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Title: Discrimination and mental health in Ecuadorian immigrants in Spain

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Abstract

Background

To examine the effects of ethnic discrimination on the mental health of Ecuadorian immigrants in Spain and to assess the roles of material and social resources

Methods:

Data were taken from the “Neighbourhood characteristics, immigration and mental health” survey conducted in 2006 in 33 areas of Spain. Interviews were conducted at home with an overall response of 69%. Psychological distress measured as “Possible Psychiatric Case” [PPC] was measured by the GHQ-28. A logistic regression was fitted to assess the association between PPC and discrimination adjusting for potential confounders. Interactions of discrimination with social and material resources were tested using product terms.

Results: Some 28% of the participants met our definition of PPC. About 20% of those who reported no discrimination were PPCs, rising to 30% of those who sometimes felt discriminated against and 41% of those who continually perceived discrimination. The OR for continuous discrimination was 12 [95%CI 3.5-40.3] among those with high financial strain, and 10 [2.4-41.7] when there was lack of economic support. Emotional support had an independent effect on PPC (OR of 1.8 [1.0-3.6] for those who reported having no friends). Social integration through a community group or association was positively related to the probability of being a PPC (OR of 1.7 [1.0-2.9]).

Conclusion: Ethnic discrimination is associated with psychological distress in these Ecuadorian immigrants in Spain. Discrimination effects may be exacerbated among those facing economic stress and those without economic support. These particularly vulnerable immigrants should be the subject of social and health interventions.

Introduction

Discrimination can be defined as actions from individuals and institutions that negatively and systematically impact socially defined groups with less power.(1) Discrimination has negative consequences on the mental and physical health of those who suffer it.(2-6)

Spain has become one of the most important host countries in Europe for economic immigrants.(7) This has occurred at a rapid pace, largely due to the demand for unskilled labour.(8) The migratory process in Spain has developed in a social context in which democratic values of coexistence have been strengthened and in the awareness of Spain's past history as a country of political and economic emigration. In the 1990's Spanish attitudes towards immigrants were less racist than those of other Europeans.(9) However, two more recent surveys showed that perceived discrimination was extensive and increasing in importance.(10)

Experiences of discrimination towards minorities are stressful events with potential health consequences.(11-13) For minority immigrants, the hardships and problems directly related to discrimination – denial of decent housing, precarious and hazardous employment, delays and barriers to obtaining services – (14-16) constitute sources of stress. Discrimination can act on mental health indirectly, leading to situations of social exclusion as well as social and economic problems that in turn increase the probability of health risk exposures, greater susceptibility to diseases, and less access to healthcare services.(1) Prolonged and systematic discrimination can also act directly on mental health through psychosocial mechanisms, such as loss of self-esteem and identity.(17)

Our aim was to examine the effects of discrimination due to ethnic origin on the mental health of Ecuadorian immigrants in Spain, the third largest immigrant group, who comprise 20% of economic immigrants. Extending the model of the stress process,(18) we argue that the direct effects of discrimination on mental health are independent of the immigrant's individual characteristics (age, sex, education,(19) and health status)(20;21), and that economic resources and social support can potentially intervene to attenuate the effects of cumulative stress on health due to discrimination.(22) We attempt to answer the following research questions: What are the associations between discrimination and mental health? Are these associations modified by the availability of economic resources and social support?

