Relationship between social support and immigration: an adjusted analysis in the Madrid Cross Sectional Study.

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Background

Immigration is a recent phenomenon in Spain that has intensified during last few years, marking a new social and political reality and raising many social and health challenges. Currently, Spain’s population has reached more than 44 million people, nearly 12% (16.5% in Madrid) is accounted by immigrants, and this percentage does not reflect the illegal fraction of these people who live within Spain’s frontiers [1].

Due to the structure of the Spanish National Health System, all the legal immigrants have free access to public health care, but the reality is that the immigrants who lack valid identity documents and those who remain in the country as illegal are also protected by the Health System. The immigrant population represents an heterogeneous group of people who have quite different features (customs and traditions, reasons to emigrate, familiar habits, socioeconomic and educational level, personality) that makes them display a lot of ways of life and health beliefs. By other hand, some circumstances such as the insecure job, irregular situation, social isolation, and changes in everyday rhythm may pose them at risks regarding health and physical and psychological integrity, and makes complex the process of adaptation and integration in the new society [2].

Social contacts are very important factors in the adaptation process of immigrants. They are useful resources for the integration of a person in a new environment, access to workplace, education and health [3]. The degree and type of social support can be measured by validated scales [4], that have been widely used in the areas of social and medical sciences due to their influence on health and well-being aspects [5].

Several studies [6-9] have shown that social support contributes to a good health working like a buffer against stressful life events, preventing development of physical and mental illness and improving self-esteem and subjective well-being too.
On the other hand, the immigrant population may have difficulties to establish social contacts and that fact may have an impact on the use of public health resources. Some publications emphasize the presence of a different health-seeking behaviour between immigrants and natives, but they don’t explore if the different social support in both groups could explain these phenomena [10,11].

The aim of this study is to describe the social support of immigrant and native population and study the possible association between immigration and lack social support after adjusting for sociodemographic factors, income, stress and self-reported health status.

**Methods**

**Patients**

A cross-sectional descriptive was conducted in 15 urban primary health centers, in the north-eastern area of Madrid (Spain) during the 2007-2009 years. Inclusion criteria: older than eighteen years, who attended for a medical or nursing consultation, understood Spanish language. All participants were required to give informed consent, and the study was approved by the Institutional Review Board of Hospital Ramón y Cajal (Madrid).

Exclusion criteria: all those who refused to participate, patients with psychotic or mood disorder (bipolar type) and the patients with severe chronic diseases or significant physical or psychic disabilities.

**Methods**

The interview was led by two psychologists who were trained about the used tools to minimise bias between them.
Variables in the study

The dependent variable was social support, measured by MOS Social Support Survey [12]. The Spanish version, adapted by De la Revilla et al. [4], it contains 20 items and from 2 to 20 are scored in a Likert scale ranking from 1 (never) to 5 (always), where a higher global score corresponds to a higher social support. The qualitative or functional social support is evaluated with four dimensions: a) Emotional support as affectionate expression and empathic comprehension, counselling and information guide (items: 3, 4, 8, 9, 13, 16, 17 and 19); b) Positive social interaction as availability to meet other people, to have fun or a good time (items: 7, 11, 14 and 18); c) Affective support, with true love affect or empathic manifestations (items: 6, 10 and 20); and d) Instrumental support as availability of other persons to provide material or tangible help (items: 2, 5, 12 and 15). The global score social support was calculated as the sum of 19 items. Lack of social support was defined by less than 57 points. The cut points for lack of emotional, instrumental, social interaction and affective support were: 23/24, 11/12, 8/9 and 8/9, respectively [13].

Stress was measured with the Psychosocial Stress Scale (PSC) of Holmes and Rahe [14]. The Spanish version was adapted by González de Rivera et al. [15], and includes 43 items about high stress vital events in the last year. Items are scored ranking from 11 to 100. Stress is defined like values over 150 in the global score.

Self-reported health status was measured by a single-item self-report indicator: “Would you say your health in general is…?”. Five response categories were combined into 2 categories: poor/fair/good or very good/excellent [16,17].

Native or immigrant status was based on the country where the person was born. Marital status was codified into four categories: single, married, divorced and widow. Occupational status was compressed in four categories: directive position, administrative/self employed,
manual worker and unemployed. Monthly income was categorized as: less than 500 €, 500-1000 € and higher than 1000 €.

