

**Psychological correlates of perceived ethnic discrimination in Europe:  
A meta-analysis**

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## Abstract

Objective: Many studies point to the negative impact of discrimination on the psychological and social functioning of ethnic minority persons. The realization of these studies across multiple European countries enables a systematization of this knowledge, which is our goal in the present work.

Method: This study presents a meta-analysis of the correlates of perceived ethnic discrimination among minorities living in European countries.

Results: The analyses of 121 effect sizes reveal that discrimination is positively associated with symptoms of psychiatric disturbances, depression, psychosis, perceived stress, and externalizing behavior. Discrimination is also negatively associated with the self-esteem, positive evaluation of life, self-efficacy/mastery, well-being, and psychological adaptation of migrants. The results show that the strength of these significant relationships is, in some cases, moderated by persons' gender, age and ethnicity and countries' multicultural approach and rating in the Migrant Integration Policies Index (MIPEX), namely in regards to labor market mobility, permanent residence, and anti-discrimination policies.

Conclusions: The detrimental effect of discrimination on many psychosocial dimensions emphasizes the need for governmental agencies to develop systemic and concrete interventions to decrease ethnic prejudice in Europe. Moreover, the results show that fostering multiculturalism, implementing broad anti-discrimination policies and enabling labor market mobility has a protective function in the face of discrimination as fundamental ways to promote the psychological adjustment of ethnic minority persons.

*Keywords:* Discrimination, ethnic minority, Europe, psychological adjustment, migrants' integration policies

## Introduction

Europe is becoming increasingly diverse; however, prejudice towards migrants and ethnic minority groups is still high. For instance, 22.3% of ethnic minority persons living in many European countries have experienced discrimination on the grounds of their ethnicity (Missinne & Bracke, 2012). The perception of discrimination is the evaluation of a negative event as unfair and is explained by belonging to a stigmatized social group (Major & O'Brien, 2005). In the European context, migrants perceive prejudice as among the most important barrier to their integration in the host country, and their most negative experiences are related to discrimination (European Commission, 2011). Ethnic/racial discrimination has a negative effect on various indicators of adaptation such as self-esteem, interpersonal sensitivity, psychological stress, depression, anxiety, behavioral problems, selection of friends, substance use, several indices of physical health and changes in the pattern of cortisol response (the stress hormone) (e.g., Gilbert & Zemore, 2016; Heim, Hunter, & Jones, 2011; Goosby, Straley, & Cheadle, 2017; Missinne & Bracke, 2012; Paradies et al., 2015; Schmitt, Branscombe, Postmes, & Garcia, 2014). Moreover, longitudinal studies support the observation that discrimination has a long-term negative influence on self-esteem and psychological distress (Schmitt et al., 2014). The present study is focused on the associations of perceived ethnic discrimination with dimensions of psychological functioning in European samples.

The majority of studies on ethnic discrimination have been conducted in the United States of America (USA). However, discrimination in Europe and the USA may be different, and several factors account for this variance. Historically, the USA was formed on the grounds of immigration (Zimmermann, Bauer, & Lofstrom, 2000) and African persons that were submitted to forced labor (Zick, Pettigrew, & Wagner, 2008). The migratory movements in Europe only showed a relevant increase following World War II (Zimmermann et al., 2000). Given that European countries have a past of colonization, most of the people that contribute to the ethnic diversity observed today came from the former colonies of each country (Zick et al., 2008). Humanitarian crises have also contributed to the ethnic diversity in Europe, by the increasing number of refugees (Zimmermann et al., 2000). Another difference observed between Europe and the USA is that the European identity is not the most salient; people identify themselves generally by the country of origin (e.g., Portuguese, French or Dutch) (Zick et al., 2008).

Additionally, it was not until 2000 that most of the European Union countries develop joint efforts to erase racial and ethnic discrimination and to create “social cohesion and solidarity,” by establishing the European Union’s Racial Equality Directive (Givens, 2007, p. 68). This directive was based on the British and Dutch anti-discrimination policies and forced member states to make changes in their laws, regulations and administrative provisions in order to incorporate the principle of equal treatment in matters of ethnic origin (Luedtke, Humphreys, Givens, & Case, 2010). In some European countries, a relatively recent crisis in the multiculturalism is observed (Vasta, 2007). Multiculturalism represents a broad political approach by which the State seeks to accommodate ethnic identities. It is manifested in migrants’ integration policies that stress the value of migrant persons (e.g., given permanent residency, and providing intercultural education (Kymlick & Banting, 2006). In countries with weak multicultural policies, also designated as assimilationist, migrants face more barriers in their integration in the host country society and have fewer opportunities to express their ethnic identity due to the absence of governmental support for cultural activities (Kymlick & Banting, 2006). Currently, we are witnessing a new inflow of war refugees, and although most of the European countries agreed to be host societies, the power of some right-wing parties, which openly support racism and oppose refugees’ settlement in European countries, is growing. This is observed in the increase of the proportion of right-wing parties in the parliamentary 2014 European elections comparatively to the 2009 (European Parliament, 2017).

Thus, based on the mentioned literature, we consider that it is socially relevant to look at the effects of perceived discrimination exclusively in the European context. To our knowledge, this is the first meta-analysis to be conducted exclusively with ethnic minority persons living in European countries. Specifically, we aim to understand how the effects of perceived ethnic discrimination are moderated by characteristics of the sample, such as gender, age, immigration to or birth in the country of residence, ethnic ascendancy, and countries’ policies for the integration of migrants.

### **Discrimination and its associations with sociodemographic characteristics**

**Gender.** Studies on development and psychopathology have revealed a higher vulnerability of women to manifest internalized symptoms, such as anxiety, depression and lower

self-esteem, while men are more prone to manifest externalized behaviors (Rutter, Caspi, & Moffitt, 2003). In the context of ethnic discrimination, given the intersectionality of gender and ethnicity, one may expect that women facing double discrimination may react more negatively than men. First, women's discriminatory experiences may be qualitatively different than men's (e.g., the eroticization of the foreign women). A European report shows that migrant women over 15 years old have faced more physical and/or sexual violence (by partners and non-partners) in their lifetime than women who have lived in the country all their lives (FRA, 2014). Second, there may be a quantitative cumulative negative effect of gender and ethnic discrimination (Cole, 2009). However, concerning the reaction to ethnic discrimination alone, few studies show differences between women's and men's responses. Nevertheless, a study showed that while among women the perception of discrimination was not related to the levels of depression and self-esteem, this pattern was observed among men (Cassidy, O'Connor, Howe, & Warden, 2004). Moreover, in a study involving 18 European countries (Borrell, Palència, Bartoll, Ikram, & Malmusi, 2015), no strong evidence was shown for gender differences in the reaction to discrimination. The results portray a complex interaction between gender, immigration status (first or second generation) and national integration policies (Borrell et al., 2015).

