



**Utrecht University**

**The Mediating Role of Self-Esteem and Acculturative Stress in The Relationship Between  
International Migration and Migratory Grief: A Cross-Cultural Comparison**

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Master's Thesis

Clinical Psychology

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June 2021

### Abstract

In the past years, migration has become a critical global subject. Previous research suggests that immigrants are prone to experience a large range of stressors, which can lead to mental health issues. The novel concept of migratory grief has been put forth as a notion to potentially explain the particular distress some immigrants might experience. Nonetheless, relatively little research has examined this construct, and tried to unravel which factors might be linked to migratory grief. The present study investigated the effects of the cultural discrepancy in terms of individualism-collectivism between the country of origin and the host country, self-esteem, and acculturative stress on migratory grief in Danish, Greek, and Swedish immigrants through a proposed serial-multiple mediation model. 2237 immigrants (781 Danish, 375 Greek, and 1081 Swedish) participated in the study. The findings suggested that self-esteem and acculturative partially mediate the pathway between migration and migratory grief as higher self-esteem and lower acculturative stress was related to less migratory grief. In addition, a larger cultural discrepancy between the country of origin and the host country directly prompted more migratory grief, but it was not significantly related to acculturative stress. The current study is the first to examine the effects of self-esteem and acculturative stress in the pathway between migration and migratory grief through a serial-multiple mediation model. The findings add to the scarce body of literature on migratory grief, and they provide directions for further research that might enhance our knowledge of this novel construct.

*Keywords:* Migration, self-esteem, acculturative stress, migratory grief, individualism, collectivism, cultural contrasts.

### **The Mediating Role of Self-Esteem and Acculturative Stress in The Relationship Between International Migration and Migratory Grief: A Cross-Cultural Comparison**

Migration is a current and critical matter around the world. In 2019, a global review indicated that approximately 272 million individuals were international migrants (International Organization of Migration, 2019). There are numerous reasons as to why people choose to migrate to a new country and migrating in itself is not always an uncomplicated process (Castelli, 2018). In some instances, migrants leave their country of origin on a somewhat voluntary basis, whereas in others, the migration might be of a more involuntary nature (e.g., as for asylum seekers and refugees). Establishing a precise definition of voluntary and involuntary migration can be somewhat challenging (Ottonelli & Toressi, 2013), but voluntary migration is generally a notion that is used when migration stems from an individual's own initiative and free will (Tataru, 2019). Regardless of the reasons for migrating, individuals who migrate to a new country might experience a large range of stressors, including grief associated with the migration process, namely migratory grief. Migratory grief is a rather novel concept which explores grief based on underlying constructs of the attachment to the home country and "identity discontinuity" (e.g., feeling ambiguous about one's own identity due to migrating to a new culture), and studies have indicated that migratory grief can significantly interfere with one's mental health (Casado et al., 2010; Casado & Leung, 2002; Kang, 2017). Nevertheless, little research has investigated which underlying psychological factors contribute to migratory grief, and the link is therefore still unclear.

Homesickness has been highlighted in scientific literature as a phenomenon that can contribute to difficulties with the adaptation to a new environment and cause significant distress after leaving one's home (van Tilburg et al., 1996). Feeling homesick to a small degree can be viewed as a normal reaction when leaving one's familiar environment, but when the feelings of homesickness intensify, it can cause significant distress for an individual (van Tilburg et al., 1996; Vingerhoets, 2005). Stroebe and colleagues (2016) suggested that homesickness can be viewed as a "mini grief" in which the experience of separation is the essential element. The researchers conducted an empirical review in which it was highlighted that homesickness might pose as a risk factor that can interfere with an individual's physical and mental well-being (Stroebe et al., 2016). Based on this notion, the researchers invented a dual-model of coping with homesickness in which the ability to cope with homesickness is determined by an oscillation between two categories of stressors, namely "home-related stressors" and "new-place related stressors" (Stroebe et al., 2016). Whereas the home-related factors emphasize coping with the separation from one's home and

familiar environment, the new-place related factors address coping with the adaptation to one's new and unfamiliar environment (Stroebe, et al., 2016). The level of homesickness an individual experiences can thus be influenced by the opposing factors of one's home and the new environment in which one migrated to, and it can consequently influence the way in which migrants adapt to their new environment.

When looking at factors influencing the process of migration, acculturative stress is a mechanism that seems to impact migrants' ability to adapt and acculturate to a new culture. Acculturation in itself is a process which emerges when migrants are trying to connect with a new culture while simultaneously attempting to preserve the cultural roots from their homeland (Berry & Sam, 1997). Conversely, acculturative stress can be viewed as a stress response that might arise when an individual is attempting to commence the process of acculturation after migration (Berry, 1970). Acculturative stress was put forth as a different terminology to that of "culture shock", which encompasses a range of negative emotional responses (e.g., discomfort, fear, and isolation) migrants might encounter when they are faced with a new culture and environment (Berry, 2006; Crow, 2012). Empirical evidence has suggested that migrants might feel highly conflicted if the cultural comprehension in their host country differs greatly from the cultural comprehension they have adopted in their country of origin, and this can in turn lead to a stronger acculturative stress response (Berry, 2006; Poulakis et al., 2017). Research examining the effects of acculturative stress has found that acculturative stress can severely impact one's psychological well-being and promote feelings of depression, anxiety, and grief (Berry et al., 1987; Finch & Vega, 2003; Hwang & Ting, 2008). Hence, it seems plausible that acculturative stress might similarly promote feelings of migratory grief, and that this response might be more profound when an individual's original cultural understanding of life contrasts with the cultural understanding found in their new host country.

