



# Black Disabled People's Experiences of Ableism and Medical Racism in Healthcare: A Scoping Review

Prepared for  
Disability Justice Network Ontario

In

September 2023

By

Navdeep Goraya  
Sajroop Mann  
Sahra Siyad  
Luxiga Thanabalachandran  
Raghava Neelapala

# Contents

- Introduction ..... 2
  - Purpose and scope ..... 2
  - Research question ..... 2
- Background ..... 2
  - Immigration and number of Black Canadians in Canada ..... 2
  - Canadian healthcare system and health inequalities ..... 2
- Methods ..... 3
  - Eligibility criteria ..... 3
  - Study selection ..... 3
  - Data extraction ..... 4
  - Strengths and limitations ..... 4
- Findings ..... 5
  - Description of the included studies ..... 5
  - Qualitative studies – experiences of perceived medical racism ..... 5
    - Autism spectrum disorders ..... 5
    - Long COVID ..... 5
    - Spinal cord injury ..... 6
  - Quantitative studies – extent and impact of perceived medical racism ..... 7
    - Spinal cord injury ..... 7
    - Multiple disabilities ..... 8
    - Cutaneous lupus erythematosus ..... 8
- Discussion ..... 9
  - Overall findings ..... 9
  - Experiences of Medical Racism ..... 9
  - Extent and Impact of Medical Racism ..... 10
  - Gaps in Existing Research ..... 10
- Conclusion ..... 11
- References ..... 12

# Introduction

## Purpose and scope

The purpose of this research is to review existing literature on Black and disabled peoples' experiences of medical racism. The research was requested by the Disability Justice Network of Ontario (DJNO), an organization that advocates for disabled individuals in Ontario and aims to make Ontario more accessible. DJNO was interested in the extent to which medical racism and ableism shapes the experiences and health outcomes of Black disabled individuals. Although the original focus of this work was the Ontario Healthcare system, we expanded our criteria to both Canadian and United States (US) Healthcare systems due to the limited data present on this topic within Ontario. In this review we considered perceived discrimination from the perspective of patients as an indicator of medical racism.

This review was completed by a team of volunteer Research Associates with the McMaster Research Shop in 2023.

## Research question

To what extent do Black disabled people experience medical racism and/or ableism in Ontario and Canada's healthcare system and US healthcare system? How, if at all, do these experiences impact their health outcomes?

# Background

## Immigration and number of Black Canadians in Canada

Canada is a diverse country which houses immigrants coming from all over the world. According to the 2021 Census of the Canadian Population, 23.0% of the population are immigrants (1). Furthermore, there are around 1.5 million Black individuals in Canada with around 750 000 of them residing in Ontario (2). Black individuals make up about 3.5% of Canada's population with around 43% of Black individuals living in Canada also being born in Canada (3).

## Canadian healthcare system and health inequalities

Canada's healthcare system is publicly funded with each of the provinces and territories responsible for their own healthcare. Although all Canadians have access to universal healthcare, the level of care they receive is often not equal (4). Previous research has shown that there are notable health inequalities between Black and White Canadians (5). For example, racialized individuals were 6-7x more likely to test positive for COVID-

19 in the GTA (6). Similarly, Black individuals are more likely to report having high blood pressure and diabetes compared to their white counterparts. Also, black individuals reportedly experience poorer mental health (i.e., depressive feelings) compared to white and South Asian populations (7).

In this review, we focus on the intersection of Anti-black racism, also referred to as medical racism, and ableism in the healthcare system. Anti-black racism within the healthcare system is often seen in the form of stereotyping or provider bias. Furthermore, Black people are underrepresented within the Ontario healthcare system as although the population of Black individuals is around 4.5%, only 2.3% of practicing physicians are Black (3). One study conducted in the United States (US) reported that 23% of its participants reported experiences of perceived racism while receiving health care. In addition, the level of perceived racism was also found to be associated with lower odds of satisfaction with the quality of care (8).

When it comes to ableism in the healthcare system, according to the World Health Organization document “global report on health equity for persons with disabilities,” a significant amount of health inequalities are experienced by people with disabilities that eventually leads to greater risk of mortality and morbidity (9). Previous research has shown that physicians’ biases and reluctance to provide accommodations for disabled people have contributed to such disparities (10). Given systemic healthcare barriers towards Black and disabled people, the goal of this project is to understand how these intersecting identities shape healthcare experiences and outcomes.

