

INSTITUTO UNIVERSITÁRIO DE LISBOA

Navigating emotions: exploring the relationship between cultural adaptation, emotion regulation and well-being among migrants in the Portuguese cultural context.

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Resumo

O presente estudo investigou a relação entre as emoções decorrentes da experiência migratória, as estratégias de regulação emocional, a adaptação cultural e a qualidade de vida subjetiva entre imigrantes de primeira geração em Portugal. No total, 82 participantes completaram o questionário, e a maioria dos resultados esteve alinhada com quase todas as hipóteses propostas. Os resultados revelaram que a maioria dos participantes relatou ter emoções mais positivas da experiência migratória, o que se correlaciona com uma melhor qualidade de vida psicológica e satisfação com o ambiente. Em contrapartida, as emoções negativas parecem afetar negativamente o bem-estar geral. No que diz respeito às estratégias de regulação emocional, o uso da reavaliação cognitiva relacionou-se com as dimensões física e psicológica da qualidade de vida. Ao contrário do esperado, a supressão emocional não se mostrou significativamente relacionada com a qualidade de vida. Os resultados também revelaram que uma adaptação cultural bem-sucedida parece ser um fator importante que contribui para a melhoria da qualidade de vida dos migrantes. Além disso, os participantes que relataram um forte desejo de manter sua cultura de origem também relataram mais emoções negativas. Contudo, os migrantes que equilibram a assimilação da cultura de acolhimento com a manutenção da sua cultura de origem apresentam melhor bemestar psicológico. Assim, programas de intervenção podem ser úteis para ajudar os migrantes a superar barreiras culturais, como o idioma, para facilitar a sua adaptação à integração social.

Abstract

The present study investigated the relationship between emotions due to migration experience, emotion regulation strategies, cultural adaptation, and subjective quality of life among firstgeneration migrants in Portugal. In total, 82 participants completed the questionnaire and most of the results aligned with almost all the proposed hypotheses. Findings revealed that a majority of the participants reported having more positive emotions from the migration experience, correlating with a better psychological quality of life and satisfaction with the living environment. Conversely, negative emotions seem to negatively affect general well-being. Regarding emotion regulation strategies, cognitive reappraisal was positively related to physical and psychological dimensions of quality of life. Contrary to the expectations, emotion suppression was not significantly related to quality of life. The findings also revealed that a successful cultural adaptation appears to be an important factor contributing to improving migrants' quality of life. Moreover, participants who reported a strong desire to maintain their culture of origin also reported more negative emotions. However, those migrants who seem to balance between assimilation with the host culture and maintenance of their culture of origin are found to have better psychological well-being. Therefore, interventional programs may be useful to help migrants overcome cultural barriers, such as language, to make their adaptation to social integration easier.

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Introduction

Every year, global migration increases. Indeed, many people around the world are moving to new countries, discovering different cultures, and adapting, more or less, to new social environments, usually in search of a better life, new opportunities, or for other reasons. In recent years, Portugal has become a major destination for migrants (those who come to live in another culture on a permanent basis). Traditionally seen as a country of emigration (people, in this case, Portuguese, who have gone to live abroad), Portugal is now both a source and a destination in the global migration system (Góis & Marques, 2009). This change is marked in particular by the fact that Portugal's immigration policy has been positively evaluated, and by the strengthening of its good international reputation as a welcoming country, as well as for its lifestyle and culture. Indeed, in 2012, foreign citizens in Portugal represented 3.8% of the population, notably from the former Portuguese colonies in Africa, Eastern Europe, and Brazil. Consequently, in the 1990s, structured immigration policies were put in place, and institutions such as the High Commission for Immigration and Ethnic Minorities (ACIME), created in 2002, marked a decisive turning point towards integration and the promotion of immigrants' rights. These changes concerned not only access to social benefits and the right to vote but also the promotion of cooperation between ministries, particularly in crucial sectors such as housing, education, and employment. Indeed, ACIME's main areas of intervention included the defense of immigrant and minority populations, their social and political rights, and the implementation of measures to combat racism, discrimination, and xenophobia (Horta et al., 2014). Furthermore, according to reports from the United Nations, the Migrant Integration Policy Index (MIPEX), and the European Union, Portugal's integration policy is highly successful (Padilla & França, 2016).

However, despite these supportive policies, many migrants in Portugal still face considerable emotional and psychological challenges. Certainly, the process of adapting to a new cultural and social environment is not always straightforward and is often a source of stress, nostalgia, and uncertainty, which can complicate integration. Although Portuguese policies provide institutional support, other aspects of migration, particularly the emotional and psychological ones, cannot be dealt with by political measures alone, and are poorly understood and supported. Indeed, from an emotional point of view, migrants often find it difficult to regulate

their emotions in unfamiliar cultural contexts, as cultural norms, values and traditions are different, and these difficulties can be detrimental to their general well-being (Bhugra & Becker, 2005) and quality of life.

Although Portugal's immigration policies have been recognized as inclusive and effective, the emotional and psychological experiences of migrants have been largely neglected. Nowadays, this gap is important and significant, as many migrants reside in Portugal, and successful integration requires, as previously stated, not only structural measures but also psychological adaptation. For this reason, this study seeks to understand and determine the impact of emotion regulation and cultural adaptation on the subjective quality of life of first-generation migrants in Portugal, in order to address the need for a more holistic understanding of the migrant experience.

CHAPTER 1

Literature Review

1.1. Immigration in Portugal

Portugal welcomes diverse migrants and is a country very well recognized internationally for its friendly policies on migration, especially due to its proactive approach to integration and commitment to social cohesion. In 1993, the beginning of the Interdepartmental Commission for the Integration of Immigrants and Ethnic Minorities was an important step towards responding to the social needs of migrants and reducing discrimination.

Subsequently, thanks to these initial measures, migrant associations and political parties established a dialogue between them, leading to the approval of Law 50/1996, which gave immigrants the right to vote and be elected at a local level (Padilla, 2007; Grassi, 2008; Horta & Gonçalves de Oliveira, 2014; Padilla & França, 2016). In the years that followed, Portugal continued to improve its policies for migrants. The creation of the High Commission for Immigration and Ethnic Minorities (ACIME) in 2022, demonstrated again that for the Portuguese

government, it is important to improve the challenges associated with immigration. Later, in 2007, the High Commission for Immigration and Cultural Dialogue (ACIDI) was created, and established space for intercultural dialogue and emphasized the importance of integration. More recently, in 2014, the creation of the High Commission for Migration (ACM), showed once more that Portugal understands the close link between immigration and emigration. These actions, as well as the various inclusive nationality laws, have made Portugal a model country regarding integration, enabling it to be ranked internationally, notably not the Migrant Integration Policy Index (MIPEX), where it was recognized for its effective and inclusive immigration policies (Padilla & França, 2016).

Key initiatives, such as the creation of the High Commission for Migrations and different integration programs, ensure equal rights in education, housing, and employment. This is linked to a national ethos valuing cultural diversity and intercultural dialogue and has placed Portugal in the vanguard to serve as a model in inclusive immigration policies (Padilla & França, 2016). In 2002, Portugal reinforced its efforts for integration with the social pact signed within the framework of ACIME aimed at clarifying the rights and responsibilities of immigrants in combating exploitation and discrimination (Pereira Ramos, 2004).

Portugal has several inclusive laws concerning nationality recognition and immigration rights, contributing to its reputation as a welcoming country for newcomers. For instance, statistics from the Serviço de Estrangeiros e Fronteiras (SEF) in 2022 revealed that Brazilian nationals made up the largest foreign community resident in Portugal, accounting for 30.7% of the migrant population, followed by individuals from India, reflecting the growing diversity of immigrant origins. Year after year, the resident population of Portugal is growing, and by December 2023 had reached 10,639,726, an increase of 123,105 from the previous year (Instituto Nacional de Estatística, 2024). According to the Instituto Nacional de Estatística (2024), in 2023, the number of permanent immigrants who arrived in Portugal was 189,367, while 33,666 people emigrated. For comparison, in the previous year, 2022, there were 167,098 immigrants, that came to live in Portugal, and 30,954 registered emigrants, that went to live abroad. These figures underline how Portugal is a country that appeals to and grows as a destination for migrants, further enriching its demographic diversity.

The report <u>Indicadores de integração de immigrantes: relatório estatístico (2023)</u> shows that the main reasons for migration are study visas, student exchanges, internships, and volunteer work. They are followed by family reunification, retirement visas, religious visas, and incomegenerating visas. Showing that there are many reasons and profiles for migration, and the ability of Portugal to adapt and integrate a diverse immigrant population.

In addition, local initiatives move one step further in consolidating the Portuguese ability to adapt and integrate this diversity, for example with the creation of support and information centers, offering their services in several languages, Portuguese, English, and Russian. These provide the opportunity for immigrants' access to social services, education, health, and other resources that will better enable them to integrate into Portuguese society (Pereira Ramos, 2004). However, integration into a new country is itself a very long and laborious process, mainly due to the cultural diversity of the various foreign communities living in the country. Even if they exist, Portugal's supportive policies and principles of cultural dialogue (Horta & Gonçalves de Oliveira, 2014) are not enough to prevent immigrants from experiencing emotional and psychological difficulties related to adapting to a new environment. Despite numerous studies on migration, the emotional challenges faced by migrants remain underexplored. This is partly because most research focuses on economic and political factors, often overlooking or downplaying the role of emotions (Boccagni & Baldassar, 2015).

Adjusting to a new cultural and social environment often involves stress, nostalgia, and uncertainty. Migrants often encounter acculturative stress, struggles in adapting to a new cultural and social environment, which may involve cultural conflicts (Berry, 2005). This stress can manifest in various ways depending on the acculturation strategy adopted. Integration, where migrants maintain aspects of their heritage while adopting elements of the host culture, tends to cause the least stress. In contrast, marginalization, where individuals lose connection with both their original and new cultures, often results in heightened stress (Berry, 2005). These acculturative experiences deeply affect mental health, impacting an individual's emotional regulation and overall quality of life (Berry, 2005). Furthermore, migrants may face hostility, discrimination, and racism in their new country, leading to feelings of rejection and inadequacy. These experiences can exacerbate emotional difficulties, impacting mental health and self-esteem (Schmitt et al., 2014). They face unique stressors that can lead to negative emotions and influence mental health. The

challenges of adapting to a new society are numerous, which include language barriers, separation from family, feelings of loss, and many more which can contribute to depression (Coffman & Norton, 2010). For migrants, successful adaptation depends not only on their resilience but also on the support and inclusivity offered by the host society. Understanding these challenges helps to explain how immigrants experience their transition, their adaptation (or not) to their new environment, and the repercussions on their emotion regulation and, therefore, quality of life in a foreign context.

Emotional regulation is an essential aspect of migrants' emotional well-being. Their ability to control their emotions in this new cultural environment is crucial to their psychological well-being. Obviously, cultural factors play an important role in their choice of strategies for regulating emotions, and understanding these processes can explain the emotional challenges faced by migrants.

1.2. Emotion regulation, cultural factors and implications for migrants

Emotions are defined by the American Psychological Association (APA) as complex responses that include a subjective involvement - how we feel inside, a physiological reaction - how our bodies respond, and a behavioral or expressive response - how we show those feelings. According to Gross (1998), emotions emerge when we experience situations that create a gap between our objectives and reality, activating either positive or negative feelings. These personal experiences are shown in facial expressions or body language, like smiling in happiness or frowning in sadness. Physiologically, emotions trigger changes in our bodies, such as increased heart rate or sweating. Together, these subjective encounters, behavioral expressions, and physiological reactions help us define emotions. Managing emotions is very important for psychological well-being and social adaptation (Gross, 1998; Gross & John, 2003). Regulating emotions includes both conscious strategies, like rethinking situations or suppressing outward expressions, and automatic mechanisms that function without awareness (Gross & Thompson, 2007). These strategies, whether used to amplify or reduce emotions, are essential for navigating complex social and personal environments.

In his revised process model (see Figure 1.2) of emotion regulation, Gross (1998, 2015, 2024) outlined four stages in which regulation can occur: identification, selection, implementation,

and monitoring. Each stage reflects moments in the emotional process where individuals can intervene to influence their emotional responses or manage their expressions and is linked to a decision that the person makes, consciously or not (Braunstein et al., 2017; Koole et al., 2015; Gross et al., 2019; Gross, 2024). Identification is the stage when the person decides whether the emotional state aligns with their desired emotional outcome or needs to be changed, this is the emotional goal. Usually desired emotional states are associated with positive or pleasant feelings, but they may also serve a functional purpose beyond pleasure (Tamir, 2016; Gross, 2024). For example, a person may want to be more anxious than they currently are, as this will help them to remain alert and cautious when preparing for a potentially dangerous situation, such as a difficult hike or a high-stakes negotiation. When a person decides to modify their emotional state, they activate the selection phase and determine the emotion generation process. Emotion regulation strategies can be grouped into five categories according to their primary influence on emotion generation (see Figure 1.3).

Figure 1.2.

Process Model of Emotion Regulation by Gross 2024

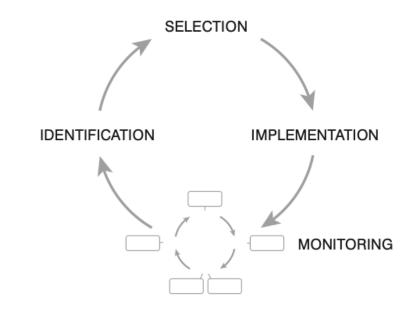
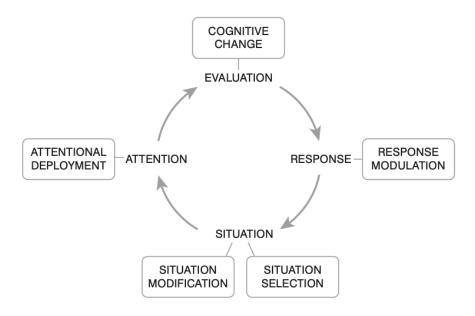


Figure 1.3.

