The mediating role of self-esteem on the relationship between perceived discrimination and mental health in South American immigrants in Chile

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ABSTRACT

Psychological aspects in South-South migration have been little studied. The following study aimed to describe the effect of individual self-esteem as a mediator in the relationship between perceived discrimination and mental health (understood as the presence of anxious and depressive symptomatology) in South American migrants in Chile. We surveyed 853 people, of Peruvian and Colombian nationality, residing in three cities (Arica, Antofagasta and Santiago). Three ad-hoc scales were applied to evaluate the study variables, analyzing the measurement models for each of them using the Confirmatory Factor Analysis method. Subsequently, the hypothesized mediation model is evaluated through Structural Equations (SEM). The results show that discrimination has a positive and direct relationship with both anxiety and depression, and that the effect of interaction between the variables of discrimination, self-esteem and symptoms associated with depression and anxiety, had a simple partial mediating effect. Discrimination would have a positive and minor effect on anxious and depressive symptoms, as it is mediated by self-esteem.

1. Introduction

In the last thirty years, Chile has become a focus of attraction for immigrants, mainly from neighboring countries of the Southern Cone, a phenomenon known as south-south migration (Vergara, 2014). The migration process generates changes and consequences in both the immigrant and in the host societies. At the individual level, these changes directly affect the well-being and the immigrants´ physical and mental health, mainly due to the demands of adaptation which is often precipitated by the social context that is not supportive, and in so doing, exceeds the internal resources of the migrant (Urzúa et al., 2017a,b,c,d,e, 2016b, 2015).

Discrimination, conceptualized as the different treatment towards a group with common characteristics or towards a person belonging to that group (Krieger, 2000), is an example/result of a social context that is not very supportive. It has been systematically reported that the perception of being negatively discriminated (isolation and unfair treatment) against effects people's health, both physically and mentally (Harrell et al., 2003; Lewis et al., 2015; Pascoe and Smart, 2009; Schnittker and McLeod, 2005; Williams and Collins, 1995; Williams and Mohammed, 2009), affecting in the long term the psychological functioning of individuals (García et al., 1996).

In the mental health field, discrimination has been linked to mood and anxiety disorders (Kessler et al., 1999; Williams and Mohammed, 2009; Yip et al., 2008), with adverse health consequences (Bastos et al., 2014). Despite the increase in studies on this topic, it is still possible to identify limitations in its development. First, studies have been focused mainly on racial and ethnic discrimination in the United States in specific populations such as African American, Latino, indigenous, or discrimination by sexual orientation (Bastos et al., 2014). Second, many of these studies have failed to access the intensity and frequency of discrimination, as well as their attribution on social class, gender, age, etc. Third, there is no compelling body of findings that provides evidence to the processes by which internalized discrimination between groups, institutional and structured discrimination, interacts with interpersonal discrimination to produce unfavorable mental health consequences.

Given that discrimination is a phenomenon present in various social processes, including migration, in addition to the high impact it has on individual suffering and the social cost derived from the mental health problems it generates, it is highly relevant to follow the investigation of the relationship between discrimination and mental health, including factors that influence the strength of this relationship, which must be considered (Mewes et al., 2015). Among these factors, we find personal

self-esteem as an important mediator in the relationship between discrimination and mental health (Feng and Xu, 2015;Verkuyten and Nekuee, 1999; Twenge and Crocker, 2002; Wei et al., 2008).

Self-esteem can be defined as the overall assessment that a person makes of himself, plus the feelings that accompany that evaluation (Verkuyten and Nekuee, 2001). It is linked to how we see and feel about ourselves (Campbell, 1990) and is constructed through the evaluation of one's personal characteristics (Rosenberg, 1965). It has been considered a resource capable of cushioning negative experiences of life (Cast and Burke, 2002), being associated with both physical and mental well-being (Krol et al., 1994). As for the possible mediating role of self-esteem, it has been found that it constitutes a psychological resource that can mediate the relationship between family variables and problems of criminal behavior (Jiménez et al., 2007b), cultural conflicts and negative affects (Verkuyten and Nekuee, 1999) and the effect of racial discrimination (Tynes et al., 2012), becoming a protective factor for mental health (Jiménez et al., 2007a). At the group level, collective self-esteem could attenuate the relationship between the perception of ethnic discrimination as well as the sense of paranoia in the face of possible discriminatory events (Kong, 2016).