Materials and Methods

The data were taken from the “Neighbourhood characteristics, immigration and mental health” survey carried out between May and December 2006. Sampling was conducted in four regions (Alicante, Almeria, Madrid and Murcia) selected due to the high influx of immigrants to these regions in recent years and the large concentration of immigrants from Ecuador, employed primarily in the service and agriculture sectors. In Madrid, 128 neighbourhoods (*barrios*) in the city’s 21 districts were ranked in tertiles according to socioeconomic status (measured as the mean price of housing per square meter) and immigrant density. One neighbourhood was selected in each of the nine resulting strata. In both Alicante and Murcia, nine populations (neighbourhoods and cities) with high and low immigrant density were selected, and in Almeria, only six cities were selected. A list of residents was available from census rolls in each city with place of birth, age, and sex. A sex-specific stratified random sample of Ecuadorian residents aged 18-55 years was selected to obtain 9 men and 9 women at each location. The final sample had 570 subjects from 33 areas stratified by mean housing prices and immigrant density (Madrid sample) or only by immigrant density (Almeria, Alicante and Murcia). Assuming only two thirds of addresses would actually be valid (estimated by a pilot study), a second sample of 5 men and 5 women was selected to replace those whom we were unable to locate during field work. A letter of invitation was sent to each potential participant followed by a home visit from trained interviewers. Response rates [completed interviews/ (completed +refused interviews)] varied by location: 42.9% in Madrid, 79.5% in Alicante, 96.4% in Murcia, and 89.6% in Almeria, giving an overall response rate of 69%. The questionnaire and the measurement scales used were tested in the pilot study.

The dependent variable was psychological distress measured by the General Health Questionnaire GHQ-28,(23) a screening instrument consisting of four sub-scales (somatic symptoms, anxiety and insomnia, social dysfunction and depression). The response categories refer to the person’s experience in the last four weeks compared to their “usual state” (better/same/worse/much worse than usual). We used the coding scheme that assigns values of 0,0,1,1 to these responses and calculated the summary score of the 28 items, the so-called “GHQ

score".(24) A 4/5 cut-off point as a marker of "caseness" was adopted, meaning that those individuals with scores higher than 4 are considered as having a high probability of being a "possible psychiatric case" (PPC).(25) The Spanish translation of the GHQ has been validated.(26)

To measure discrimination, we constructed a 5-item scale based on the works of Finch and Noh.(27;28). Respondents indicated how often they had felt treated as described in each of five sentences due to their Latin American origin. (Table 1). Factor analysis using the data from the pilot study revealed a single factor. In the final sample, this factor explained 67% of the variance. Internal consistency measured with Cronbach's alpha was 0.87. The total possible score on the discrimination scale ranged from 0 (reply of "never" to all 5 questions) to 20 (reply of "always" to all 5 questions). Since a considerable proportion of respondents (37.7%) said they had never felt treated in any of these ways, a categorical variable was created to identify those who had never felt discriminated against for ethnic reasons, those whose cumulative score was in the upper tertile of the distribution, and those in intermediate situations. We labelled the categories: (0)-never, (1)-sometimes, and (2)-always or nearly always

Financial strain was assessed by the following question: How would you rate your difficulty in making ends meet each month using your net monthly income?

Responses were: a lot, quite a lot, neither a lot not a little, little and none.(29) Since responses in the two extreme categories were infrequent, they were collapsed with the adjacent categories. Categories for analysis were: a lot, some and little difficulty. Two kinds of *social support* were assessed. Economic support was assessed by the following question: "In case of need, do you have anybody from whom to borrow 100 euros?" (yes/no). Emotional support was assessed by the following question: "How many friends do you have? I mean people who make you feel good, who you can talk to about personal matters and can ask for help when you need it?" For the analysis the answer was dichotomised to none and one or more.

Social integration was assessed by participation in community associations. A list of different groups was read by the interviewer: sports, neighbourhood, parents of school children, housewives, volunteers, immigrants, trade unions, dance groups, religious associations and others. Since most participants did not participate in any activity, and those who did tended to belong to just one group, the variable was dichotomised.

Potential confounders were age, sex, area of residence, education, and self-rated health, measured by the general question: “How would you rate your health?”

Data analysis

We described discrimination according to age, sex, area of residence, education and self-rated health. We estimated the bivariate associations between caseness and discrimination using a Chi-squared statistic. We then performed a multivariate logistic regression analysis of the association controlling for the possible confounding effects of age, sex and self-rated health [$P < 0.05$] We evaluated the possible modifying effects of economic and social resources on the association between discrimination and caseness by a descriptive stratified analysis and by testing the interaction terms [the product terms of financial strain, economic and emotional support, and social integration with discrimination] in the logistic regression. Lastly, 95% confidence intervals for the odds ratio of caseness for discrimination compared to the absence of discrimination were estimated. The statistical software used was SPSS version 16.0.

