

Association between the pandemic and its impact on the mental health of immigrants: systematic review and meta-analysis

Associação entre a pandemia e o seu impacto sobre a saúde mental dos imigrantes: revisão sistemática e meta-análise

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Martha Maria Macedo Bezerra

Postgraduate Program in Health Sciences

Institution: Faculdade de Medicina do ABC – FMABC, Santo Andre, São Paulo, Brazil

Modesto leite Rolim Neto

Faculty of Medicine

Institution: Federal University of Cariri – UFCA, Barbalha, Ceará, Brazil

Caio Parente Barbosa

Postgraduate Program in Health Sciences

Institution: Faculdade de Medicina do ABC – FMABC, Santo Andre, São Paulo, Brazil

E-mail:psiquiatra2020@bol.com.br

ABSTRACT

Some populations are more susceptible to developing mental health disorders. One of these populations is immigrants. The study aimed to establish an association between the pandemic and the impact on the mental health of immigrants. This is a systematic review with meta-analysis carried out using Web of Science, Scopus, and EMBASE sources. The results showed that the immigrant population is more susceptible to the development of mental changes in the pandemic period when compared to other groups. There is a moderate association (0.80) with a confidence interval of 0.70 to 0.90. Some risk factors can be identified, but there is still a significant lack of primary data, which encourages further observational studies.

Keywords: immigrants, mental health, pandemic, stress, anxiety.

RESUMO

Algumas populações são mais susceptíveis ao desenvolvimento de distúrbios de saúde mental. Uma destas populações é a dos imigrantes. O estudo visava estabelecer uma associação entre a pandemia e o impacto sobre a saúde mental dos imigrantes. Trata-se de uma revisão sistemática com meta-análise realizada utilizando fontes Web of Science, Scopus, e EMBASE. Os resultados mostraram que a população imigrante é mais susceptível ao desenvolvimento de alterações mentais no período pandêmico, quando comparada com outros grupos. Existe uma associação moderada (0,80) com um intervalo de confiança de 0,70 a 0,90. Alguns factores de risco podem ser identificados, mas ainda há uma falta significativa de dados primários, o que encoraja mais estudos observacionais.

Palavras-chave: imigrantes, saúde mental, pandemia, stress, ansiedade.

1 INTRODUCTION

The COVID-19 pandemic has resulted in a range of negative reactions and perceptions among people from all walks of lifestyles. The new coronavirus, SARS-CoV-2, first identified in the city of Wuhan, China, in December 2019, is capable of causing chronic cognitive impairments, such as stress, anxiety, and other diseases with a psychosocial impact¹.

Persistent social and economic inequalities have contributed to increasing the exposure to the virus, as well as to creating barriers to screening and treatment. This occurs, for example, among Latinos, especially women and immigrants. These experiences can negatively affect mental health, particularly for women, who are at higher risk for stress, depression, and anxiety². Overwork and conditions that people are subjected to on the frontline are likely to lead to greater exposure to COVID-19, while economic hardship and declining mental health could reduce individuals' access to health care

There is an influence of clinical, psychological, and socioeconomic factors on mental health status during states of emergency. Specifically, we report an overall increase in depression and anxiety levels directly attributable to the coronavirus pandemic³. The pandemic period has altered the mental health of many people, including some of the most vulnerable populations, such as immigrants. Despite this, an insignificant approach is taken to contain these changes in the mental health of this population, which ends up having several consequences concerning the health and care system. The data collected, processed, and analyzed will serve as a basis for further guidance on possible interventions to promote and prevent significant mental changes in the community. So that this is no longer a complicating health factor for the most affected groups. The study aimed to establish an association between the pandemic and the impact on the mental health of immigrants.

2 METHOD

This is a systematic review with meta-analysis according to the recommendations of the PRISMA⁴ checklist. This is a systematic review with meta-analysis, carried out following the recommendations of the PRISMA 4 checklist. Articles without distinction of temporality were included, in which at least the abstract was available. It were excluded the ones with high risk of bias. Studies addressing mental health in immigrant population during the pandemic period were included. The outcomes analyzed are variables for

possible changes in the mental health of this population. All types of studies were searched for selection, in Portuguese, English, and Spanish, without defining publication criteria.

The surveys were carried out on the following bases:

1. Web of Science
2. Scopus
3. BASE

Data were searched using the descriptors “immigrants”, “mental health” and “pandemic”, with their correlates and using the Boolean AND operator.