Self-esteem has been inversely associated with depressive symptoms (Derdikman-Eiron et al., 2011; Ginsburg et al., 2008; Glendinning 1998; Millings et al., 2012), with anxious symptomatology (Derdikman-Eiron et al., 2011; Moksnes and Espnes 2012; West 2004) and with disruptive behavioral behaviors (Ybrandt and Armelius 2010). In immigrants, a low self-esteem has been associated with high levels of depressive symptoms (Greene et al., 2006; Zeiders et al., 2012) and poor mental health (Borrell et al., 2010). At the same time, it has been reported that self-esteem is negatively affected by the perception of discrimination ((Branscombe et al., 1999; Bourguignon et al., 2006; Fischer et al., 2000; Romero and Roberts, 2003; Szalacha et al., 2003; Schmitt et al., 2002). These researchers have found that perceived discrimination could predict self-esteem or self-esteem could predict depressive symptoms. Despite of these data, research on the relationship between self-esteem and discrimination has yielded mixed results, with authors reporting an association (Ghaffari and Çiftçi, 2010; Lee 2005), while others do not (Fischer and Shaw, 1999; Moradi and Subich, 2004). This substantiation the need to continue exploring the possible mediating role of this variable.

In summary, although the literature on the relationship between discrimination and mental health is quite broad, research on factors that measure this relationship is scarce, especially in migrant populations. It is within this framework that the question arises: does self-esteem play a mediating role in the relationship between discrimination and mental health (understood as presence of anxious and depressive symptomatology) in migrant populations? This question is particularly relevant to the clinical challenge of dealing with a rising immigrant population and the need for information to generate tools for effective treatment of mental health problems in this group. Furthermore, serve as an estimate of the effect of this variable, to work in clinical therapies that can strengthen migrant patient's mental health who have had difficulties when suffering discrimination. It is hypothesized that discrimination has a positive and direct relationship to both anxiety and depression. In addition, it is expected to find a negative relationship between discrimination and self-esteem, the greater the discrimination, the less self-esteem, and therefore the greater the presence of anxious and depressive symptoms. The model to be tested can be seen in Fig. 1.

2. Method

2.1. Study participants

We have chosen Colombian and Peruvian participants because they are the South American population with the largest presence in Chile (INE, 2018). Both countries have very marked cultural differences, with a predominance of Andean culture in Peruvians and Caribbean culture

in Colombians (Urzúa et al., 2017a). It was considered as an inclusion criterion to be living more than six months in the country. The questionnaires were collected in three different cities of Chile. Participants were surveyed mainly in public institutions such as the Chilean Catholic Migration Institute (INCAMI), Global Citizen-Jesuit Migrants Service, Immigration and Migration Department, Consulate of Colombia and Peru, health centers, among others, as well as informal immigrant meeting places i.e. restaurants, support groups, etc. The participants were surveyed when they came to carry out personal procedures in the different services, when they were waiting for attention in the case of health and immigration services, or in meetings of organized groups of migrants. The average to complete the survey was 40 minutes. Approximately 10% of those selected to participate in the study did not complete the questionnaires, expressing the lack of time as the main reason.

2.2. Instruments

2.2.1. Perceived discrimination

It was measured by an ad-hoc scale created by Basabe et al. (2009). The scale is composed of five items that inquire about the frequency by which an immigrant perceives their treatment as unfair or negative, with scores between 1 (nothing) and 5 (almost always). A reliability measured by the Cronbach alpha between 0.87 and 0.88 has been reported for this scale in previous studies of South American migration. (Aierdi et al., 2008; Basabe et al., 2009; Sevillano et al., 2014; Zlobina et al., 2006).