Results

Depending on the scale item considered, these Ecuadorian immigrants acknowledge ethnic discrimination as a relatively constant experience in their lives, and a sizeable proportion reported feeling discriminated against as a somewhat frequent experience (sometimes) (Table 1).

Table 1. Percentage distribution of responses to each question on the discrimination scale (n=570)

How often do you feel that, because of your Latin American origin, you have been...	4	3	2	1	0
	Always	Almost always	Sometimes	Almost never	Never
1. discriminated against	2.1	3.9	33	16	45.1
2. treated rudely or offensively	1.1	3.5	27.5	15.1	52.8
3. treated unfairly	0.9	2.8	30.5	14.4	51.4
4. excluded or ignored	0.4	2.1	18.2	13.3	66
5. verbally insulted or attacked	1.1	1.2	14.6	11.6	71.6

Table 2 presents the distribution of the study participants by the main study variables. The mean age was 31.6 years. Some additional information may also be useful in characterising the sample. They primarily came from the “Sierra” region of

Table 2. Demographic and socioeconomic characteristics

	<i>Male</i>	<i>Female</i>	<i>Total</i>
Sex	<i>n=284</i>	<i>n=286</i>	<i>n=570</i>
Age (years) (p=0.028)		%	
=<25	18.66	22.73	20.70
26-30	23.59	30.42	27.02
31-40	45.42	34.62	40.00
41-45	6.34	8.74	7.54
=>46	5.99	3.50	4.74
Total	100.00	100.00	100.00
Education			
Primary or lower	19.00	16.10	17.50
Secondary	69.40	69.20	69.30
University	11.60	14.70	13.20
Total	100.00	100.00	100.00
Self-perceived health			
Excellent	7.04	3.15	5.09
Very good	25.00	19.23	22.11
Good	46.83	44.41	45.61
Fair	20.07	31.47	25.79
Poor	1.06	1.75	1.40
Total	100.00	100.00	100.00
Region			
Almeria	16.55	16.78	16.67
Alicante	28.52	30.07	29.30
Madrid	26.41	24.48	25.44
Murcia	28.52	28.67	28.60
Total	100.00	100.00	100.00
Financial strain (difficulty making ends meet by end of the month) *			
A lot	11.97	19.23	15.61
Some	32.75	37.06	34.91
Neither a lot nor a little	29.93	23.08	26.49
Not much	13.03	13.64	13.33
None	12.32	6.99	9.65
Total	100.00	100.00	100.00
Economic support (ability to borrow 100€)	82.75	73.78	78.25
Emotional support (1 or more friends)	89.79	87.06	88.42
Social integration (participation in some group or association)	25.35	19.23	22.28

(*Includes 4 respondents who responded “neither a lot nor a little”)

Ecuador, which is home to nearly half the population. Most had migrated to have a better life and to improve their economic conditions and had lived in Spain for at least 5 years. Almost one third already had a stable legal situation, and barely 5% were in a legally precarious situation. One third of them were acquiring their own home. This is a population with a relatively high educational level, most of whom (96%) were employed. The majority worked in manual occupations, with temporary work contracts.

The distribution of perceived discrimination was as follows: 37.7% did not report any discrimination, 41.1% had felt discriminated against on some occasions, and 21% reported feeling discriminated against always or almost always. Discrimination was not significantly associated with sex, age, educational level or self-reported health, but was higher among those residing in Murcia.

Some 28% of the participants met our definition of PPC. About 20% of those who reported no discrimination were PPCs, rising to 30% of those who sometimes felt discriminated against and 41% of those who continually perceived discrimination. Neither age nor education were significantly associated with classification as a PPC. Women and participants with fair or poor self-rated health were more likely to be PPCs ($p < 0.001$). There were also differences by regions, with Almeria having the largest proportion of PPCs (36.8%).

