitivity to status-based rejection: Implications for African American students' college experience. *Journal of Personality and Social Psychology, 83*(4), 896–918. https://doi.org/10.1037/0022-3514.83.4.896

Mesch, G. S., Turjeman, H., & Fishman, G. (2008). Perceived discrimination and the well-being of immigrant adolescents. *Journal of Youth and Adolescence*, *37*, 592-604. https://doi.org/10.1007/s10964-007-9210-6

Mesquita, B. (2010). Emoting: A Contextualized Process. In B. Mesquita, L. F. Barrett, & E. R. Smith (Eds.), *The Mind in Context* (pp. 83–104). The Guilford Press.

Mesquita, B., De Leersnyder, J., & Boiger, M. (2016). The cultural Psychology of Emotions. In L. F. Barrett, M. Lewis, & J. Haviland-Jones (Eds.), *Handbook of Emotions* (4th ed., pp. 393–411). Guilford Press.

Mesquita, B., & Frijda, N. H. (1992). Cultural variations in emotions: A

review. *Psychological Bulletin, 112*(2), 179–204. https://doi.org/10.1037/0033-

2909.112.2.179

Mierzynska, A. (2018). *W mediach społecznościowych coraz więcej nienawiści do*

Ukraińców. Jak to wpłynie na politykę PiS? Gazeta Wyborcza.

https://wyborcza.pl/7,162657,23936923,w-mediach-spolecznosciowych-coraz-wiecej-

nienawisci-do-ukraincow.html

Migracje.gov.pl. (2021), *Statistics*. https://migracje.gov.pl

Miller, A. M., & Chandler, P. J. (2002). Acculturation, resilience, and depression in midlife

women from the former Soviet Union. *Nursing Research*, *51*(1), 26-32.

Montoya, R. M., Horton, R. S., & Kirchner, J. (2008). Is actual similarity necessary for

attraction? A meta-analysis of actual and perceived similarity. *Journal of Social and*

Personal Relationships, *25*(6), 889-922. https://doi.org/10.1177/0265407508096700

Moore-Berg, S. L., Ankori-Karlinsky, L. O., Hameiri, B., & Bruneau, E. (2020). Exaggerated

meta-perceptions predict intergroup hostility between American political

partisans. *Proceedings of the National Academy of Sciences*, *117*(26), 14864-14872.

https://doi.org/10.1073/pnas.2001263117

Moradi, B., & Risco, C. (2006). Perceived discrimination experiences and mental health of

Latina/o american persons. *Journal of Counseling Psychology, 53*(4), 411–

421. https://doi.org/10.1037/0022-0167.53.4.411

Newcomb, T. M. (1956). The prediction of interpersonal attraction. *American Psychologist,*

11(11), 575–586. https://doi.org/10.1037/h0046141

Nguyen, H., Messé, L., & Stollak, G. (1999). Toward a more complex understanding of

acculturation and adjustment: Cultural involvements and psychosocial functioning in

Vietnamese youth. *Journal of Cross-Cultural Psychology*, *30*, 5–31. https://doi.org/10.1177/0022022199030001001

Noh, S., & Kaspar, V. (2003). Perceived Discrimination and Depression: Moderating Effects of Coping, Acculturation, and Ethnic Support. *American Journal of Public Health*, *93*(2), 232–238. https://doi.org/10.2105/AJPH.93.2.232

Oatley, K., Jenkins, J.M. (2003). *Zrozumieć emocje.* Wydawnictwo Naukowe PWN.

O'Brien, T. C., Leidner, B., & Tropp, L. R. (2018). Are they for us or against us? How intergroup metaperceptions shape foreign policy attitudes. *Group Processes & Intergroup Relations*, *21*(6), 941-961. https://doi.org/10.1177/136843021668464

Oh, Y., Koeske, G. F., & Sales, E. (2002). Acculturation, stress, and depressive symptoms among Korean immigrants in the United States. *The Journal of Social Psychology*, 142, 511–526. https://doi.org/10.1080/00224540209603915

Owuamalam, C., Issmer, C., Zagefka, H., Klaßen, M., & Wagner, U. (2014). Why Do Members of Disadvantaged Groups Strike Back at Perceived Negativity Towards the In-group?: Meta-stereotyping and expressions of discontent. *Journal of Community & Applied Social Psychology*, *24*(3), 249–264. https://doi.org/10.1002/casp.2165