Moreover, the acculturative stress response migrants experience when migrating to a new country seems to be amplified by certain cultural contrasts. Individualism and collectivism have been highlighted as one stark cultural contrast in Hofstede's (1967) theory of cultural dimensions, in which each country can be sorted on a spectrum according to its cultural and societal values. Individualistic countries tend to emphasize the need for one's individual independence and autonomy, whereas more collectivistic countries tend to stress the role of one's community and unity (Hofstede, 1967). Bhugra and Becker (2005) found that it can significantly interfere with a migrant's mental health when there is incongruence between one's culture of origin and the culture

one migrates to (e.g., when originating from a collectivistic oriented culture and migrating to a more individualistic oriented one). In addition, further research has indicated that cultural distance between the culture of origin and the host culture can induce culture shock and a subsequent acculturative stress response (Caroppo, 2009). Taken together, this indicates that the acculturative stress response might be amplified when the country an individual migrates to differs individualistically or collectivistically from their own country of origin.

However, what seems to alleviate feelings of acculturative stress is self-esteem. Self-esteem can be viewed as a trait associated with an overall favorable or unfavorable subjective appraisal of one's personal worth and capability (Rosenberg, 1965), and it has been highlighted in scientific literature as a mechanism that enhances feelings of psychological well-being and happiness (Furnham & Cheng, 2000; Pyszczynski et al., 2004; Mann et al., 2004). Whereas individuals with high self-esteem tend to experience more life satisfaction and emotional well-being (Baumeister et al., 2003), individuals with low self-esteem tend to experience more life dissatisfaction, negativity, and stress (Baumeister et al., 2003; Galanakis et al., 2016). In a cross-cultural context, empirical evidence has indicated that high self-esteem might also alleviate stress associated with the acculturation process (Kim et al., 2014). Thus, high self-esteem might serve as a protective factor for acculturative stress, and in turn alleviate feelings of migratory grief.

No prior research has focused on examining how acculturative stress and self-esteem influence feelings of migratory grief after migration, and the relationship is therefore unclear. The aim of this study is to expand the existing literature on migratory grief and gain further insight into the relationship between acculturative stress, self-esteem, and migratory grief. The research question to be addressed is whether self-esteem and acculturative stress mediate feelings of migratory grief after voluntary international migration. In line with the abovementioned literature, it is hypothesized that self-esteem mediates the relationship between migration and acculturative stress, and acculturative stress in turn mediates the relationship between migration and migratory grief. Moreover, it is hypothesized that the more self-esteem a migrant indicates to have, the less acculturative stress and migratory grief they experience. Lastly, in line with previous findings (Bhugra & Becker, 2005; Caroppo, 2009) it is hypothesized that migrants will indicate more acculturative stress and migratory grief, when there is a larger discrepancy in individualism/collectivism between their culture of origin and the culture in which they migrated to.

## **Method**

## Participants

The initial dataset included 3163 participants. Participants had to be of minimum 18 years of age to participate, hold either a Danish, Greek, or Swedish nationality (or originate from one of these countries), and have migrated to a different country than their country of origin. Participants were excluded if they had completed less than 90% of the survey ( $N = 808$ , 25.5%), if their age was not clearly indicated ( $N = 7$ , 0.2%), or if they did not fulfil the nationality requirements ( $N = 107$ , 3.4%). Furthermore, 4 participants (0.1% of the total sample) were excluded as they had migrated to countries of which no Hofstede individualism score could be obtained. Participants who indicated to hold a dual nationality were converted into being either Danish, Greek, or Swedish depending on the country they grew up in. If the country they grew up in did not correspond to one of the three, they did not meet the nationality requirements, and were thus excluded from the dataset.

The final dataset thus consisted of 2237 participants of whom 1081 were Swedish (48.3%), 781 were Danish (34.9%), and 375 were Greek (16.8%). 1554 (69.5%) participants indicated to be female ( $N = 531$  Danish,  $N = 244$  Greek,  $N = 779$  Swedish), 675 (30.2%) participants indicated to be male ( $N = 246$  Danish,  $N = 131$  Greek,  $N = 298$  Swedish), and 6 participants (0.3%) indicated to be “other” ( $N = 4$  Danish,  $N = 2$  Swedish). 2 participants did not indicate their gender. The age of the participants ranged from 18-82, and the sample as a whole was somewhat middle-aged ( $M = 42.2$ ,  $SD = 13.1$ ). The majority of the participants had completed education at university level (75%), were employed (72.3%), and married (47.7%) (see Table 1 in Appendix A). The mean length since migration was 11.5 years ( $SD = 10.6$ ), and the vast majority of the participants indicated to be highly satisfied with the lifestyle in their current host country based on their previous expectations ( $M = 8.7$ ,  $SD = 1.9$ ) (see Table 2 in Appendix A).