Table 3 presents the stratified analysis by level of discrimination. The presence or absence of resources modified the effect of discrimination. The proportion of PPCs was highest when high financial strain was combined with continuous discrimination, with the result that 75% of the persons in this situation were PPCs. The lack of economic support combined with continuous discrimination resulted in a similar situation, with 62% in the category of PPC. Neither having friends nor belonging to associations modified the association between discrimination and PPC.

Table 3. Stratified analysis of the association between discrimination and possible psychiatric case (GHQ=>5) according to financial strain, economic support, emotional support and social integration

		N	% GHQ =>5	p
Discrimination	Financial strain			<0.001
Never	A little	121	14.1	
	Some	70	24.3	
	A lot	24	33.3	
Sometimes	A little	110	27.3	
	Some	87	28.7	
	A lot	37	43.2	
Always/Almost always	A little	51	37.3	
	Some	42	21.4	
	A lot	28	75.0	
Discrimination	Economic support			<0.001
Never	Support	175	15.4	
	No support	40	37.5	
Sometimes	Support	182	31.3	
	No support	52	26.9	
Always/Almost always	Support	89	32.6	
	No support	32	62.5	
Discrimination	Emotional support			
Never	No friends	21	38.1	0.36
	Friends	194	17.5	
Sometimes	No friends	28	42.9	
	Friends	206	28.6	
Always/Almost always	No friends	17	41.2	
	Friends	104	40.4	
Discrimination	Participation in groups or associations			
Never	No	182	19.8	0.256
	Yes	33	18.2	
Sometimes	No	169	27.2	
	Yes	65	38.5	
Always/Almost always	No	92	34.8	
	Yes	29	58.6	

In the multivariate analysis, the magnitude of the OR for the association between discrimination and PPC after adjusting for the possible confounding variables [OR=3.0; 95% CI 1.7-5.2] varied little with respect to the bivariate analysis [OR= 2.8; 95% CI 1.7-4.6]. (Table 4)

Table 4. Crude and adjusted odds ratios (95% confidence intervals) for the association between discrimination and possible psychiatric case (GHQ-28=>5)

	Crude		Adjusted		
	OR	95% CI	OR	95% CI	
Discrimination					
Never	1.0		1.0		
Sometimes	1.8	1.2 2.8	1.6	1.0 2.6	
Always/Almost always	2.8	1.7 4.6	3.0	1.7 5.2	
Sex					
Male			1.0		
Female			3.0	1.9 4.5	
Age (years)					
=<25			1.0		
26-30			1.2	0.6 2.2	
31-40			1.4	0.8 2.4	
41-45			1.5	0.6 3.6	
=>46			0.6	0.2 2.1	
Educational level					
University			1.0		
Primary or lower			1.1	0.5 2.2	
Secondary			0.7	0.4 1.4	
Region					
Madrid			1.0		
Almería			2.3	1.2 4.4	
Alicante			1.5	0.8 2.8	
Murcia			1.6	0.9 2.9	
Self-perceived health					
Excellent/Good			1.0		
Fair/Poor			4.2	2.7 6.5	

Table 5 shows the results of the final multivariate model, which includes the interaction terms for discrimination with available resources: financial strain, social support (emotional and economic), and social integration. The OR for continuous discrimination rose to 12 [95% CI 3.5-40.3] among those with high financial strain, and to 10 [2.4-41.7] when there was lack of economic support. Emotional support had an independent effect on PPC, with an OR of 1.8 [95% CI 1.0-3.6] for those who reported having no friends. Social integration through a community group or association was positively related to the probability of being a PPC, with an OR of 1.7 [95% CI 1.0-2.9].

