

Racial discrimination in pain management*

A discriminação racial no tratamento da dor

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ABSTRACT

BACKGROUND AND OBJECTIVES: The vulnerability of certain races and ethnicities may be worsened by the subjectivity of pain. So, this study aimed at identifying whether there has been racial discrimination in pain control by health professionals.

CONTENTS: This is a literature review and queried databases were: PubMed/Medline, LILACS, SciELO, Cochrane, EMBASE, SCOPUS and psycINFO with keywords in English and Portuguese: *pain-dor and race-raça or ethnic-etnia, analgesia-analgesia, prejudice/discrimination-discriminação, prescriptions drug-prescrição médica*. From 3216 articles, 45 were selected. Five were included after manual search, in a total of 50 articles.

CONCLUSION: No study was carried out in Brazil and 96% are from the United States. Studies are of the cross sectional and cohort type. Most researched races/ethnicities were black and white, followed by Hispanic and Asian. Most common outcomes were: access to treatment and analgesic prescription. Racial discrimination was identified in 74% of studies, being blacks the most discriminated race.

Keywords: Analgesia, Discrimination, Ethnicity, Pain, Race.

RESUMO

JUSTIFICATIVA E OBJETIVOS: A vulnerabilidade de determinadas raças e etnias, pode ser agravada pela subjetividade da dor. Portanto, o objetivo deste estudo foi identificar se há discriminação racial no controle da dor pelos profissionais de saúde.

CONTEÚDO: Trata-se de uma revisão de literatura, e as bases de dados consultadas foram: PubMed/Medline, LILACS, SciELO, Cochrane, EMBASE, SCOPUS e psycINFO com palavras-chaves em inglês e português: *pain-dor and race-raça or ethnic-et-*

nia, analgesia-analgesia, prejudice/discrimination-discriminação, prescriptions drug-prescrição médica. De 3.216 artigos, 45 foram selecionados. Na busca manual, cinco foram incluídos, totalizando 50 artigos.

CONCLUSÃO: Nenhum estudo foi realizado no Brasil e 96% são dos Estados Unidos. Os estudos são do tipo transversal e corte. As raças/etnias mais pesquisadas foram a negra e a branca, seguidas dos hispânicos e asiáticos. Os desfechos mais usados foram: acesso ao tratamento e a prescrição de analgésicos. A discriminação racial foi identificada em 74% dos estudos, sendo a raça negra a mais discriminada.

Descritores: Analgesia, Discriminação, Dor, Raça, Etnia.

INTRODUCTION

Pain is an experience bringing losses of different forms and magnitudes; its relief has to be considered a right for those feeling it and a duty for those managing it; however, this is not always satisfactorily done¹.

Among racial and ethnic minorities there is description of differences in quality when managing pain and this may affect health status and quality of life. The American Academy of Pain Medicine and the American Medical Association state that differences in medical care based on unchangeable characteristics such as age, gender and race have to be avoided².

The vulnerability of certain races and ethnicities may be worsened by the subjectivity of pain, the expression of which depends on those feeling it. Studies on the subject are a major advance in the understanding of racial discrimination when managing pain, and health care policies need to develop actions for the adequate assistance to vulnerable populations.

So, this study aimed at identifying racial discrimination in pain control by health professionals.

CONTENTS

The following electronic databases were queried: Pubmed/Medline, Latin American Literature in Health Sciences (LILACS), Scientific Electronic Library Online (SciELO), Cochrane, EMBASE.com, SCOPUS and psycINFO. The following keywords, standardized in MESH and DeCs, were used: *pain-dor and race-raça or ethnic-etnia, and analgesia-analgesia*. To further refine the search, the following terms were added to these combinations: prejudice, discrimination, disparities and prescriptions drug. In addition to electronic databases search, we carried out manual search on initially identified publications. No limit date was

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established to obtain a maximum number of articles regarding relevant subjects.

PICO strategy was used to search articles in PubMe/Medline, which means Patient, Intervention, Comparison, Outcome. In our review we have used the keyword "Pain" for Patient, "Race" for Intervention and "Treatment" for Outcome. In a different search attempt we have used the keyword "Analgesia" for Outcome.

Inclusion criteria were: quantitative studies evaluating racial discrimination in pain control and exclusion criteria were studies related to patients' response to pain management according to race. Search flowchart is shown in figure 1.