Two reviewers – who are also authors - worked independently to extract some predetermined information. In case of possible discrepancies, a third reviewer was consulted to determine data and inclusion or not in the article.

Some information analyzed in each study were:

- Year of publication, country of origin, authors, method, number of participants, inclusion and exclusion criteria and forms of recruitment;

For the study of outcomes, the number of participants and the descriptive variables - such as mean and standard deviation of the positive variables examined - were analyzed.

In case of disagreement about a possible factor in a given article, a third reviewer was included to determine the score and the level of bias and, consequently, the inclusion or not of the study in the present review article.

All effects were analyzed according to a dichotomous or continuous perspective giving the characteristics of the selected studies. In this way, the random effect was always calculated using a confidence interval of 95%.

Whenever possible, missing data were sought when not available in the articles by contacting the authors. When these data were not found after two attempts, the multiple imputation method was used to determine missing cases.

Heterogeneity refers to how different are the studies selected in an analytical review, calculated by homoscedasticity. Studies as homogeneous as possible were selected for a better determination of the effects. Cases above 50% were considered heterogeneous.

Studies with a high risk of bias was excluded from the present study. For a better determination, analysis by the GRADE system was used for the general examination. For individual analysis, the ROB scale was considered.

The effects were analyzed according to a dichotomous or continuous perspective, giving the characteristics of the selected studies. By this, they were calculated using the random effect model, always using a 95% confidence interval and using prevalence and relative risk. Clinical and methodological heterogeneities were considered.

The general data analysis took place using the R 4.0 software. The DerSimonian-Laird model was used considering a confidence interval of 95% and a significance of 0.05. Using the sensitivity analysis method, studies with a high risk of bias were excluded. In addition, the risk of publication bias was also determined with the funnel plot. Furthermore, outliers were excluded and subgroup analysis was performed.

3 RESULTS

We found 70 studies, of which 11 were selected to compose the review. **Figure 1** summarizes the main information of the articles. **Table 1** summarizes the information from the studies extracted during the analysis process. The selected studies were grouped within the meta-analysis to verify the association between a pandemic and changes in the health of immigrants (**Figure 2**). The results showed that the immigrant population is more susceptible to the development of mental changes in the pandemic period when compared to other groups. There is a moderate association (0.80) with a confidence interval of 0.70 to 0.90. There was no identification of bias in the selected studies. The overall quality of evidence also did not identify bias (**Table 2**).

Figure 1: Information from selected studies, 2021.