**Age.** Previous studies show an association between discrimination and well-being and self-esteem in children, adolescents, and adults, with similar magnitudes (Schmitt et al., 2014). Thus, age also does not seem to moderate the associations between discrimination and some mental and physical health outcomes (Paradies et al., 2015). Moreover, as persons grow older, they start perceiving discrimination across all spheres of life, such as in interpersonal relationships in school, medical services, employment, housing segregation, and access to bank credit. This pattern of discrimination may lead to chronic strains (Link & Phelan, 2001). Consistently, the increasing awareness about discrimination and the cumulative experience may be translated into more negative reactions for adults than for younger individuals (Schmitt, et al, 2014). Alternatively, the use of more adaptive coping strategies as persons grow older may be associated with a gradual decrease of the negative impact of discrimination. Some studies show that stressful experiences can lead to changes in identity (Park, 2010). When discriminatory experiences occur, there is a tendency for a higher identification with the ethnic group (Jasinskaja-Lahti, Liebkind, & Solheim, 2009). In turn, higher ethnic identification has been

found to protect individuals' self-esteem from effects of discrimination (Mewes, Asbrock, & Laskawi, 2015). Thus, it is possible that attributing unfair treatment to the perpetrator's problem/ignorance and perceiving a stronger ethnic identity may decrease the negative effect of recurrent discriminatory experiences across the lifespan.

**Migration status and ethnicity.** Studies are inconclusive on whether first-generation migrants and second-generation migrants (children of immigrant persons that were born in the host country) perceive similar levels of discrimination or not (André & Dronkers, 2017; Borrell et al., 2015). However, it has been shown that, compared to the first generation of migrants, the second generation seems to manifest lower risk for depression (Levecque & Rossem, 2015; Missinne & Bracke, 2012). In fact, one study with data from 18 European countries revealed that only in the first generation of migrants was discrimination related to depression, poor self-assessed physical health and limitation of activity by illness, disability or a chronic condition (Borrell et al., 2015). Moreover, a recent study showed that Europeans' attitudes seem to be more xenophobic than exclusively racist (biological phenotype), given that Europeans hold more negative attitudes towards persons with different cultural values (Heath & Richards, 2016). A Finnish comparative study shows that migrants perceived as more culturally different than the natives (e.g., namely Arabs and Somalis vs. Russians and Finnish repatriates) experience more discrimination (Jasinskaja-Lahti, Liebkind, & Perhoniemi, 2006). However, the strength of the association between discrimination and psychological stress and self-rated health is, respectively, lower and non-significant, in Somalis and Arabs than in the other immigrant groups. Explanations for this seem to lay in the less ambiguity in the attribution of unfair treatment to prejudice (external attribution vs. internal), which is self-protective (Jasinskaja-Lahti et al., 2006; Major & O'Brien, 2003; Schmitt et al., 2014). Also, more discrimination is related to the more ethnic identification and specific social support, which seems to buffer the negative impact of discrimination (Jasinskaja-Lahti et al., 2006, 2009; Schmitt et al., 2014).

**Migrants' integration policies.** Migrant integration policies focus on several criteria, such as permission to live in the country; attribution of citizenship; access to welfare programs; employment; and cultural affairs, such as the obligation or not to take courses related to the language and civic values of the host country (Givens, 2007). European countries are quite

diverse regarding their integration policies. Globally, immigration policies vary in the degree to which migrants are expected to “hide their ethnicity” and assimilate the customs of the host society or in the degree to which the general public is expected to recognize and accommodate ethnic diversity by fostering a multicultural society (Kymlicka & Banting, 2006). The relation between different political approaches towards ethnic diversity and the levels of discrimination and psychological outcomes has not been fully explored. A recent study, that used the Migrant Integration Policies Index (MIPEX) data to differentiate three groups of countries, shows that the difference in the levels of depressive symptoms between migrants and non-migrants is higher in countries with exclusionist policies, followed by the assimilationist countries, and is lowest in the inclusive countries (Malmusi, Palència, Ikram, Kunst, & Borrell, 2017). Borrell et al. (2015) observed that integration policies moderated the impact of discrimination. Their results show that in assimilationist countries, discrimination was more strongly associated with depression, poor self-rated physical health and limitation of activity due to illness, disability or chronic conditions (Borrell et al., 2015).

Some studies revealed that access to the labor market and the welfare system are key predictors of better mental health among migrants and ethnic minority persons (Levecque & Rossem, 2015; Missinne & Bracke, 2012). Immigrant testimonies reveal that what contributes most to their integration, in addition to the general public attitude towards them, is having a job and legal status, which provides security and freedom from exploitation and allows them to plan their future (European Commission, 2011). The platform Migrant Integration Policies Index (MIPEX) compiles data from 38 countries regarding migrants’ opportunities to participate in society. Based on 167 policy indicators, MIPEX ratings allow comparisons between countries in several domains, namely, labor market mobility, family reunion, education, health, political participation, permanent residence, access to nationality, and anti-discrimination policies. It is expected that more favorable policies are associated with better psychological functioning. The main motivations for immigration are economic reasons (such as developing a career or getting out of poverty), private reasons (joining family members) or political reasons (looking for a safer place to live) (Zick, Küpper, & Hövermann, 2011). The existence of policies focused on positive integration in the host country in all dimensions of human functioning means that migrants can have a more fulfilling life and broader opportunities to achieve their goals. Using data from the MIPEX, André and Dronkers (2017) observed that labor market mobility increased the perceived

discrimination, while family reunion predicted less discrimination. However, these effects become non-significant when controlling for employment and wealth in the country of origin (unemployed individuals and persons from poorer countries perceived more group discrimination). To our knowledge, no studies have focused on the moderation effect of distinct integration policies in the relations between discrimination and psychological functioning.

### **Study goals**

In the present study, we sought to systematize the effects of discrimination on ethnic minority persons in Europe, using a meta-analytical approach. We aim to understand how these effects are moderated by sample characteristics and national migrant integration policies. Our hypotheses are that 1) ethnic discrimination will be positively related to worse mental health (e.g., depression); 2) ethnic discrimination will be negatively related to positive psychological functioning (e.g., self-esteem); 3) the strength of these relationships will be moderated by the sample's demographic characteristics, it is expected that women, older persons, immigrants and in persons from non-European countries the strength of the associations is higher; and 4) the strength of these relationships will be moderated by the migration integration policies of each country, it is expected that in countries that value multiculturalism and in those with higher rates in MIPEX the strength of the association is decreased.

## **Method**

### **Data collection and criteria for the selection of studies**

To be included in the review, studies had to be quantitative, consider one measure of perceived ethnic discrimination with at least one psychological outcome, and be conducted in European countries. The studies included in this meta-analysis were sought in the following databases: PsycINFO, PsycARTICLES, Psychology and Behavioral Sciences Collection, Education Research Complete, ERIC, Medline, SocINDEX, and ProQuest Dissertations & Theses. The searched key terms were related to discrimination and social violence (*discrimination, stigma, prejudice, victimization, bullying, racism, xenophobia*), to ethnicity (*ethnic, racial*) and to psychological dimensions (*psychological, psychosocial, outcome, functioning, adjustment, adaptation, mental health, well being, self-esteem, coping, satisfaction,*



*stress, depression, anxiety*). These key terms had to be present in the abstracts. We included all studies available until January 2017. No language constraints were made.