2.2.2. Mental health

We used two dimensions of the Chilean version of the Outcome Questionnaire (OQ-45.2) which was developed in the United States by Lambert et al., (1996) and adapted for chilean context by (De la Parra and Von Bergen, 2002). In the Chilean adaptation, the instrument was stable according to the test-retest test (0.67 to 0.93). The reliability measured through the Cronbach's alpha coefficient had values between 0.63 and 0.91 in both clinical and normal populations (De la Parra and Von Bergen, 2002). In its complete version, this instrument has 45 items with a Likert response format. It seeks to evaluate symptoms of mental health associated with symptoms or subjective discomfort, difficulties in interpersonal relationships and difficulties in the performance in the social-work role. For this study we have used the dimension of symptoms or subjective discomfort which includes symptoms of depression and anxiety, as well as somatization disorder, addictive and self-destructive behaviors. Also, we have only used the items that evaluate anxiety (10) and depression (6). Higher scores on this scale are associated with a greater presence of symptoms associated with mental health problems. Given that there are no references to the use of this questionnaire in a non-clinical population in both countries, this was previously evaluated using the technique of cognitive interviews in the population of each country.

2.2.3. Self esteem

It was measured by seven of the 10 questions selected from the Rosenberg Self-Esteem Scale (1965). These statements inquire about a person's feelings, with Likert-type responses with scores between 1 and 4 depending on the degree of agreement with the statements. Three questions were not used because of their low item to total correlation test in previous studies (Sometimes I think I'm not a good person; I wish I could feel more respect for myself; I feel that I am a person worthy of appreciation, at least to the same extent as the others). Considering that this questionnaire is one-dimensional, and that the direct score obtained by the person has been used, without cut-off points, its content validity has not been affected, presenting the remaining reagents with good measurement indicators in both samples (peruvians and colombians). The Rosenberg Self-esteem Scale was validated in Chile in 2009, with a reliability of 0.75 and with grouping of factors in two
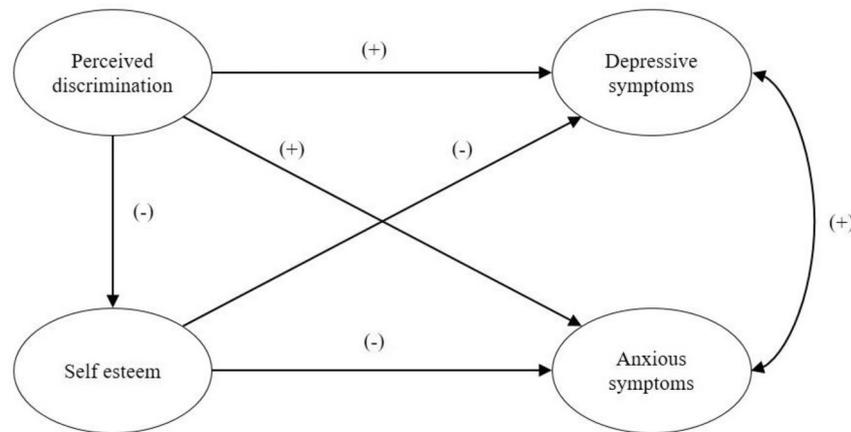
Fig. 1. The moderated mediation model proposed with perceived discrimination as exogenous variable, depressive symptoms and anxious symptoms as endogenous variables and self-esteem as the mediator.

Table 1
Averages, standard deviations and nationality, and total sample scores ($N = 853$).

Variables	Nationality Colombians		Peruvians		t-test		Total sample	
	m	SD	m	SD	t	p-value	m	SD
Discrimination perceived	2.34	1.11	2.19	0.97	2.096	0.072	2.27	1.054
Self esteem	3.54	0.56	3.29	0.56	6.084	0.000	3.42	0.575
Symptoms of anxiety	0.85	0.74	0.94	0.74	2.138	0.033	0.9	0.743
Symptoms of depression	1.11	0.67	1.22	0.73	1.938	0.057	1,16	0.703

Table 2
Correlation between variables.

Variables	1	2	3	4
1. Discrimination perceived		− 0.151**	0.376**	0.384**
2. Individual self-esteem	− 0.151**		− 0.319**	− 0.269**
3.Symptoms of depression	0.376**	− 0.319**		0.589**
4. Symptoms of anxiety	0.384**	− 0.269**	0.589**	

** The correlation is significant at the 0.01 level (bilateral).

dimensions, based on the positivity or negativity of the items (Rojas-Barahona et al., 2009). In this application, Cronbach's alpha for the full scale was 0.71.