Emotion Regulation Strategies by Gross 2024



They are situational strategies such as situation selection which is proactive regulation, involving choices to enter or avoid emotionally evocative situations. For instance, someone may decide to skip social gatherings to avoid anxiety. Situation modification, involves, once in a situation, altering aspects of a situation to change its emotional impact. For example, someone might guide the conversation away from a sensitive topic that could cause negative feelings, or focus on things that bring positive emotions, like humor or support. Attentional deployment focuses on directing attention within a situation, distraction can be effective. For example, during the migration process, which can be a stressful experience, a person may choose to focus on organizing enjoyable activities, such as exploring the city and local attractions. It is also possible to meet people and establish links with community support groups, to focus attention on pleasant things and not on the overwhelming challenges of adapting to a new environment. Cognitive change involves reinterpreting a situation to alter its emotional meaning.

For example, if someone is insulted, they might choose to see the remark as a problem with the other person, instead of feeling it is their fault. This can help them feel less angry or upset. Response modulation refers to inhibiting experiential, behavioral, or physiological responses, any outward signs of emotion, such as controlling facial expressions or body language.

Since each strategy has distinct costs and benefits that depend on the context, selecting the appropriate strategy requires a careful matching process. For instance, during the migration process, if an individual faces discrimination in their new community but has the opportunity to join a support group, it may be more effective to seek out and engage with that group (a situational strategy) to improve their experience. However, if they find themselves in an unavoidable and hostile environment where immediate change is not possible, they might choose to reframe the situation positively (a cognitive strategy) to manage their emotional response (Troy et al., 2013, Gross, 2024). Strategy selection leads to the implementation phase, during which specific actions are chosen to implement the regulation strategy. This stage translates general strategies into specific ones, such as reframing thoughts or controlling behavior. This is an iterative process, involving constant monitoring and adjustment as the situation evolves. If the chosen strategy is not working, or if circumstances change, people can modify or abandon their approach. Often, people use several regulation strategies simultaneously or in rapid succession, a practice known as polyregulation (Ford et al., 2019, Gross, 2024).

Research suggests that cognitive reappraisal tends to be associated with more positive outcomes than suppression. This is because this will allow people to reduce negative emotions at their source and can often transform potentially distressing situations into more manageable ones. Greater psychological health, well-being, and quality of interpersonal relationships are associated with this strategy since it allows people to experience and express more authentic emotions without the cognitive burden of constant suppression (Gross, 2002).

In contrast, expressive suppression is an attempt to suppress overt displays of emotion. Whereas useful in situations, for example, where a migrant does not express sadness or homesickness so as not to worry their family members back home, it is otherwise generally associated with cognitive costs. Moreover, it may lead to heightened physiological arousal over time, disordered social functioning (Gross & John, 2003), and severe deleterious personal and social consequences. For instance, suppression may lead others to view individuals as inauthentic, thereby undermining the quality of close relationships (Butler et al., 2003). Moreover, suppression does not diminish the internal experience of negative emotions and can even intensify them over time (Gross, 1998). However, there are situations where suppression can be effective. For instance, if someone encounters a brief interaction with a stranger who says something upsetting but will likely never see this person again, suppression might be the best strategy. The individual might choose not to express their emotions because the situation is temporary and expressing anger or frustration could escalate a conflict with no long-term benefit. In contrast, for ongoing negative experiences, such as a migrant facing discrimination, cognitive reappraisal offers a more sustainable coping mechanism. Instead of bottling up emotions, individuals might reinterpret their experiences, attributing discrimination to others' ignorance rather than internalizing it.

The issue of emotion regulation is particularly exacerbated for those migrants who suffer discrimination. Sometimes, the expression of negative emotions may also result in a person's social isolation or even danger. Thus, for example, a migrant who suffers from discrimination at work may not want to express frustration or anger because this might impact their job. But suppression, as repeatedly repressed, may also have devastating consequences for mental and physical health. The need to keep on inhibiting emotions at one point or another takes a toll on the individual

through cognitive resources and might link to increasing levels of stress, anxiety, or depression (Hatzenbuehler et al., 2009). In such cases, cognitive reappraisal could prove a healthier alternative. Individuals, through cognitive reframing of their experiences of discrimination, may focus on their resilience and community support as a means of more adaptively managing their emotions over time for better psychological outcomes (Webb et al., 2012). Regarding this migration to Portugal, the knowledge of Portuguese culture will work favorably for this strategy since it would enable migrants to revalue their experiences by integrating cultural insights and perspectives into how they interpret events.

Most people use a combination of regulation strategies depending on the situation, an essential flexibility. For example, someone might initially suppress emotions during a tense encounter but later use cognitive reappraisal to process the situation. Migrants often navigate between suppression and reappraisal. In situations where they fear negative repercussions, such as interactions with authority figures, they may suppress their feelings. Later, in supportive environments, they might engage in reappraisal to cope with the residual effects of discrimination.

But does culture influence emotion regulation?

Studies show that cultural background significantly influences emotion regulation strategies. Individualistic Western cultures prioritize emotional expression and cognitive reappraisal, thus, individuals are encouraged to openly share their emotions. Collectivist East Asian cultures tend to emphasize suppression of expression and emotional restraint to maintain social harmony (Ramzan & Amjad, 2017). Cultural differences have an impact on how emotions are regulated, and can significantly complicate migrants' adaptation to their new environment. Indeed, emotional norms vary from one culture to another, it is necessary to understand how the host culture functions and it can be difficult for immigrants to adapt to these new ways of expressing and managing emotions. For example, individuals from cultures where suppressing emotions is an accepted norm and strategy may find it difficult to adapt to environments where expressing emotions is valued and encouraged. These cultural differences then lead to misunderstandings and difficulties in forming social bonds. Conversely, migrants from expressive cultures may find it difficult to integrate into societies where withholding emotions is preferred and the norm. These emotional regulation difficulties also have an impact on the ability to interpret

and respond to emotional signals in the new culture. Migrants may struggle to read facial expressions, body language, or tone of voice that are culturally specific, leading to miscommunication and further hindering social integration. Consequently, difficulties in emotion regulation can decrease quality of life and exacerbate psychological challenges such as depression, anxiety, and loneliness, ultimately complicating the overall adaptation process (Ramzan & Amjad, 2017). Cultural differences do not only shape which emotion regulation strategies are used but also affect their utilization and functionality (Jiang et al., 2023).

In a study by Espinoza, Gavidia-Payne, and Okumura (2021), it was found that both Venezuelan migrants to Peru and Peruvian internal migrants showed adaptive processes, where social support and socio-demographic factors acted as protective or risk elements. They also concluded that migration, whether internal or international, influences emotional adaptation, with social support and personal characteristics playing key roles in either helping or hindering this process. These findings highlight the importance of developing policies that address these factors to better support migrants' psychological well-being and quality of life. Furthermore, research in urban China found that migrant adolescents used emotion regulation strategies, such as expressive suppression, more than non-migrants, and this approach had a positive effect on their well-being (Jiang et al., 2023). These findings underscore the significance of emotion regulation and social support in migrants' adaptation, emphasizing that effective support systems are essential for improving migrants' emotional adaptation and overall quality of life across diverse contexts.

To summarize, the ability to regulate emotions is essential to general well-being and effective adaptation to new environments, particularly for migrants. When individuals try to adapt to a different cultural context, the strategies they use to regulate their emotions may be challenged by unfamiliar emotional norms, and therefore not know how to express them. This fact can complicate the adaptation process since individuals must first understand the culture of the host country to cope with cultural expectations that differ from those of their home country. It is therefore essential to understand the relationship between emotion regulation and cultural adaptation. Cultures and norms shape emotional experiences and coping mechanisms, which ultimately have an impact on migrants' quality of life.

1.3. Cultural adaptation and immigration

Immigrants relocating to a new country may have difficulties in adjusting to new and unfamiliar cultural norms, which would thereby complicate their effective regulation of emotions. These complications take place because emotional expression and regulation are deeply rooted in cultural values and norms (Mesquita et al., 2014). Complications in adapting to new emotional norms can considerably hamper the overall adaptation process, as emotion regulation is an essential aspect of intercultural adaptation (Matsumoto et al., 2004).

Intercultural adaptation is a real and important challenge, as maladaptation can have a real negative impact and in particular lead to psychological and physical problems (Shin & Abell, 1999; Kim & Gudykunst, 1988), such as emotional distress (Furukawa & Shibayama, 1995), depression, anxiety, communication problems (Gao & Gudykunst, 1991; Okazaki-Luff, 1991), reduced academic and professional performance and difficulties in interpersonal relationships (Matsumoto et al., 2001). These issues can result in culture shock (Pederson, 1995) or even an early return to the home country (Montagliani & Giacalone, 1998). Conversely, successful adaptation can improve language skills, self-esteem, awareness, mood, and health (Babiker et al., 1980; Kamal & Maruyama, 1990), while also decreasing the level of stress (Matsumoto et al., 2001).

Acculturation, defined as the process of adapting to a new culture, plays a pivotal role in immigrants' experiences. It involves adopting the values, beliefs, behaviors, language, and identities of a new culture (Berry, 2006). There are different acculturation strategies, including integration, assimilation, separation, and marginalization. According to Sam and Berry (2010), assimilation occurs when individuals relinquish their original cultural identity to integrate into a new culture by adopting its values, norms, and traditions. In contrast, separation is chosen when individuals prioritize retaining their native culture and avoid engaging with the new society. Integration involves maintaining aspects of one's original culture while regularly interacting with other groups, creating a balance between cultural integrity and participation in broader society. Marginalization, on the other hand, involves a lack of interest in maintaining one's heritage culture or engaging with others, often due to exclusion, discrimination, or forced cultural loss. These acculturation strategies are dynamic, and shaped by factors such as societal events or discrimination, as observed in the experience of Muslims in the U.S. post-9/11 (Sirin & Fine, 2007). Following the attacks, Muslims faced increased discrimination and hostility, which

prevented them from safely expressing their cultural identity. As a result, many felt disconnected both from their heritage and from American society as a whole, demonstrating how marginalization can develop when people feel excluded and stigmatized. According to Berry's acculturation model (1974, 1980), these strategies depend on the degree to which people wish to maintain their heritage culture and engage with the dominant society and significantly influence psychological outcomes.

Immigrants who employ integration strategies, where they maintain aspects of their heritage culture while adopting elements of the host culture, generally experience the most positive outcomes (Berry & Hou, 2016). In contrast, immigrants who become marginalized or disengaged from both cultures are more likely to experience negative psychological effects, including increased stress and a lower sense of belonging (Berry & Hou, 2016). Research also highlights that, under certain conditions, assimilating more fully into the host culture without maintaining strong ties to the culture of origin can yield positive well-being outcomes, particularly when the host society is welcoming (Angelini et al., 2015).

Migration stressors, such as language barriers, unemployment, and discrimination, are pervasive and can further hinder cultural adaptation, emphasizing the need for tailored interventions to support migrants during this challenging process (Yakushko et al., 2008). The bidimensional model of acculturation suggests that maintaining connections to both the origin and host cultures (integration or biculturalism) is generally associated with better psychological outcomes. In contrast, a lack of engagement with either culture is generally linked to poorer outcomes (Berry, 2006). Furthermore, other studies have shown that prioritizing the host culture (i.e., assimilation) might be more beneficial to effective adaptation than maintaining a strong orientation with the culture of origin, potentially leading to positive well-being outcomes comparable to those who are bicultural (Birman et al., 2002; Berry & Hou, 2016).

The process of migration can be a stressful and life-changing experience. It often involves the loss of social support, economic need, cultural adjustment, and discrimination. There are various common stressors among migrants such as language barriers, unemployment, and acculturation pressures, all of which affect their quality of life. Portugal's evolving role in global migration reflects an integrative approach to supporting migrants. However, they still face

significant emotional and psychological challenges during the transition process. Understanding the complex interactions between migration, emotion regulation, and cultural adaptation is essential for developing effective strategies to improve migrant well-being and quality of life.

1.4. Quality of life and immigration

The World Health Organization (2012) characterized the quality of life as the subjective assessment individuals make about their circumstances, considering the cultural and value frameworks in which they exist. This concept covers different factors, including physical health, mental well-being, independence, social connections, personal beliefs, and interactions with significant environmental elements. This definition explains the quality of life as a notion intrinsically subjective yet based upon cultural, social, and environmental contexts.

The quality of life of migrants can be significantly influenced by their ability to adapt to a new cultural environment, overcome emotional challenges, and establish social support networks. This will ultimately affect their overall sense of satisfaction and well-being within the host society. Effective emotion regulation has been found to significantly improve the quality of life among immigrants, as it minimizes psychological distress while enhancing their ability to cope with challenges related to adjustment (Matsumoto et al., 2004).

Acculturation strategies have been found to directly influence quality of life. The high level of acculturation is linked to better quality of life, and positively affects social support, mental health, and self-esteem (Lim et al., 2008; Brand et al., 2017; Chen et al., 2018). Inversely, separation and marginalization are associated with poorer physical and mental health outcomes (Brand et al., 2017). Family relationships play a crucial role, with positive family support enhancing quality of life and negative family strain diminishing it (Chen et al., 2018). Additionally, migrants who succeed in culturally adjusting tend to experience better mental and physical health, with lower rates of depression and anxiety (Berry, 1997). In contrast, marginalized individuals, who reject both the host and heritage cultures, often face greater challenges to their mental health and overall well-being (Sam & Berry, 2010). Factors influencing quality of life include length of stay in the host country, residence areas, and satisfaction with health services (Lee & Lee, 2014). Migrant workers face difficulties in accessing health services, which impacts their quality of life (Lee & Lee, 2014). Indeed, one of the participants explained: "Not enough mental health care with

affordable prices", another one explained having difficulties "Seeking medical help in European Portuguese". To improve migrant workers' quality of life, researchers recommend developing programs to enhance health-related quality of life and strategies to increase satisfaction with health services (Lee & Lee, 2014).