Chi square tests revealed that there were significant differences between the three subgroups in terms of age ( $\chi^2 (126) = 289.04$ ,  $p < .005$ , Cramer's  $V = .25$ ), gender ( $\chi^2 (4) = 11.06$ ,  $p < .05$ , Cramer's  $V = .06$ ), marital status ( $\chi^2 (10) = 89.04$ ,  $p < .005$ , Cramer's  $V = .14$ ), educational level ( $\chi^2 (6) = 18.74$ ,  $p < .05$ , Cramer's  $V = .07$ ), employment status ( $\chi^2 (6) = 18.74$ ,  $p < .005$ , Cramer's  $V = .07$ ), whether they had children ( $\chi^2 (2) = 112.93$ ,  $p < .005$ , Cramer's  $V = .23$ ), the number of children they had ( $\chi^2 (4) = 11.06$ ,  $p < .05$ , Cramer's  $V = .05$ ), the number of years since they had migrated to a new country ( $\chi^2 (166) = 306.87$ ,  $p < .005$ , Cramer's  $V = .27$ ), and whether the host country met their expectations ( $\chi^2 (20) = 45.98$ ,  $p < .005$ , Cramer's  $V = .10$ ).

## **Design and procedure**

The design of this study was cross-sectional and correlational in nature. The data were collected via the online survey tool Qualtrics for a period of approximately 2,5 weeks during the beginning of December 2020. The online survey was distributed via a number of social media platforms (e.g., Facebook, LinkedIn, and WhatsApp), and particularly through specific online migrant groups for Danish, Greek, and Swedish immigrants living abroad, which prompted a snowball effect. The online survey was solely conducted in English as it was estimated that the participants would possess a sufficient level of English to comprehend the questionnaires.

The current research was officially registered at the Clinical Psychology Department at Utrecht University, and it was further approved by the ethical committee at Utrecht University. Prior to initiating the survey, participants were presented with a letter of information regarding the study, and they had to grant their informed consent to participate. The online study took approximately 15 minutes to complete, and participation was entirely anonymous. Furthermore, participants could inconsequentially decide to discontinue the study at any time point. After completing the study, participants were presented with a short debriefing including the contact information of the researchers and supervisory staff in case any questions remained. Monetary reimbursement was not provided for participation in the study, but participants who successfully completed the survey were granted the opportunity to participate in a randomized lottery to win a 15€ voucher for Amazon.

## **Materials**

### ***Socio-demographic section***

The first section of the online survey was comprised of a range of self-developed socio-demographic questions concerning the participants' age, gender, employment status, educational level, marital status, home country, nationality, country migrated to, what the choice to migrate was based on, and the number of years since immigrating to the current host country. Additionally, participants were asked to what degree the lifestyle in their current host country met their expectations. The home countries and host countries were attributed with an individualism score according to Hofstede's individualism index from his theory of cultural dimensions (Hofstede, 1997).

### ***Migratory Grief***

Migratory Grief was assessed with the Migratory Grief and Loss Questionnaire (MGLQ) by Casado and colleagues (2010). The MGLQ is comprised of 18 items which reflect two different factors, namely “Attachment to Homeland” and “Identity Discontinuity”. An example item of the MGLQ is “*Leaving homeland is like having a part of me cut off*”. Scoring of the 18 items is based on a 4-point Likert scale which ranges from 0-3, where 0 signifies *never*, 1 equals *occasionally*, 2 corresponds to *often*, and 3 resembles *always* (Casado et al., 2010). A total score of the MGLQ can thus be obtained by summing the scores of the 18 items into one final score ranging from 0-54 (Casado et al., 2010). Higher scores on the MGLQ correspond to higher levels of migratory grief, whereas lower scores correspond to lower levels of migratory grief (Casado et al., 2010). The MGLQ has yielded great internal consistency in previous research ( $\alpha = .94$ ) (Casado et al., 2010), and the present study similarly found a Cronbach’s alpha of .90, thus revealing excellent internal consistency.

### ***Self-esteem***

Self-esteem was assessed with the Rosenberg Self-Esteem Scale (RSES), which is comprised of 10 items that aim to detect one’s global self-esteem according to positive and negative appraisals of oneself (Rosenberg, 1965). An example item of the RSES is “*On the whole, I am satisfied with myself*”. The items of the questionnaire are scored on a 4-point Likert scale (0 = strongly disagree, 3 = strongly agree), whereas some of the items (reflecting negative self-evaluations) need to be reversed. A total score can be obtained by summing the scores of all the items into one final global self-esteem score of which higher scores reflect a higher level of self-esteem and lower scores correspond to lower levels of self-esteem (Rosenberg, 1965). The RSES has previously revealed high internal consistency with a Cronbach’s’ alpha ranging from .82-.89 (Blascovich & Tomaka, 1991; Rosenberg, 1965), and the current study similarly found a high value for the 10 items ( $\alpha = .89$ ).

### ***Acculturative stress***

The participants level of acculturative stress was assessed with the Culture Shock Questionnaire (CSQ) by Mumford (1998). The questionnaire is comprised of 12 items, which are scored according to a 3-point Likert scale (0 = not at all, 1 = occasionally, and 2 = most of the time). One of the items has three alternate options (0 = none, 1 = a few things, and 2 = many things). An example item of the CSQ can be seen in the following: “*Do you ever feel helpless or powerless when trying to cope with the new culture?*”. A total score can be obtained by summing the scores of all 12 items into one final culture shock score, which can range between 0-24, where



higher scores correspond to higher levels of experienced culture shock, and lower scores reflect lower levels of experienced culture shock (Mumford, 1998). The CSQ has previously yielded great internal consistency ( $\alpha = .79$ ) (Mumford, 1998), whereas the previous study found a somewhat lower, but marginally acceptable Cronbach's alpha ( $\alpha = .61$ ) for the 12 items.