2.3. Procedures

The present research corresponds to an analytical, non-experimental, cross-sectional study. Considering the difficulty in accessing the target population, it was decided to first use a non-probabilistic sampling with the snowball technique (Goodman, 1961), for groups difficult to access (Heckathorn, 1997). In the second instance, sampling was intended to obtain equitable quotas by sex, country of origin (Peru, Colombia), legal status in Chile (regular, irregular) and proportional quotas by city of residence (Arica, Antofagasta, Santiago).

2.4. Proposed analysis

Data analysis was performed in three stages. In the first stage, the measurement models of each of the variables involved in the model were adjusted. In the case of the OQ scale, the measurement models were adjusted separately for symptoms of both depression and anxiety. To study the adjustment of the models, we applied the Confirmatory Factor Analysis using the Robust Maximum Likelihood (MLR) estimation method.

Because the analysis was carried out in a sample composed of two groups of immigrants culturally distinct, we have evaluated the Measure Equivalence/Invariance (ME/ I) between the two groups through a Multi-group Confirmatory Factor Analysis (MCFA) for each of the four measures. To compare the differences in the fit between the nested models, we used the difference test in the chi-square adjustment and the difference in the goodness of fit indices CFI, RMSEA and SRMR. To determine the ME/I we have not considered the level of invariance of the residuals because it is a very strict level in the applied research and researchers do not usually consider it, since it has no interest in comparing different groups (Byrne, 2004). When the analysis is focused on the validity of comparison between groups, the equality in the intercepts would ensure the equivalence of the average of the latent factors (Dimitrov, 2010).

We have carried out this stage with two purposes. On the one hand, the purpose is to provide greater evidence of validity referring to the internal structure of the measures, and on the other, to contribute to the fit of the structural model that we will specify in the hypothesized mediation model.

Secondly, we performed a descriptive analysis of the data, presenting the comparisons between Colombian and Peruvian immigrant sub-samples, as well as the correlations between the variables under study. Finally, the results of the adjustment of the hypothesized mediation model are presented through a Structural Equation (SEM) model. As for the adjustment of the measurement models, we used the MLR estimation method. For the evaluation of the overall fit, in addition to the $\chi 2$ statistic, we have used some of the adjustment indexes most frequently used in applied research (CFI, RMSEA and SRMR). For data management, as well as for descriptive analysis, we used the SPSS 23.0 program. For the adjustment of the measurement models, as well as for the adjustment of the SEM model, we used the Mplus v.7.4 program.