In summary, the migrants' quality of life is influenced by their ability to adapt to new cultures and handle emotional challenges. Managing emotions is essential for reducing stress and improving well-being. Additionally, how migrants acculturate and build social connections greatly affects their overall quality of life.

1.5. The present study

The present study examined first-generation immigrants (the first individual in the family to migrate to a new country, meaning they were born and raised in a different country than the one they moved to) residing in Portugal, encompassing individuals from diverse countries and migration motivations. This study aimed to explore how emotional responses to migration, cultural adaptation, and emotion regulation influence the subjective quality of life among first-generation migrants in Portugal. Specifically, it sought to examine the mediation effects of emotion regulation strategies, such as cognitive reappraisal and expressive suppression, and of cultural orientation which are cultural adaptation, maintenance, and shared reality perception on subjective quality of life. Furthermore, it intended to explore the association between emotion regulation strategies and cultural adaptation.

1.6. Hypotheses

To better understand the relationships between emotions experienced due to migration, emotion regulation strategies, cultural adaptation, and subjective quality of life among first-generation migrants in Portugal, we propose the following hypotheses:

H1: Negative emotions related to the migration experience are negatively associated with migrants' quality of life.

H2: This association is mediated by emotion regulation, such that higher levels of negative emotions lead to the use of emotion regulation strategies, specifically:

H2a: A higher level of cognitive reappraisal is positively correlated with more favorable emotional experiences among migrants, leading to enhanced physical and psychological quality of life.

H2b: However, a higher level of emotion suppression is associated with lower levels of physical and psychological quality of life.

H3: Emotions are interrelated with cultural adaptation strategies, such that:

H3a: Successful cultural adaptation is positively associated with quality of life, indicating that adapting well to a new culture leads to improved physical and mental quality of life.

H3b: More negative emotions are linked to a focus on cultural maintenance, which can negatively affect physical and psychological quality of life.

H3c: The perception of shared reality (i.e., feeling connected with others in a new cultural context, while maintaining its own culture) is linked to enhanced emotional well-being and overall quality of life.

Objective (O1): Since there is no clear indication in the literature of an association between emotion regulation strategies and cultural adaptation, we aim to explore the relationship between these two variables.

CHAPTER 2

Method

2.1. Design

The present study used a correlational, cross-sectional design to examine the relationships between emotions arising from the migration experience, emotion regulation, cultural adaptation, and subjective quality of life among first-generation migrants in Portugal.

2.2. Participants

An analysis with G*Power (Faul et al., 2009) indicated that 120 participants were needed for this study. To participate, a minimum age of 18 and first-generation migrant status (born and raised in a different country before moving to Portugal) were required, with participants coming from diverse countries and migration backgrounds. They could all understand, read, and write in English or Portuguese, as all study materials were available in both languages. Initially, 136 individuals participated in the study. Among these responses, only 82 completed the survey and were included in the final analysis. The other 54 participants did not finish the survey and were therefore excluded from the study. The final sample size comprised 82 migrants, including 63 women and 19 men, and had a mean age of 35.76 years (range: 18-62 years; SD = .99). This study offered a very diverse and rich sample, with the largest group of participants coming from Brazil, representing 29.3% (n=24). This was followed by 7.3% (n=6) from the United States. Angola, Nigeria, and Colombia each accounted for 3.7% of the sample, with 3 participants from each country.

(see Tables 2.1 and 2.2 for detailed demographics).

 Table 2.1.

 Overview of Sociodemographic Characteristics of Participants

	Total				
	N	%			
Country of origin					
Brazil	24	23.9%			
United States	6	7.3%			
Angola	3	3.7%			
Nigeria	3	3.7%			
Colombia	3	3.7%			
Mother tongue					
Portuguese	26	31.7%			
English	17	20.7%			
Other	39	47.6%			
Religion					
Cristianity	25	30.5%			
Islam	9	11%			
Other	7	8.5%			
No religion	41	50%			
Accompaniment					
Alone	24	29.3%			
With family	18	22%			
With friends	3	3.7%			
With partner	33	40.2%			
Other	4	4.9%			
Reason of migration					
To study	21	25.6%			
To work	12	14.6%			
For security reasons	10	12.2%			
For economic reasons	8	9.8%			
Other	31	37.8%			
Stay in Portugal for the next 2 years					
Yes	78	95.1%			
No	2	2.4%			

 Table 2.2.

 Sociodemographic Characteristics of Participants related to Migration

	To	tal
	N	%
Gender		_
Female	63	76.8%
Male	19	23.2%
Occupation		
Employed in a Potuguese compagny	17	20.7%
Employed in a foreign compagny	14	17.1%
Self employed	20	24.4%
Unemployed	13	15.9%
Student	9	11%
Retired	4	4.9%
Other	5	6.1%
Level of education		
Secondary school	11	13.4%
Bachelors degree	34	41.5%
Master degree	31	37.8%
PhD	4	4.9%
Other	2	2.4%

2.3. Materials and measures

2.3.1. Socio-demographic questionnaire, participants indicated their country of origin, age, gender, religion, education, mother tongue, occupation, duration of stay in Portugal, accompaniment, reason for migration, contact with Portuguese people, level of Portuguese proficiency, and future plans (see Tables 2.1 and 2.2).

2.3.2. Emotional responses due to the migration experience were measured using the Self-Assessment Manikins (Lang, 1985). With this tool, three dimensions were assessed: valence, arousal, and dominance, on a 9-point rating scale. To represent these dimensions, images were displayed and participants were asked to evaluate their feelings (see Appendix D).

For the valence dimension, participants viewed a series of images depicting varying degrees of positive and negative emotions. They were instructed to indicate whether their feelings about the migration experience were predominantly negative or positive. If their feelings were more negative, they selected one of the images on the left side of the scale, which represented negative emotions. Conversely, if their feelings were more positive, they chose one of the images on the right side, representing positive emotions. Higher scores indicated more positive emotions.

For the arousal dimension, participants were presented with a series of images that depicted varying levels of calmness and activity. They were asked to indicate whether their feelings were mostly calm or active. If their feelings were calmer, they selected one of the images on the left side of the scale, which represented calm and relaxed expressions. If their feelings were more active, they chose one of the images on the right side, which represented more active and anxious expressions. Higher scores indicated higher levels of arousal, reflecting a more active or excited emotional state.

For the dominance dimension, participants were asked to evaluate their sense of control or lack thereof in relation to their emotions. They were instructed to indicate whether their feelings were mostly characterized by a lack of control or by dominance. If they felt more of a lack of control, they selected one of the images on the left side of the scale, which represented emotions of resignation or oppression. If they felt more dominant, they chose one of the images on the right side, which represented emotions of control and confidence. Higher scores indicated a greater sense of dominance and control over their emotional experience.

2.3.3. The acculturation orientations to measure cultural adaptation were assessed with two nineitem scales (Nguyen & Von Eye, 2002; Berry et al., 2006). This was used to measure the motivation that individuals had to adopt the Portuguese host society culture or maintain one's own cultural identity in the Portuguese context. The cultural adaptation scale asked migrants to imagine their future life in Portugal and how likely it was that they would adopt Portuguese traditions, values, and behaviors (e.g., When I think about my future life in Portugal, I would like to adopt Portuguese values.). In contrast, the cultural maintenance scale evaluated the motivation to preserve one's cultural traditions, values, and behaviors while living in Portugal (e.g., " When I think about my future life in Portugal, I would like to maintain the values of my country of origin."). Both scales measured acculturation orientations on a five-point scale from 1 = strongly disagree to 5 = strongly agree. Higher values indicated higher motivation for cultural adaptation and maintenance. Internal consistency was $\alpha = .83$ for cultural adoption and $\alpha = .84$ for cultural maintenance (see Appendix E).

Shared reality perceptions were operationalized with three items asking how far migrants thought their attitudes, experiences, and perspectives on everyday life match those held by Portuguese (e.g., "Portuguese and I share the same outlook on the world.") (Conley et al., 2015; Lutterbach & Beelmann, 2020). The scale ranged from 1 = strongly disagree to 5 = strongly agree. Higher values indicated increased shared reality. The internal consistency of the scale was $\alpha = .83$.

- 2.3.4. Emotion regulation was measured using the Emotion Regulation Questionnaire developed by Gross and John (2003). This tool of 10 items assessed how individuals use two emotion regulation strategies: cognitive reappraisal with 6 items (e.g., "When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.") and expressive suppression with 4 items (e.g., "I keep my emotions to myself."). Participants responded the items while reflecting on their emotional experiences, particularly how they manage their emotions as migrants in Portugal. Both strategies were measured by a seven-point scale ranging from 1 = strongly disagree to 7 = strongly agree. Higher values reflected more intense use of the respective emotion regulation strategy. Internal consistency was $\alpha = .79$ for cognitive reappraisal and $\alpha = .78$ for expressive suppression (see Appendix F).
- 2.3.5. Well-being related to the migration experience was assessed using the World Health Organization Quality of Life (WHOQOL)-BREF questionnaire (World Health Organization, 2004). This tool measures various dimensions of quality of life, including 7 items for physical health (e.g., "How much do you need any medical treatment to function in your daily life?"), 6 items for psychological well-being (e.g., "How much do you enjoy life?"), 3 items for social relationships (e.g., "How satisfied are you with your personal relationships?"), and 8 items for

environmental factors (e.g., "How safe do you feel in your daily life?"). As well as 2 items for general quality of life such as "How would you rate your quality of life?". Participants were instructed to reflect on their life over the past four weeks when completing the questionnaire, considering how their quality of life has been influenced by their experience living in Portugal (see Appendix G).

Each item on the WHOQOL-BREF was rated on a five-point scale, with the specific scale varying depending on the aspect of the question. For questions regarding the frequency of experiences or behaviors, participants rated their responses from 1 = never to 5 = always. When evaluating satisfaction with different life aspects, the scale ranged from 1 = very dissatisfied to 5 = very satisfied. To assess the perceived quality of experiences or conditions, participants used a scale from 1 = very poor to 5 = very good. For questions concerning the extent to which something was present or complete, the scale ranged from 1 = not at all to 5 = completely. Higher scores indicated better quality of life across the assessed domains. Internal consistency was $\alpha = .44$ for overall quality of life and general health, $\alpha = .76$ for physical health, $\alpha = .75$ for psychological well-being, $\alpha = .65$ for social relationships, and $\alpha = .79$ for environmental factors.

2.3.6. Two optional open-ended questions were also asked to participants, to provide context and support for the study's results, allowing them to express themselves freely. These questions were intended solely to enrich the context of the study and will not be analyzed as qualitative data. The first question focused on their migration experience: "What have been your greatest challenge(s) while expressing your emotions in Portugal?" The second provided a space for additional comments: "Thank you for participating in this survey. Your responses are invaluable to our research. If you have any additional comments or thoughts, please feel free to share them below." Participation in these questions was not mandatory, and not all participants chose to respond (see Appendix H and J).

2.4. Procedure

All materials of this study were approved by the ethics committee of ISCTE. Data was collected online using the Qualtrics platform. The questionnaire was translated into Portuguese using a backtranslation process (Peña, 2007) for any items not originally available in the language. The online survey was estimated to take about 20 minutes to complete. Participants were recruited voluntarily

through word-of-mouth, personal networks, social media, collaboration with organizations that support migrants and using QR-Code distribution. Recruitment materials provided an overview of the study's objectives, procedures, potential benefits, and instructions for accessing the online questionnaire. Before participating, individuals were provided with informed consent and reviewed detailed information which included their rights as participants, the voluntary, anonymous, and confidential nature of participation, potential risks and benefits, the contact information of the researchers, and the duration of the study.

All participants completed the same questionnaire. Initially, they were presented with an informed consent form, and participation was not permitted without consent. Following this, participants were asked to confirm that they were first-generation migrants; they could continue with the survey only if they met this criterion. Then, they filled out a socio-demographic questionnaire. After, participants filled out the rest of the survey, detailed in the following section. Upon finishing the entire questionnaire, they were provided with a debriefing statement that outlined the study's objectives, potential follow-up procedures, and contact information for the research team. At the end, participants were debriefed and thanked for participation (see full materials in Appendix).

CHAPTER 3

Results

Below are the results of the statistical analyses that were carried out according to the research objectives formulated. After applying the research protocol and collecting the data, it was entered into a single database and analyzed using the Statistical Package for Social Science (SPSS), version 29. Missing values were treated using the listwise deletion method. All statistical analyses were carried out at a 95% confidence interval.

3.1. Descriptive analysis of the variables

A descriptive analysis of the data was conducted, reporting the mean and standard deviation values for the variables of emotion regulation (cognitive reappraisal and emotional suppression), acculturation orientations (cultural adaptation, cultural maintenance, and shared reality perceptions), subjective quality of life (physical, psychological, social relationships, and environmental health), and emotions experienced by migrants.

The results of the study are summarized in Table 3.1 provide insights into participants' emotional responses to migration, their strategies for emotion regulation, their acculturation orientations, shared reality perceptions, and overall quality of life.