The sample size was calculated for the worst support absence’s expected prevalence: 50% (maximum possible uncertainty) in each subgroup (native and immigrant) and the following assumptions: 4% precision, 95% confidence interval, 20% beta risk and 20% loss. Calculated size was obtained by the IMIM (Municipal Institute for Medical Research) computer program GRANMO 5.2 and was 751 subjects in each group.

**Statistical analysis**

Estimated descriptive statistics were mean and standard deviation (SD) for the quantitative variables, and frequencies for the qualitative variables. The corresponding frequency distributions of the qualitative variables were calculated, analyzing whether significant differences existed between both study populations (immigrants and native people). For the bivariate proportion comparisons, was applied the Pearson chi-square method or the Fisher exact test method. The Student’s t-test was applied for the bivariate mean comparisons.

Multiple logistic regression was adjusted to examine the influence of migration status and social support (yes/no), controlling for potential socio-demographic covariates of self-reported health status, such as age, marital status, gender, occupational status, monthly income and stress. Variables were introduced in the model step by step based on statistical significance in the bivariate analysis and relevance for the study. The interactions between migration status, sex and socioeconomic factors were also checked. Adjusted prevalence ratios (PR) with their corresponding CI 95% were calculated.

In all instances, the accepted level of significance was 0.05 or less. Statistical analysis of the data was carried out with SPSS 15.0 (SPSS, Inc., Chicago, Illinois).
Results

The population study was comprised of 1515 subjects, 612 immigrants and 903 natives. The origin of this foreign population was 91% Latin American (16% Ecuatorian, 5.7% Peruvian and 5.5% Colombian), 6% European, 2% African and 1% Asiatic ones.

The socio-demographical characteristics of both populations are shown in Table 1. Statistically significant differences in the two subpopulations appear in age, educational level, occupational status, self-reported health status and monthly income. The majority of immigrants were in a legal situation of residence (85.2%), having Spanish nationality a quarter of them. The vast majority, 77.3%, were living with a family member and their main motive to immigrate was economic (63.5%), followed by family reassembly (31%). Mean length of residence in Spain was 6.7 +/- 5.3 years.

Regarding occupational status before migration, 35% were administrative/self employed, 34% manual workers, 25% unemployed and 6% directives. The 5.5% immigrant population reported having been victim of political violence and 8.5% of family violence.

There were significant differences in the perception of social support among immigrants and natives (p <0.001) for global social support and for the four dimensions studied (Figure 1). For global social support, 79% of immigrants compared to 94% of natives expressed receiving social support. The perception of emotional / informational, instrumental, social and emotional interaction support is shown in Figure 1. As to social network size, the group of immigrants reported to have smaller networks than native patients (6 and 9 persons, respectively), showing a statistically significant difference (p <0.001).

With respect to the stress experienced in the past year, 55.4% of immigrants have had stress disorder while the native population have had 45.6% (p <0.001).
Table 2 presents the global lack of social support adjusted prevalence ratios, showing a significant association with being an immigrant (PR = 2.72), male (PR = 2.26), having monthly income 500-1000 € and <500 € (PR = 1.91 and PR=3.81, respectively), suffering stress (PR = 1.94) and self-reported health status excellent/very good (PR 0.46). Considering the four dimensions of social support, it was noted that the lack of such support is significantly associated with being an immigrant and suffering stress, after adjusting for potential confounding variables, as shown in Table 3. However, the variable that explained a significant and greater association with the lack of social support prevalence was low income, especially income below 500 € / month (PR between 3 and 5).

**Discussion**

This study shows the immigrant population, attended in primary health care, perceives a lower social support than the native population and that the socioeconomic status, marital status, length of residence in Spain, stress and self-reported health status are factors associated with lack of social support.

Studies in the field of psychosocial sciences have described the social support characteristics of the immigrant population [18] but there are fewer studies that compare the social reality of the immigrant population with the native population in the area of health sciences [19].

One study on healthcare background and psychosocial environment of a group of 403 North African immigrants in Catalonia (Spain), depicts information about the sources and the number of people who could help them. Only 18.6% of natives and 10.6% of immigrants surveyed had more than three sources of support. These results are quite similar to those found in our study in which the average social support sources of the immigrant population were six people [20].
In another study conducted with people living in Canada, a strong correlation between the different dimensions of social support was identified. A positive correlation between physical health and perception of social support and a negative correlation between stress and low socioeconomic status were also found [21]. These results are consistent with the findings of our study, since the worst monthly income levels and stress were associated with lower global social support and its four dimensions.

Health status and social support appear to be associated in our study (Excellent/Very good health status reduce the lack support social prevalence by 54% \(1 - 0.46\)), confirming the findings of previous studies [22].