2.5. Ethical aspects

This research was approved by the Committees of Scientific Ethics of the Universidad Católica del Norte and the National Commission of Science and Technology, CONICYT. This manuscript is part of the results of the FONDECYT Project 1140843, funded by the National Commission of Science and Technology, CONICYT, who had no interference in the elaboration of said. Prior to applying the instruments, all participants were asked to sign an informed consent, where the respondent understood the nature of the study and was completely free to express their willingness to participate or not.
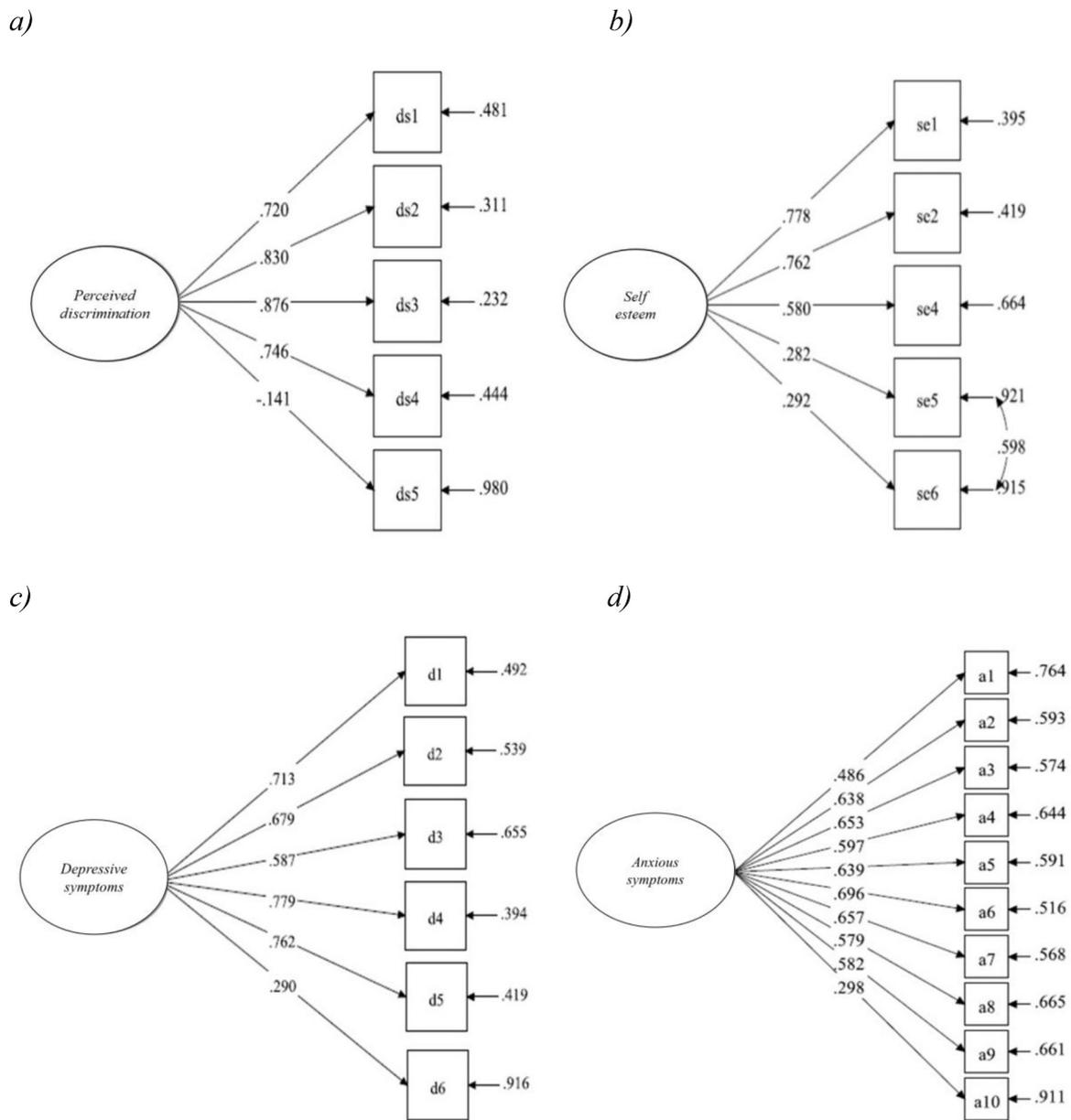
a)

b)

c)

d)

Fig. 2. Measurement models of the variables involved in the structural model. All regression coefficients are significant ($p < 0.05$).

Table 3
Global adjustment indicators of measurement models.

Measurement models	Par.	χ^2	df	p-value	CFI	RMSEA (IC$_{90}$)	SRMR
Discrimination	15	19.188	5	0.001	0.986	0.060 (0.033–0.090)	0.015
Self esteem	16	19.039	4	0.000	0.997	0.024(0.000–0.063)	0.012
Symptoms of depression	18	53.923	9	0.000	0.953	0.080 (0.060–0.100)	0.029
Symptoms of anxiety	30	118.415	35	0.000	0.944	0.055 (0.044–0.066)	0.038

3. Results

We will present the results in four sections. First, we will present descriptive analyzes of the sociodemographic variables of the participants. Second, we will present the descriptive statistics of the study variables, the comparison between the two groups of immigrants and correlations between study variables. Third, before adjusting the structural model, we have evaluated the goodness of fit of the measurement models for the four study variables. Additionally, in this section we will present the results of factorial invariance analysis in

order to ensure the equivalence of measurement between the two immigrant groups. Finally, in the fourth section, we present the results of the goodness of fit of the SEM model with the hypothesized mediation analysis.