Table 3.1Descriptive Statistics of Emotional Responses, Emotion Regulation, Acculturation Orientations, and Quality of Life

	N	Min	Max	Mean	Std. Dev	Skewness	Kurtosis	KS (Sig.)	
	Emotions due to Migration								
Emotional Valence	82	1.00	9.00	5.93	1.82	-0.64	.21	<.001	
Emotional Arousal	82	1.00	9.00	5.06	2.09	-0.10	98	<.001	
Emotional Dominance	82	1.00	9.00	5.23	1.86	-0.03	50	<.001	
				Emotio	n Regula	ation			
Cognitive Reappraisal	81	2.33	7.00	4.99	0.99	-0.32	02	.163	
Expressive	81	1.00	6.50	3.60	1.42	0.03	95	.127	
Suppression		Acculturation Orientations							
Cultural Adaptation	82	1.78	5.00	3.56	0.69	-0.39	04	.151	
Cultural Maintenance	82	1.00	5.00	3.54	0.83	-0.61	.47	.007	
Shared Reality Perception	82	1.00	5.00	3.13	0.97	-0.11	59	.024	
	Quality of Life								
Physical	82	1.14	4.86	3.78	0.70	-1.24	2.68	.011	
Psychological	82	2.17	4.83	3.67	0.63	-0.31	53	.002	
Social Relationships	82	2.00	5.00	3.55	0.80	-0.16	65	.020	
Environmental	82	1.63	4.75	3.52	0.65	-0.76	.43	.007	

3.1.1. Emotions Due to Migration

As we can see in table 3.1 participants generally reported moderately positive emotional experiences, with an average emotional valence score of 5.93 on a 9-point scale. The negative

skewness (-0.64) suggests that most participants leaned towards more positive emotional experiences, with fewer reporting more negative emotions. A kurtosis of 0.21 is a bit flatter than normal distribution. Additionally, the Kolmogorov-Smirnov (KS) test (p < .001) confirmed that the distribution of emotional valence significantly deviated from normality.

The average emotional arousal score was 5.06, suggesting that participants experienced a moderate level of emotional intensity. The skewness, close to zero (-0.10), indicates that the responses were fairly balanced between high and low arousal levels. Meanwhile, the kurtosis of -0.98 points to a distribution that's slightly flatter than a normal distribution. As with valence, the KS test (p < .001) showed that emotional arousal did not follow a normal distribution.

The mean score of emotional dominance, 5.23, suggests that participants felt a moderate sense of control over their emotions. The skewness was minimal (-0.03), indicating a near-symmetrical distribution, and the kurtosis (-0.50) points to a slightly flattened distribution. The KS test (p < .001) further confirmed that emotional dominance did not adhere to a normal distribution.

3.1.2. Emotion Regulation

In terms of emotion regulation strategies, as seen in Table 3.1, the average score for cognitive reappraisal was 4.99, suggesting that participants moderately engaged in this strategy to manage their emotions. A negative skewness (-0.32) indicates a tendency toward higher scores, meaning participants often relied on cognitive reappraisal. The kurtosis (-0.02) suggests a relatively flat distribution, and the KS test (p = .163) did not show any significant deviation from normality.

For expressive suppression, participants reported using this strategy less frequently, with an average score of 3.60. The skewness (0.03) is close to zero, reflecting a balanced spread of scores, while the kurtosis (-0.95) indicates a slightly flatter-than-normal distribution. The KS test (p = .127) suggests no significant deviation from normality.

3.1.3. Acculturation Orientation

Looking at acculturation orientation in Table 3.1, the mean score for cultural adaptation was 3.56, indicating that participants demonstrated a moderate level of adaptation to their new culture. The negative skewness (-0.39) shows a tendency for participants to report relatively higher levels of

adaptation. The kurtosis (-0.04) suggests that the distribution is close to normal, and the KS test (p = .151) confirmed this.

For cultural maintenance, the mean score of 3.54 indicates that participants also valued maintaining their original culture. The stronger negative skewness (-0.61) highlights a greater emphasis on cultural preservation, while the kurtosis (0.47) suggests a slightly peaked distribution. The KS test (p = .007) shows that the distribution of cultural maintenance significantly deviates from normality.

In terms of shared reality perception, the mean score of 3.13 suggests that participants were moderately aligned in their understanding of the migration experience. The skewness (-0.11) suggests a fairly balanced distribution, while the kurtosis (-0.59) reflects a flatter-than-normal spread. The KS test (p = .024) confirmed a significant deviation from normality.

3.1.4. Quality of Life

As we can see in Table 3.1, when assessing quality of life, participants reported a mean score of 3.78 for physical well-being, indicating generally positive perceptions of their health. The skewness (-1.24) reflects that most participants rated their physical health highly, and the kurtosis (2.68) shows a more peaked distribution with lower scores. The KS test (p = .011) indicated that the physical quality of life distribution deviated from normality.

For psychological quality of life, participants reported a mean score of 3.67, suggesting moderate satisfaction with their psychological state. The negative skewness (-0.31) shows a slight tendency toward higher scores, and the kurtosis (-0.53) suggests a relatively flat distribution. The KS test (p = .002) indicates that psychological well-being does not follow a normal distribution.

Regarding social relationships, the average score was 3.55, reflecting moderate satisfaction with social aspects of life. The skewness (-0.16) indicates a nearly balanced distribution, and the kurtosis (-0.65) points to a flatter-than-normal spread of scores. The KS test (p = .020) suggests a non-normal distribution for this variable.

Finally, participants reported moderately positive perceptions of their environment, with a mean score of 3.52. The negative skewness (-0.76) shows that participants generally rated their

environment favorably. The kurtosis (0.43) suggests a slightly peaked distribution, and the KS test (p = .007) confirmed a significant deviation from normality for environmental quality of life.

3.2. Correlations between variables

Table 3.2.

Pearson Correlation Values for Emotional Valence, Emotion Regulation Strategies, Acculturation

Orientations, and Quality of Life

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Cognitive Reappraisal	-									
2. Expressive Suppression	.22*	-								
3. Cultural Adaptation	.28*	.11	-							
4. Cultural Maintenance	.23*	.08	.11	-						
5. Shared Reality Perception	.15	.25*	.65**	.05	-					
6. Physical	.31**	.12	.37**	.12	.30**	-				
7. Psychological	.48**	.11	.27*	.22*	.23*	.66**	-			
8. Social Relationships	.17	06	.04	.12	.06	.28*	.43**	-		
9. Environmental	.22*	12	.17	.02	.28*	.55**	.44**	.42**	-	
10. Valence	13	04	.03	07	.16	04	05	.07	.07	-

As shown in Table 3.2, cognitive reappraisal is weakly to moderately positively correlated with cultural adaptation (r = .28, p < .05) and cultural maintenance (r = .23, p < .05). These correlations show that participants who say they often use cognitive reappraisal generally find it easier to adapt to their new culture, while retaining certain aspects of their culture of origin.

Expressive suppression, on the other hand, showed a moderate positive correlation with shared reality perception (r = .25, p < .05). This suggests that individuals who report higher levels of emotional suppression may feel a closer alignment between how they see the realities of their home country and the host country. This might mean that, although emotional suppression can sometimes have drawbacks, it could also help people adjust to the norms and expectations of the host culture more easily.

In terms of quality of life, cognitive reappraisal was positively associated with both physical (r = .31, p < .01) and psychological well-being (r = .48, p < .01). This indicates that participants who report greater use of cognitive reappraisal as a strategy also tend to report better physical and psychological health. In contrast, expressive suppression was not significantly correlated with physical or psychological well-being, but there was a slight negative correlation with environmental quality of life (r = -0.12), indicating a weak association between emotional suppression and satisfaction with the living environment.

The quality of life dimensions, physical, psychological, social, and environmental showed a strong interrelationship. In particular, physical and psychological well-being were strongly correlated (r = .66, p < .01). Participants who reported having better physical health also tended to report better psychological health. Moreover, the social dimension was also moderately associated with the physical one (r = .28, p < .05) and psychological (r = .43, p < .01), which suggests that stronger social connections are linked to better physical and psychological well-being. Similarly, environmental quality of life was also strongly associated with both physical (r = .55, p < .01) and psychological well-being (r = .44, p < .01), indicating that higher satisfaction with one's environment is correlated with overall health and emotional stability.

These findings highlight the connections between how individuals regulate their emotions, their approach to acculturation, and their quality of life. In particular, cognitive reappraisal is associated with both adaptation to a new culture and enhancing physical and emotional health, while the associations of expressive suppression seem more complex, particularly concerning shared reality perception and environmental satisfaction.

3.3. Serial mediation of emotion regulation, and cultural orientation on the association between emotional valence and quality of life

To examine the indirect effects of emotion valence (predictor) on quality of life (criterion variable) through emotion regulation strategies and cultural adaptation dimensions (mediators), we employed PROCESS macro Model 6 (Hayes, 2017), which allows for serial mediation analysis. Model 6 was chosen because it tests a chain of mediators, where the predictor variable (emotion valence) first influences emotion regulation, which in turn influences cultural adaptation, and finally impacts the outcome variable (quality of life). Emotion valence, conceptualized as the

positivity or negativity of emotional experiences, was hypothesized to have both direct and indirect effects on quality of life. The indirect effects were expected to occur through two mediating pathways: (1) through changes in emotion regulation, the ability to manage and respond to emotional experiences, and (2) through subsequent adjustments in cultural adaptation, defined as the individual's capacity to adjust to a new cultural environment.

Bootstrapping with 5,000 resamples was utilized to estimate the indirect effects, providing biascorrected confidence intervals for testing the significance of the mediated pathways. These sequential mediation models enable us to assess how variations in emotion valence influence the quality of life through these psychological and sociocultural processes, offering a deeper understanding of the mechanisms involved in this relationship.

3.3.1. Serial mediation of cognitive reappraisal, and cultural orientation on the association between emotional valence and quality of life

Twelve serial mediations, preformed with Model 6 of the PROCESS macro (REF) examined whether cognitive reappraisal and cultural adaptation mediate the relationship between emotional valence and the four dimensions of quality of life (Table 3.3.1).

Table 3.3.1.1 Serial mediation for the association between emotional valence and quality of life, mediated by cognitive reappraisal and cultural adaptation

Model number	Model	b (SE)	t	р	LLCI	ULCI				
1	Output: Cognitive reappraisal									
	Emotional valence	-0.07 (.06)	-1.17	.224	-0.19	0.05				
2	Output: Cultural adaptation									
	Emotional valence	0.10 (.04)	2.54	.013	0.02	0.18				
	Cognitive reappraisal	0.21 (.07)	2.97	.004	0.07	0.36				
3		Output:	Physical qua	ality of life						
	Emotional valence	0.05 (.04)	1.35	.181	-0.03	0.14				
	Cognitive reappraisal	0.18 (.08)	2.36	.021	0.03	0.33				
	Cultural adaptation	0.29 (.11)	2.61	.011	0.07	0.51				
3				quality of life						
	Emotional valence	0.07 (.04)	1.98	.051	-0.00	0.14				
	Cognitive reappraisal	0.31 (.07)	4.69	.000	0.18	0.44				
	Cultural adaptation	0.08 (.10)	0.88	.384	-0.11	0.28				
3		Outpu	ıt: Social rela	ationships						
	Emotional valence	0.15 (.05)	2.99	.004	0.05	0.24				
	Cognitive reappraisal	0.20(.09)	2.14	.036	0.14	0.38				
	Cultural adaptation	-0.14 (.13)	-1.02	.310	-0.41	0.13				
3	Output: Environmental									
	Emotional valence	0.12 (.04)	3.07	.003	0.04	0.20				
	Cognitive reappraisal	0.17(.07)	2.34	.022	0.03	0.32				
	Cultural adaptation	0.03 (.11)	0.24	.808	-0.19	0.24				
Direct effects		B (SE)	t	p	LLCI	ULCI				
$EV \rightarrow PhQV$		0.05 (.04)	1.35	.181	-0.03	0.14				
$EV \rightarrow PsyQV$		0.07(.04)	1.98	.050	-0.00	0.14				
$EV \rightarrow SRQV$		0.15 (.05)	2.99	.004	0.05	0.24				
$EV \rightarrow EQV$		0.12 (.04)	3.07	.003	0.04	0.20				
Indirect Effect			В	Boot SE	Boot LLCI	Boot ULCI				
Ind 1 (EV→CR-	→PhQV)		-0.01	0.01	-0.05	0.01				
Ind 1 (EV→CR-	~ /		-0.02	0.02	-0.06	0.01				
Ind 1 (EV→CR-	• - /		-0.01	0.02	-0.05	0.01				
Ind 1 (EV→CR-	~ /		-0.01	0.01	-0.04	0.01				
Ind 2 (EV→CA-			0.03	0.02	-0.00	0.08				
Ind 2 (EV \rightarrow CA-			0.01	0.01	-0.01	0.04				
Ind 2 (EV \rightarrow CA-	• • /		-0.01	0.02	-0.07	0.02				
Ind 2 (EV \rightarrow CA-	~ /		0.00	0.02	-0.03	0.03				
Ind 3 (EV \rightarrow CR-			-0.00	0.00	-0.02	0.00				
Ind 3 (EV \rightarrow CR-	• - /		-0.00	0.00	-0.02	0.00				
`	~ /		0.00	0.00	-0.01	0.00				
Ind 3 (EV \rightarrow CR-			0.00	0.01	-0.00 -0.01	0.02				
$\frac{\text{Ind 3 (EV} \rightarrow \text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}-\text{CR}$	→CA→EQV)	: 10 12 CI								

Note. EV= Emotional Valence; PhQV= Physical Quality of Life; PsyQV= Psychological Quality of Life; SRQV= Social Relationship Quality of Life; EQV= Environmental Quality of Life; CR= Cognitive Reappraisal; CA= Cultural Adaptation.