Páez, D., Rimé, B., Basabe, N., Wlodarczyk, A., & Zumeta, L. (2015). Psychosocial effects of perceived emotional synchrony in collective gatherings. *Journal of Personality and Social Psychology, 108*(5), 711–729. https://doi.org/10.1037/pspi0000014

Parkinson, B. (1996). Emotions are social. *British Journal of Psychology*, *87*(4), 663-683. https://doi.org/10.1111/j.2044-8295.1996.tb02615.x

Parkinson, B. (2011). Interpersonal emotion transfer: Contagion and social appraisal. *Social and Personality Psychology Compass*, 5, 428–439. http://dx.doi.org/10.1111/j.1751-9004.2011.00365.x

Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin, 135*(4), 531–554. https://doi.org/10.1037/a0016059

Peters, K., & Kashima, Y. (2015). A multimodal theory of affect diffusion. *Psychological Bulletin*, 141, 966–992. http://dx.doi.org/10.1037/bul0000020

Pinel, E. C. (1999). Stigma consciousness: The psychological legacy of social stereotypes. *Journal of Personality and Social Psychology, 76*(1), 114–128. https://doi.org/10.1037/0022-3514.76.1.114

Plant, E. A., & Devine, P. G. (2003). The antecedents and implications of interracial anxiety. *Personality and Social Psychology Bulletin*, *29*(6), 790-801. https://doi.org/10.1177/0146167203029006011

Pratto, F., & Stewart, A. L. (2012). Group Dominance and the Half-Blindness of Privilege. *Journal of Social Issues*, *68*(1), 28–45. https://doi.org/10.1111/j.1540-4560.2011.01734.x

Precker, J. A. (1952). Similarity of valuings as a factor in selection of peers and near-authority figures. *The Journal of Abnormal and Social Psychology, 47*(2), 406–414. https://doi.org/10.1037/h0061869

Putra, I. E. (2014). The role of ingroup and outgroup metaprejudice in predicting prejudice and identity undermining. *Peace and Conflict: Journal of Peace Psychology, 20*(4), 574–579. https://doi.org/10.1037/pac0000068

Putra, I. E., & Wagner, W. (2017). Prejudice in interreligious context: The role of metaprejudice and majority-minority status. *Journal of Community & Applied Social Psychology*, *27*(3), 226–239. https://doi.org/10.1002/casp.2305

Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why Do We Need What We Need? A

Terror Management Perspective on the Roots of Human Social Motivation.

Psychological Inquiry, *8*(1), 1–20. https://doi.org/10.1207/s15327965pli0801_1

R Core Team (2021). R: A language and environment for statistical computing. R Foundation

for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/

Reis, H. T., Lemay, E. P., & Finkenauer, C. (2017). Toward understanding understanding:

The importance of feeling understood in relationships. *Social and Personality*

Psychology Compass, *11*(3). https://doi.org/10.1111/spc3.12308

Repke, L., & Benet-Martínez, V. (2018). The (diverse) company you keep: Content and

structure of immigrants' social networks as a window into intercultural relations in

Catalonia. *Journal of Cross-Cultural Psychology*, *49*(6), 924-944.

https://doi.org/10.1177/0022022117733475

Richardson, H. M. (1939). Studies of mental resemblance between husbands and wives and

between friends. *Psychological Bulletin, 36*(2), 104–

120. https://doi.org/10.1037/h0063390

Richardson, H. M. (1940). Community of values as a factor in friendships of college and adult

women. *The Journal of Social Psychology*, *11*(2), 303-312.

https://doi.org/10.1080/00224545.1940.9918751

Rimé, B., Finkenauer, C., Luminet, O., Zech, E., & Philippot, P. (1998). Social sharing of

emotion: New evidence and new questions. European Review of Social Psychology, *9*,

145–189. http://dx.doi.org/10.1080/14792779843000072

Ríos Rodríguez, M., & Moreno Jiménez, M. (2010). Influencia de la participación

comunitaria y la identidad con el lugar en la satisfacción vital en inmigrantes. *Escritos*

de Psicología (Internet), *3*(2), 8-16.