3.1. Participants

A total of 853 people was evaluated, with an average age of 33.2 years (SD = 9.5 years). Of these, 51.0% (n = 433) were women; 48.3% (n = 412) Peruvian citizens and 51.7% (n = 441) Colombian citizens.

Table 4
Goodness of fit indices and differences among nested levels of measurement models.

	χ^2	df	p	CFI	RMSEA	$\Delta\chi^2$	Δdf	Δp-value
Discrimination								
Configural	60.971	10	0.000	0.956	0.114			
Metric	69.575	14	0.000	0.952	0.101	0.633	4	0.959
Scalar	83.678	18	0.000	0.944	0.090	12.668	8	0.123
Self esteem								
Configural	33.582	8	0.000	0.962	0.088			
Metric	37.891	12	0.000	0.961	0.072	4.096	4	0.393
Scalar	42.789	16	0.000	0.960	0.064	7.248	8	0.510
Symptoms of anxiety								
Configural	163.694	70	0.000	0.945	0.057			
Metric	180.177	79	0.000	0.940	0.056	15.146	9	0.087
Scalar	194.691	88	0.000	0.937	0.054	27.782	18	0.065
Discrimination								
Configural	64.161	18	0.000	0.959	0.079			
Metric	71.093	23	0.000	0.957	0.071	5.065	5	0.408
Scalar	79.030	28	0.000	0.955	0.067	11.099	10	0.349

Furthermore, 66.4% ($n = 562$) of the immigrants had regular legal status (work visa) and 33.6% ($n = 284$) illegal/irregular migrants (without a visa); In addition, 24.8% ($n = 212$) were residents Arica, 50.6% ($n = 431$) residents of Antofagasta and 24.6% ($n = 210$) residents of Santiago.

3.2. Descriptive statistics

The descriptive statistics of the study variables were presented in Table 1. When comparing the means of the different variables between Colombians and Peruvians, it was found that the mean for self-esteem for Colombians was significantly higher than for Peruvians ($t_{(723)} = 6.084$, $p = 0.000$), while Peruvians have a higher mean in symptoms of anxiety ($t_{(728)} = 2.138, p = 0.033$). In the other variables, there were no statistically significant differences between the means. In addition, the Table 2 show the Pearson correlations coefficients. As can be seen all these variables are related to each other ($p < 0.01$).

3.3. Measurement models

Fig. 2 shows the path diagram of each of the adjusted measurement models of the four study variables. In addition, Table 3 shows the goodness of fit indices for each of the analyzed models.

In the case of the discrimination variable, and as can be seen in Fig. 2(a), all items have an adequate factor load. On the other hand, the adjustment indices show an adequate statistical fit.

In the case of the self-esteem scale, since the adjustment indicators

of the seven-item model obtained values lower than what the literature considers adequate (i.e. CFI > 0.95, TLI > 0.95, RMSEA < 0.08) (Schreiber et al., 2006), it is decided to iteratively debug the items, finally being a factor composed by five items (Fig. 2.b).

Similarly, given the non-adjustment of the initial model, we proceed to debug the variables for the symptoms of depression and anxiety. Hence, both dimensions were composed of six and ten items respectively, as can be seen in Fig. 2(c) and (d). Both subscales show an adequate statistical fit (Table 3). Aditionally, all measurements have obtained adequate Cronbach alpha coefficients (depression = 0.830; anxiety = 0.855; perceived discrimination = 0.892; Self-steem = 0.697).

As discussed above, to assess the Measurement Equivalence/ Invariance between the two groups of immigrants, we have carried out a MCFA for each of the measures. The analysis we have carried out in order to ensure that the instruments which have the same metric properties across immigrant groups. Even though this approach differs from others (e.g. Differential Item Funtion, DIF), they share many of the fundamental assumptions and are conducted in a rather similar manner (Kankaras and Moors, 2010). In Addition, this MCFA technique is consistent with the techniques used in the study (CFA and SEM), it is simpler to evaluate the graduated response test and this technique performs well in the detection of bias and DIF when the linear relationship between indicators and latent factors is assumed. The results are presented in the Table 4.