The total effects of emotional valence on physical and psychological quality of life were not significant (b = 0.07, SE = 0.04, p = .120; b = 0.06, SE = 0.04, p = .159, respectively). However,

emotional valence had significant total effects on social relationships and environmental quality of life (b = 0.12, SE = 0.05, p = .013; b = 0.11, SE = 0.04, p = .005). Similarly, the direct effects of emotional valence on physical and psychological quality of life were not significant, whereas the direct effects on social relationships and environmental quality of life were positive and significant (Table 3.3.1.1). None of the indirect effects of emotional valence on the four dimensions of quality of life were significant (Table 3.3.1.1), which indicates the absence of mediation. Cultural adaptation was positively associated with emotional valence and cognitive reappraisal. Furthermore, physical, social relationship, and environmental quality of life were positively related to both emotional valence and cognitive reappraisal. Psychological quality of life, however, was positively related only to cognitive reappraisal (Table 3.3.1.1).

Table 3.3.1.2 Serial mediation for the association between emotional valence and quality of life, mediated by cognitive reappraisal and cultural maintenance

Model number	Model	b (SE)	t	р	LLCI	ULCI				
1	Output: Cognitive reappraisal									
	Emotional valence	-0.07 (.06)	-1.17	.224	-0.19	0.05				
2	Output: Cultural maintenance									
	Emotional valence	-0.09 (.05)	-1.86	.067	-0.19	0.01				
	Cognitive reappraisal	0.17 (.09)	1.91	.059	-0.01	0.36				
3		Output:	Physical qu	ality of life						
	Emotional valence	0.09 (.04)	2.23	.029	0.01	0.17				
	Cognitive reappraisal	0.23 (.08)	2.97	.004	0.07	0.38				
	Cultural maintenance	0.09(.09)	0.96	.341	-0.01	0.27				
3		Output: Ps	sychological	quality of life						
	Emotional valence	0.09 (.03)	2.65	.010	0.02	0.16				
	Cognitive reappraisal	0.30(.06)	4.83	.000	0.18	0.43				
	Cultural maintenance	0.13 (.08)	1.71	.091	-0.02	0.28				
3		Outpu	t: Social rela	itionships						
	Emotional valence	0.15 (.05)	3.07	.003	0.05	0.24				
	Cognitive reappraisal	0.14 (.09)	1.58	.118	-0.04	0.32				
	Cultural maintenance	0.15 (.11)	1.42	.160	-0.06	0.36				
3		put: Environ	mental							
	Emotional valence	0.13 (.04)	3.28	.002	0.05	0.20				
	Cognitive reappraisal	0.17(.07)	2.42	.018	0.03	0.31				
-	Cultural maintenance	0.03 (.09)	0.38	.704	-0.14	0.20				
Direct effects		B (SE)	t	p	LLCI	ULCI				
$EV \rightarrow PhQV$		0.09(.04)	2.23	.029	0.01	0.17				
$EV \rightarrow PsyQV$		0.09(.03)	2.65	.010	0.02	0.16				
$EV \rightarrow SRQV$		0.15 (.05)	3.07	.003	0.05	0.24				
$EV \rightarrow EQV$		0.13 (.04)	3.28	.002	0.05	0.20				
Indirect Effect			В	Boot SE	Boot LLCI	Boot ULCI				
Ind 1 (EV→CR-	→PhQV)		-0.02	0.02	-0.05	0.01				
Ind 1 (EV→CR–	→PsyQV)		-0.02	0.02	-0.06	0.01				
Ind 1 (EV→CR–			-0.01	0.01	-0.04	0.01				
Ind 1 (EV→CR–	- /		-0.01	0.01	-0.04	0.01				
Ind 2 (EV \rightarrow CM	~ /		-0.01	0.01	-0.03	0.01				
Ind 2 (EV \rightarrow CM	~ /		-0.01	0.01	-0.03	0.00				
Ind 2 (EV \rightarrow CM	• - /		-0.01	0.01	-0.04	0.01				
Ind 2 (EV \rightarrow CM	- ·		0.00	0.01	-0.02	0.01				
Ind 3 (EV \rightarrow CR-		-0.00	0.00	-0.01	0.00					
Ind 3 (EV \rightarrow CR $-$		-0.00	0.00	-0.01	0.00					
Ind 3 (EV \rightarrow CR– Ind 3 (EV \rightarrow CR–			-0.00	0.00	-0.01	0.02				
Ind 3 (EV \rightarrow CR– Ind 3 (EV \rightarrow CR–	- /		-0.00	0.00	-0.01	0.02				
	→CM→EQV)	' 10 1' CT								

Note. EV= Emotional Valence; PhQV= Physical Quality of Life; PsyQV= Psychological Quality of Life; SRQV= Social Relationship Quality of Life; EQV= Environmental Quality of Life; CR= Cognitive Reappraisal; CM= Cultural Maintenance.

The total effects of emotional valence on physical and psychological quality of life were not significant (b = 0.07, SE = 0.04, p = .120; b = 0.06, SE = 0.04, p = .159, respectively). However,

emotional valence had significant total effects on social relationships and environmental quality of life (b = 0.12, SE = 0.05, p = .013; b = 0.11, SE = 0.04, p = .005). None of the indirect effects of emotional valence on the four dimensions of quality of life were significant (Table 3.3.1.2), which indicates the absence of mediation. Cultural maintenance was not associated with emotional valence and cognitive reappraisal. Furthermore, physical, psychological, and environmental quality of life were positively related to both emotional valence and cognitive reappraisal. Social relationship quality of life, however, was positively related only to emotional valence (Table 3.3.1.2).

Table 3.3.1.3

Serial mediation for the association between emotional valence and quality of life, mediated by cognitive reappraisal and shared reality perception

Model	Model	b (SE)	t	p	LLCI	ULCI				
number	Wiodei	U (BL)	·	Р	LLCI	OLCI				
1	Output: Cognitive reappraisal									
-	Emotional valence	-0.07 (.06)	-1.17	.224	-0.19	0.05				
2			ared reality p							
	Emotional valence	0.19 (.06)	3.43	.001	0.08	0.30				
	Cognitive reappraisal	0.19(.10)	1.88	.064	-0.01	0.40				
3			hysical quali	ty of life						
	Emotional valence	0.05 (.04)	1.23	.221	-0.03	0.14				
	Cognitive reappraisal	0.21 (.07)	2.81	.006	0.06	0.36				
	Shared reality perception	0.17 (.08)	2.05	.043	0.00	0.33				
3		Output: Psyc	chological qu	ality of life						
	Emotional valence	0.07 (.04)	1.84	.070	-0.01	0.14				
	Cognitive reappraisal	0.31 (.06)	4.95	.000	0.19	0.44				
	Shared reality perception	0.06(.07)	0.89	.378	-0.08	0.20				
3		Output:	Social relation	onships						
	Emotional valence	0.15 (.05)	2.95	.004	0.05	0.25				
	Cognitive reappraisal	0.18(.09)	2.06	.043	0.01	0.36				
	Shared reality perception	-0.09 (.10)	-0.90	.370	-0.28	0.10				
3			ıt: Environm							
	Emotional valence	0.10(.04)	2.61	.011	0.02	0.18				
	Cognitive reappraisal	0.16(.07)	2.26	.027	0.02	0.30				
	Shared reality perception	0.10 (.08)	1.30	.199	-0.05	0.25				
Direct		B (SE)	t	p	LLCI	ULCI				
effects										
$EV \rightarrow PhQV$	7	0.05 (.04)	1.23	.221	-0.03	0.14				
$EV \rightarrow PsyQ$	V	0.07(.04)	1.84	.070	-0.01	0.14				
$EV \rightarrow SRQV$	V	0.15 (.05)	2.95	.004	0.05	0.25				
$EV \rightarrow EQV$		0.10 (.04)	2.61	.011	0.02	0.18				
Indirect			В	Boot SE	Boot LLCI	Boot ULCI				
Effect										
Ind 1 (EV \rightarrow	CR→PhQV)		-0.01	0.02	-0.05	0.01				
Ind 1 (EV \rightarrow	CR→PsyQV)		-0.02	0.02	-0.07	0.01				
Ind 1 (EV \rightarrow	CR→SRQV)		-0.01	0.01	-0.05	0.01				
Ind 1 (EV→			-0.01	0.02	-0.02	0.06				
	SRP→PhQV)		0.03	0.03	-0.02	0.09				
*	\rightarrow SRP \rightarrow PsyQV)		0.01	0.02	-0.02	0.04				
	\rightarrow SRP \rightarrow SRQV)		-0.02	0.03	-0.07	0.03				
`	$\rightarrow SRP \rightarrow EQV$		0.02	0.02	-0.02	0.06				
	$\rightarrow CR \rightarrow SRP \rightarrow PhQV)$		-0.00	0.00	-0.01	0.00				
`	$\rightarrow CR \rightarrow SRP \rightarrow PsyQV)$		-0.00	0.00	-0.00	0.00				
	$\rightarrow CR \rightarrow SRP \rightarrow SRQV$		0.00	0.00	-0.00	0.01				
	\rightarrow CR \rightarrow SRP \rightarrow EQV)		-0.00	0.00	-0.01	0.00				
	motional Valence: PhOV= Phy	sical Quality of I								

Note. EV= Emotional Valence; PhQV= Physical Quality of Life; PsyQV= Psychological Quality of Life; SRQV= Social Relationship Quality of Life; EQV= Environmental Quality of Life; CR= Cognitive Reappraisal; SRP= Shared Reality Perception.

The total effects of emotional valence on physical and psychological quality of life were not significant (b = 0.07, SE = 0.04, p = .120; b = 0.06, SE = 0.04, p = .159, respectively). However, emotional valence had significant total effects on social relationships and environmental quality of life (b = 0.12, SE = 0.05, p = .013; b = 0.11, SE = 0.04, p = .005). None of the indirect effects of emotional valence on the four dimensions of quality of life were significant (Table 3.3.1.3), which indicates the absence of mediation. Shared reality perception was positively associated with emotional valence but not with cognitive reappraisal. Furthermore, social relationships and environmental quality of life were positively related to both emotional valence and cognitive reappraisal. Physical and psychological quality of life, however, was positively related only to cognitive reappraisal (Table 3.3.1.3).

3.3.2. Serial mediation of expressive suppression, and cultural orientation on the association between emotional valence and quality of life

Twelve serial mediations, performed with Model 6 of the PROCESS macro (REF) examined whether expressive suppression and cultural adaptation mediate the relationship between emotional valence and the four dimensions of quality of life (Table 3.3.2.1).

Table 3.3.2.1 Serial mediation for the association between emotional valence and quality of life, mediated by expressive suppression and cultural adaptation

number 1 Output: Expressive suppression Emotional valence -0.06 (.09) -0.65 5.17 -0.23 0 2 Emotional valence 0.09 (.04) 2.15 .035 0.01 0 3 Emotional valence 0.09 (.04) 2.15 .035 0.01 0 4 Expressive suppression 0.06 (.05) 1.17 .244 -0.04 0 5 Emotional valence 0.04 (.04) 0.93 .354 -0.04 0 6 Expressive suppression on Cultural adaptation 0.36 (.11) 3.30 0.02 0.1 0 6 Emotional valence 0.04 (.04) 1.00 .322 -0.04 0 0 6 Emotional valence 0.04 (.05) 0.84 .401 -0.06 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ULCI		LLCI	р	t	b (SE)	Model	Model					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				1		()							
Emotional valence -0.06 (.09) -0.65 .517 -0.23 0 2 Emotional valence Expressive suppression on Expressive suppression on Expressive suppression on Expressive suppression on Cultural adaptation 0.09 (.04) 2.15 .035 0.01 0 3 Emotional valence Expressive suppression Cultural adaptation 0.04 (.04) 0.93 .354 -0.04 0 4 Emotional valence Expressive suppression Cultural adaptation 0.36 (.11) 3.30 .002 0.14 0 5 Emotional valence Expressive suppression Cultural adaptation 0.04 (.05) 0.82 .413 -0.06 0 6 Emotional valence Expressive suppression Cultural adaptation 0.04 (.05) 0.82 .413 -0.04 0 6 Emotional valence Expressive suppression Cultural adaptation 0.04 (.05) 0.84 .401 -0.06 0 6 Emotional valence Expressive suppression Cultural adaptation -0.02 (.06) -0.29 .773 -0.14 0 6 Emotional valence Expressive suppression Cultural adaptation -0.01 (.04) 2.45 .016				pression	xpressive su	Output: E		1					
	0.12		-0.23										
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				ptation	Cultural ada	Output	Outp						
Semotional valence 0.04 (.04) 0.93 .354 -0.04 0.06 0.04 (.05) 0.82 .413 -0.06 0.04 (.05) 0.82 .413 -0.06 0.05 0.06 0.05 0.05 0.02 0.14 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05 0.05	0.17		0.01	.035	2.15	0.09 (.04)	Emotional valence	•					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.17		-0.04	.244	1.17	0.06 (.05)	Expressive suppression						
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $				ty of life	hysical quali	Output: I		3					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	0.12		-0.04	.354	0.93	0.04(.04)	Emotional valence						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.15					0.04 (.05)	Expressive suppression						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.58		0.14				Cultural adaptation						
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$								3					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.12												
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0.14												
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$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ot ULCI	\mathbf{B}	Boot LLCI	Boot SE	В								
$\begin{array}{cccccccccccccccccccccccccccccccccccc$													
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.01						→PhQV)	Ind 1 (EV \rightarrow ES					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.01						$S \rightarrow PsyQV$)	Ind 1 (EV \rightarrow ES					
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.02		-0.01	0.01	0.00		$S \rightarrow SRQV$)	Ind 1 (EV \rightarrow ES					
Ind 2 (EV \rightarrow CA \rightarrow PsyQV) 0.02 0.01 -0.00 0	0.02		-0.01	0.01	0.00		$S \rightarrow EQV$)	Ind 1 (EV \rightarrow ES					
	0.08		0.01	0.02	0.03		A→PhQV)	Ind 2 (EV→CA					
	0.05		-0.00	0.01	0.02		~ /	`					
Ind 2 (EV \rightarrow CA \rightarrow SRQV) -0.00 0.02 -0.04 0	0.03		-0.04	0.02	-0.00		• • /	`					
	0.02		-0.01	0.01	0.01		- ·	*					
	0.00			0.00									
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	0.00						- /	`					

Note. EV= Emotional Valence; PhQV= Physical Quality of Life; PsyQV= Psychological Quality of Life; SRQV= Social Relationship Quality of Life; EQV= Environmental Quality of Life; ES= Expressive Suppression; CA= Cultural Adaptation.