Titles and abstracts of all identified articles by electronic search

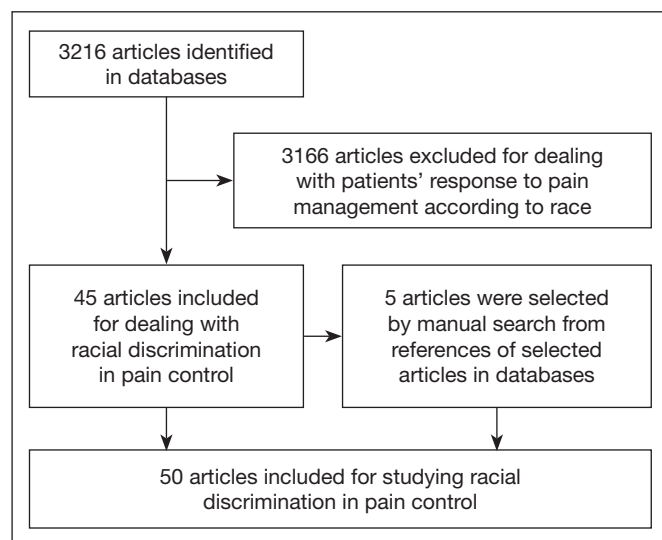


Figure 1. Flowchart of included and excluded studies

were reviewed (n=3216) and 45 were selected. Manual search has included 5, in a total of 50 articles.

Analyzed aspects were: publication date, country where the study was carried out, studied races, study design, outcomes, level of evidence and major results. Some of these aspects are shown in table 1.

There have been 25 different compositions of racial/ethnic groups among the 50 studies. Blacks and whites were included in most groups (43/50). Methodological designs were predominantly transversal (31/50) and cohort (19/50). Among transversal studies, 15 have evaluated medical records.

There has been predominance (41/50) of studies with control of variables, being sociodemographic (35/50) and health insurance (14/50) the most widely controlled variables. Analgesics prescription was used as outcome by most studies (29/50).

Racial discrimination has influenced pain control in 4% of selected studies. Among those evaluating the black race and other races/ethnicities (n=43), 24 have shown discrimination for blacks (55.8%), and among those exclusively evaluating blacks and whites (n=17), 12 have reported discrimination for blacks. Hispanics were compared to other races/ethnicities in 30 studies and discrimination for this ethnicity was found in 16 studies (53.33%).

Racial discrimination in pain control seems to be a relatively recent concern among pain researchers, considering that only as from the 1990s studies are proliferating. During the 1990s, in the United States, several professional organizations, such as the World Health Organization, the Agency for Health Policy and Research Care, the American Pain Society and the Society of Oncology Nursing have carried out major efforts to direct discussions about pain management⁵³. There is concern with racial discrimination in this country and this is confirmed by the major

Table 1. Summary of major aspects of selected articles

Authors	Methodological Design	Outcome	Major results
Strogatz ³	Transversal	Access to health services	49% of blacks and 27% of whites have never visited a physician due to pain
Cleeland et al. ⁴	Transversal	Matching of pain intensity and analgesic potential	Centers treating predominantly blacks and Hispanics had three times more chance of inadequately treating pain as compared to centers treating whites
Vangen, Stoltenberg & Schej ⁵	Transversal	Epidural analgesia	Pakistani females had three times more chance of not receiving analgesia as compared to Norwegian patients.
Ng, Dimsdale, Rollnik et al. ⁶	Transversal	Morphine prescription	Significantly higher for blacks and whites as compared to Hispanics
Bernabei et al. ⁷	Transversal	Analgesics administration	Blacks had higher chance of being undertreated as compared to whites
Morrison et al. ⁸	Transversal	Opioids availability	Pharmacies in non-white regions have significantly lower chance of storing opioids as compared to white regions
Weisse et al. ⁹	Transversal	Analgesics prescription	Male physicians have prescribed more to whites than to blacks and female physicians higher doses for blacks
Choi et al. ¹⁰	Transversal	Analgesics administration	Whites received better analgesia than blacks
Riley, Gilbert & Heft ¹¹	Transversal	Access to health services	More white non-Hispanic and black males have visited health services as compared to black females
Singer, Thode ¹²	Transversal	Analgesics administration	There has been no significant difference among races/ethnicities

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Table 1. Summary of major aspects of selected articles – continuation