### **Data analysis**

The obtained data was analysed with IBM SPSS version 25. Prior to running the data analysis, the dataset was trimmed for responses that did not correspond to the set criteria of the study. Total scores of the MGLQ, RSES, and CSQ were established for the entire sample and for the three sub-samples. Assumptions of a serial-multiple mediation analysis (e.g., multicollinearity, normality, linearity, homogeneity, etc.) were tested, and based on the tests, none of the assumptions appeared to be violated. Subsequently, assumptions underlying Pearson correlation analysis (e.g., homoscedasticity, linearity, normality) were examined. All assumptions appeared to be met, except for normality which was slightly skewed. However, due to the large sample size of the current study, the central limit theorem applies, and a normal distribution should thus be presumed (Kwak & Kim, 2017).

After inspecting the assumptions, a serial-multiple mediation analysis was conducted with the PROCESS macro extension version 3.5.3, to test the plausible serial-multiple mediating relationship of self-esteem and acculturative stress in the pathway between migration and migratory grief. An additional variable was created to demonstrate the cultural discrepancy in terms of individualism-collectivism between the country of origin and the host country (continuous, ranging from -72 to 65). Secondly, two Pearson correlation analyses were conducted to further inspect the nature of the second hypothesis. Lastly, two additional Pearson correlation analyses were carried out to further investigate the relationship between migratory grief and the discrepancy in individualism, and the link between acculturative stress and the discrepancy in individualism.

### **Results**

A serial-multiple mediation analysis was conducted to examine whether self-esteem and acculturative stress mediate the pathway between the cultural discrepancy between home and host countries and migratory grief. The total effect of the discrepancy in individualism between home country and host country on migratory grief was significant ( $c = -.01$ ,  $SE = .01$ ,  $t = -9.14$ ,  $p < .001$ ). Additionally, the direct effect of the discrepancy in individualism on self-esteem was

significant ( $B = .07$ ,  $SE = .00$ ,  $t = -3.54$ ,  $p < .001$ ), whereas the direct effect of the discrepancy in individualism on acculturative stress was not significant ( $B = .00$ ,  $SE = .00$ ,  $t = 1.00$ ,  $p = > .05$ ). The direct effect of self-esteem on acculturative stress, which represents the effect of the first mediating variable on the second mediator was again significant ( $B = -.37$ ,  $SE = .01$ ,  $t = 18.54$ ,  $p < .001$ ). Furthermore, the direct effect of the mediating variables on migratory grief revealed that the effects of self-esteem ( $B = -.08$ ,  $SE = .03$ ,  $t = 4.49$ ,  $p < .001$ ) and acculturative stress ( $B = .52$ ,  $SE = .06$ ,  $t = 28.05$ ,  $p < .001$ ) were both significant. When the discrepancy in individualism was processed concurrently with the two mediating variables, the direct effect of the individualistic discrepancy on migratory grief remained significant ( $c' = -.06$ ,  $SE = .01$ ,  $t = -10.43$ ,  $p < .001$ ). Moreover, the model appeared to be significant at an overall level ( $F = 386.30$ ,  $p < .001$ ), and account for 34% of the total variance in migratory grief. These findings suggest that self-esteem and acculturative stress does but only partially mediate the relationship between the cultural discrepancy between home and host country and migratory grief as a large cultural discrepancy between home and host country also directly led to stronger migratory grief responses. In addition, the results imply that the cultural discrepancy in terms of individualism-collectivism between home and host country directly affects self-esteem and migratory grief, that self-esteem directly affects both acculturative stress and migratory grief, and that acculturative stress directly affects migratory grief. Hence, when the participants experienced lower levels of self-esteem and higher levels of acculturative stress it directly led to a stronger migratory grief response, which partially confirms the second hypothesis.

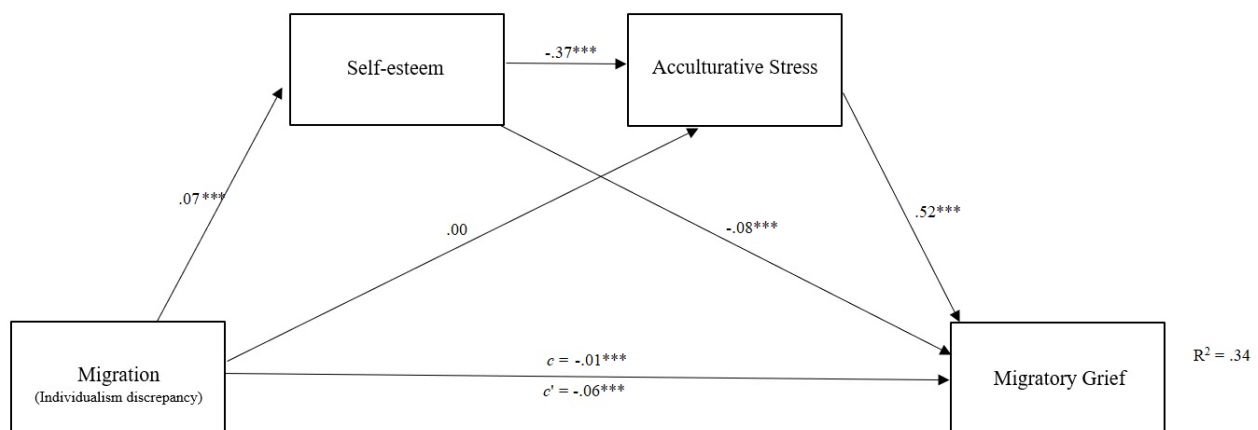


Figure 1. Serial-multiple mediation of self-esteem and acculturative stress in the link between migration (discrepancy in individualism between home and host country) and migratory grief with standardized beta values. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