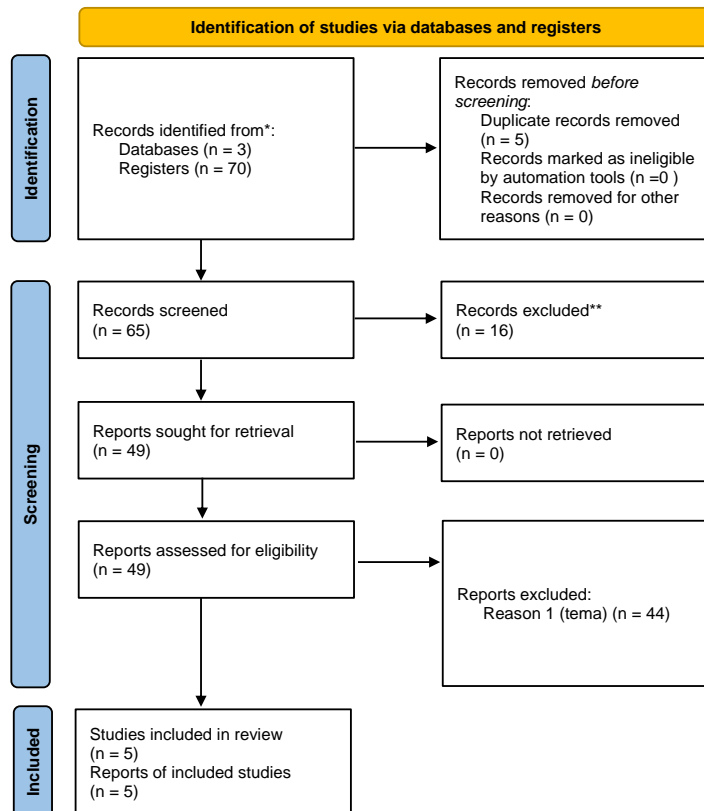


Table 1 : Information extracted from the surveys, 2021

Author and Year	Objective	Results (Associated Factors)	Outcomes	Mental Changes
Acharya et al. ¹	Examining the impact of the COVID-19 outbreak on the mental health of immigrants in South Korea.	The prevalence of severe anxiety among immigrants was 47.2%. Female immigrants (28.6%) had a lower anxiety disorder than male immigrants (71.4%). Immigrants who were married or lived alone had low incomes, a history of health problems, and suffered from moderate to severe anxiety.	With very limited studies on the mental health of immigrants during the COVID-19 pandemic, this article provides scientific research evidence of the impact of the COVID-19 outbreak on the mental health of migrants.	Anxiety
Ornelas et al. ^{two}	Describe how Latino immigrants living in King County coped with the pandemic, including their attitudes and behaviors related to COVID-19 and the impact of the pandemic on their mental health and well-being	Most participants had concerns about paying for housing (76%) and food (73%). Symptoms of depression and anxiety were in the moderate range. Almost all participants were practicing the recommended preventive behaviors.	Although few participants had COVID-19 infection, the pandemic has had significant impacts on their mental health and ability to meet needs.	Impact on general mental health

Gosselin et al. ⁵	Provide information about the changes in mental health among disadvantaged immigrants from Sub-Saharan Africa in the Greater Paris area and their level of information about Covid-19.	Among the 100 participants, 68% did not have a legal residence permit. Food insecurity was reported more often during lockdown than before (62% vs 52%). 9% of the participants had a score indicative of major depression (PHQ9) before the block and 17% after ($p = 0.17$). Only 51% were aware of the possibility of asymptomatic transmission of the COVID-19 virus.	This study provides original information about a difficult-to-reach population group. Our results suggest that the lockdown had a negative impact on several economic and mental health aspects among disadvantaged migrants residing in the Greater Paris area.	Impact on general mental health
Serafini et al. ³	Assessing psychological distress in the face of a pandemic: an observational study characterizing the impact of COVID-19 on outpatient mental health of immigrants	The mean total psychological distress score was 23.8, with 60% of the scores reflecting severe mental illness. Factors that most influenced K10+ scores included pre-existing depressive disorder, food insecurity, and comfort during telepsychiatry visits.	The negative impact of COVID-19 on mental health of vulnerable populations stems from medical and psychosocial factors, such as pre-existing psychiatric conditions and unmet essential needs.	Impact on general mental health
Aragona et al. ⁶	To estimate the impact of COVID-19-related lockdown on service utilization and adherence to follow-up in an Italian outpatient mental health service for migrants and individuals in socioeconomic difficulties.	The number of patients who visited the outpatient service between February 2017 and February 2020 was continuously increasing. In March 2020, fewer patients visited the service for psychiatric interview, in line with the introduction of lockdown measures. Additionally, the number of patients who visited in February 2020 and returned for their follow-up appointments in March 2020 decreased from approximately 30% in the same months of 2017-2019 to 17.53% in March 2020.	The confinement-related reduction in the number of patients accessing mental health services makes it difficult to help vulnerable populations during a period when their mental health needs are expected to increase.	Impact on general mental health
Ng and Zhang ⁷	Describing the mental health of immigrants and refugees: Canadian evidence from a nationally linked database	Results adjusted for age and sex show that immigrants, especially refugees, are less likely than the Canadian-born population to report high levels of mental health, but these differences disappeared after full adjustment. The odds of immigrants with a high SRMH differed more by world region of origin and duration since landing. For example, fully adjusted results show support for the HIE, with recent immigrants (interviewed within 10 years of disembarkation) more likely to report high SRMH than the Canadian-born population or established immigrants. Greater odds of high SRMH among recent immigrants also occur in admission classes and for selected world regions.	This study provides new evidence related to the differences in mental health between Canadian-born and immigrant individuals by various characteristics.	Impact on general mental health