## Methods

We used keywords from the following categories to conduct our search: Black people/patients, disability, prejudice, and healthcare. Our full search strategy can be found in the appendix. We conducted the search in five databases: MEDLINE, PsychInfo, EMBASE, CINAHL and Web of Science and completed the searches in May 2023. After removing duplicates, 705 articles were included for title and abstract screening.

### Eligibility criteria

We included studies if the study population was Black disabled people, the study location was a healthcare setting in Canada or US, and if the objectives of the study was on the extent (e.g., incidence rates) and/or perceived impact of discrimination in healthcare settings.

### Study selection

Two reviewers independently performed the title and abstract screening, and the discrepancies were resolved by a third reviewer. Full-text reviews and data abstraction were performed independently by the reviewers. In total, we assessed 209 full texts for

eligibility, of which nine articles were considered to meet our eligibility criteria. The common reasons for exclusion are that the studies did not measure or report on medical racism/discrimination, or their study population did not focus on those living with disabilities.

## Data extraction

We extracted the following information from the included articles. We extracted information such as study title, authors, country of study, and objectives. For the methods we extracted the information on study population, study setting, and outcome measure used to evaluate perceived medical discrimination. In regard to the results, we searched for available information on the “extent” (any measure, quantitative or qualitative, of the amount of people who experienced discrimination and the types of discrimination they experienced) and “impact” defined as the resulting effects of discrimination on the population of interest, such as the medical care they receive and their views of the healthcare system.

## Strengths and limitations

Our research has a few limitations to consider. Despite a comprehensive search strategy, we weren't able to find any relevant studies conducted on Canadian healthcare settings. This constitutes a research gap and therefore findings from other jurisdictions (i.e., the U.S.) may not be generalizable to the Canadian healthcare context. Even when scanning for studies in the U.S., we were only able to find a small number of studies (nine) that fit our eligibility criteria. This is because many of the studies identified in our initial searches revealed racial disparities in health care outcomes, however they did not relate these outcomes to perceived medical racism/discrimination. Of those studies with an explicit focus on medical racism, they did not focus on racialized individuals who also had a disability (or it was unclear whether the study participants experienced disability). As our eligibility criteria exclusively focused on participants who were Black and disabled, this refrained from including many of the studies we found in our review.

Another limitation to our research is that we did not perform a formal quality assessment of the articles as our primary aim was to summarize the extent of literature on this emerging topic. As such, in addition to identifying gaps in the existing literature, formal quality appraisal of the studies may also identify gaps in methodological rigour that are not reported on in this study.

Our report has the following strengths. First, we developed an extensive search strategy in consultation with a health sciences librarian. Second, we adopted a robust screening strategy where two reviewers independently screened the titles and abstracts of the resulting articles, and a third reviewer resolved the conflicting decisions. Next, we examined both qualitative and quantitative studies. Lastly, we were able to identify a number of tools that can be considered in future research to evaluate the extent of medical racism in Canadian health care settings.

# Findings

## Description of the included studies

Of the 9 included studies, 6 were quantitative and 3 were qualitative with all of the studies being conducted in the US. The studies were conducted on participants with the following disabilities:

- Autism spectrum disorders
- Long COVID
- Spinal cord injury
- Multiple disabilities
- Systemic Lupus

The results of included studies are presented below. We summarized the findings of qualitative and quantitative studies separately.

## Qualitative studies – experiences of perceived medical racism

### Autism spectrum disorders

Dababnah et al. (2018) interviewed 22 caregivers of Black children with autism spectrum disorder (ASD) in Baltimore Maryland, to assess caregiver perspective on ASD care for Black children (11). The research identified two relevant themes affecting ASD screening in primary care. Theme 1: Primary Healthcare Providers' Attention to Caregiver Concerns" "Theme 2: Perceived Racism and Poor Caregiver-Provider Interactions. Respondents first highlighted that primary healthcare providers' had variable attitudes towards their concerns, acting both as a barrier and facilitator to further screening and testing. Some caregivers reported their concerns were minimized, leading to delayed referrals. Caregivers from various income and education levels reported this experience. Secondly, Dababnah et al. (2018) also identified the impact of perceived racism and poor caregiver-provider interactions on caregiver experience. Caregivers described instances where racism led to negative assumptions about themselves and their families, dismantling caregiver-provider trust and hindering the screening process. For example, one respondent, a college graduate, shared that her primary healthcare provider doubted her ASD knowledge and wrongly assumed she was a single mother with many children on social assistance. Another respondent, with a graduate degree, described her experience as no longer sharing ASD knowledge with her provider, due to previous discrimination.