Rogler, L. H. (1994). International migrations: A framework for directing research. *American Psychologist, 49*(8), 701–708. https://doi.org/10.1037/0003-066X.49.8.701

Rohrer, J. M., Hünermund, P., Arslan, R. C., & Elson, M. (2022). That'sa lot to PROCESS! Pitfalls of popular path models. *Advances in Methods and Practices in Psychological Science*, *5*(2), 1–14. https://doi.org/10.1177/25152459221095827

Ryder, A. G., Alden, L. E., & Paulhus, D. L. (2000). Is acculturation unidimensional or bidimensional? A head-to-head comparison in the prediction of personality, self-identity, and adjustment. *Journal of Personality and Social Psychology, 79*(1), 49–65. https://doi.org/10.1037/0022-3514.79.1.49

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069–1081. https://doi.org/10.1037/0022-3514.57.6.1069

Ryff, C. D., Keyes, C. L., & Hughes, D. L. (2003). Status inequalities, perceived discrimination, and eudaimonic well-being: Do the challenges of minority life hone purpose and growth?. *Journal of health and Social Behavior*, *44*(3), 275-291. http://dx.doi.org/10.2307/1519779

Salami, S. O. (2010). Emotional intelligence, self-efficacy, psychological well-being and students attitudes: Implications for quality education. *European Journal of Educational Studies*, *2*(3), 247-257.

Sanchez, J., & Fernandez, D. (1993). Acculturative stress among Hispanics: A bidimensional model of ethnic identification. *Journal of Applied Social Psychology*, 23, 654–658. https://doi.org/10.1111/j.1559-1816.1993.tb01107.x

Sandelands, L., & St. Clair, L. (1993). Toward an empirical concept of group. *Journal for the Theory of Social Behavior*, *23*, 423–458.

Santuzzi, A. M. (2007). Perceptions and metaperceptions of negative evaluation: Group composition and meta-accuracy in a social relations model. *Group Processes & Intergroup Relations*, *10*(3), 383–398. https://doi.org/10.1177/1368430207078700

Schmitt, M. T., & Branscombe, N. R. (2002). The Meaning and Consequences of Perceived Discrimination in Disadvantaged and Privileged Social Groups. *European Review of Social Psychology*, *12*(1), 167–199. https://doi.org/10.1080/14792772143000058

Schmitt, M. T., Branscombe, N. R., Kobrynowicz, D., & Owen, S. (2002). Perceiving Discrimination Against One's Gender Group has Different Implications for Well-Being in Women and Men. *Personality and Social Psychology Bulletin*, *28*(2), 197–210. https://doi.org/10.1177/0146167202282006

Schmitt, M. T., Branscombe, N. R., Postmes, T., & Garcia, A. (2014). The consequences of perceived discrimination for psychological well-being: A meta-analytic review. *Psychological Bulletin, 140*(4), 921–948. https://doi.org/10.1037/a0035754

Schooley, M. (1936). Personality resemblances among married couples. *The Journal of Abnormal and Social Psychology, 31*(3), 340–347. https://doi.org/10.1037/h0055382

Schubert, T., & Otten, S. (2002). Overlap of self, ingroup and outgroup: Pictorial measurement of self-categorization. *Self and Identity*, *4*, 353–376. https://doi.org/10.1080/152988602760328012

Schwartz, S. H. (1999). A theory of cultural values and some implications for work. *Applied Psychology*, *48*, 23–47.

Schwarz, N., & Clore, G. L. (1996). Feelings and phenomenal experiences. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social Psychology: Handbook of Basic Principles* (pp. 433–465). Guilford Press.

Sels, L., Ruan, Y., Kuppens, P., Ceulemans, E., & Reis, H. (2020). Actual and Perceived

Emotional Similarity in Couples' Daily Lives. *Social Psychological and Personality

Science*, *11*(2), 266–275. https://doi.org/10.1177/1948550619845927

Shafaei, A., Abd Razak, N., & Nejati, M. (2016). Integrating two cultures successfully:

Factors influencing acculturation attitude of international postgraduate students in

Malaysia. *Journal of Research in International Education*, *15*(2), 137-154.

https://doi.org/10.1177/1475240916653566

Sharma, S., & Sharma, M. (2010). Self, social identity and psychological well-

being. *Psychological studies*, *55*, 118-136. https://doi.org/10.1007/s12646-010-0011-8

Shelton, J. N. (2003). Interpersonal concerns in social encounters between majority and

minority group members. *Group Processes & Intergroup Relations*, *6*, 171–185.