### **Coding of Studies**

Given that most studies measured several psychological constructs, we chose not to exclude any variables of psychological functioning. The meta-analysis was performed when at least two studies presented information regarding the same or a closely related psychological dimension. Several features related to the characteristics of the study, sample and country were coded. Study characteristics included the date of publication; evaluation of the quality of study (assessed on a Likert-type scale of 0 to 6 and based on the authors' assessment of the method of each research, including the type of sampling, reliability of the instruments and overall quality of the paper); whether the study was cross-sectional or longitudinal; and the type of raw data included in the meta-analysis (correlation, odds ratio (OR) or independent means and standard deviation). Sample characteristics included the percentage of women, the percentage of foreign-born migrants, the mean age of study participants and their ethnic ancestry considering the continent of origin (a proxy for racial phenotype). Concerning the host country's cultural preference, to determine whether assimilation or multiculturalism was more prominent, we used the attribution based on the strength of multicultural policies as presented by Kymlicka and Banting (2006). In their assessment of the countries' level of commitment to multiculturalism, Kymlicka and Banting (2006, p. 294) have considered eight indices: 1) legislative affirmation of multiculturalism, 2) multicultural curricula, 3) ethnic representation in public media, 4) exemptions from dress codes, 5) permission of dual citizenship, 6) support of ethnic group organizations, 7) funding of bilingual education, and 8) affirmative actions for disadvantaged immigrant groups. Countries that adopted at least six of these policies were classified as "strong", between three and six were classified as "modest", and with two or fewer were classified as "weak". Given that all the European countries considered in Kimlicka and Banting's (2016) study were classified as having "modest" or "weak" commitment to multiculturalism, in this meta-analysis we chose to consider the "modest" countries as valuing multiculturalism and the "weak" countries as valuing assimilation. Additionally, we used the classification attributed to each country in the MIPEX, a continuous rate, as a moderation variable.

## Data analysis

Pearson's correlation coefficient ( $r$ ) was the measure of the effect size used, given that most of the studies included in the meta-analysis used this statistic to assess the outcomes of perceived discrimination. Standardized regression coefficients ( $\beta$ ) were converted to correlations by the formula provided by Peterson and Brown (2005),  $r = \beta + .05\lambda$ , "where  $\lambda = 1$  when  $\beta$  is positive and  $\lambda = 0$  when  $\beta$  is negative" (p. 179). Odds ratio and independent means were also gathered, and the raw data were transformed to  $r$  and combined in the statistical analyses, using the Comprehensive Meta-Analysis software. Considering that the studies in the meta-analysis come from different populations, we used random effects models (Cooper, Hedges & Valentine, 2009). To explore publication bias, we analyzed the funnel plot asymmetry and considered Begg and Mazumdar's (1994) rank correlation test (Field & Gillett, 2010). The  $I^2$  value is presented to provide the extent to which confidence intervals of the different studies overlap and the level of inconsistency of findings across studies. The  $Q$  value statistic indicates the heterogeneity of the results. The comparison of groups and the procedure of meta-regression, using the random effects model (method of moments) (Borenstein, Hedges, Higgins, & Rothstein, 2009), was used to explore sources of heterogeneity. The PRISMA guidelines were considered in reporting this study (Moher, Liberati, Tetzlaff, & Altman, 2009).

## Study selection

To minimize the chance of excluding pertinent studies from the research, two independent reviewers evaluated the inclusion of each paper in each step of the screening. From an initial gathering of 6500 records, 51 studies matched the inclusion criteria. In Figure 1, a description of the main reason for the exclusion of papers in each step of the screening process is presented. The 51 studies were all published in scientific journals. When several measures of discrimination were studied (verbal insult, job refusal), the most common experience, acts of daily interpersonal discrimination (e.g., verbal insult), was chosen. When a study provided both unadjusted and adjusted OR, the adjusted OR was considered. When a study was associated with more than one publication, we chose to retrieve data from the most informative paper.

FIGURE 1

## Results

### Study characteristics

The 51 papers included were published between 1998 and 2016, most of them in the last decade. The analyzed data were based on 76 independent samples ( $N = 75,137$ ), ranging from 24 to 34,446 participants. A total of 121 effect sizes were obtained, of which the majority were correlations ( $n = 78$ ); 25 were odds ratios; 16 were regression betas; and 2 were means of independent groups. Moreover, 115 effect sizes were from cross-sectional studies, and 6 were from longitudinal studies. Regarding gender ( $k = 114$ ), the mean percentage of women was 52.71% ( $SD = 17.69$ ). Twenty-seven effect sizes were collected from studies that did not provide the mean age of participants, but all were conducted with adults. For the remaining studies, the mean age of participants was 23.80 years ( $SD = 12.49$ ); 14 effect sizes were from samples with children (up to 13 years old), 38 with adolescents (aged 13-18), 12 with young adults (aged 18-27); 19 with adults aged 30-40; 9 with adults aged 43-47; and 2 from a sample with adults up to 60 years old. Of the studies that provided the percentage of foreign-born participants ( $k = 86$ ), the mean percentage was 63.25% ( $SD = 37.25$ ). Regarding ethnic ancestry, based on what was mentioned in the original studies, participants were categorized as being from Africa (19 effects, including French-Maghrebis; Moroccans, Somalis and Ghanaians), Asia (11 effect sizes, including Bangladeshis, Indians, Pakistanis, Sri Lankans, and Vietnamese), Europe (14 effect sizes, including Irish, Portuguese, Russians, Estonians, Albanians, Finnish repatriates and persons from the ex-USSR), Middle East (27 effect sizes, including Arabs, Iranians, Turks, and Kurds), South America (13 effect sizes, including Caribbeans, Surinamese, and Ecuadorians) and samples from multinational studies (37 effect sizes).

Of the total number of effect sizes, 34 were from persons living in the Netherlands, 27 in Finland, 27 in the United Kingdom, 12 in Norway, 8 in Germany, 4 in Spain, 4 in France, 3 in Portugal, 3 in Switzerland, 2 in Greece, and 4 in multiple countries. Concerning the host country cultural preference, the Netherlands and the United Kingdom were considered as valuing multiculturalism (56 effect sizes) and all the other countries valuing assimilation (61 effect sizes); 4 effects were not categorized given that samples were from multinational studies.