### Long COVID

A study by Bergmans et al. (2022) interviewing 15 Black adults with long COVID symptoms in Michigan, USA revealed race-related barriers that Black individuals perceive when seeking care for long COVID (12). Black participants reported difficulties

in navigating COVID testing, experiencing mental taxation and uncertainty about where and when to get tested. One participant cited the historical mistreatment of the Black community in the clinical setting as a plausible cause of the mistrust and testing hesitancy of the Black community. For example, one respondent explained her delay in getting tested describing “it’s the fear in the Black community that prevents [us] from going to get tested ... I said, ‘I don’t want to be in anybody’s database tied to COVID.’” Additionally, participants expressed fear and confusion during the hospital discharge process, often dealing with premature discharge where they felt unsafe returning and posing risk to their communities. Among interviewees, race played a significant barrier to seeking care, with many sharing reluctance due to concerns that they could receive inferior treatment compared to White patients. Moreover, the lack of standardized care approaches and diagnostic shortcomings left participants feeling disheartened and burnt out after seeking care from multiple healthcare providers. Some Black patients shared disproportionate denial of treatment or testing, sharing that they [and other Black people] are routinely denied medication and will only be taken seriously in hospital if deathly ill. Similarly, instead of in-hospital treatment, many positive-testing Black COVID patients would be sent home. Likewise, the lack of sufficient treatment for long COVID symptoms like pain, fatigue, and dyspnea hindered participants' ability to work and access social assistance. Despite advocating for themselves, participants were repeatedly denied short-term disability benefits.

## Spinal cord injury

Meade et al. (2011) analyzed data from seven focus groups that occurred across Virginia, United States with people who had spinal cord injuries (SCI) (13). These focus groups were conducted as part of a broader needs assessment of Virginians with SCI. Meade et al.’s (2011) study aimed to uncover how women and African American men with SCI perceived that the delivery and quality of their health care was negatively affected by patient-provider interactions. African American men (40% of all participants) and women (60% of all participants were women, and 5 of these women were African American) were included within these discussions. Participants “were reluctant to identify racial discrimination as a factor in their care”, but did indeed describe incidents of medical racism and/or ableism. For example, one African American male participant described how he was denied a prescription for pain medication on the grounds that he “might get addicted”. It was unclear whether the participant himself perceived this to be a form of racism. Another example provided by African American participants, were physicians assuming that their SCI was a result of gang violence or criminal activity. Finally, one participant described medical racism as a factor affecting the timeliness with which they received care, the importance/relative priority of their needs, physician cooperation, and their access to coverage such as *Medicare* and *Medicaid*. Again, it is important to highlight that the authors stated that “many participants were reluctant to identify racial discrimination as a factor in their care”. In other words, while participants may have described instances of medical racism, many were reluctant to label this as racism. With this, the authors were careful to note that public discourse regarding the subject of discrimination at the time of the study may have discouraged acknowledgement of this phenomenon.

## Quantitative studies – extent and impact of perceived medical racism

### Spinal cord injury

In a study by Hogaboom et al. (2019), a questionnaire consisting of seven questions was given to 410 participants with chronic spinal cord injury (SCI) who were wheelchair users to measure perceived medical discrimination (14). The participants were asked to rate their experiences in a healthcare setting on a scale of 1-5. The survey asked how often patients perceived they were treated with less courtesy, treated with less respect, received poorer service, felt that healthcare providers perceived them to be unintelligent, felt that healthcare providers were afraid of them or perceived themselves to be better than them, and if they felt a doctor or nurse was not listening to them. The study found that Black individuals perceived medical discrimination at a rate of 2.15 times a white reference group. Furthermore, it was found that this perceived discrimination led to detrimental health effects as higher perceived discrimination was correlated with black patients reporting more pain (relative risk= 1.11 times a white control group) and greater depressive symptoms (relative risk=1.09 for mild depressive systems and relative risk=1.12 for severe depressive symptoms).