http://dx.doi.org/10.1177/1368430203006002003

Shelton, J. N., & Richeson, J. A. (2005). Intergroup Contact and Pluralistic

Ignorance. *Journal of Personality and Social Psychology, 88*(1), 91–

107. https://doi.org/10.1037/0022-3514.88.1.91

Shelton, J. N., Richeson, J. A., & Salvatore, J. (2005). Expecting to be the target of prejudice:

Implications for interethnic interactions. *Personality and Social Psychology

Bulletin*, *31*(9), 1189-1202. https://doi.org/10.1177/0146167205274894

Shelton, J. N., Richeson, J. A., & Vorauer, J. D. (2006). Threatened identities and interethnic

interactions. *European Review of Social Psychology*, *17*(1), 321-358.

https://doi.org/10.1080/10463280601095240

Shen, B.-J., & Takeuchi, D. T. (2001). A structural model of acculturation and mental health

status among Chinese Americans. *American Journal of Community Psychology*, *29*,

387–418. https://doi.org/10.1023/A:1010338413293

Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's

 WHOQOL-BREF quality of life assessment: Psychometric properties and results of the

 international field trial. A Report from the WHOQOL Group. *Quality of Life Research*,

 13, 299–310. doi:10.1023/B:QURE.0000018486.91360.00

Smith, E. R. (1993). Social Identity and Social Emotions: Toward New Conceptualizations of

 Prejudice. In D. M. Mackie & D. L. Hamilton (Eds.), *Affect, Cognition, and*

 Stereotyping: Interactive Processes in Group Perception (pp. 297–315). Academic

 Press.

Spoor, J. R., & Kelly, J. R. (2004). The evolutionary significance of affect in groups:

 Communication and group bonding. *Group Processes and Intergroup Relations*, *7*(4),

 398–412. https://doi.org/10.1177/1368430204046145

Stathi, S., Di Bernardo, G. A., Vezzali, L., Pendleton, S., & Tropp, L. R. (2020). Do they

 want contact with us? The role of intergroup contact meta-perceptions on positive

 contact and attitudes. *Journal of Community & Applied Social Psychology*, *30*(5), 461-

 479. https://doi.org/10.1002/casp.2452

Stephan, W. G. (2014). Intergroup anxiety: Theory, research, and practice. *Personality and*

 Social Psychology Review, *18*(3), 239-255. https://doi.org/10.1177/1088868314530518

Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and

 intergroup behaviour. *European Journal of Social Psychology*, *1*(2), 149-178.

 https://doi.org/10.1002/ejsp.2420010202

Tajfel, H., & Turner, J. C. (1986). The Social Identity Theory of Intergroup Behavior. In S.

 Worchel & W. G. Austin (Eds.), *Psychology of Intergroup Relations* (2nd ed., pp.7–24).

 Nelson-Hall.

Tanaka, T., Takai, J., Kohyama, T., Fujihara, T., &Minami, H. (1997). Effects of social

    networks on cross-cultural adjustment. *Japanese Psychological Research*, 39, 12–24.

    https://doi.org/10.1111/1468-5884.00032

Tanghe, J., Wisse, B., & Van Der Flier, H. (2010). The formation of group affect and team

    effectiveness: The moderating role of identification. *British Journal of*

    Management, *21*(2), 340-358. https://doi.org/10.1111/j.1467-8551.2009.00656.x

Tartakovsky, E., & Walsh, S. D. (2020). Factors affecting the psychological well-being of

    immigrants: The role of group self-appraisal, social contacts, and perceived ethnic

    density. *Cultural Diversity and Ethnic Minority Psychology, 26*(4), 592–

    603. https://doi.org/10.1037/cdp0000333

Te Lindert, A., Korzilius, H. P., Stupar-Rutenfrans, S., & Van de Vijver, F. J. (2022). The role

    of perceived discrimination, intergroup contact and adoption in acculturation among

    four Dutch immigrant groups. *International Journal of Intercultural Relations*, *91*, 297-

    310. https://doi.org/10.1016/j.ijintrel.2021.02.005

Tissera, H., & Lydon, J. E. (2021). Seeing you, seeing me: Links between perceived

    commitment, metaperceptions, and relationship well-being. *Personal*

    Relationships, *28*(3), 521-537. https://doi.org/10.1111/pere.12376

Titzmann, P. F., & Lee, R. M. (2022). New temporal concepts of acculturation in immigrant

    youth. *Child Development Perspectives*, *16*(3), 165-172.