Authors	Methodological Design	Outcome	Major results
Tamayo-Sarver et al. ¹³	Transversal	Opioids prescription	There has been no significant difference among races/ethnicities
Weisse, Sorum e Dominguez ¹⁴	Transversal	Opioids prescription	Male physicians have prescribed higher doses for whites than for blacks and female physicians for blacks.
Tamayo-Sarver et al. ¹⁵	Transversal	Analgesics prescription	There has been lower chance of being prescribed to blacks as compared to whites
Rust et al. ¹⁶	Transversal	Epidural analgesia	Analgesia rates were lower for black, Hispanic and Asian females as compared to white and non-Hispanic females
Gerson, Emond & Camargo ¹⁷	Transversal	Analgesics administration	There has been no significant difference among races/ethnicities
Adams, Armstrong, Erstad ¹⁸	Transversal	Morphine prescription	There has been no significant difference among races/ethnicities
Portenoy et al. ¹⁹	Transversal	Visit to physician and analgesics prescription	Significantly less Hispanics as compared to whites and blacks have visited the physician and blacks had higher chance as compared to whites or Hispanics of having analgesics prescribed
Atherton, Feeg & El-Adham ²⁰	Transversal	Epidural analgesia	Hispanic females had twice more chance of not receiving analgesia as compared to non-Hispanic females
McNeill, Sherwood & Starck ²¹	Transversal	Pain intensity, patients' satisfaction	Non-whites had significantly more severe pain and lower satisfaction scores with pain management as compared to whites
Vallerand et al. ²²	Transversal	Pain intensity, functional status	Blacks have reported more severe pain and worse functional and mood status as compared to whites
Taylor et al. ²³	Transversal	Access to services and therapy	More imaging tests were recommended for whites. Whites and Asians had higher chance of having surgical indication as compared to blacks and Hispanics
Nguyen et al. ²⁴	Transversal	Access to therapy	Hispanics had significant less chance of visiting a pain service as compared to whites and blacks
Green et al. ²⁵	Transversal	Availability of analgesics	Areas with predominance of whites had higher chance of analgesics as compared to areas of ethnic minorities
Chen et al. ²⁶	Transversal	Opioids prescription	Whites had higher chance of receiving analgesics as compared to blacks
Reyes-Gibby et al. ²⁷	Transversal	Pain intensity	Non-Hispanic and Hispanic blacks had higher risk of having severe pain as compared to non-Hispanic whites.
Staton et al. ²⁸	Transversal	Difference between physicians and patients estimate of pain	Physicians have twice the chance of underestimating pain of blacks as compared to other races
Pletcher et al. ²⁹	Transversal	Opioids prescription	Whites had higher chance of receiving opioids as compared to Hispanic blacks or Asians
Cohen et al. ³⁰	Transversal	Access to dentist	Dental service access was more difficult for Hispanics
Edwards ³¹	Transversal	Perception of racial discrimination	Higher perception for blacks as compared to whites was significant
Quazi S et al. ³²	Transversal	Analgesics administration	There has been no difference among blacks, whites and Hispanics
Epps, Ware e Packard ³³	Transversal	Analgesics wait time	Hispanics have waited longer as compared to Americans
Todd, Samaroo e Hoffman ³⁴	Retrospective	Analgesics administration	Hispanics had twice more chance of not receiving analgesics as compared to non-Hispanic whites
Mc Donald ³⁵	Retrospective	Opioids administration	Whites have received significantly more opioids as compared to blacks and Hispanics.
Ng B et al. ³⁶	Retrospective	Morphine prescription	Significantly lower for blacks as compared to Hispanics and whites
Benson et al. ³⁷	Retrospective	Analgesics administration and other interventions	Interventions were significantly more required for whites as compared to non-whites
Karpman, Del Mar & Bay ³⁸	Retrospective	Analgesics prescription	There has been no significant difference between whites and Hispanics

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Table 1. Summary of major aspects of selected articles – continuation

Authors	Methodological Design	Outcome	Major results
Todd et al. ³⁶	Retrospective	Analgesics administration	Blacks had lower chance of receiving analgesics as compared to whites
Fuentes, Kohn & Neighbor ⁴⁰	Retrospective	Analgesics prescription	There has been no significant difference between races/ethnicities
Heins et al. ⁴¹	Retrospective	Dose of prescribed opioids	Significantly lower for blacks as compared to whites
Glance et al. ⁴²	Retrospective	Epidural analgesia	Hispanic and black females had higher chance of not receiving analgesia as compared to non-Hispanic white females
Bijur et al. ⁴³	Retrospective	Analgesics administration	There has been no difference between races/ethnicities
Ranasinghe et al. ⁴⁴	Retrospective	Health Insurance, use of interventionist units	There has been no difference between indigenous and non-indigenous
Todd, Lee & Hoffman ⁴⁵	Prospective	Difference between physicians' pain estimate and patients' reports	There has been no significant difference between races/ethnicities
Bartfield ⁴⁶	Prospective	Analgesics administration	There has been no significant difference between whites and non-whites
Cleeland et al. ⁴⁷	Prospective	Analgesics administration	More blacks and Hispanics have not received adequate analgesia as compared to whites
Carey e Garrett ⁴⁸	Prospective	Radiograph and imaging exams	Blacks had lower chance of receiving radiographs or imaging exams as compared to whites
Green et al. ⁴⁹	Prospective	Management according to type of pain	There has been no significant difference between races/ethnicities
Rabow & Dibble ⁵⁰	Prospective	Pain report and analgesics prescription	Blacks have reported more severe pain as compared to whites. There has been no significant difference in opioid prescription
Miner et al. ⁵¹	Prospective observational	Difference between physicians and patients pain estimate	Perception of exaggerated symptoms was higher among Americans.
Bijur et al. ⁵²	Prospective	Analgesics administration	There has been no significant difference between races/ethnicities