Table 5. Final multiple logistic regression model for possible psychiatric case (GHQ-28=>5) according to discrimination, economic resources, emotional support and social integration

Discrimination	Financial strain	OR*	95% CI	
Never	Little	1		
	Some	1.4	0.6	3.2
	A lot	1.7	0.5	5.1
Sometimes	Little	2.4	1.1	5.2
	Some	2.6	1.1	5.7
	A lot	3.5	1.2	10.1
Always/Almost always	Little	3.1	1.2	8.0
	Some	1.1	0.4	3.1
	A lot	11.9	3.5	40.3
Discrimination	Economic support			
Never	Support	1		
	No support	2.6	1.1	6.3
Sometimes	Support	2.4	1.1	5.2
	No support	1.1	0.4	3.1
Always/Almost always	Support	3.1	1.2	8.0
	No support	10	2.4	41.7
Emotional support (no friends)		1.8	1.0	3.6
Social integration (participation in some group or association)		1.7	1.0	2.9

*Adjusted for sex, age, educational level, region and self-rated health

Discussion

In this population of Ecuadorian immigrants in Spain, one fifth reported being discriminated against continually. This unjust treatment for reasons of ethnic origin seems to have consequences for mental health beyond what could be expected by sociodemographic characteristics or health status. Moreover, economic resources and the ability to obtain economic support in case of need seemed to attenuate the effects of discrimination. Participation in some type of group or association and lack of emotional support from friends were independently associated with poor mental health.

Other studies have shown that most Latin American immigrants are the object of double discrimination in their host countries, both for being poor and due to their

ethnic origin,(30) although the health consequences of this unfair treatment are modulated by their integration process, which varies by ethnicity.(31;32)

The first survey on discrimination against immigrants in Spain was not made until 2000; it showed that over 60% of the immigrant population had not perceived any discriminatory treatment. Latin American residents were one of the groups that generated the least feelings of rejection on the part of the Spanish population. (33) Two years later, a more specific survey showed that Ecuadorians were the least integrated of the three major immigrant groups investigated [Morocco, Colombia, Ecuador], and the ones who most often (24%) reported suffering discrimination.

Perceived discrimination was more frequent in Murcia, the study area with the largest proportion of Ecuadorians in relation to the total population (3.7%) and to the foreign-born population (26%). . For instance in Totana, a municipality of nearly 30,000 inhabitants, the proportion of Ecuadorians is 12%. It is possible that the local populations have difficulties in accepting large numbers of foreigners in their communities.

Consistent with our findings, perceived discrimination was not associated with sociodemographic variables, duration of residence in Spain, or administrative situation.(10)

In another study in an urban setting,(34) some 50% of Ecuadorians – surpassed only by the Africans – said they had felt discriminated against at some time due to cultural differences, national origin or physical characteristics. Ecuadorians, primarily of Mestizo origin, have even reported experiencing discrimination among their own people.(35)

Answering our first research question, we found a clear and strong association between perceived discrimination and mental health, coinciding with Paradies' recent review,(6) which reported that the most consistent association found was between self-perceived racism and poorer mental health. Most of the studies included in the review were conducted in native ethnic minorities (primarily Afro-Americans) in the United States; those carried out in Latino populations referred mainly to first and second generation Mexican immigrants. Only 11% of the 138 studies included addressed specific aspects of the immigrant experience.

Our second research question dealt with how the availability of economic resources and emotional support might modify the association between discrimination and mental health. Our results are consistent with Pearlin's conceptual model. Financial

stress has been identified as a source of depression,(36) and this has also been seen in Hispanic elders in the US, (37;38) but its interaction with discrimination was not examined in those studies. Economic support in times of crisis has been identified as protective for depression in a population of poor Afro-American mothers, but that study did not examine the joint effects of ethnic discrimination and lack of economic support.(39) Our findings support the conclusions of a recent review that financial strain is one of the most powerful stressors, together with unemployment, that could explain the mechanisms by which ethnic discrimination influences health.(17) However, because only 4% of the immigrants in our sample reported being unemployed, we were unable to study the effects of unemployment on mental health.