    https://doi.org/10.1111/cdep.12458

Totterdell, P. (2000). Catching moods and hitting runs: Mood linkage and subjective

    performance in professional sport teams. *Journal of Applied Psychology, 85*(6), 848–

    859. https://doi.org/10.1037/0021-9010.85.6.848

Totterdell, P., Kellett, S., Teuchmann, K., & Briner, R. B. (1998). Evidence of mood linkage in work groups. *Journal of Personality and Social Psychology, 74*(6), 1504–1515. https://doi.org/10.1037/0022-3514.74.6.1504

Tropp, L. R., & Bianchi, R. A. (2006). Valuing diversity and interest in intergroup contact. *Journal of Social Issues*, *62*(3), 533-551. https://doi.org/10.1111/j.1540-4560.2006.00472.x

Tropp, L. R., Stout, A. M., Boatswain, C., Wright, S. C., & Pettigrew, T. F. (2006). Trust and Acceptance in Response to References to Group Membership: Minority and Majority Perspectives on Cross-Group Interactions. *Journal of Applied Social Psychology*, *36*(3), 769-794. https://doi.org/10.1111/j.0021-9029.2006.00031.x

Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology, 90*(2), 288–307. https://doi.org/10.1037/0022-3514.90.2.288

Turban, D. B., Dougherty, T. W., & Lee, F. K. (2002). Gender, race, and perceived similarity effects in developmental relationships: The moderating role of relationship duration. *Journal of Vocational Behavior*, *61*(2), 240-262. https://doi.org/10.1006/jvbe.2001.1855

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory.* Basil Blackwell.

Unger, J. B. (2011). Cultural Identity and Public Health. In S. Schwartz, K. Luyckx & V. Vignoles (Eds.), *Handbook of Identity Theory and Research* (pp. 811-825). Springer.

Urzúa, A., Delgado-Valencia, E., Rojas-Ballesteros, M., & Caqueo-Urízar, A. (2017). Social well-being among colombian and peruvian immigrants in northern Chile. *Journal of Immigrant and Minority Health*, *19*, 1140-1147. https://doi.org/10.1007/s10903-016-0416-0

Urzúa, A., Ferrer, R., Canales Gaete, V., Nunez Aragon, D., Ravanal Labrana, I., & Tabilo Poblete, B. (2017). The influence of acculturation strategies in quality of life by immigrants in Northern Chile. *Quality of Life Research*, *26*, 717-726. https://doi.org/10.1007/s11136-016-1470-8

Urzúa A, Ferrer R, Godoy N, Leppes F, Trujillo C, Osorio C, et al. (2018) The mediating effect of self-esteem on the relationship between perceived discrimination and psychological well-being in immigrants. *PLoS ONE*, *13*(6). https://doi.org/10.1371/journal.pone.0198413

Urzúa, A., Leiva, J., & Caqueo-Urízar, A. (2020). Effect of Positive Social Interaction on the Psychological Well-being in South American Immigrants in Chile. *Journal of International Migration and Integration*, *21*(1), 295–306. https://doi.org/10.1007/s12134-019-00731-7

Vandermeulen, D., Hasan Aslih, S., Shuman, E., & Halperin, E. (2022). Protected by the Emotions of the Group: Perceived Emotional Fit and Disadvantaged Group Members' Activist Burnout. *Personality and Social Psychology Bulletin*, *0*(0), 1-11. https://doi.org/10.1177/01461672221092853

van der Schalk, J., Fischer, A., Doosje, B., Wigboldus, D., Hawk, S., Rotteveel, M., & Hess, U. (2011). Convergent and divergent responses to emotional displays of ingroup and outgroup. *Emotion, 11*(2), 286–298. https://doi.org/10.1037/a0022582

Verhofstadt, L. L., Buysse, A., Ickes, W., Davis, M., & Devoldre, I. (2008). Support provision in marriage: The role of emotional similarity and empathic accuracy. *Emotion, 8*(6), 792–802. https://doi.org/10.1037/a0013976

Verkuyten, M., & Nekuee, S. (2001). Self-esteem, discrimination, and coping among refugees: The moderating role of self-categorization. *Journal of Applied Social Psychology*, *31*(5), 1058-1075. https://doi.org/10.1111/j.1559-1816.2001.tb02662.x