TABLE 1

## Synthesis of Results

In the current study, discrimination was associated with symptoms of psychological disturbances, depression, psychosis, and perceived stress. These results confirm our first hypothesis, that discrimination is positively related to worse mental health (see Table 1). Discrimination was also related to lower self-esteem, self-efficacy, worse evaluation of life, well-being and measures of psychological adaptation, confirming our second hypothesis, that discrimination is negatively related to positive psychological functioning. In most of the explored associations, Begg and Mazumdar's rank correlation was non-significant in all analyses, which does not suggest the presence of publication bias. The sensitivity analysis, made by removing one study, revealed that the association obtained with most of the psychological constructs was robust. The few exceptions to this were noted in the results for each psychological dimension. Moderation analyses were made only when there was significant heterogeneity and the number of effect sizes allowed these analyses. As shown in Tables 2, 3, 4 and 5, most of the moderation variables did not significantly change the strength of the association between discrimination and the psychological dimensions. However, some characteristics of the sample and the countries' integration policies moderated the association between discrimination and depression, self-esteem and positive evaluation of life (more information below). These results confirm only partially the third and fourth hypotheses, namely that the strength of the relationships between discrimination and measures of psychological functioning is moderated by the person's demographic characteristics and by the migration integration policies of each country, respectively. Given the wide range of our analysis, only the main results of each psychological construct accessed will be presented.

**Psychological disturbance symptoms.** This was the dimension associated with the most studies included in the meta-analyses (Table 1). This is explained by the combination of effect sizes from different measures, as this dimension includes measures of several symptoms of psychological disturbances such as depression and anxiety, general negative mental health, psychological distress, somatization and psychiatric symptoms. The results portrayed a significant positive association between the perception of discrimination and the level of psychiatric symptoms (9.61% of shared variance). The exploration of sources for heterogeneity

(Table 2) revealed a significant difference regarding the type of data included. The relationship calculated based on independent means provided a non-significant effect, while the effects of correlations, OR and regressions were significant. Further analyses revealed that the effect sizes obtained from correlations,  $B = 0.13$ ,  $z = 3.91$ ,  $p < .001$ , and regressions,  $B = 0.19$ ,  $z = 5.21$ ,  $p < .001$ , were significantly higher than those obtained from OR. No difference was observed between correlation and regression effect sizes,  $B = 0.06$ ,  $z = 1.75$ ,  $p = .080$ . A preliminary result suggested that the percentage of women was significantly associated with the magnitude of the effect size,  $B = 0.0085$ ,  $z = 4.28$ ,  $p < .00$ ,  $R^2_a = .28$ . However, an analysis of the regression scatterplot revealed an outlier effect size, whose sample was 100% women. Excluding this effect size, gender was not a significant moderator (as shown in Table 2).

TABLE 2

**Depression.** The results portrayed a significant positive association between the perception of discrimination and the frequency of symptoms of depression assessed exclusively, with 3.61% of shared variance (see Table 1). Moderation analysis revealed that the strength of the association varied in function of gender, age, countries' cultural orientation and some integration policies (Table 3). The results shown that the impact of discrimination on depression was higher in men and decreased as persons grew older. Countries that emphasize assimilation presented higher effect sizes than countries that favor multiculturalism. Thus, in countries that value assimilation as a model for migrants' integration, when ethnic minority persons face discrimination they manifest more symptoms of depression, than ethnic minority persons in multicultural countries. Contrary to what was expected, in countries with more favorable policies regarding labor market mobility and access to permanent residence (based on MIPeX), discrimination had a greater association with symptoms of depression. Additionally, the moderation analyses' results revealed that in countries with stronger anti-discrimination policies, the perception of discrimination was associated with lower levels of depressive symptoms.

TABLE 3

**Anxiety.** No significant association between the perceptions of discrimination and

symptoms of anxiety exclusively was found. Given the small number of studies that used this outcome ( $k = 3$ ), the exploration of moderation effects was not possible. The sensitivity analyses revealed that excluding one effect size could change the results ( $r = 0.27$ ,  $z = 3.40$ ,  $p = .001$ ). Thus, no secure conclusions can be drawn for this specific variable.

**Psychosis.** The results regarding the associations with symptoms of psychosis revealed a significant association between the perception of discrimination and the manifestation of symptoms of psychosis (4.41% of the shared variance). Moreover, the results showed no significant heterogeneity among samples, suggesting the robust nature of this finding. However, the sensitivity analyses revealed that excluding one effect size could change the results ( $r = 0.22$ ,  $z = 1.79$ ,  $p = .074$ ). Thus, the results must be interpreted with caution.

**Perceived stress.** This measure includes measures of stress and negative humor not considered part of a specific psychological disturbance. The results suggest that the perception of discrimination was associated with the variance of stress (3.24%). The  $I^2$  value suggests some inconsistency in the results and there was a high level of heterogeneity. Moreover, the sensitivity analyses revealed that excluding one effect size would change the results ( $r = 0.13$ ,  $z = 1.576$ ,  $p = .115$ ), suggesting the need to interpret these results with caution.

**Externalizing behavior.** This includes measures of problematic behavior, and the studies that measured this outcome were exclusively conducted with adolescents. A significant positive relation between discrimination and externalizing behavior was observed (7.84% shared variance). There was a high level of heterogeneity within these results; however, given the small number of studies that used this outcome, the exploration of moderation effects was not possible.

**Self-esteem.** The results revealed a significant negative association between discrimination and self-esteem (2.25% of shared variance). The exploration of moderation effects revealed different results according to ethnic ancestry and countries' cultural orientations (Table 4). Regarding ethnic ancestry, the results showed that discrimination was not related to self-esteem among persons with African and South American ascendancy, which in this case included Surinamese persons only. Significant effect sizes with different magnitudes were found in

participants with ancestry from Asia, Europe, the Middle East, and multiple origins. Concerning the host country and its immigration policies, the effect sizes observed in multicultural countries were significantly lower than those in countries that value assimilation.

TABLE 4

**Positive evaluation of life.** This aspect measure life satisfaction, happiness, and quality of life. The results portrayed a significant negative association between the perception of discrimination and positive evaluation of life (2.89% of shared variance). The analysis of the funnel plot asymmetry suggested no publication bias, but Begg and Mazumdar's rank correlation test was significant,  $\tau = -0.37$ ,  $p = .031$ , which points to a possible publication bias. Moderation analysis revealed a significant effect for type of data, gender, age, ethnic ancestry, and policies regarding labor market mobility (Table 5). The effect size based on a regression provided a non-significant result, whereas the effects size of correlations and of OR were significant. There was no significant difference between the effect sizes obtained from correlations or OR,  $Q(1) = 0.436$ ,  $p = .509$ ,  $k = 13$ . Moreover, samples with more women showed lower associations between discrimination and the manifestation of a positive evaluation of life. The results showed that in among older participants, the negative association of discrimination with the appreciation of life was stronger. Concerning ethnic ancestry, there was a trend for a non-significant association in persons with African ascendancy. However, significant effect sizes with different magnitudes were found in participants with ancestry from Asia, Europe, the Middle East, and multiple origins. Regarding migrant integration policies, in countries with better labor market mobility, the negative association of discrimination with the positive evaluation of life was lower.

TABLE 5

**Self-efficacy/mastery.** The results portrayed a significant positive association between the perception of discrimination and the level of perceived self-efficacy and mastery (4.24% of shared variance). This is the only dimension where no heterogeneity was observed. The results seem, then, to be robust.