Myaskovsky et al. (2017) studied the levels of discrimination experienced by African Americans with SCI measured on a 0-5 likert scale (15). They identified that African Americans reported more experiences of discrimination in healthcare (Mean Score: 2.6) compared to white Americans (Mean Score: 2.3). They also reported that previous experiences of discrimination were associated with lower levels of satisfaction with healthcare. However, the levels of discrimination were not significantly associated with a negative health outcome - Craig Handicap Assessment and Reporting Short Form (16).

Another study by Myaskovsky et al. (2011) examined the disparities in health-related quality of life (HRQoL) amongst Black individuals with SCI as related to discrimination in a health care setting, in comparison to their White counterparts (17). The authors measured health care discrimination using perceived discrimination in health care measure which is a 7-item questionnaire with each item rated on a 4-point likert scale (possible score range: 7-28). Perceived racism was measured using a 4-item scale rated on a 5-point likert scale (possible score range (0-20): Medical distrust was measured using a 9-item health care distrust scale (possible score range: 9-45). The study revealed that African Americans with SCI reported a greater amount of discriminatory experiences in health care settings ( $2.23 \pm 2.52$  vs.  $1.09 \pm 1.86$ ;  $p = 0.00$ ), increased perceived racism ( $10.48 \pm 3.20$  vs.  $9.54 \pm 3.43$ ;  $p=0.04$ ), more distrust towards the healthcare system ( $25.60 \pm 6.04$  vs.  $23.93 \pm 6.26$ ;  $p=0.04$ ). African Americans were also significantly more likely to exhibit an external locus of control, in comparison to the White group ( $19.39 \pm 6.23$  vs.  $17.39 \pm 5.42$ ;  $p = 0.01$ ), meaning that they were more likely to attribute their health outcomes to external factors (e.g., chance,



their physician, others). Despite African Americans reporting greater discrimination and perceived racism in the healthcare system, there were no significant between-group differences in anxiety, depression, or overall life satisfaction ( $P > 0.05$ ).

### Multiple disabilities

A study by Smith and Alston (2009) examined the relationship between race, disability, and life satisfaction in the United States (17). The researchers aimed to explore whether disabled Black individuals experience different levels of perceived racism/discrimination which in turn impact life satisfaction, compared to individuals with disabilities from other racial backgrounds in a multitude of settings, one of which being healthcare. This study used a quantitative research design. Sampling from the 2005 Behavioural Risk Factor Surveillance System (BRFSS), which is a US based dataset of responses to telephonic survey on questions related to health risk behaviors, chronic health conditions, and use of preventive services. The 2005 survey has an approximate sample of 350,000. On examining this data via chi square and regression analysis, the authors found that almost five times as many African Americans with disabilities perceive that they are treated worse in health care settings because of their race, in comparison to their white counterparts (25.6% vs. 5.8%).

A study by LaVeist et al (2003) analyzed the prevalence and patterns of discrimination among US health care consumers, with a focus on the perceived discrimination in African Americans based on disability status or health (18). Results found that on average, African American health care consumers perceived that they were experiencing discrimination in a health care setting due to their disability more often than their white counterparts (32.5% vs. 15.2%). Moreover, the African American group was more likely to report the belief of thinking that they would receive better care if they were of a different race, in comparison to the White group (22.6% vs. 5.6%). African American heritage also placed respondents at twice the odds of discrimination based on disability (LaVeist et al., 2003).

### Cutaneous lupus erythematosus

Hong et al. (2019) surveyed 89 patients (85.8% identified as Black) with chronic cutaneous lupus erythematosus (CCLE) to investigate CCLE patient experience during care and how it relates to depression risk (19). Patients scored physician-patient communication, shared decision making, and physician/staff interpersonal style on seven separate scales, representing either bad (e.g., hurried communication) or good (e.g., listened patiently to patients' concerns) experiences with healthcare staff. Scores range from 1 to 5, a higher score indicating greater frequency of the experience in question. 26.4% of the predominantly Black population-based cohort with primary CCLE experienced depression, which is three to five times higher than the depression rates previously observed in the overall population of Atlanta. Poor interpersonal interaction between Black patients and staff, specifically disrespect, increased the likelihood of depression. CCLE patients with depression, who were predominately Black, reported

significantly more experiences with office staff disrespect (1.63 out of 5) versus non-depressed CCLE patients (1.26 out of 5).