Vertovec, S. (2007). Super-diversity and its implications. *Ethnic and Racial Studies*, *30*(6), 1024–1054. https://doi.org/10.1080/01419870701599465

Vorauer, J. D. (2006). An information search model of evaluative concerns in intergroup interaction. *Psychological Review, 113*(4), 862–886. https://doi.org/10.1037/0033-295X.113.4.862

Vorauer, J. D., Main, K. J., & O'Connell, G. B. (1998). How do individuals expect to be viewed by members of lower status groups? Content and implications of meta-stereotypes. *Journal of Personality and Social Psychology, 75*(4), 917–937. https://doi.org/10.1037/0022-3514.75.4.917

Vorauer, J. D., & Turpie, C. A. (2004). Disruptive Effects of Vigilance on Dominant Group Members' Treatment of Outgroup Members: Choking Versus Shining Under Pressure. *Journal of Personality and Social Psychology, 87*(3), 384–399. https://doi.org/10.1037/0022-3514.87.3.384

Walsemann, K. M., Gee, G. C., & Geronimus, A. T. (2009). Ethnic differences in trajectories of depressive symptoms: Disadvantage in family background, high school experiences, and adult characteristics. *Journal of health and social behavior*, *50*(1), 82-98. https://doi.org/10.1177/002214650905000106

Walter, Z. C., Jetten, J., Parsell, C., & Dingle, G. A. (2015). The Impact of Self-Categorizing as "Homeless" on Well-Being and Service Use: Self-Categorization and Well-Being. *Analyses of Social Issues and Public Policy*, *15*(1), 333–356. https://doi.org/10.1111/asap.12089

Wassermann, M., & Hoppe, A. (2019). Perceived overqualification and psychological well-being among immigrants. *Journal of Personnel Psychology*, *18*, 34–45. https://doi.org/10.1027/1866-5888/a000219

Williams, D. R., Neighbors, H. W., & Jackson, J. S. (2003). Racial/ethnic discrimination and health: Findings from community studies. *American Journal of Public Health*, *93*(2), 200-208. http://dx.doi.org/10.2105/AJPH.93.2.200.

WHOQOL Group. (1995). The World Health Organization Quality of Life assessment (WHOQOL): Position paper from the World Health Organization. *Social Science & Medicine, 41*(10), 1403–1409. https://doi.org/10.1016/0277-9536(95)00112-K

Wolf, L. J., Hanel, P. H., & Maio, G. R. (2021). Measured and manipulated effects of value similarity on prejudice and well-being. *European Review of Social Psychology*, *32*(1), 123-160. https://doi.org/10.1080/10463283.2020.1810403

World Health Organization. (2022). *World Report on the Health of Refugees and Migrants (2022).* https://www.who.int/publications/i/item/9789240054462

World Health Organization (2022). *New research reveals how war-related distress affects mental health of Ukrainian refugees in Poland.* https://www.who.int/europe/news/item/19-12-2022-new-research-reveals-how-war-related-distress-affects-mental-health-of-ukrainian-refugees-in-poland

Wout, D. A., Murphy, M. C., & Steele, C. M. (2010). When your friends matter: The effect of White students' racial friendship networks on meta-perceptions and perceived identity contingencies. *Journal of Experimental Social Psychology*, *46*(6), 1035-1041. https://doi.org/10.1016/j.jesp.2010.06.003

Wu, Q., & Ou, Y. (2023). Does "who I am" influence "how I feel"? Cultural identity and mental health among Hong Kong Chinese adolescents. *Journal of Community Psychology*, *51*(2), 648-661. https://doi.org/10.1002/jcop.22827

Yañez, S., & Cárdenas, M. (2010). Estrategias de aculturación, indicadores de salud mental y bienestar psicológico en un grupo de inmigrantes sudamericanos en Chile. *Salud & Sociedad*, *1*(1), 51-70.

Appendix

Attachment 1
Part II Study 4: Manipulation and manipulation check from the first condition

Below you can see bar graphs which show findings from our study with answers of representative group of more than 1000 **Polish** participants. They answered the same questions as you.