Figure 2: Meta-analysis of selected studies

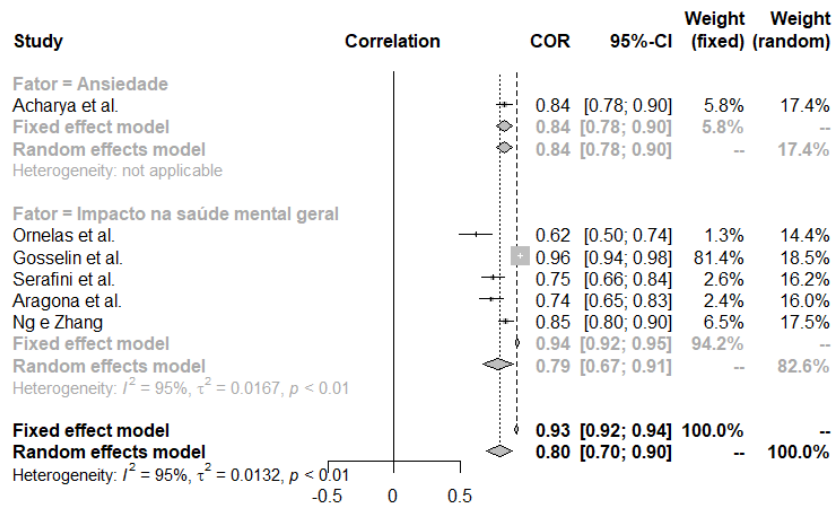


Table 2 : Quality of evidence by the GRADE system

Certainty assessment							Nº of patients		Effect		Certainty	Importance
Nº of studies	Study design	risk of bias	Inconsistency	indirect evidence	imprecision	Other considerations	Pandemic	[comparison]	Relative (95% CI)	Absolute (95% CI)		
Saúde mental												
6	observational study	short	short	short	short	all possible reducing factors would affect the effect	Risk factors and a significant association were identified.		<div style="display: flex; justify-content: space-around;"> ⊕⊕⊕ ○ </div> Moderate		critical	

CI: Confidence interval

4 DISCUSSION

The results demonstrate a strong association between risk factors associated with the pandemic period and the development of mental disorders in the immigrant population. The statistical result showed an association of the order of 0.80 with a p value less than 0.05. An important aspect to consider when researching immigrant health is the admissions category. As immigrants are selected according to these categories (primarily economic immigrants, family class immigrants, and refugees), each one having pre-immigration experience and individual selection requirements, post-immigration mental health outcomes may vary according to the type of process or category ⁷.

Factors such as insufficient information, complete quarantine at centers that report COVID-19 cases among their asylum seekers, and other barriers to accessing mental health services. Pain and psychic suffering can limit your ability to receive adequate psychiatric help⁶. Some changes are more common, such as major depressive disorder, generalized anxiety disorder, and post-traumatic stress disorder. Among these populations are low-income immigrants, who are particularly vulnerable to public health crises due to factors such as living in close neighborhoods, inadequate financial resources, fear, the possibility of expulsion, among other characteristics³.

Quarantine and other social distancing measures, while important, can have significant psychosocial and mental effects. Key factors that exacerbate these effects include boredom, isolation, inadequate supplies, lack of information, financial anxiety, and disease-related stigma. Refugees and immigrants in the United States, especially low-income and undocumented people, may not have health insurance or have access to primary care providers. Research has documented that more than 50% of refugee children experience symptoms of post-traumatic stress disorder before migration, which can be exacerbated by cultural stress during resettlement. Refugee families often prioritize economic survival, looking to the future, and can be reluctant to seek mental health care for their children due to stigma and mental health predispositions. Treatment does not focus on past difficulties⁸. The main limitation of the research is the small number of studies related to the theme and with a specific approach to the immigrant population. This attests to the need to carry out original studies that provide greater support and vision for the discussion of the topic.

5 CONCLUSION

A significant association was identified between the pandemic period and the negative impact on the mental health of the immigrant population in general. It is noteworthy that, in this study, there was no separation by classes or countries to which immigrants were directed. The relationships described are generally applicable.

These findings show that it is paramount to develop direct public policies to minimize these impacts, as they also generate important expenses within the health of the country that receives these people. Furthermore, adopting a preventive perspective is essential in this context.

CONFLICT OF INTERESTS

The authors declare that they have no competing interests.

CONTRIBUTORS

MMMB, MLRN and CPB: conceptualization,; data curation; formal anlysis; funding acquisition. MMMB, MLRN and CPB: Investigation; methodology; Project administration; resources. MMMB, MLRN and CPB: writing -review & editiom.

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