**Well-being.** Well-being comprises measures of psychological well-being, mental health, and mental well-being. The results suggested a significant relationship between discrimination and well-being (11.02% of shared variance). The  $I^2$  value suggests some inconsistency in the results. The heterogeneity within these results is very high. Thus, the obtained effect size is not fully reliable.

**Psychological adaptation.** Two studies, with three samples of adolescents with different ethnicities, used a composite variable named psychological adaptation. This global dimension includes measures of life satisfaction, self-esteem, social self-efficacy, school adjustment, behavioral problems, and symptoms of psychological disturbance. The results suggested a significant relationship between discrimination and psychological adaptation (7.24% of shared variance). The heterogeneity within these results was, understandably, significant. Given the small number of studies that used this outcome, exploration of moderation effects was not possible.

## Discussion

This meta-analysis studied the associations between ethnic discrimination and psychological adjustment in European countries. Overall, the results reveal that perceived discrimination may be responsible for a considerable variation in the psychological functioning of ethnic minority persons living in Europe. More precisely, discrimination is associated with a broad range of symptoms of psychiatric disturbances, depression, and psychosis and perceived stress and externalizing behavior. The only non-significant association observed was with symptoms of anxiety. Moreover, discrimination was negatively associated with measures of positive functioning, namely, self-esteem, a positive evaluation of life, well-being, perception of self-efficacy and psychological adaptation of migrants and ethnic minority persons. Based on our results, we conclude that perceived discrimination not only damages individuals' mental health but also impairs individuals in core domains of their psychological structure, making them more vulnerable to situations of underachievement under stressful circumstances. These results are in line with what has been reported in other meta-analyses (Paradies et al, 2015; Schmitt et al, 2014) and in meta-analyses with only American samples (Lee & Ahn, 2012; Lee & Ahn, 2011; Pieterse,



Todd, Neville, & Carter, 2012). This suggests that the negative impact of the perception of ethnic/racial discrimination on mental health and psychological functioning is generalizable to different countries and cultures, regardless of historical roots, economic development and integration policies.

Some inconsistencies in the findings across studies were observed in the associations between discrimination and symptoms of psychological disturbance, perceived stress, and well-being. These inconsistencies may be related to methodological aspects, such as the existence of a study that contributed to the results to a higher degree, linguistic differences of the used instruments, and perhaps most importantly, the aggregation of different measures used to represent the aforementioned psychological constructs. Additionally, the analyses revealed heterogeneity within the results. To explain this heterogeneity, moderation analysis considering the characteristics of the study, sample, and country was performed.

## **Gender**

The percentage of women in each study was found to be a significant predictor of the strength of the association between discrimination and depression or positive life evaluation. In both cases, men were found to be more affected by discrimination than women were. In a previous study was found that in a sample of women, the association between perceived discrimination and depression was null (Cassidy et al., 2004). An explanation for the moderation effect observed may be related to the gender roles socialization. According to the traditional gender roles and gender performance, men are more socialized than women are for status-oriented or competitive goals, which have more traits and behaviors associated with masculinity (Lengua & Stormshak, 2000; Rose & Rudolph, 2006). In contrast, women are more socialized for caring roles and seem to value family more than men do (Fegg, Kramer, Bausewein, & Borasio, 2007). Thus, when a discriminatory event threatens men's sense of agency and performance (such as being denied a job promotion), they may react with greater hopelessness and think of their lives as less satisfactory than women would. Differential uses of coping strategies may also explain these results. McLaughlin, Hatzenbuehler, and Keyes (2010) observed that when dealing with discrimination, the participants who did not discuss it with others (i.e., did not look for social support) had a higher likelihood of psychiatric disorders. Since an early age, men are less prone to look for social support and express their emotions in times of stress; which may lead to

reduced availability of social support networks in adulthood (Lengua & Stormshak, 2000; McLaughlin et al., 2010; Rose & Rudolph, 2006). Additionally, the higher emotional flexibility in women's reactions to the environment, compared to men's reactions, may favor a more adaptive response to discrimination (Diener, Suh, Lucas, & Smith, 1999).

### **Age**

Age was found to significantly modify the level of depressive symptoms and the level of positive evaluation of life in situations of discrimination. However, the directions of the age effect are opposite for the two outcomes. The association between discrimination and depression is more pronounced at younger ages, affecting adolescents more than adults. On the other hand, the association between discrimination and positive evaluation of life becomes stronger as persons age, affecting adults more than adolescents. The differential effect can be explained by the developmental tasks at different stage of life. Supporting Erikson's theory of psychological development, studies show that persons at younger ages value and are more focused on friendships, close intimate relationships and identity issues, while during adulthood, work and what a person has produced seem to be more relevant (Conway & Holmes, 2004; Fegg et al., 2007). Given that discrimination is a serious threat to the need for social belonging and relationships (Baumeister & Leary, 1995; Richman & Leary, 2009), which is central to intimacy and identity, this can explain why younger persons may react with more depression than older persons would. As work and generativity are central dimensions in adulthood, achievements in work and in ensuring family well being are the main aspects for a self-assessment (Conway & Holmes, 2004; Fegg et al., 2007). When middle aged ethnic minority persons face discrimination (such as refused promotion or job hiring and housing segregation), which cumulatively results in poorer living conditions, their positive evaluation of life can be more jeopardized than if they were adolescents or young adults.

### **Migration status and ethnicity**

Concerning migration status, the absence of significant moderation effects indicated that the strength of the effect sizes between discrimination and psychological functioning may be similar in the first and the second generation of migrants. This result is different from what has been observed in one study with 18 European countries (Borrell et al., 2015), namely that in

second-generation migrants, discrimination was not related to depression, poor self-assessed physical health and limitation of activity by illness, disability or a chronic condition. In regards to ethnicity, in participants with African and Surinamese ancestry, the relationship between discrimination and self-esteem was non-significant. Additionally, a trend towards a non-significant association between discrimination and life evaluation in participants with African ascendancy was observed. Several arguments can be made to explain these results. First, African people were the only group subjected to slavery by Europeans, and there is evidence of racialization in the integration of ethnic minority persons and of the prejudice based on the color of the skin (Hansen, 2003; Neto & Paiva, 1998). Thus, these participants are more aware of the prejudice they are targets of, even when the manifestation of racism is more subtle due to the effect of anti-racism norms (Pettigrew & Meertens, 1995; Vala, Pereira, & Ramos, 2006; Zick et al., 2008). Accordingly, they may be less prone to internalize the responsibility of unfair treatment of which they are the target (Link & Phelan, 2001) and attribute the responsibility for unfair events to those of perpetrating them (Jasinskaja-Lahti et al., 2006, 2009), which reinforces their ethnic identity and protects their self-esteem (Hunter, Durkin, Heim, Howe, & Bergin, 2010; Jasinskaja-Lahti et al., 2006, 2009). Previously, a research in the Netherlands with ethnic minority children who were victims of peer victimization revealed that when they attributed those events to prejudice, the victimization was positively associated with self-esteem (Thijs & Piscoi, 2016) Other studies suggest that the protection of self-esteem in cases discrimination occurs only when members of devalued groups manifest a strong identification with their stigmatized group (Schmitt et al., 2014). The trend towards a non-significant association between discrimination and a positive life evaluation in persons with African ascendancy may be more explained by cultural values, and other dimensions such as self-esteem, perception of mastery or health and employment, than the perception of ethnic discrimination, (Kirmanoğlu & Başlevent, 2014; Neto, 2001).