The total effects of emotional valence on physical and psychological quality of life were not significant (b = 0.07, SE = 0.04, p = .120; b = 0.06, SE = 0.04, p = .159, respectively). However,

emotional valence had significant total effects on social relationships and environmental quality of life (b = 0.12, SE = 0.05, p = .013; b = 0.11, SE = 0.04, p = .005). Only the indirect effects of emotional valence through cultural adaptation on physical quality of life was significant. Cultural adaptation was associated with emotional valence but not with expressive suppression. Furthermore, social relationships and environmental quality of life were positively related only to emotional valence. In contrast, physical and psychological quality of life were not related to emotional valence or expressive suppression but were significantly associated with cultural adaptation (Table 3.3.2.1). Cultural adaptation mediated the association between emotional valence and physical quality of life, where positive emotions were positively related to cultural adaptation and physical quality of life (Table 3.3.2.1).

Table 3.3.2.2 Serial mediation for the association between emotional valence and quality of life, mediated by expressive suppression and cultural maintenance

Model	Model	b (SE)	t	p	LLCI	ULCI					
number		O I		•							
1	E		Expressive su		0.22	0.12					
2	Emotional valence	-0.06 (.09)	-0.65	.517	-0.23	0.12					
2	F		Cultural mai		0.20	0.00					
	Emotional valence	-0.10 (.05)	-2.04 0.56	.045	-0.20	-0.00					
3	Expressive suppression	0.04 (.06)		.577	-0.09	0.17					
3	F		Physical qual		0.00	0.17					
	Emotional valence	0.08 (.04)	1.96 1.11	.053 .271	-0.00 -0.05	0.17 0.17					
	Expressive suppression	0.06 (.05) 0.14 (.09)	1.11	.271 .144	-0.03 -0.05	0.17					
3	Cultural maintenance				-0.03	0.33					
3	Emotional valence			uality of life	0.00	0.16					
		0.08 (.04)	2.05	.044 .328	0.00	0.16 0.14					
	Expressive suppression	0.05 (.05)	0.98 2.40		-0.05						
2	Cultural maintenance	0.20 (.08)		.019	0.03	0.37					
3	F		Social relat	•	0.04	0.24					
	Emotional valence	0.14 (.05)	2.87	.005 .653	0.04 -0.15	0.24 0.09					
	Expressive suppression	-0.03 (.06)	-0.45								
3	Cultural maintenance 0.19 (.11) 1.79 .077 -0.02 0.40 Output: Environmental										
3	Emotional valence				0.04	0.20					
		0.12 (.04)	2.94	.004 .337	0.04	0.20 0.05					
	Expressive suppression Cultural maintenance	-0.05 (.05)	-0.97 0.95	.337 .347	-0.15 -0.09	0.03					
Direct effects	Cultural maintenance	0.08 (.09) B (SE)	t		LLCI	ULCI					
$EV \rightarrow PhQV$		0.08 (.04)	1.96	.053	-0.00	0.17					
		0.08 (.04)	2.05	.033	0.00	0.17					
$EV \rightarrow PsyQV$		` /									
EV→ SRQV		0.14 (.05)	2.87	.005	0.04	0.24					
$EV \rightarrow EQV$		0.12 (.04)	2.94	.004	0.04	0.20					
Indirect			В	Boot SE	Boot LLCI	Boot ULC					
Effect	T. DLOW		-0.00	0.01	-0.02	0.01					
Ind 1 (EV \rightarrow ES					-0.02	0.01					
Ind 1 (EV \rightarrow E			-0.00	0.01							
Ind 1 (EV \rightarrow E			0.00	0.01	-0.01	0.02					
$\underline{\text{Ind 1 (EV} \rightarrow \text{E})}$			0.00	0.01	-0.01	0.02					
Ind 2 (EV \rightarrow CN	~ /		-0.01	0.01	-0.04	0.00					
Ind 2 (EV→CI	· - /		-0.02	0.01	-0.05	0.00					
Ind 2 (EV→CI	~ /		-0.02	0.01	-0.05	0.00					
Ind 2 (EV \rightarrow CN			-0.01	0.01	-0.03	0.01					
Ind 3 (EV \rightarrow E	$S \rightarrow CM \rightarrow PsyQV)$		-0.00	0.00	-0.00	0.00					
Ind 3 (EV \rightarrow E	$S \rightarrow CM \rightarrow PhQV$		-0.00	0.00	-0.00	0.00					
Ind 3 (EV \rightarrow E	$S \rightarrow CM \rightarrow SRQV$		-0.00	0.00	-0.00	0.00					
Ind 3 (EV \rightarrow E	$S \rightarrow CM \rightarrow EQV$		-0.00	0.00	-0.00	0.00					

Note. EV= Emotional Valence; PhQV= Physical Quality of Life; PsyQV= Psychological Quality of Life; SRQV= Social Relationship Quality of Life; EQV= Environmental Quality of Life; ES= Expressive Suppression; CM= Cultural Maintenance.

The total effects of emotional valence on physical and psychological quality of life were not significant (b = 0.07, SE = 0.04, p = .120; b = 0.06, SE = 0.04, p = .159, respectively). However, emotional valence had significant total effects on social relationships and environmental quality of life (b = 0.12, SE = 0.05, p = .013; b = 0.11, SE = 0.04, p = .005). None of the indirect effects of emotional valence on the four dimensions of quality of life were significant (Table 3.3.2.2), which indicates the absence of mediation. Cultural maintenance was negatively associated with emotional valence but not with expressive suppression. Furthermore, social relationships and environmental quality of life were positively related only to emotional valence. In contrast, physical quality of life was not significantly related to expressive suppression, emotional valence, or cultural maintenance. Psychological quality of life was positively associated with both emotional valence and cultural maintenance (Table 3.3.2.2).

Table 3.3.2.3

Serial mediation for the association between emotional valence and quality of life, mediated by expressive suppression and shared reality perception

Model	Model	b (SE)	t	p	LLCI	ULCI				
number										
1	Output: Expressive suppression									
	Emotional valence	-0.06 (.09)	-0.65	.517	-0.23	0.12				
2			ared reality p	perception						
	Emotional valence	0.19 (.05)	3.48	.001	0.28	0.29				
	Expressive suppression	0.19 (.07)	2.74	.008	0.05	0.33				
3		Output: P	hysical quali							
	Emotional valence	0.03 (.04)	0.74	.461	-0.06	0.12				
	Expressive suppression	0.03 (.06)	0.49	.626	-0.08	0.14				
	Shared reality perception	0.20 (.09)	2.31	.024	0.03	0.37				
3		Output: Psyc								
	Emotional valence	0.04(.04)	0.88	.383	-0.05	0.12				
	Expressive suppression	0.03 (.05)	0.63	.528	-0.07	0.14				
	Shared reality perception	0.12 (.08)	1.45	.152	-0.04	0.28				
3			Social relation							
	Emotional valence	0.13 (.05)	2.46	.016	0.02	0.23				
	Expressive suppression	-0.01 (.06)	-0.20	.841	-0.14	0.12				
	Shared reality perception	-0.04 (.10)	-0.39	.698	-0.24	0.16				
3		Outpu								
	Emotional valence	0.08 (.04)	1.88	.064	-0.00	0.16				
	Expressive suppression	-0.08 (.05)	-1.52	.131	-0.18	0.02				
	Shared reality perception	0.17 (.08)	2.&5	.035	0.01	0.33				
Direct		B (SE)	t	p	LLCI	ULCI				
effects										
$EV \rightarrow PhQV$		0.03 (.04)	0.74	.461	-0.06	0.12				
$EV \rightarrow PsyQ$		0.04 (.04)	0.88	.383	-0.05	0.12				
$EV \rightarrow SRQ'$	V	0.13 (.05)	2.46	.016	0.02	0.23				
$EV \rightarrow EQV$		0.08 (.04)	1.88	.064	-0.00	0.16				
Indirect			В	Boot SE	Boot LLCI	Boot ULCI				
Effect										
,	>ES→PhQV)		-0.00	0.01	-0.02	0.01				
	>ES→PsyQV)		-0.00	0.01	-0.02	0.01				
Ind 1 (EV-	>ES→SRQV)		0.00	0.01	-0.02	0.02				
Ind 1 (EV-	>ES→EQV)		0.00	0.01	-0.01	0.02				
Ind 2 (EV-	>SRP→PhQV)		0.04	0.03	0.00	0.10				
Ind 2 (EV—)	\rightarrow SRP \rightarrow PsyQV)		0.02	0.02	-0.01	0.06				
`	SRP →SRQV)		-0.01	0.02	-0.06	0.04				
`	\rightarrow SRP \rightarrow EQV)		0.03	0.02	0.00	0.08				
	\rightarrow ES \rightarrow SRP \rightarrow PhQV)		-0.00	0.00	-0.01	0.01				
`	$\Rightarrow ES \rightarrow SRP \rightarrow PsyQV)$		-0.00	0.00	-0.01	0.00				
`	\rightarrow ES \rightarrow SRP \rightarrow SRQV)		0.00	0.00	-0.00	0.01				
`	\rightarrow ES \rightarrow SRP \rightarrow EQV)		-0.00	0.00	-0.01	0.00				
	motional Valence: PhOV= Phy	sical Quality of I								

Note. EV= Emotional Valence; PhQV= Physical Quality of Life; PsyQV= Psychological Quality of Life; SRQV= Social Relationship Quality of Life; EQV= Environmental Quality of Life; ES= Expressive Suppression; SRP= Shared Reality Perception.

The total effects of emotional valence on physical and psychological quality of life were not significant (b = 0.07, SE = 0.04, p = .120; b = 0.06, SE = 0.04, p = .159, respectively). However, emotional valence had significant total effects on social relationships and environmental quality of life (b = 0.12, SE = 0.05, p = .013; b = 0.11, SE = 0.04, p = .005). The indirect effects of emotional valence through shared reality perception were significant for the psychological and environmental dimensions of quality of life. In contrast, the indirect effects on the physical and social relationships dimensions were not significant. Shared reality perception was positively associated with emotional valence and with expressive suppression. Furthermore, social relationship was positively related only to emotional valence, while environmental quality of life was positively associated with shared reality perception but not with emotional valence and expressive suppression. In contrast, physical health was significantly associated only with shared reality perception, while emotional valence and expressive suppression were not significant predictors. Psychological health was not significantly related to emotional valence, expressive suppression, or shared reality perception (Table 3.3.2.3).

CHAPTER 4

Discussion

The present study investigated the relationships between emotions related to the migration experience, emotion regulation strategies, cultural adaptation, and subjective quality of life among first-generation immigrants in Portugal. The findings provided nuanced support for the hypotheses. The results indicated that positive emotions were associated with participants' migration experiences and positively influenced their quality of life, particularly psychological well-being and environmental satisfaction. The results suggest that while emotional valence significantly influenced social relationships and environmental quality of life, none of the mediators (cognitive reappraisal, expressive suppression, cultural adaptation, cultural maintenance, or shared reality perception) significantly explained these effects consistently. Moreover, the findings also highlight the importance of emotion regulation strategies. Cognitive reappraisal was found to be related to improvements in well-being. Successful cultural adaptation also turned out to be an important factor that contributed to improvements in the quality of life since overcoming cultural barriers and feeling integrated into a new environment empowers migrants in their general quality of life.

The first hypothesis proposed that emotions related to the migration experience would affect migrants' quality of life. Participants generally reported positive emotions regarding migration, which were moderately but significantly linked to better psychological well-being and favorable living environments. However, social relationships and physical well-being showed weaker or no direct associations with emotional valence. Qualitative comments from participants show the impact that unpleasant emotions due to their migration experience had on them. For example, one participant said that the first few months had been very difficult, with feelings of isolation, frustration, and overwhelm: "The first five months were terrible. I'd never lived abroad, my Portuguese was nonexistent, I was overwhelmed and felt I'd made the worst decision. I decided to put off the decision about whether to return to the U.S. or stay for six months. That gave me the breathing space to learn how to live here without daily re-litigating the decision. I felt lonely without good friends, scared by how different things were, frustrated by things that didn't work as I was used to or thought they should. After 5 months, the negative emotions disappeared, and I felt

more settled. Less like every day something new and unexpected was hitting me upside the head. By 6 months, I never wanted to leave." Indeed, acculturation is a gradual process that takes place over time (Berry et al., 2006). Moreover, in their study of predictors of acculturation among Chinese adolescents in Canada, Kuo and Roysircar (2011) found that longer residence in the host country was associated with greater acculturation benefits. Such findings highlight the evolving nature of emotional experiences during migration.