attention this subject is receiving from Health Services in the last 10 years². It is observed that, in spite of the increasing concern with pain management in the last decades, the prevalence of studies with outcomes of racial discrimination in pain control has also increased.

Lack of differentiation between race and ethnicity is observed because many studies refer to those terms as synonyms. The predominant notion of race in biomedical research has been understood as phenotypic characteristics such as color of skin and facial characteristics which may be used to classify people in genetic subgroups. The concept of ethnicity has been suggested as race alternative aiming at not having a strictly biological connotation, implying that groups may vary with regard to culture and biological pattern⁵⁴.

The difference between these constructions is very often blurred, leading researchers to consider them in a single race/ethnicity dimension, which is also justified because data are in general collected by self-report, and several respondents consider both terms as synonyms⁵⁴.

As to the term "Hispanic", the National Health Institute of the United States has reported that the terms "Hispanics and Latinos" are used by researchers to all people descendant of Spaniards, when such people may come from Cuba, Mexico, Puerto Rico, South or Central America or other Spanish cultures. It has also to be stressed that authors do not justify their choices, do

not present any pre-established criteria and are not guided by a standardized classification. In spite of that, it is a mistake to conclude that for not being scientific classifications, but rather built and reinforced by social rules, race and ethnicity are of no value for research⁵⁵.

Most are transversal studies and from them, 50% have used medical records data. In this case it is difficult to determine whether patients requested less medication for pain, or if patients would simply refer less pain. So, pain investigators' challenge is to determine when and why differences exist.

Notwithstanding confusion variables control in most studies, racial discrimination is described by 74% of them; however it is understood that such result has to be considered at the light of the extreme difficulty to isolate race/ethnicity effects from the socioeconomic position which, in the United States, are closely intermingled⁵⁶. Outcomes vary, indicating a limitation in the comparison of results.

Black race was discriminated the most (55.8%), followed by Hispanics (53.3%). These results are similar to those observed by two literature reviews⁵³⁻⁵⁷.

Racial discrimination in pain management may be related to several issues. Pain expression and interpretation are affected by their meaning. Meaning and behavior may be associated to cultural rules, and perception and communication may be impaired when health professional and patient ethnicities are different. The ethnic

stereotype may also interfere with health professionals' ability to reliably evaluate pain. So, for a number of reasons, professionals are at risk of undervaluing pain of patients of other cultures. Although differences in pain management based on race and ethnicity are common themes in pain studies, there is little evidence to explain why these differences exist²⁴. Possible explanations include health caregivers' racism, language and cultural barrier impairing communication, socioeconomic factors which affect ethnic minorities and gaps in the understanding how to reliably evaluate pain. Until such aspects are not further understood, it will be difficult to develop strategies to eliminate ethnic and racial differences in pain management².

Research on culturally and linguistically-sensitive pain evaluation tools and studies about quality assistance of social and ethnic minorities experiencing pain are needed²⁴. Authors suggest that one initiative to minimize racial discrimination in pain management could be the implementation of protocols to assist patients in health services⁵⁸. Another important aspect to be considered is the need for discussions during health professionals' qualification, allowing the analysis of prejudices influencing assistance provided.

A limitation of this study might be the fact that studies were almost totally carried out in the United States, restricting a broader analysis about possible differences in assistance to painful patients according to their racial/ethnic condition.

CONCLUSION

Racial discrimination was identified in most selected studies, being the black race the most discriminated, followed by Hispanics. Most common outcome was related to analgesics prescription. It was observed that caregivers' behavior contributes for ethnic/racial discrimination in pain management. It is believed that the findings of this study may be correlated to the assistance to painful patients in Brazil, considering the racial diversity of our country. Our results point to the need for further studies on this subject in other countries different from the United States and to the importance of the reflection about the influence of cultural differences on care assistance during the qualification of health professionals.

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