### **Migrant integration policies**

Host country cultural values, either emphasizing assimilation to the national culture or valuing multiculturalism, were found to alter the strength of the associations between discrimination and both symptoms of depression and self-esteem. In countries that value multiculturalism, more precisely the UK and the Netherlands, ethnic minority persons are less

affected by discrimination. This result is in line with what has been observed previously, that the association of discrimination with depression and physical health is stronger in countries with an assimilationist approach (Borrell et al., 2015). Multiculturalism is associated with the legitimation of social identities, minority group identification, and better relationships with the persons from non-minority groups (Verkuyten, 2006).

The MIPEX yielded a significant influence on the relationship between discrimination and depressive symptoms and positive evaluation of life. Unexpectedly, it was observed that more favorable policies regarding labor market mobility and access to permanent residence were found to be associated with more depressive symptoms in the face of discrimination. Labor market mobility policies include the right to work at the time of arrival in the country, recognition of qualifications achieved abroad, access to training and study grants, availability of trained public staff to help assess skills, and public employment services. Migrants have the same rights as all workers in the country. Access to permanent residence allows any temporary resident the right to settle permanently in the country if he or she has a legal income and obeys the law. The procedure is short and nearly free and includes the rights to appeal. After obtaining permanent residency, persons have the same rights and responsibilities as nationals.

The increasing negative impact of discrimination with better policies regarding job mobility and permanent residence was an unexpected result. Several reasons for this can be addressed. First, previous studies have found that minority ethnic groups perceive a gap between the policies and their implementation, even in countries high scored at MIPEX (Fernandes-Jesus, Ribeiro, Ferreira, Cicognani, & Menezes, 2011; Vasta, 2007). This seems to suggest that it is important to look at the everyday's barriers faced by migrants, even in contexts of favorable policies for their full integration. Structural discrimination allied with the meritocracy ideology may put migrants at a greater risk for social exclusion, thus increasing the adverse effect of discrimination. Second, given that upholding a job and having a permanent residence are mentioned by non-EU migrants as very important for successful integration in the country (European Commission, 2011), barriers to achieving this goal may have a stronger impact on their mental health. One must keep in mind that access to a permanent residence is dependent on having a job. Third, when the broader environment seems to be positive (hence the protective effect of labor market mobility on the positive evaluation of life), being the target of negative acts can be attributed to one's competencies and stable characteristics; this attribution is associated

with worse self-esteem (as observed in this study) and can increase depression. Support for this argument is the observation of a mediation effect of self-esteem on the relationship between the perception of discrimination and depression (Slotman, Snijder, Ikram, Schene, & Stevens, 2017).

Contrary to what was observed in the relationship with depressive symptoms, good conditions for labor market mobility contribute to a more positive evaluation of life when facing discrimination. Having good working conditions and income are related to the quality of life and subsequently life satisfaction (Büchel & Frick, 2005; Diener et al., 1999). Given the importance of having a job, it seems that the provision of better opportunities for immigrant success in work fosters resilience to situations of biased treatment (Ungar, 2013).

Better anti-discrimination policies were found to buffer to some extent the negative impact of discrimination on depression (Ungar, 2013). These policies make discrimination against someone based on their race, ethnicity or religion a felony, and this state protection is applied to many, if not all, areas of life (e.g., employment, housing, education, and health services). Anti-discrimination policies also consider that any person can forward a case against any form of discrimination, as well as racial profiling and incitements to hatred. Moreover, victims are encouraged to seek justice and receive help from equality organizations and NGOs throughout the legal process. Anti-discrimination policies also reflect the use of affirmative actions. On a practical level, the existence of laws that clearly condemn racism and xenophobia have an influence on the majority of people's attitudes and behaviors, suppressing the expression of prejudice (at least in its blatant form of manifestation) (Zick et al., 2008). Similarly to what was mentioned concerning the impact of multiculturalism on the relationship between discrimination and depressive symptoms and self-esteem, anti-discrimination policies also mean that all identities are valued, accepted and deserving of equal treatment. Therefore, it can be the symbolic power of anti-discrimination policies that reassures ethnic minority persons' sense of worth in a situation of social devaluation (Verkuyten, 2006). Finally, no significant moderation effects concerning health and education policies were observed, as this meta-analysis was not focused on the levels of physical health of migrants and ethnic minority persons on their academic and work performance.

## **Research Limitations**

Some considerations regarding the limitations of this meta-analysis need to be noted. Some of the primary studies used convenience samples, which affects the generalization of the results. Regarding gender, most of the studies analyzed did not mention the use of inclusive gender assessment measures. Concurrently, none of the studies analyzed had in their samples persons who do not identify with the gender that was assigned to them at birth. Thus, the results may not be generalized for transgender persons or persons with non-binary gender identities. Additionally, given that few studies focused exclusively on economic migrants or refugees, there was no exploration of a link between motivation for migration and the effects of discrimination. Thus, future studies could use a differential approach to explore whether the motivation for migration affects the influence of discrimination. There was also limited access to publications in languages other than English, although a couple of studies included were written in other languages. Additionally, the use of a composite measure to operationalize some of the constructs poses a constraint in the generalization of the observed relationships to the more specific domains of psychological functioning. Finally, the combination of several moderation variables was not considered.

## **Research Implications**

Most of the immigration to Europe is due to economic reasons, and having a good working situation and access to permanent residency is very valued by non-EU migrants (European Commission, 2011). Thus, it is quite unexpected that in countries with policies favoring labor market mobility and easier access to a permanent residence, the influence of ethnic discrimination on depression was stronger. Given the novelty of this analysis, future studies should explore whether these relations are observed in other samples. Additionally, qualitative studies should more deeply explore the relations between integration policies, discrimination and psychological well-being. The differential direction of the moderation effects presented suggest that the impact of discrimination in depression is higher when the attainment of the valued goals for each person in their current life is frustrated. This hypothesis is also consistent with moderation effects of the gender and age in these dimensions. Futures studies should explore how gender, age and coping mechanisms can explain the relationships between discrimination,

depression and life satisfaction (Park, 2010). Moreover, previous studies showed that the moderation mechanisms can interact to predict the impact of discrimination (e.g., gender and cultural approach, Borrell et al., 2015); in this study, these interactions were not considered, and future studies can explore this.