Social networks have a direct effect on health, by the interaction with others and by social participation, which promotes healthier life behaviours and greater self-esteem and social competence [23]. This may explain the association between health perception status and social support of our population as previously studied by Gallicchio et al. [24].

Moreover, our study has found that women have better perception of social support than men, except in the instrumental support. These results are coherent with other studies that have described higher perceived social support in women, especially in emotional and affective dimensions [20,25,26]. In several studies, the difference in perception of social support among both genders is due to various factors such as marital status, education level, age and socioeconomic conditions [21,27]. In this sense, our data demonstrate a relationship between perceived social support and marital status, so that being married is positively associated with social support and being divorced negatively, confirming the findings of other studies [28,29].

One of the sociodemographic characteristics with greater strength of association with the lack of social support is monthly income. A low level of income, below the minimum salary, is a stressful situation that favours the loss of social skills and increases stress. Both conditions
reduce the availability of resources giving poor people less social support. This is also confirmed by Palomar and Cienfuegos results [30], in which after an analysis of variance and multiple regression, he found three socioeconomic levels (poor, moderate poor and rich) to explain the relationship between social support and social and personal characteristics.

Other study carried out by the Aragonese government (Spain) in 1993, which analyzed the interaction and social support in family units, eligible for economic assistance, only 47% of participants had social support, provided mainly by family and 6.9% lacked any type of social support. Women had more social interaction than men, as in our study, the relationship between socioeconomic status and social support was demonstrated [31].

The stress level is a variable with a known association with lack of social support, because both are closely linked. Social support is a resource to minimize the effect of stressful situations and stress affects the level of social support [30].

Another variable of interest that can explain the degree of social support in the immigrant population is the spent time in the host country, a phenomenon already studied by Saura et al. [20] and Lin and Hung [32]. Both authors support the findings of our study, that shows the longer one lives in Spain, the more social support one has. This relationship can be explained by several circumstances: a better understanding of the host language, a better sociocultural adaptation to the new society and by immigrants’ origin.

This study has some limitations. The main one is the high number of women participants. This situation is due to the fact that women use primary health care services more often than men, as seen in the study of Esteban Peña and Health Survey of Castilla la Mancha (Spain), where the population of women studied was 67% and the use of primary health care services for women was 82%, respectively [33,34].
Another important limitation is the small size of some of the subpopulations (Asian, African and European), which forces a cautious interpretation and limits the ability to generalize the results to the immigrant population. In addition, the cross-sectional design of this study limits the possibility of establishing causal relationships between variables.

Despite the limitations, this research offers an insight into personal and social factors that the immigrant population expressed as an important perceived lack of social support.

**Conclusions**

We conclude that with regardless of the level of monthly income, stress level, self-perceived health and gender, immigrant status is directly associated with lack social support. The variable most strongly associated with lack social support has been monthly income below 500 euros.

**Competing interests**

The authors declare that they have no competing interests.

**Authors' contributions**

MASF conceived of the study and participated in its design and performed the statistical analysis and drafted the manuscript. LOS, CBL, RMCM drafted the manuscript and made substantial contributions to the analysis and interpretation. CMM participated in the design and coordinated the research group. PGC helped in the statistical analysis and drafted the manuscript. All authors read and approved the final manuscript.

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34. Observatorio de Salud FISCAM: **Utilización de servicios sanitarios: Encuesta de salud de Castilla la Mancha 2002-2006.** Consejería de Sanidad. España
Figure 1. Proportion of immigrants and natives with emotional, instrumental, social interaction, affective and global social support.

Social support perception

<table>
<thead>
<tr>
<th></th>
<th>Immigrants</th>
<th>Natives</th>
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<tbody>
<tr>
<td>Emotional support</td>
<td>69.4</td>
<td>90.8</td>
</tr>
<tr>
<td>Instrumental support</td>
<td>63.7</td>
<td>86.9</td>
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<tr>
<td>Social interaction support</td>
<td>77.1</td>
<td>91.8</td>
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<tr>
<td>Affective support</td>
<td>85</td>
<td>93.6</td>
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<tr>
<td>Global social support</td>
<td>79.2</td>
<td>94.2</td>
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p<0.001
Additional files provided with this submission:

Additional file 1: table_1.doc, 52K
http://www.biomedcentral.com/imedia/6030096435152911/supp1.doc
Additional file 2: table_2.doc, 56K
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Additional file 3: table_3.doc, 89K
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