Does the perception of immigrants among some groups in Poland make you feel...
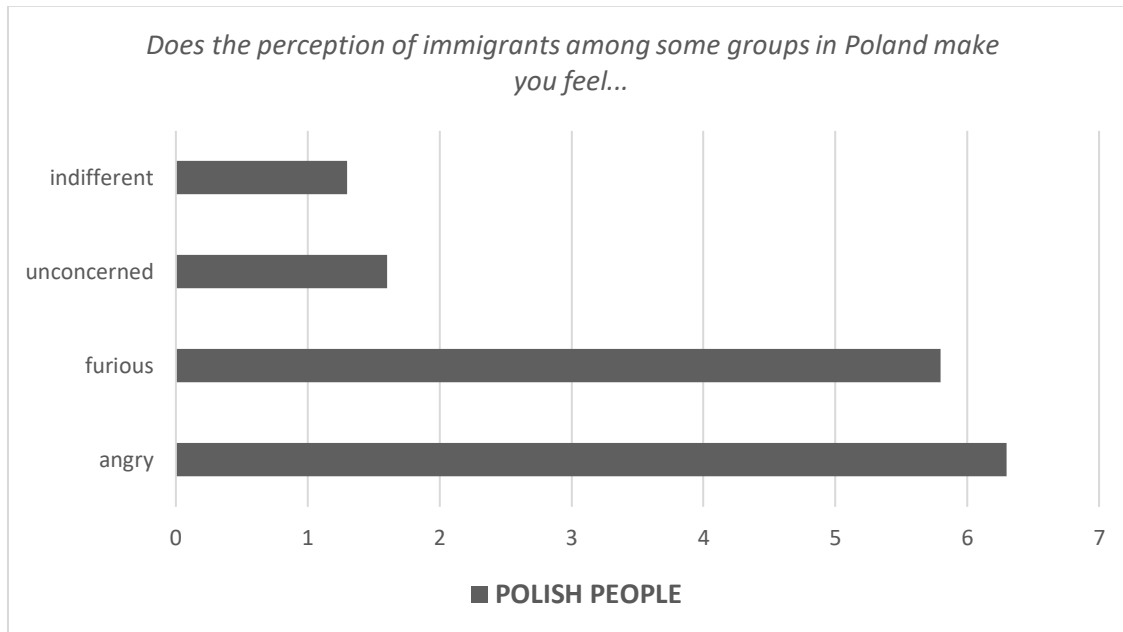
25.
1. According to these findings, to what extent does the perception of immigrant among some groups in Poland make Polish people feel angry? not at all $1 - 2 - 3 - 4 - 5 - 6 - 7$ extremely

2. According to these findings, to what extent does the perception of immigrant among some groups in Poland make Polish people feel furious? not at all $1 - 2 - 3 - 4 - 5 - 6 - 7$ extremely

3. According to these findings, to what extent does the perception of immigrant among some groups in Poland make Polish people feel unconcerned? not at all $1 - 2 - 3 - 4 - 5 - 6 - 7$ extremely

4. According to these findings, to what extent does the perception of immigrant among some groups in Poland make Polish people feel indifferent? not at all $1 - 2 - 3 - 4 - 5 - 6 - 7$ extremely

Attachment 2
Part II Study 5: Text used as an anger elicitor and items used to check any generated anger

The Guardian

Ukraine struggles with tragedy, global conflicts – and its reputation

Air disaster in Iran adds to feeling the country 'has a dark cloud over it', say observers

It only took a few hours of examining the crash site of flight 752 outside Tehran for a team of Ukrainian experts to ascertain that the Ukrainian Airlines jet had been brought down by a missile, security officials in Kyiv say.(…)

"Ukraine seems to have a dark cloud over it," said Alina Polyakova of the Brookings Institution. "It's fighting a war against Russia, and has become part of the political war in the US. This tragedy again puts Ukraine in the middle of conflicts that have nothing to do with it."

While the plane's shooting down had a terrible cost in human life, Ukraine's unwanted starring role in the US impeachment disaster has come with costs to military aid, political alliances and reputation.

"It's a catastrophe," said Pavlo Klimkin, who was the country's foreign minister until last August. "Ukraine now has the reputation of a place that can cause all kinds of trouble. It's the opposite of everything we were working for." (…)

Privately, Zelenskiy and his team must be praying for an uneventful year, followed by a change in the White House and a new chapter of US-Ukraine relations under a Democratic president.(…) "I don't even know what to expect next. When will the country finally have a period of being lucky?" asked Ukrainian journalist Kristina Berdynskykh in a post on Twitter.