Concerning the second hypothesis, which suggested that emotion regulation strategies influence the relationship between emotions and quality of life, the findings partially supported the expected outcomes. Cognitive reappraisal demonstrated a positive association with migrants' psychological and physical quality of life. It was hypothesized that higher cognitive reappraisal levels would correlate with better emotional experiences, ultimately enhancing physical and psychological well-being. The literature shows that cognitive reappraisal enables the individual to reframe an overwhelming situation and transform it into a manageable one, which would improve their psychological well-being and social relationships. The strategy is also constructive for migrants in emotional crises (Gross, 2002; Webb et al., 2012). The results revealed that participants who employed cognitive reappraisal more frequently reported higher satisfaction with their quality of life. This aligns with Gross (2002), who emphasizes its links to better psychological health, greater well-being, and stronger interpersonal relationships. However, while cognitive reappraisal significantly improved psychological quality of life, it did not mediate the pathway between emotional valence and other well-being dimensions. This suggests its effects may be direct or influenced by other, unexamined factors.

Emotion suppression, on the other hand, did not show a significant impact on quality of life. While suppression was weakly linked to shared reality perception, it did not significantly impact the quality-of-life dimensions, contradicting hypothesis 2b. Although the literature suggests that this strategy increases stress and may impair social functioning, potentially harming well-being over time (Gross & John, 2003; Hatzenbuehler et al., 2009), our study found minimal correlation between suppression and overall quality of life. While suppression might provide some temporary benefits, excessive practice of suppression can have debilitating effects on social integration and overall well-being (Gross & John, 2003; Butler et al., 2003). Qualitative feedback

highlighted instances where suppression might provide situational benefits, such as avoiding conflict in culturally sensitive contexts. For example, one participant noted, "Not wanting to be interpreted as invasive in the way I express myself with my body, I repress my behaviors for fear of being misunderstood." Another said, "I think I repress everything." Despite these reports, the quantitative analysis suggests that suppression neither enhances nor detracts from migrants' overall quality of life.

Moreover, significant direct effects of emotional valence were observed on specific quality of life dimensions, such as psychological and environmental well-being. However, none of the proposed mediators (cognitive reappraisal, cultural adaptation, cultural maintenance, or shared reality perception) explained these relationships. These findings underscore the need to explore alternative mechanisms that might elucidate how emotions influence quality of life.

The third hypothesis posited that successful cultural adaptation would enhance quality of life. This was supported by the finding that participants who adapted well culturally experienced better psychological and physical well-being. Cultural adaptation was modestly associated with positive emotions and emotion regulation strategies such as cognitive reappraisal. Participants who integrated well into their new culture generally experienced more positive emotions. Cognitive reappraisal appears to play an important role in cultural adaptation, while emotion suppression had little impact on how well people adapted. Several aspects of the cultural adaptation process can explain this positive relationship. Migrants who overcome challenges such as language barriers, social norms or community integration often feel more integrated and supported. This sense of belonging is essential for strengthening psychological and physical health. For example, adapting well culturally often leads to greater involvement in social networks and local activities, improving emotional well-being and life satisfaction (Matsumoto et al., 2004; Lim et al., 2008). However, its role in mediating the relationship between emotional valence and quality of life was limited, as cultural adaptation alone did not fully explain these pathways.

The significant relationship between quality of life and cultural adaptation aligns with Berry's (2006) acculturation model. This model shows that the integration strategy, where people retain elements of their original culture while opening up to the new one, is the one that offers the best results for psychological well-being. Conversely, people who feel marginalized or separated

from the host culture often report poorer physical and mental health (Berry & Hou, 2016). Difficulties and migration stressors, such as language barriers, unemployment, and discrimination, are pervasive and can further hinder cultural adaptation and, ultimately, adversely affect the quality of life (Yakushko et al., 2008). In this study, 16 participants shared that language barriers were a real challenge to their integration and impacted their quality of life. One participant explained, "It's the language. Even though I'm bilingual and my partner and I communicate well in English, it feels different expressing emotions in my native tongue." Another mentioned simply, "Difficulties in being able to adequately express myself in the language."

Another hypothesis stated that negative emotions are associated with a focus on cultural maintenance, which can negatively affect physical and psychological quality of life. The findings partially support this hypothesis. Research shows that immigrants often confront unfamiliar cultural norms, making it difficult to manage their emotions (Mesquita et al., 2014). When individuals feel a strong need to maintain their culture of origin, they may find themselves in conflict with the host culture. This conflict can lead to emotional tension and slow down their integration, which is in line with the hypothesis. Furthermore, numerous studies have shown that the desire to preserve one's culture can sometimes lead to emotional distress, further complicating the adaptation process (Matsumoto et al., 2004).

The results show that participants mostly expressed positive emotions. They also indicated that maintaining their culture of origin was important, suggesting an effort to balance between adapting to their new environment and preserving their cultural identity. However, the hypothesized negative association between cultural maintenance and quality of life dimensions was not robustly supported. Additionally, the mediation analyses only showed marginal significance for one pathway, indicating weak or inconclusive support for this relationship. We did not find a significant connection between cultural maintenance and physical or psychological quality of life, which limits the overall support for this hypothesis, suggesting other factors may mitigate or interact with these effects.

Finally, the last hypothesis suggested that the perception of shared reality is linked to enhanced emotional well-being and overall quality of life. Indeed, it was positively associated with emotional quality of life and also showed a link with expressive suppression. Participants who felt in tune with their migratory experience and the expectations of their new culture reported more positive emotions. However, the role of shared reality in affecting the relationship between emotion regulation and quality of life remains unclear, although it does appear to play a role in some dimensions of well-being.

These results show that shared perceptions of reality can help migrants interpret their emotions. Feeling understood and aligned with the reality of both their culture of origin and their host culture could help them better manage their emotions, thereby improving their quality of life. However, the relationship between shared reality and emotion regulation is complex. Moreover, shared reality perception did not mediate the effects of emotional valence on all dimensions of quality of life, suggesting that its influence is more direct or operates through other mechanisms.

The results confirm that negative emotions harm the quality of life, especially psychological and environmental well-being. This means that interventions such as psychological support or community programs could significantly help migrants improve their quality of life. Working on their emotional well-being may help them to better perceive their mental state and environment, which could be essential for their adaptation in general. Furthermore, cognitive reappraisal does improve migrants quality of life. Emotion regulation training programs could encourage them to use this approach more effectively, strengthening their psychological resilience. Promoting more positive regulation strategies is therefore essential to support migrants' well-being.

Additionally, successful acculturation is associated with a better quality of life, underlining the importance of creating opportunities for social integration and community participation for immigrants. Programs that foster interaction with local communities, provide cultural orientation and support language learning can improve acculturation. By encouraging participation in local activities and networks, these initiatives can help immigrants develop a sense of belonging, thereby contributing to strengthening emotional and mental health. Negative emotions are linked to a focus on cultural maintenance, highlighting the importance of protecting cultural identity. This means that it would be useful to implement interventions that encourage adaptation to the host culture while supporting the preservation of cultural heritage. The balance between these two aspects seems to be crucial to the emotional well-being of immigrants. Community programs that celebrate

cultural diversity and encourage the expression of cultural identity can help immigrants feel valued and understood. This approach can alleviate the negative emotions resulting from cultural conflict, and thus improving overall quality of life. The positive relationship between shared realities and emotional well-being demonstrates the need to strengthen connections among migrants and between them and host communities. Creating spaces for conversation and shared experiences can help them feel understood and supported in their emotional journey.

The mediation analyses provided limited support for the hypothesized pathways. While direct effects of emotional valence were observed for certain dimensions, such as psychological and environmental well-being, the mediators, including cognitive reappraisal and cultural adaptation, did not significantly explain these relationships. This highlights the need to explore alternative mechanisms, such as social support or resilience, that could clarify how emotions influence quality of life.

4.1. Limitations and future directions

Therefore, like many studies, there are a few limitations that this research presents, and these should be discussed. First, the sample size was small, and the number of participants did not reach the objectives needed to ensure solidity in statistical power. The findings should be interpreted with prudence, and more research is needed and with a bigger sample. Moreover, this small sample cannot represent the general migrant population in Portugal, which jeopardizes the generalisability of the results. In addition, other studies might also look at why participants do not complete this kind of survey.

Also, the demographic characteristics of the participants indicate that most of them were women, such distribution would be valued if it had equal proportions of gender. Similarly, a greater number of participants had a high level of education, striving for a wide range of participants with different educational levels might provide a wider range of opinions. Also, whereas the greater part of the respondents were individuals from Brazil, which is the biggest foreign community in Portugal, according to the Serviço de Estrangeiros e Fronteiras (SEF) in 2022, other groups, like immigrants from India, were underrepresented and hence may limit the generalization of results. About the motivations to migrate, the most expressed by participants as a reason for coming to

Portugal was economic reasons. Migration motives can be diverse and each may potentially lead to some unique psychological consequences, which would be very interesting to investigate.

The questionnaire was available only in Portuguese and English; this could have been one of the limiting factors. Keeping in mind that immigration and cultural adaptation are rather sensitive issues, the questionnaires in the mother tongue of participants or a language comfortable to them would be an ideal approach. Limitations due to languages may not allow people to project or express themselves appropriately, hence giving scope for some bias. Personalized interviews may also be useful to supplement the findings with more information on a more individualized basis.

Also, the current study did not measure social support, although the latter is an important factor for mental health among migrant populations. Social support may reduce stress from migration, which would include financial and job problems and also personal relationship issues (Wong & Leung, 2008). This can increase life satisfaction and psychological well-being (García-Cid et al., 2018). The most advantageous support for favorable mental health consequences has been that of family, friends, and ethnic communities (Schweitzer et al., 2006). It would be important for interventions to focus on strengthening social support and reducing tensions within communities (Guruge et al., 2015). Other than this, linguistically accessible, culturally safe, and timely mental health services are required in order to support and help the at-risk immigrant population (Guruge et al., 2015).

Research also indicated that length of stay in the host country, access to social support, and satisfaction with community resources significantly influence the quality of life of immigrants (Lee & Lee, 2014). Further, premigration trauma, postmigration difficulties, as well as gender turn out to be other factors affecting mental health among migrant populations (Schweitzer et al., 2006). Individuals who successfully adapt to a new culture can better access and benefit from these resources, which in turn supports their well-being. For social networking, people who are much more involved with their community tend to show increased life satisfaction, with low levels of depression and anxiety (Chen et al., 2018). However, this study did not look at these factors, suggesting an area for future research.

The Self-Assessment Manikins tool used to assess participants' emotions about their migration experience measures three emotional dimensions: valence, excitement and dominance. However, this assessment of emotions is limited, as many other relevant emotions are not captured. This tool cannot fully represent the emotional spectrum migrants experience. For instance, feelings such as nostalgia, homesickness, and hope are often central to the migration experience but are not directly measured by this scale. Including more qualitative measures, such as one-to-one interviews, could provide a richer and more nuanced understanding of how migrants emotionally manage life in a new country.

4.2. Conclusion

In conclusion, this study reveals valuable insights into the emotional experiences of firstgeneration migrants in Portugal, confirming that positive emotions associated with migration improve psychological well-being and overall quality of life. Conversely, although less frequent in this study, negative emotions negatively impacted their well-being, demonstrating the need for interventions to help and support migrants in emotion regulation. The findings also show cognitive reappraisal as a significant factor in fostering resilience, while emotional suppression is associated with lower quality of life. Additionally, successful cultural adaptation emerged as essential to improving migrants' well-being, supporting the importance of social integration and community support. However, many limitations exist in this study, such as the sample size, which was too limited, as well as demographic representation, including gender equity and educational level. This suggests that future research should explore these issues with more of the factors cited above, including social support and pre- and post-migration challenges. Overall, this study highlights the need for a comprehensive approach to understanding and addressing the emotional and psychological needs of migrants, to facilitate their integration into Portuguese society. In summary, despite its limitations, this study has nonetheless provided a better understanding of the emotional experiences of first-generation immigrants to Portugal. Not least because there has not been a lot of research done on the subject to date. It highlights the specific challenges faced by this population and underscores the importance of emotions in their adaptation process. By recognizing the obstacles through which migrants pass, and the resources available to them, this study contributes to an important and growing field of research aimed at improving the well-being and integration of marginalized groups in Portuguese society.

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Appendix A – Informed consent

Welcome and thank you for your interest in this research. This study aims for participants who are 18 years old or older and are first-generation migrants in Portugal. This means you were born in another live permanently in Portugal the country and now as first generation. This study is part of a research project taking place at Iscte – Instituto Universitário de Lisboa and aims to understand how migrants manage their emotions in the Portuguese context and how it impacts their wellbeing.

We will ask you to answer a questionnaire about your experience as a migrant in Portugal and how you feel about it. It is composed of different sections: emotions due to the migration experience, emotion regulation, cultural adaptation and well-being. Your participation will take less than 20 minutes. There are no expected significant risks associated with participation in the study. However, while answering this questionnaire about your emotions due to the migration experience in Portugal, it is possible that some questions may stir up uncomfortable or distressing feelings. If you find yourself in need of support or someone to talk to about your experiences, please don't hesitate to reach out to us. Participation in the study is strictly voluntary, hence we ask for your honest response to all questions as only then can they be evaluated and useful. Note that your participation is anonymous and confidential. All obtained data are merely intended for statistical processing and none of the answers will be analysed or reported individually. At no point of the study will you be asked to identify yourself. The study is conducted by Lena Foligné (Foligne Lena@iscte-iul.pt) and scientifically supervised by Dr. Cristina Camilo (cristina_camilo@iscte-iul.pt) who you may contact to clear up any doubts or share comments. We want to express our gratitude for your participation in the study as it contributes to the advancement of knowledge in this field of science. I have read this informed consent document and I declare that I have understood the aims of what was proposed to me, as explained by the investigator, that I was given the opportunity to ask any questions about this study and received a clarifying reply to all such questions and accept participating in the study. I freely and voluntarily choose to participate in this study.