These findings were mirrored with two additional Pearson correlation coefficient analyses which revealed a small but statistically significant negative correlation between self-esteem and migratory grief  $r(2237) = -.29$ ,  $p < .001$ . This again suggests that higher self-esteem was

related to lower migratory grief. Similar findings were established in the three sub-samples: Danish ( $r = -.29, p < .001$ ), Greek ( $r = -.26, p < .001$ ), Swedish ( $r = -.29, p < .001$ ). As for the relationship between self-esteem and acculturative stress, a moderate negative correlation was established  $r(2237) = -.37, p < .001$ , which suggests that higher levels of self-esteem were related to lower levels of acculturative stress. This result seemed stable across the three sub-samples: Danish ( $r = -.34, p < .001$ ), Greek ( $r = -.40, p < .001$ ), Swedish ( $r = -.37, p < .001$ ). The results of the current analysis thus provide further evidence to confirm the second hypothesis as self-esteem was negatively associated with both migratory grief and acculturative stress, thereby indicating that the more self-esteem a migrant indicated to have, the less acculturative stress and migratory grief they experienced. Nonetheless, the serial-multiple mediation analysis found no direct link between the individualistic discrepancy between home and host country and acculturative stress as a larger cultural contrast between home and host country did not cause significantly more acculturative stress, which initially disconfirms the third hypothesis. These findings were mirrored with two additional Pearson correlation coefficient analyses which revealed an insignificant effect in the total sample for the link between the cultural discrepancy between home and host countries and acculturative stress  $r(2237) = -.01, p = .723$ . Similar findings were obtained in the Greek subsample ( $r = -.01, p = .816$ ), and in the Swedish sub-sample ( $r = -.02, p = .525$ ). However, a small statistically significant positive correlation was found for Danish participants ( $r = .07, p < .05$ ), thereby showing a differentiation between the different subgroups (see table 3 and 4 in Appendix A for a total overview). This suggests that a larger individualistic discrepancy between home and host country does not prompt more acculturative stress for Greek and Swedish migrants, but it might slightly influence acculturative stress for Danish participants. Hence, the findings of the current analyses only partially support the third hypothesis, as a larger cultural discrepancy between home and host country was associated with higher levels of migratory grief, but not consistently with more acculturative stress.

Lastly, 5000 bootstrap samples were investigated to determine whether the indirect effects of the examined serial-multiple mediation model were statistically significant. As presented in Table 5 in Appendix A, the total indirect effect of the discrepancy in individualism via self-esteem and acculturative stress on migratory grief was not significant (PE =  $-.0101$ ; 95% BCa CI [ $-.0330, .0130$ ]). However, within the examined model, the single mediation effect of self-esteem on migratory grief (PE =  $-.0062$ ; 95% BCa CI [ $-.0113, -.0022$ ]), and the serial-multiple mediation effect of self-esteem and acculturative stress on migratory grief (PE =  $-.0141$ ; 95% BCa CI [ $-.0222,$

-.0061]) proved to be significant. The single mediation effect of acculturative stress on migratory grief was not significant (PE = .0103; 95% BCa CI [-.0100, .0310]). These results partly confirm the initial hypothesis as self-esteem and acculturative stress were found to partially mediate the relationship between the discrepancy in individualism between home and host country and migratory grief. The findings thus suggest that lower levels of self-esteem led to higher levels of acculturative stress, which in turn prompted a stronger migratory grief response. The found negative association of self-esteem on acculturative stress and migratory grief was in the expected direction.

### Discussion

The present study examined the relationship between the cultural discrepancy in terms of individualism-collectivism between the home and host countries, acculturative stress, self-esteem, and migratory grief in Danish, Greek, and Swedish immigrants through a proposed serial-multiple mediation model. The initial hypothesis suggested that self-esteem would mediate the relationship between the cultural discrepancy in terms of individualism-collectivism between the country of origin and the host country and acculturative stress, and that acculturative stress in turn would mediate the relationship between the cultural discrepancy between the home and host country and migratory grief. Results from the serial-multiple mediation analysis partially supported this hypothesis as self-esteem and acculturative stress mediated the pathway between the cultural discrepancy between home and host country and migratory grief, while there was also a significant direct link between the cultural discrepancy between home and host country and migratory grief. Secondly, it was hypothesized that higher levels of self-esteem would be associated with less acculturative stress and migratory grief, which was supported by the statistical findings. Lastly, it was expected that migrants would indicate more acculturative stress and migratory grief, when there was a larger cultural discrepancy in terms of individualism-collectivism between the culture of their original country and that of their host country. This hypothesis was partially confirmed as a larger cultural contrast in terms of individualism-collectivism was significantly related to higher levels of migratory grief, but not consistently to acculturative stress.