24.
1. Does the Ukraine's situation make you feel angry? not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 extremely

2. Does the Ukraine's situation make you feel furious? not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 extremely

3. Does the Ukraine's situation make you feel resentful? not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 extremely

4. Does the Ukraine's situation make you feel bitter? not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 extremely

5. Does the Ukraine's situation make you feel annoyed? not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 extremely

6. Does the Ukraine's situation make you feel frustrated? not at all 1 – 2 – 3 – 4 – 5 – 6 – 7 extremely

Attachment 3
Part II Study 6: Results of the tests on anger elicitor

To assess the extent to which the story employed in our study elicited anger, we sought the

judgment of eleven evaluators. These judges were requested to rate three potential emotional

reactions ("I feel angry/scared/indifferent") on a scale ranging from 1 (not at all) to 7

(extremely). The results revealed that anger was rated as the most prominent emotion, with a

mean 4.90 In contrast, fear received a mean score of 2.91, and indifference garnered a mean

score of 2.45.

Attachment 4
Part II Study 6: Scores of emotions used for different conditions

We employed a consistent rating scale ranging from 1 to 7, reflecting ascending levels of emotional intensity, as utilized in our initial two online experiments.

High anger and low fear: 'angry' (score: 6.3), 'scared' (score: 1.9), 'indifferent' (score: 1.3);

High fear and low anger: 'angry' (score: 1.9), 'scared' (score: 6.3), 'indifferent' (score: 1.3);


Attachment 5
Part II Study 6: Description for participant and Condition 1

In our project about cultural differences, we have conducted a lot of studies during the last years. We want to describe differences between cultures in the expression of emotions. In our last study, a group of six hundred Polish people took part. They read the same text as you and answered the same questions. On the next page, you will see the average reaction of Polish people to the text which you have read. Past research has demonstrated that being exposed to other participants' responses is helpful to individuals for thinking about their own responses.

Please, go to the next page.

Below you can see graph which shows reaction to the text of representative group of Polish people. They read the same text as you.

How do you feel about the information presented in the text?
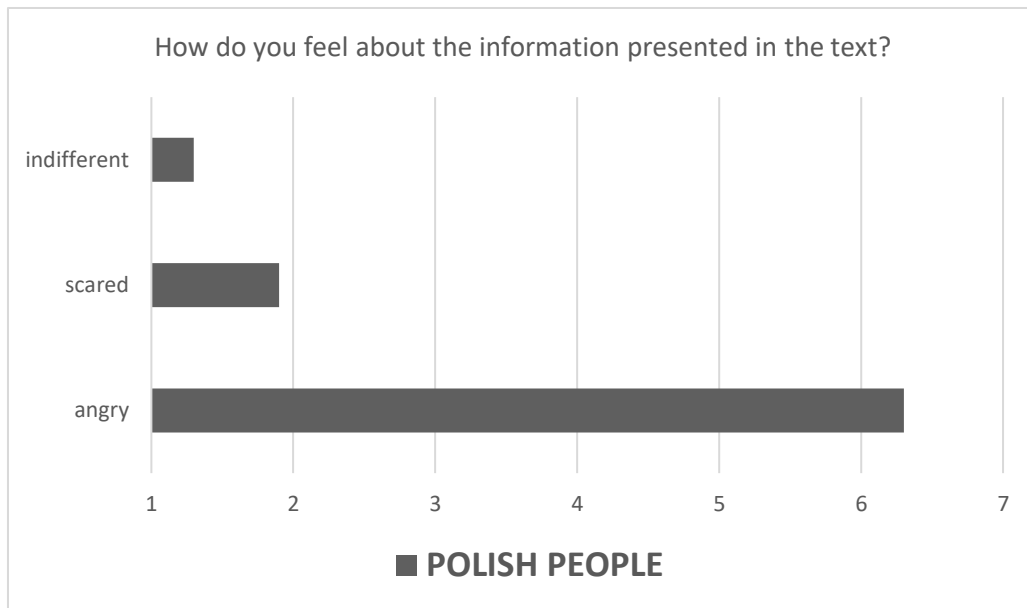
■ POLISH PEOPLE

Please answer questions below.

30.

1. According to the graph Polish people felt indifferent // scared // angry in response to the text.

31.

1. I believe the Polish participants and I experienced similar emotions in response to the text

strongly disagree 1 – 7 strongly agree

2. I had the same feelings as Polish people after reading the text.

strongly disagree 1 – 7 strongly agree