### **Clinical and Policy Implications**

This systematization of the research reveals that perceived discrimination is related to the worse psychological functioning of ethnic minority persons. Mental health problems pose a huge problem for the individuals and for society, with increasing costs in health care and higher rates of work absence. Additionally, poor self-esteem and perceptions of self-efficacy undermine the positive development and performance of an individual in multiple dimensions, such as academic and work performance and relationships. It was observed that ethnic discrimination is pervasive; thus, clinicians working with ethnic minority persons should assess patient's experiences of discrimination and suggest psychological support.

At the macro level, the primary concern for governments and societies should be to develop actions to decrease prejudice. The novel approach in this study lies in the exploration of moderation effects considering characteristics of the studied persons and European countries. These analyses revealed some important results, showing that in countries where multiculturalism is valued and there are good anti-discrimination policies, the negative effect of discrimination on depressive symptoms and on self-esteem is lower. Additionally, in countries with good conditions for success in the professional sphere (labor market mobility and education), the positive evaluation of life is less impaired by acts of discrimination. Thus, this knowledge can also be capitalized on by governments to improve migrants' and ethnic minority persons' psychological adjustment; especially in times when there is a new inflow of war refugees to Europe, and some governments are redefining their migration policies.

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Figure 1.

*Flow diagram of the screening process and reasons for exclusion*

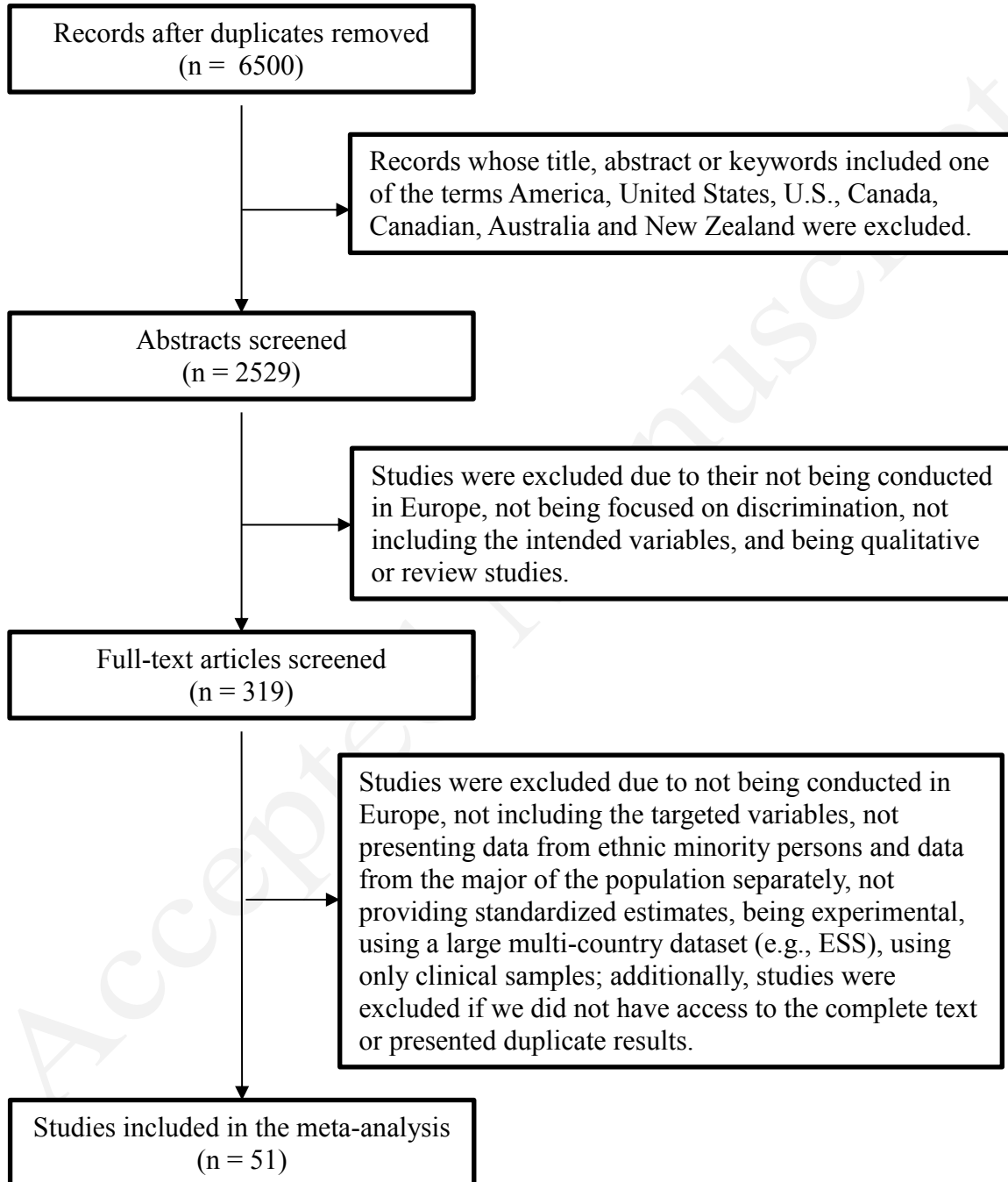


Table 1

*Relationships between perceived ethnic discrimination and psychological dimensions*

Psychosocial dimensions	<i>k</i>	<i>r</i>	95% CI		<i>Z</i>	<i>P</i>	<i>Q</i>	<i>p</i>	<i>I</i> <sup>2</sup>
Psychological disturbance	46	0.31	0.25	0.36	10.39	.000***	514.47	.000	91.25
Depression	11	0.19	0.16	0.22	12.58	.000***	17.41	.066	42.57
Anxiety	3	0.15	-0.11	0.39	1.12	.265	9.63	.008	79.23
Psychosis	4	0.21	0.08	0.33	3.15	.002**	4.10	.251	26.77
Perceived stress	4	0.18	0.02	0.34	2.16	.031*	18.60	.000	83.87
Externalizing behavior	4	0.28	0.20	0.37	6.23	.000***	10.18	.017	70.52
Self-esteem	21	-0.15	-0.20	-0.10	-5.61	.000***	57.33	.000	65.12
Positive evaluation of life	14	-0.17	-0.21	-0.12	-7.32	.000***	29.27	.006	55.58
Self-efficacy/mastery	7	-0.21	-0.22	-0.19	-21.22	.000***	5.58	.472	0.00
Well-being	4	-0.33	-0.60	0.00	-1.98	.048*	56.46	.000	94.69
Psychological adaptation	3	-0.27	-0.37	-0.16	-4.77	.000***	5.81	.055	65.57