The partial serial-mediating effect of self-esteem and acculturative stress on migratory grief is in line with previous findings (Berry, 2006; Bhugra, 2004; 2005; Bhugra & Becker, 2005; Casado & Leung, 2001; Kim et al., 2014). In relation to self-esteem, others have found that high levels of self-esteem can diminish migrants' acculturative stress response after migration (Berry,

2006; Kim et al., 2014), and that higher self-esteem can alleviate grief associated with the process of migration (Bhugra & Becker, 2005; Kang, 2017). For instance, Kim and colleagues (2014) found that self-esteem posed as a buffer for acculturative stress reactions in immigrants, and it enhanced their mental well-being. In terms of acculturative stress, Bhugra and Becker (2005) emphasized that heightened stress during the acculturation process can prompt a sense of cultural bereavement, which might subsequently cause mental distress and amplify feelings of grief after migration. Similarly, Casado and Leung (2001) highlighted that stressful experiences during the acculturation process might exacerbate feelings of migratory grief. Thus, it seems logical that both self-esteem and acculturative stress served as mediators for migratory grief in the present study, that self-esteem was negatively related to migratory grief, and that higher levels of acculturative stress directly prompted more migratory grief. Although the acculturative stress and migratory grief levels appeared to be relatively low in the total sample, the two were positively related.

Although a full mediating relationship was expected, the direct path from the cultural discrepancy in terms of individualism-collectivism between home and host country to migratory grief proved to be significant, which is consistent with previous empirical findings (Bhugra, 2005; Bhugra & Becker, 2005). Bhugra (2005) put forth a framework to inspect immigrants' feelings of psychological distress, where she highlighted how a large cultural discrepancy can challenge immigrants' ability to adjust to a new culture. Furthermore, research has found that incongruity between two cultures can worsen an individual's mental health status (Bhugra & Becker, 2005), which would thus explain why a larger cultural discrepancy appeared to be directly associated with heightened migratory grief in the present study.

The current study did not find a significant link between the cultural discrepancy between home and host country and acculturative stress in the total sample. This result was unexpected as previous research strongly points to the two being positively linked (Berry, 2006; Bhugra, 2005; Bhugra & Becker, 2005; Caroppo, 2009). Interestingly, Greek participants had the highest mean individualism discrepancy and they had undergone migration more recently than the other sub-groups, yet they did not experience a significant amount of acculturative stress. Conversely, Danish participants had a relatively low mean individualism discrepancy, and they had migrated numerous years ago, but they were the only sub-group who experienced a small, but significant association between the cultural discrepancy between their home and host country and acculturative stress. It is plausible that other personal factors (e.g., motivations to migrate, personal resilience, etc.) or certain acculturating factors (e.g., social support, opportunities for employment,

etc.) are more strongly associated with acculturative stress as these have proven to be typical sources that can induce high distress (Berry & Sam, 1997; Bhugra, 2004; Bhugra & Becker, 2005; Casado & Leung, 2001). Furthermore, considering that the participants indicated to experience relatively little acculturative stress it is relevant to consider whether this might have played a role in the obtained results. The relatively low acculturative stress levels might partially be explained by the participants high satisfaction with the lifestyle in their current host country. Negy and colleagues (2009) conducted a study in which they examined how Hispanic immigrants' expectations prior to migration could influence acculturative stress. They found that when the discrepancy between the immigrants' expectations to the host country prior to migrating and their actual experience in the host country post migration was large, it amplified their acculturative stress response. Hence, this could plausibly explain why the participants in the current study experienced relatively low levels of acculturative stress as the majority of the participants indicated that the lifestyle in their host country highly lived up to their expectations. In addition, it is relevant to consider the fact that the vast majority of participants had migrated to their host country several years ago, which might make them less prone to experience acculturative stress. A study by Zheng and Berry (1991) found that the acculturative stress response in immigrants were strongest promptly after having migrated, whereas this response diminished with time. This could potentially explain why the participants in this study reported relatively little acculturative stress, and relatively little migratory grief, which might in turn have contributed to the insignificant result in the current study.

### **Limitations and directions for future research**

It is important to note that the present study was subjected to several limitations. Firstly, the study was cross-sectional and correlational in nature, which in itself poses certain limitations. From such a design no causal links can be established, and the collected data might only catch a glimpse of certain groups of individuals at one point in time rather than provide a nuanced image of immigrants' experience of migration. Future research could thus consider a different approach by recruiting participants from more diverse cultural backgrounds, and by using a longitudinal design as it would allow for the exploration of the immigrants' self-esteem, acculturative stress, and migratory grief levels at different time points, and thus provide a more nuanced image of the different constructs over time.

Secondly, it should be noted that the CSQ by Mumford (1998) might not be the most precise acculturative stress measurement. It was decided to use this particular measurement as it has

been proposed as a measurement of such (Rudmin, 2009), and other acculturative stress measures are aimed at specific target groups (e.g., international students, children, families, etc.). The CSQ thus seemed more appropriate for the wide target group used in the present study. Nonetheless, the CSQ is not unflawed, and it has been criticized for being a simplistic tool that lacks robustness and does not impress due to its fluctuating reliability (Furnham, 2019). Considering this including the fact that the current study found a just marginally acceptable Cronbach's alpha for the CSQ, future research should consider using alternative and more robust acculturative stress measurements to better determine immigrants acculturative stress response after migration.