The results show that for all measures the null hypothesis of equality of fit is maintained across all levels of invariance. Additionally, following the recommendations of Chen (2007), both CFI, RMSEA and SRMR do not show a significant loss in the fit ($\Delta CFI < 0.01$ and $\Delta RMSEA < 0.01$). We have not used the SRMR index because it has shown a differential functioning in the different levels of invariance (Chen, 2007). These results show that both the factorial structures (*configural label*), as well as the factorial loadings (metric label) and the intercepts (*scalar label*) are invariant between the groups of Bolivians and Peruvians. This evidence shows the existence of Measurement Equivalence / Invariance across groups.

Finally, because of its extension, a parceling process was performed where variables were created by means of the average of two questions, finalizing with symptoms of depression which composed three items and symptoms of anxiety five.

3.4. Global model

Finally, we have assessed the fit of the mediation model. The goodness of fit of the global model resulted in $\chi^2 = 353.816$, $df = 113$, $p = 0.000$, CFI = 0.957, RMSEA = 0.055, SRMR = 0.034 (Fig. 3). This
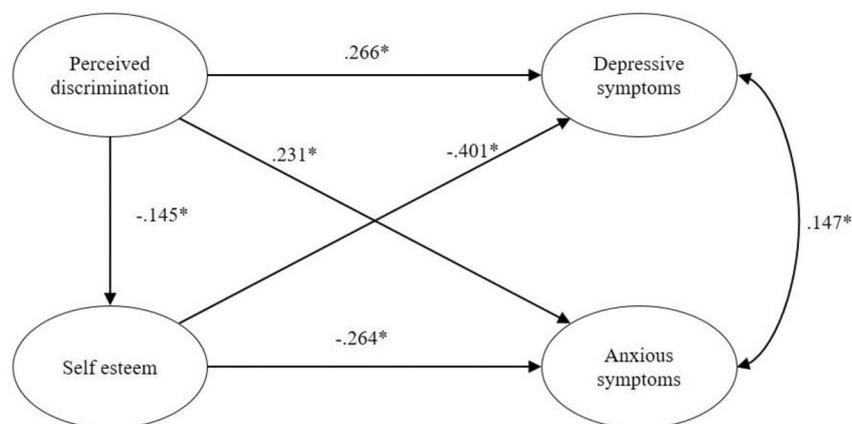
Fig. 3. The final mediation model with self-esteem as the mediator. The standardized coefficients are showed. all the estimated parameters were significant ($p < 0.05$).

results show that the hypostatized mediation model obtained an excellent fit.

Fig. 3 shows the path diagram with the standardized solution. The direct effect of discrimination on the symptoms of anxiety (0.231) is greater than the indirect effect ($-0.145^* - 0.264 = 0.038$), obtaining as a total effect $\beta = 0.269$. Likewise, the direct effect of discrimination on symptoms of depression (0.266) is greater than the indirect effect ($-0.145^* - 0.401 = 0.058$), with a total effect (0.324). When studying the interaction effect between the variables of discrimination, self-esteem and symptoms associated with depression and anxiety, it is observed that the global model presents a partial simple mediator effect (Ato and Vallejo, 2011). Discrimination has a positive and minor effect on anxiety and depressive symptomatology, as it is mediated by self-esteem.

4. Discussion

The aim of this study was to examine the interaction between the variables of self-esteem, discrimination and symptomatology associated with mental health problems, specifically anxiety and depression in South American immigrants in Chile. The hypotheses supported in this study were that discrimination has a positive and direct relationship with both anxiety and depression. It showed that when considerable discrimination is present, the greater the presence of symptoms of anxiety and depression. In addition, we found a negative relationship between discrimination and self-esteem, where the greater the discrimination, the lower self-esteem and therefore a greater presence of symptoms of anxiety and depression, was partially verified.