Table 2

*Psychological disturbance and ethnic discrimination: Moderation effects*

Moderation variables	<i>k</i>	Q or B	<i>P</i>	<i>z</i>	$R^2_a$
Publication date	46	$B = -0.0095$	.198	-1.29	
Study quality	46	$B = 0.0224$	.410	0.82	
Study design of (cross. vs long.)	46	$Q(1) = 0.30$	.584		
Type of data	46	$Q(3) = 64.846$	< .001***		
Correlation	19	$r = .32$	< .001***	11.12	
Odds ratio	16	$r = .19$	< .001***	12.02	
Beta coefficient	9	$r = .37$	.223	20.70	
Independent means	2	$r = .71$	.223	1.22	
% women	41	$B = 0.0018$	.245	1.16	
Age	33	$B = -0.0000$	.340	-0.88	
% foreign-born	34	$B = -0.0007$	.275	-1.09	
Ethnic ancestry	45	$Q(5) = 4.96$	.421		
Host country cultural preference	45	$Q(1) = 0.07$	.790		
MIPEX – Labor marker mobility	45	$B = -0.0013$	.591	-0.54	
MIPEX – Family reunion	45	$B = -0.0011$	.611	-0.51	
MIPEX – Education	45	$B = 0.0010$	.800	0.25	
MIPEX – Health	45	$B = 0.0000$	.992	0.02	
MIPEX – Political participation	45	$B = 0.0001$	.958	0.05	
MIPEX – Permanent residence	45	$B = -0.0007$	.849	-0.19	
MIPEX – Access to nationality	45	$B = 0.0003$	.931	0.09	
MIPEX – Anti-discrimination	45	$B = 0.0016$	.532	0.63	

Notes. <sup>+</sup>  $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 3

*Depression and ethnic discrimination: Moderation effects*

Moderation variables	<i>k</i>	Q or <i>B</i>	<i>P</i>	<i>z</i>	$R^2_a$
Publication date	11	$B = 0.0025$	.736	0.34	
Study quality	11	$B = 0.0116$	.590	0.54	
Type of data	11	$Q(2) = 4.530$	.104		
% women	11	$B = -0.0018$	.043*	-2.02	.55
Age	10	$B = -0.0027$	.032*	-2.14	.76
% foreign-born	9	$B = 0.0008$	.351	0.93	
Ethnic ancestry	11	$Q(3) = 5.275$	.153		
Host country cultural preference	11	$Q(1) = 3.604$	.058 <sup>+</sup>		
Assimilation	3	$r = .27$	< .001***	6.16	
Multiculturalism	8	$r = .18$	< .001***	13.11	
MIPEX – Labor marker mobility	11	$B = 0.0043$	.021*	2.31	.62
MIPEX – Family reunion	11	$B = 0.0039$	.087 <sup>+</sup>	1.71	.36
MIPEX – Education	11	$B = 0.0031$	.308	1.02	
MIPEX – Health	11	$B = 0.0002$	.963	0.05	
MIPEX – Political participation	11	$B = 0.0026$	.062 <sup>+</sup>	1.87	.33
MIPEX – Permanent residence	11	$B = 0.0051$	.047*	1.99	.40
MIPEX – Access to nationality	11	$B = -0.0027$	.415	-0.81	
MIPEX – Anti-discrimination	11	$B = -0.0054$	.022*	-2.28	.61

Notes. <sup>+</sup>  $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 4

*Self-esteem and ethnic discrimination: Moderation effects*

Moderation variables	<i>k</i>	Q or B	<i>P</i>	<i>z</i>	$R^2_a$
Publication date	21	$B = 0.0054$	.364	0.91	
Study quality	21	$B = 0.0131$	.663	0.44	
Study design of (cross. vs long.)	21	$Q(1) = 0.06$	.801		
% women	20	$B = 0.0018$	.350	0.93	
Age	19	$B = -0.00$	.993	-0.01	
% foreign-born	11	$B = -0.0007$	.421	-0.80	
Ethnic ancestry	21	$Q(5) = 14.00$	.016*		
African	2	$r = -.15$	.374	-0.89	
Asian	1	$r = -.19$	.012*	-2.52	
European	2	$r = -.29$	< .001***	-6.75	
Middle Eastern	6	$r = -.13$	.024*	-2.61	
South American	2	$r = -.02$	.785	-0.27	
Multiple	8	-.17	< .001***	-7.34	
Host country cultural preference	20	$Q(1) = 7.96$	.005**		
Assimilation	6	$r = -.24$	< .001***	-8.17	
Multiculturalism	14	$r = -.11$	.001**	-3.40	
MIPEX – Labor maker mobility	20	$B = 0.0005,$	.864	0.17	
MIPEX – Family reunion	20	$B = -0.0011$	.666	-0.43	
MIPEX – Education	20	$B = 0.0025$	.557	0.59	
MIPEX – Health	20	$B = 0.0036$	.201	1.28	
MIPEX – Political participation	20	$B = 0.0000$	.999	0.00	
MIPEX – Permanent residence	20	$B = -0.0034$	.495	-0.68	
MIPEX – Access to nationality	20	$B = 0.0032$	.146	1.46	
MIPEX – Anti-discrimination	20	$B = 0.0028$	.260	1.13	

Notes. <sup>+</sup>  $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 5

*Positive evaluation of life and ethnic discrimination: Moderation effects*

Moderation variables	<i>k</i>	Q or <i>B</i>	<i>P</i>	<i>z</i>	<i>R</i> <sup>2</sup> <sub><i>a</i></sub>
Publication date	14	<i>B</i> = -0.00186	.676	-0.42	
Study quality	14	<i>B</i> = 0.0145	.606	0.52	
Type of data	14	<i>Q</i> (2) = 5.10	.078 <sup>+</sup>		
Correlation	10	<i>r</i> = -.19	< .001***	-6.73	
Odds ratio	3	<i>r</i> = -.14	.038*	-2.07	
Beta coefficient	1	<i>r</i> = -.07	.116	-1.57	
% women	14	<i>B</i> = 0.0065	.013*	2.48	.40
Age	9	<i>B</i> = -0.0067	.071 <sup>+</sup>	-1.80	.54
% foreign-born	14	<i>B</i> = -0.0008	.406	-0.83	
Ethnic ancestry	14	<i>Q</i> (4) = 9.63	.047*		
African	3	<i>r</i> = -.22	.083 <sup>+</sup>	-1.74	
Asian	1	<i>r</i> = -.29	< .001***	-5.08	
European	1	<i>r</i> = -.23	.001**	-3.36	
Middle Eastern	5	<i>r</i> = -.13	< .001***	-4.34	
Multiple	4	<i>r</i> = -.13	< .001***	-6.43	
Host country cultural preference	13	<i>Q</i> (1) = 0.04	.849		
MIPEX – Labor marker mobility	13	<i>B</i> = 0.0049	.020*	2.33	.41
MIPEX – Family reunion	13	<i>B</i> = -0.0003	.904	-0.12	
MIPEX – Education	13	<i>B</i> = 0.0053	.070 <sup>+</sup>	1.81	.06
MIPEX – Health	13	<i>B</i> = 0.0009	.821	0.23	
MIPEX – Political participation	13	<i>B</i> = 0.0035	.093 <sup>+</sup>	1.68	.00
MIPEX – Permanent residence	13	<i>B</i> = 0.0014	.665	0.43	
MIPEX – Access to nationality	13	<i>B</i> = 0.0045	.306	1.02	
MIPEX – Anti-discrimination	13	<i>B</i> = -0.0001	.968	-0.04	

Notes. <sup>+</sup> *p* < .10, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001