Thirdly, it is vital to note that Hofstede's individualism index from his theory of cultural dimensions highlights a rather general overview of individualistic tendencies in different countries, and the scores are thus prone to be used in an overgeneralized manner (Signorini et al., 2009). Furthermore, several scholars have criticized the theory as they believe it is a somewhat outmoded framework that cannot be accurately applied in the current world setting (McSweeney, 2002; Signorini et al., 2009). Thus, the established cultural discrepancy in the current study should be noted with caution, and solely be seen as an indication. Future studies could address this by employing a more recent established cultural framework or by measuring personal orientations towards individualism/collectivism to examine within-country discrepancies. A different approach would also allow for the re-exploration of the serial-multiple mediation model and plausibly provide a more accurate image of the cultural discrepancy between home and host country.

Lastly, it is important to consider that the MGLQ is not an impeccable instrument of migratory grief. Certain items might come across as vague, and some scholars have criticized the measurement for not being able to accurately detect migrants' experience of grief following migration (Chang, 2015). Additionally, the MGLQ aims to detect how frequently migratory grief occurs, whereas it does not provide a clear image of how intensely the migratory grief reaction is experienced. It is also imperative to note that migratory grief is a notion which has not been fully conceptualized, and it can thus be difficult to accurately differentiate it from other constructs (e.g., homesickness). Future research should work on establishing a more precise definition of migratory grief and develop an alternative measurement that more accurately detects the intensity of this construct.

### **Conclusion**

The current study investigated the relationship between the cultural contrasts in terms of individualism-collectivism between the country of origin and the host country, acculturative

stress, self-esteem, and migratory grief in Danish, Greek, and Swedish immigrants through a proposed serial-multiple mediation model. The findings of the study partially support the notion of serial-multiple mediation as self-esteem and acculturative both served as mediators for migratory grief after migration, while the direct pathway from migration to migratory grief remained significant. The findings indicated that higher self-esteem was related to lower acculturative stress and migratory grief for immigrants. In addition, the study implied that high levels of acculturative stress led to an increase in migratory grief, which supports previous findings. Nonetheless, the current study did not find a significant link between the cultural discrepancy between home and host country and acculturative stress. The pathway from migration to migratory grief could thus not be fully explained by the proposed mediating variables, and it is therefore relevant to consider whether other variables might play a role in this equation. The model should be re-investigated to determine the accuracy of the found associations.

To the author's knowledge, this is the first study that explores the plausible serial-multiple mediating relationship between self-esteem, acculturative stress, and migratory grief in international migrants. The presented findings add to the scarce body of literature on migratory grief, and they yield implications for future research. Considering that migration is a critical matter on a global scale, it is imperative to further investigate these constructs and to enhance our understanding of what influences immigrants' well-being and mental health. Improving our knowledge in this area would also aid practitioners to generate effective culturally appropriate interventions for immigrants, and to improve the current clinical treatment that is offered for this particular target group which is often neglected.



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## Appendix A

## Tables

Table 1

*Sample Characteristics of Participants*

	Total sample		Danish		Greek		Swedish	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender								
Female	1554	69.5	531	68	244	65	779	72.1
Male	675	30.2	246	31.5	131	35	298	27.6
Other	6	0.3	4	0.5	0	0	2	0.2
Marital status								
Single	326	14.6	113	14.5	82	21.9	131	12.1
In a relationship and not living together	153	6.8	51	6.5	44	11.7	58	5.4
In a relationship and cohabiting	536	24	150	19.2	117	31.2	269	24.9
Married	1067	47.7	410	52.5	123	32.8	534	49.4
Divorced	129	5.8	44	5.6	8	2.1	77	7.1
Widowed	26	1.2	13	1.7	1	0.3	12	1.1
Educational level								
No schooling	3	0.1	1	0.1	0	0	2	0.2
Middle School	42	1.9	21	2.7	4	1.1	17	1.6
High School	514	23	198	25.4	61	16.3	255	23.6
University	1675	75	559	71.8	309	82.6	807	74.6
Employment status								
Employed	1610	72.3	576	74	272	72.9	762	71
Unemployed	422	19	146	18.7	47	12.6	229	21.3
Student	194	8.7	57	7.3	54	14.5	83	7.7
Children								
Yes	1249	55.9	470	60.2	116	31	663	61.4
No	986	44.1	311	39.8	258	69	417	38.6
Children born								
Prior to migration	529	39.6	210	41.1	58	47.9	261	37
After migration	808	60.4	301	58.9	63	52.1	444	63
Choice to migrate was based on <sup>a</sup>								
Themselves	1523	59.7	504	55	290	69.9	729	58.5
Their family	291	11.4	102	11.1	64	15.4	125	10
Their partner	696	27.3	296	32.3	55	13.3	372	29.9
Their children	41	1.6	15	1.6	6	1.4	20	1.6

Note = The total N differs slightly per question as some questions were not answered by all participants.

<sup>a</sup> = Multiple answer options were possible

**Table 2***Means and Standard Deviations of Sample Characteristics of Participants*

Measure	Total sample		Danish		Greek		Swedish	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	42.2	13.1	43.3	13.2	34.7	9.1	44.2	13.3
Number of children	2.1	1.4	2.1	0.9	1.7	0.6	2.1	1.7
Years since migration	11.5	10.6	12.6	11.7	6.1	6.1	12.5	10.5
Lifestyle met expectations in host country <sup>a</sup>	8.7	1.9	8.8	1.9	8.5	1.9	8.8	1.8

<sup>a</sup> 1 = Lifestyle in host country did not meet expectations at all, 10 = Met expectations in every way.