\bigcirc	Yes, I consent
	No, I do not consent

Appendix B – First generation migrant confirmation

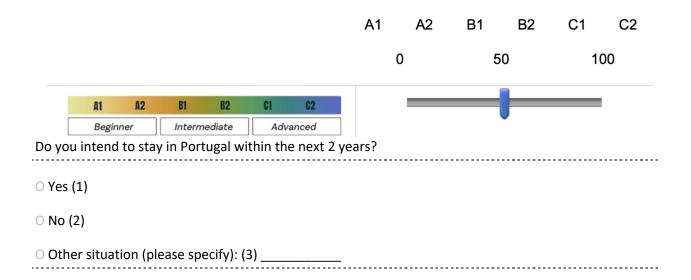
ımı	s study aim	is for parti	cipant	s wno a	are iirs	st-generation m	igrar	its in Portu	gai. i	nis m	eans yo	ou were borr
in	another	country	and	now	live	permanently	in	Portugal	as	the	first	generation
Are	e you a first	-generatio	n migr	ant in I	Portug	gal?						
0	Yes, I am											
0	No, I am n	ot										

Appendix C – Demographics

What is your country of origin?
O Brazil (1)
O Cape Verde (2)
O Ukrain (3)
O Angola (4)
O Other (please specify): (5)
What is your mother tongue?
O Portuguese (1)
O English (2)
O Other (please specify): (3)
How old are you?
How would you describe your gender?
O Female (1)
O Male (2)
O I identify my gender as (please specify): (3)
Are you religious?
O Yes (1)
O No (2)
(If yes was selected) What is your religion?
O Christianity (1)

O Islam (2)
Other (please specify): (3)
What is the highest level of education you have completed?
O Primary school (1)O Secondary school (2)
O Bachelor's degree (3)
O Master's degree (4)
O PhD (5)
O None (6)
Other, please write down with simple words (7)
What is your current occupation?
O Employed in a Portuguese company (1)
O Employed in a foreigner company (2)
○ Self-employed (3)
O Unemployed (4)
O Student (5)
O Retired (6)
Other, please write down with simple words: (7)
How long have you been in Portugal?
Number of years
Number of months

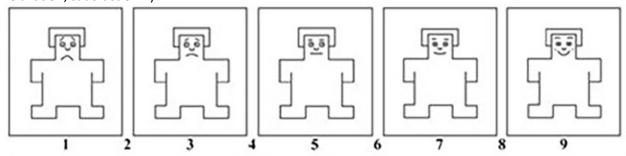
Are you alone in Portugal?
O Yes (1)
O No, I live with my family (2)
O No, I live with friends (3)
O No, I live with my partner (4)
Other situation (please specify): (5)
What is the main reason why you came to Portugal?
O To study (1)
O To work (2)
O For security reasons (3)
O For economic reasons (4)
O Other reason, please write down with simple words: (5)
To what extent do you interact with Portuguese people?
O Never (1)
O Sometimes (2)
OAbout half the time (3)
O Most of the time (4)
O Always (5)
How would you rate your Portuguese language level?



Appendix D – Emotional responses about the migration experience

Please use the scale below to indicate your current emotional state regarding your experience as a migrant in Portugal. The three images represent your emotional reactions across three dimensions: Valence: Represents the pleasantness or unpleasantness of your emotions. Arousal: Indicates the intensity or activation level of your emotions. Dominance: Reflects your sense of control or influence over your emotions.

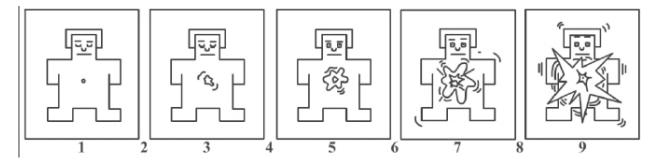
Valence: from negative to positive emotions. The first picture on the left (1) shows a person who is clearly distressed, with negative emotions (panic, irritation, sadness, frustration...) The last pictures on the right (9) shows an individual who is obviously elated, with positive emotions (fun, happiness, relaxation, satisfaction...).



Please consider how negative or positive your emotions have been regarding your migration experience in Portugal.

01(1) 02(2) 03(3) 04(4) 05(5) 06(6) 07(7) 08(8) 09(9)

Arousal: from quiet to more active emotions. The first pictures on the left (1) shows an individual who is very calm (relaxation, tranquillity, meditation, laziness...). The last picture on the right (9) shows an individual who is bursting with arousal (excitation, energised, anxious, anger...).

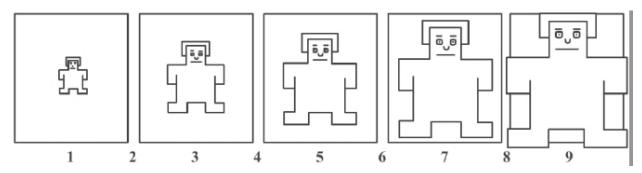


Please consider how quiet or active your emotions have been regarding your migration experience in Portugal.

0 1 (1) 0 2 (2) 0 3 (3) 0 4 (4) 0 5 (5) 0 6 (6) 0 7 (7) 0 8 (8) 0 9 (9)

Dominance: less dominant to dominant emotions..The first picture on the left (1) shows an individual who feels a lack of control (intimidation, overwhelmed, submission, resignation...).The last picture on

the right (9) shows a person who in control of the situation (confident, being important, recognized, decisive...).



Please consider how dominant your emotions have been regarding your migration experience in Portugal.

0 1 (1) 0 2 (2) 0 3 (3) 0 4 (4) 0 5 (5) 0 6 (6) 0 7 (7) 0 8 (8) 0 9 (9)

Appendix E – Acculturation orientation

Cultural Adaptation

Please indicate the extent to which you agree with the following statements regarding your culturations and the statements regarding your culturations are statements.
adaptation in Portugal:

When I think about my future life in Portugal, I would like to adopt Portuguese values.

When I think about my future life in Portugal, I would like to adopt Portuguese traditions.

When I think about my future life in Portugal, I would like to adopt the Portuguese language.

When I think about my future life in Portugal, it is important to me to socialize with Portuguese.

When I think about my future life in Portugal, I would like to adopt Portuguese gender conventions.

When I think about my future life in Portugal, I would like to have Portuguese friends.

When I think about my future life in Portugal, I would like to adopt Portuguese behaviors.

When I think about my future life in Portugal, I would like to adopt Portuguese work values.

When I think about my future life in Portugal, I would like to adopt Portuguese values regarding child education.

5,44,50
O Somewhat disagree (2)
O Neither agree nor disagree (3)
O Somewhat agree (4)
O Strongly agree (5)

Cultural Maintenance

O Strongly disagree (1)

Please indicate the extent to which you agree or disagree with the following statements regarding maintaining your cultural identity in Portugal:

When I think about my future life in Portugal, I would like to maintain the values of my country of origin.

When I think about my future life in Portugal, I would like to maintain the traditions of my country of origin.

When I think about my future life in Portugal, I would like to maintain the language of my country of origin.

When I think about my future life in Portugal, it is important to me to socialize with people from my country of origin.

When I think about my future life in Portugal, I would like to maintain gender conventions in line with the conventions of my country of origin.

When I think about my future life in Portugal, I would like to have friends from my country of origin.

When I think about my future life in Portugal, I would like to maintain behaviors that are typical for my country of origin.

When I think about my future life in Portugal, I would like to maintain values regarding child education. When I think about my future life in Portugal, I would like to maintain work values that are typical for my country of origin.

Shared Reality Percention	
O Strongly agree (5)	
O Somewhat agree (4)	
O Neither agree nor disagree (3)	
O Somewhat disagree (2)	
O Strongly disagree (1)	

Shared Reality Perception

Please indicate the extent to which you agree or disagree with the following statements regarding shared reality perceptions with Portuguese:

Portuguese and I share the same outlook on the world.

My attitudes are quite similar to those held by most Portuguese.

If I were to interact with a Portuguese person, chances are good that we would agree about lots of

nings.	
Strongly disagree (1)	
Somewhat disagree (2)	
Neither agree nor disagree (3)	
Somewhat agree (4)	
Strongly agree (5)	

Appendix F – Emotion regulation

We would like to ask you some questions about your emotional life, in particular, how you manage your emotions as a migrant in Portugal:

When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about. I keep my emotions to myself. When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about. When I am feeling positive emotions, I am careful not to express them. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm. I control my emotions by not expressing them. When I want to feel more positive emotion, I change the way I'm thinking about the situation. I control my emotions by changing the way I think about the situation I'm in. When I am feeling negative emotions, I make sure not to express them. When I want to feel less negative emotion, I change the way I'm thinking about the situation. O Strongly disagree (1) O Disagree (2) Somewhat disagree (3) O Neither agree nor disagree (4) Somewhat agree (5) Agree (6)

O Strongly agree (7)

Appendix G – Well-being and quality of life

The following questions ask how you feel about your quality of life, health, or other areas of your life. Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one. Please keep in mind your standards, hopes, pleasures, and concerns. We ask that you think about your life in the last four weeks. How would you rate your quality of life?

How would you rate your quality of life?
O Very poor (1)
O Poor (2)
O Neither poor nor good (3)
O Good (4)
O Very good (5)
How satisfied are you with your health?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
To what extent do you feel that physical pain prevents you from doing what you need to do?
O Not at all (1)
O A little (2)
O A moderate amount (3)
O Very much (4)
O An extreme amount (5)
How much do you need any medical treatment to function in your daily life?
O Not at all (1)

O A little (2)
O A moderate amount (3)
O Very much (4)
O An extreme amount (5)
How much do you enjoy life?
O Not at all (1)
O A little (2)
O A moderate amount (3)
O Very much (4)
O An extreme amount (5)
To what extent do you feel your life to be meaningful?
O Not at all (1)
O A little (2)
O A moderate amount (3)
O Very much (4)
O An extreme amount (5)
How well are you able to concentrate?
O Not at all (1)
O A little (2)
O A moderate amount (3)
O Very much (4)
O Extremely (5)
How safe do you feel in your daily life?
O Not at all (1)

O A little (2)
O A moderate amount (3)
O Very much (4)
O Extremely (5)
How healthy is your physical environment?
O Not at all (1)
O A little (2)
O A moderate amount (3)
O Very much (4)
O Extremely (5)
Do you have enough energy for everyday life?
O Not at all (1)
O A little (2)
O Moderately (3)
O Mostly (4)
O Completely (5)
Are you able to accept your bodily appearance?
O Not at all (1)
O A little (2)
O Moderately (3)
O Mostly (4)

O Completely (5)
Have you enough money to meet your needs?
O Not at all (1)
O A little (2)
O Moderately (3)
O Mostly (4)
O Completely (5)
How available to you is the information that you need in your day-to-day life?
O Not at all (1)
O A little (2)
O Moderately (3)
O Mostly (4)
O Completely (5)
To what extent do you have the opportunity for leisure activities?
O Not at all (1)
O A little (2)
O Moderately (3)
O Mostly (4)
O Completely (5)
How well are you able to get around?
O Very poor (1)
O Poor (2)
O Neither poor nor good (3)

O Good (4)
O Very good (5)
How satisfied are you with your sleep?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with your ability to perform your daily living activities?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with your capacity for work?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with yourself?
O Very dissatisfied (1)
O Dissatisfied (2)

O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with your personal relationships?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with your sex life?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with the support you get from your friends?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with the conditions of your living place?
O Very dissatisfied (1)

O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with your access to health services?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How satisfied are you with your transport?
O Very dissatisfied (1)
O Dissatisfied (2)
O Neither satisfied nor dissatisfied (3)
O Satisfied (4)
O Very satisfied (5)
How often do you have negative feelings such as blue mood, despair, anxiety, depression?
O Never (1)
O Rarely (2)
O Quite often (3)
O Very often (4)
O Always (5)

Appendix H – Emotional experience

What have been your greatest challenge(s) while expressing your emotion in Portugal?

Appendix I – Additional comment

Thank you for participating in this survey. Your responses are invaluable for our research. If you have any additional comments or thoughts, please feel free to share them below.

Appendix J – Debriefing

Thank you for participating in this study.

As indicated at the onset of your participation, we were interested in exploring how migrants regulate their positive and negative emotions in the context of Portugal and how this regulation impacts their well-being. Specifically, we aimed to understand the ways in which individuals from diverse cultural backgrounds manage their emotional experiences and how these strategies contribute to their overall sense of well-being within the Portuguese context.

In this study, we sought to investigate the relationship between emotion regulation strategies and well-being among migrants in Portugal. We aimed to understand how individuals from different cultural backgrounds utilize various emotion regulation techniques, such as cognitive reappraisal or expressive suppression, to manage their emotional experiences in response to the challenges and opportunities associated with migration.

By participating in this study, you have contributed valuable insights that will help us better understand the experiences of migrants in Portugal and inform interventions aimed at promoting their emotional well-being.

Your participation is greatly appreciated, and your responses will contribute to the advancement of knowledge in this important area of research.

While answering this questionnaire about your emotions due to the migration experience in Portugal, it is possible that some questions may have stirred up uncomfortable or distressing feelings. If you find yourself in need of support or someone to talk to about your experiences, please don't hesitate to reach out to us.

We remind that the following contact details can be used for any questions that you may have, comments that you wish to share, or to indicate your interest in receiving information about the main outcomes and conclusions of the study: Lena Foligné (Foligne Lena@iscte-iul.pt) and Cristina Camilo (cristina camilo@iscte-iul.pt)

Thank you once again for your participation and contribution to our research efforts.