Having friends was independently associated with good mental health. Some 88% of the Ecuadorians in our sample said they had friends in Spain, mostly Spaniards, (46%) and only 22% had friends exclusively from other countries. Probably because ours was a relatively well-established population of immigrants, our sample did not corroborate the findings of another study that Ecuadorian immigrants have difficulties making Spanish friends,(10) despite their shared language.(40)

In agreement with our findings, Finch reported in a study of Latinos of Mexican origin in California, that discrimination was associated with poorer self-rated health only among those who lacked social support.(21) Other studies have found direct effects of discrimination on depression, independently of social support and income.(41)

It is difficult to interpret the negative effect of participation in community groups, such as parent-teacher and neighbourhood associations composed mainly of Spaniards. It is possible that such participation accentuates immigrants' feelings of "otherness" in relation to natives.(42) Our results are consistent with a study showing that participation in community activities increased psychological distress in Pakistani immigrants in Norway.(43)

The Ecuadorians interviewed in our study participate very little in immigrant associations. Thus, they may not benefit from the ethnic support that has been reported to moderate depression, for example, in Korean refugees and immigrants in Canada.(28)

Study limitations

The choice of a cut-off point for the GHQ has been the subject of controversy. Goldberg showed that the cut-off to distinguish those who have a high probability of psychiatric disorder from those who do not varied between 3 and 7 in studies conducted across different countries.(25;44) Our choice of 4/5 corresponds to a validation study carried out in Greece,(45) and has been used in Madrid, Andalusia (46) and other studies.(47;48)

The discrimination scale used describes the frequency and nature (insult, aggression, demeaning treatment) of the type of discrimination experienced, but not the place or sphere of activity where it occurred, without establishing a temporal framework. Given the lack of homogeneity in the measure of discrimination used in the studies consulted, a detailed comparison of the results is difficult.(6)

The method used to select the sample in this study most likely led to the identification of a well established subpopulation of Ecuadorian immigrants in Spain, as suggested by the facts that they had lived in Spain for a median of 5-6 years, that only 5% were in a precarious situation and only 4% were unemployed, that almost one-third were buying an apartment, and fully 47% had Spanish friends. Thus, our results refer to a subgroup of immigrants who have been relatively fortunate in the integration process, and not to the whole immigrant population.

Concerning measurement bias, the strong associations between the factors associated with mental health, such as sex and poor perceived health, as well as the lack of association between experiences of discrimination and age, sex or education, support the validity of the measures of mental health and discrimination in our work. The relatively high integration of our sample may have influenced our estimation of the extent of discrimination since perceived discrimination may depend on the length of residence in Spain and on cumulative experiences in different settings.(49) Lastly, since this was a cross-sectional study, we cannot rule out the possibility that poorer mental health status leads to a greater perception of discrimination, although longitudinal studies seem to confirm the reverse.(41;50). Another possible explanation is that at least part of the association between discrimination and depression is the result of confounding factors not measured in the present study. For instance, personality factors, substance misuse problems and other factors which are known to increase the likelihood of mental disorder may also be associated with the likelihood of subjective experiences of discrimination.

Conclusion

Ethnic discrimination seems to be a relatively frequent and increasingly common phenomenon in Spain and other European countries,(51) and the economic situation of immigrants is deteriorating due to rising unemployment.(52) Discrimination appears to have mental health consequences among long-established immigrant populations, who are actively involved in the labour force and who often have Spanish friends. Discrimination seems particularly harmful among those with financial strain and lacking needed economic support. Since the effects of discrimination decrease when the immigrant has access to help at times of crisis, the social services in Spain should seek to detect immigrants suffering a combination of ethnic discrimination and lack of economic resources as target populations for health and social policy interventions.

'What is already known on this subject?'

There is increasing scientific evidence that ethnic discrimination has negative consequences on the mental and physical health of those who suffer it. The majority of studies refer to native or immigrant ethnic groups in English-speaking countries, whereas few studies have addressed this issue in immigrants in countries of southern Europe.

'What does this study add?'

This study focuses on Ecuadorian immigrants, who comprise the largest immigrant group from Latin America in Spain. They report frequent experiences of discrimination, which is associated with psychological distress and may be further exacerbated among those facing economic stress and those without economic support.

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