**Table 3***Means, Standard Deviations, and Correlation Matrix of Acculturative Stress, Self-Esteem and Migratory Grief by Country*

Measure	<i>M</i>	<i>SD</i>	1	2	3
Total Sample ( <i>N</i> = 2237)					
1. Acculturative Stress	8.46	2.77	-		
2. Self-Esteem	22.29	5.19	-.37**	-	
3. Migratory Grief	18.59	9.37	.55**	-.29**	-
Danish ( <i>n</i> = 781)					
1. Acculturative Stress	8.38	2.72	-		
2. Self-Esteem	22.67	5.11	-.34*	-	
3. Migratory Grief	18.15	9.02	.53**	-.29**	-
Greek ( <i>n</i> = 375)					
1. Acculturative Stress	8.68	2.96	-		
2. Self-Esteem	21.87	4.77	-.40**	-	
3. Migratory Grief	20.93	10.31	.61**	-.26**	-
Swedish ( <i>n</i> = 1081)					
1. Acculturative Stress	8.45	2.74	-		
2. Self-Esteem	22.17	5.38	-.37**	-	
3. Migratory Grief	18.09	9.17	.54**	-.29**	-

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

**Table 4**

*Means, Standard Deviations, and Correlation Matrix of Acculturative Stress, Self-Esteem and the Discrepancy in Individualism Between Home and Host Countries*

Measure	<i>M</i>	<i>SD</i>	1	2	3
Total Sample ( <i>N</i> =2237)					
1. Acculturative Stress	8.46	2.77	-		
2. Individualism contrast	-.35	27.64	-.01	-	
3. Migratory Grief	18.59	9.37	.55**	-.19**	-
Danish ( <i>n</i> =781)					
1. Acculturative Stress	8.38	2.72	-		
2. Individualism contrast	10.74	25.14	.07*	-	
3. Migratory Grief	18.15	9.02	.53**	-.18**	-
Greek ( <i>n</i> =375)					
1. Acculturative Stress	8.68	2.96	-		
2. Individualism contrast	-35.07	21.05	-.01	-	
3. Migratory Grief	20.93	10.31	.61**	-.03	-
Swedish ( <i>n</i> =1081)					
1. Acculturative Stress	8.45	2.74	-		
2. Individualism contrast	3.68	21.17	-.02	-	
3. Migratory Grief	18.09	9.17	.54**	-.19**	-

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

**Table 5**

*Comparison of Indirect Effects of the Discrepancy in Individualism on Migratory Grief through Self-Esteem and Acculturative Stress*

Effects	Coefficients		Bootstrap 95% CI	
	<i>Point Estimate</i>	<i>SE</i>	<i>Lower</i>	<i>Upper</i>
Total Indirect Effects	-.0101	.0120	-.0330	.0130
Individualism → Self-Esteem → MG	-.0062	.0023	-.0113	-.0022
Individualism → Acculturative Stress → MG	.0103	.0104	-.0100	.0310
Individualism → SE → AS → MG	-.0141	.0041	-.0222	-.0061

Note. *N* = 2237, *k* = 5000

**Appendix B**Migratory Grief and Loss Questionnaire (MGLQ) (Casado et al., 2010)<sup>1</sup>

1. Miss homeland.
2. Things were nicer in homeland.
3. Dream about going back.
4. Think and worried about homeland and its people
5. No better place than homeland.
6. Thoughts are drawn to homeland.
7. Think of pleasant things about homeland.
8. Leaving homeland like having a part of me cut off.
9. Feel like a stranger.
10. Thinking about homeland.
11. Only have pleasant memories of homeland.
12. Feel like crying.
13. Feels upset about being far away.
14. Not sure who I am.
15. Homeland is always my home.
16. Feel I am different.
17. Feel lost.
18. Need to have reminder of homeland.

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<sup>1</sup> Assessed on a 4-point Likert scale (from never to always)



**Appendix C**  
**Rosenberg Self-Esteem Scale (Rosenberg, 1995)<sup>2</sup>**

1. I feel that I'm a person of worth, at least on an equal plane with others.
2. I feel that I have a number of good qualities.
3. All in all, I am inclined to feel that I am a failure.
4. I am able to do things as well as most other people.
5. I feel I do not have much to be proud of.
6. I take a positive attitude toward myself.
7. On the whole I am satisfied with myself.
8. I wish I could have more respect for myself.
9. I certainly feel useless at times.
10. At times I think I am no good at all.

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<sup>2</sup> Assessed on a 4-point Likert scale. Item 3, 5, 8, 9 and 10 should be reversed.

**Appendix D****Culture Shock Questionnaire (CSQ) (Mumford, 1998)<sup>3</sup>**

1. Do you feel strain from the effort to adapt to a new culture?
2. Do you feel anxious or awkward when meeting local people?
3. How often do you miss your family and friends back home?
4. When talking to people, can you make sense of their gestures or facial expressions?
5. Do you feel generally accepted by the local people in the new culture?
6. Do you feel uncomfortable if people stare at you when you go out?
7. Do you feel like you want to escape from your new environment altogether?
8. When you go shopping do you feel that people may be trying to cheat you?
9. Do you ever feel confused about your role or identity in the new culture?
10. Are you finding it an effort to be polite to your hosts?
11. Have you found things in your new environment shocking or disgusting?  
- Many things (2) A few things (1) None (0)
12. Do you ever feel helpless or powerless when trying to cope with the new culture?

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<sup>3</sup> Assessed on a 3-point Likert scale (from most of the time to not at all). Item 11 has 3 alternative answer options.