The results obtained continue to provide evidence of the close and inverse relationship between the discrimination perceived by the participants and the presence of symptoms associated with, in this case, disorders such as anxiety and depression. Despite of this, it is possible to venture given these same results that personal self-esteem can reduce the negative effects of discrimination. This fact supports the evidence found in previous studies conducted in the United States and Europe. In these studies, immigrants with high personal self-esteem developed less symptomatology (Fischer and Shaw, 1999; Borrell et al., 2010), fulfilling a mediating role (Davis et al., 2012; Fischer and Shaw, 1999; Glendinning, 1998; Moksnes and Espnes, 2012). The mediating role of personal self-esteem has also been reported on the effect of discrimination on psychological well-being (Urzúa et al., 2018).

Additionally, we found significant differences in the reports on self-esteem in participants from Colombia and Peru. Possible explanations for this fact may be based in the construct of self-esteem considering socio-cultural aspects. However, this is an area that is not yet sufficiently studied. Several researchers (Davis et al., 2012; Feng and Xu, 2015; Fischer and Shaw, 1999; Glendinning, 1998; Moksnes and Espnes, 2012; Twenge and Crocker, 2002) suggest that cultural differences may explain the differences shown between races or nationalities in terms of their self-esteem, but it is not clear that culture alone can affect all the effects that were observed. The psychological process by which cultural differences of each nationality (such as individualism or modesty) can lead to greater or lesser self-esteem in minority groups is not as clear (Twenge and Crocker, 2002). Consequently, it is believed that theory and research need to be oriented beyond the analysis of individual variables to examine these processes. A necessary line of research in this area is the evaluation of the effect of the ethnic component in the construct of self-esteem, such as, for example, ethnic identity (Arenas and Urzúa, 2016). Twenge and Crocker (2002) have argued that self-esteem levels differ widely among ethnic groups, suggesting that different groups tend to develop self-esteem through different processes. The opinions or approval of others, and some specific competencies, could not be the basis of self-esteem in the same way in racial groups (Crocker and Wolfe, 2001).

Within the limitations of this study, focusing only on the immigrant population of Colombian and Peruvian nationalities, being the highest

in recent years in Chile (Vergara 2014), does not allow the comparison and/or generalization of the results of this study to other migrant populations in Chile. Therefore, the generalization of these results to other groups of migrants should be done with caution until this study can be replicated. Another limitation in this study is based on the transversality in the data collection, due to the inability to study the evolution or the trajectory of the interactions of the variables under study over time. Additionally, SEM has been developed to test models with longitudinal data.

A third limitation is related to the very "limits" of the types of measures commonly used in this type of research. Many times, these studies use self-reports to measure self-esteem or other variables, which are vulnerable to the effects of self-presentation, self-deception, or both (Paulhus, 1984). In addition, the items in the self-esteem measurement could have different meanings for the members of different groups. However, despite these possible limitations, Verkuyten (1994), through a review of the literature, concluded that there are no methodological explanations or systematic techniques for racial differences in self-esteem. So, the structure factor and variability in self-esteem measurement are similar between groups. Moreover, it is quite useful to understand how people think about themselves when they are answered these kinds of questions.

Despite of these limitations, the present study contributes to the understanding of how personal self-esteem can intercede to reduce mental health symptomatology associated with discrimination as perceived by South American immigrants in Chile. A future longitudinal study could allow future researchers to study this relationship in terms of the impact of racial discrimination or xenophobia, to reduce the subsequent symptomatology in mental health, in all its dimensions or pathologies. Future studies could also analyze experiences of racial discrimination to reduce the errors that are often associated with retrospective work. As perceived discrimination is often an important component in the stress generated by the acculturation of immigrants in a country, future studies could longitudinally examine the role of time spent in Chile in terms of perceived discrimination and symptomatology regarding mental health.

Additionally, this study provides information on the understanding of psychological variables that may affect mental health in south-south migrants, a process that has not been explored in depth, given its recent and explosive increase in the last 10 years.

Contributors

Conception and design: A. Urzúa. Data collection and analysis of data: C.Cabrera, C. Calderón, A. Urzúa. Drafting and writing the manuscript: A. Urzúa, C. Cabrera, A. Caqueo, C. Calderón

Conflict of interest

The Authors have declared that there are no conflicts of interest in relation to the subject of this study.

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