## Discussion

### Overall findings

In total, our review identified 9 studies that reported on the extent and impact of medical racism encountered by Black Individuals with various disabilities. Surprisingly, all the studies were identified from the US health care settings, with no research being reported or identified on this topic in the Canadian health care context. The identified studies differed in the study design (6 - quantitative, and 3 - qualitative), methods used to measure perceived medical racism/discrimination, and the disability of the participants. In quantitative studies, perceived medical discrimination was measured in the studies using likert scales, questionnaires to rate experiences and interactions with health care workers, and binary outcomes of Yes/No.

### Experiences of Medical Racism

The study conducted by Bergmans et al. (2022) hints at the potential impact of medical racism on the experiences of Black individuals seeking care for long COVID (13). The findings reveal a range of significant barriers that Black participants encountered. Difficulties in navigating COVID testing, coupled with mental taxation and uncertainty about testing locations, suggests the structural challenges faced by Black individuals. The perceived mistreatment of the Black community emerges as a critical factor influencing testing hesitancy and mistrust in the healthcare system. Moreover, the lack of standardized care approaches and diagnostic shortcomings further exacerbates the already challenging situation for Black individuals seeking care for long COVID. The inadequate treatment for long COVID symptoms could affect patients' health and hinder their ability to work and access social assistance, exacerbating existing disparities in socioeconomic outcomes.

Similarly, Dababnah et al. (2018) study subtly uncovers potential instances of medical racism in the context of ASD care for Black children (12). Caregiver interviews suggest a nuanced role of primary healthcare providers in either facilitating or hindering ASD screening. Some caregivers hint at inconsistent attention from providers, leading to delayed or zero referrals. The study's subtle exploration of perceived racism and strained caregiver-provider interactions raises questions about their potential impact on the ASD screening process. Caregiver accounts suggest that these factors might erode trust and contribute to caregiver discomfort, potentially affecting the screening journey of the Black children in their care.

## Extent and Impact of Medical Racism

Some, but not all studies, discovered a link between experiences of medical discrimination and health outcomes. The study conducted by Hong et al. (2019) on patients with chronic cutaneous lupus erythematosus (CCLE) may suggest the disparities in healthcare faced by predominantly Black populations (20). The significantly higher rates of depression observed among Black CCLE patients compared to the overall population of metropolitan Atlanta raise concerns about the role of healthcare interactions in exacerbating mental health issues. The research findings suggest a link between the quality of physician-patient communication and patient well-being. Instances of hurried communication and a lack of empathy from healthcare staff may contribute to feelings of disrespect and lead to adverse mental health effects, as evidenced by the increased likelihood of depression in the study.

The study done by Hogaboom et al. (2019) including wheelchair users with spinal cord injury showed that there was a correlation between being Black and reporting more perceived discrimination (15). Higher perceived discrimination was also correlated with greater pain and depression. They report that these results are in line with those seen for the able-bodied population as well. The study notes that the experience of discrimination can lead to worse health outcomes as patients may listen to health providers less or engage in self-destructive behaviors which results in a negative feedback loop. One limitation of this study is that it does not prove causation and further studies will be needed to explore this idea further. Furthermore, this study was retrospective. However, these findings suggest that the intersection of race and disability might contribute to unique experiences of discrimination and challenges in various aspects of life, impacting overall life satisfaction.

## Gaps in Existing Research

Research gaps exist for all aspects of our research question, including both large-scale studies that independently examine extent and impact of medical racism among Black disabled individuals in Canada, as well as studies that explicitly link the two phenomena. We consulted the McMaster University librarian to develop a comprehensive search strategy to retrieve studies from the Canadian demographic, but could not locate any articles. Though we were able to retrieve relevant studies conducted in the US health care settings, the number of studies is still small, suggesting the need for more research on this topic to arrive at definite conclusions.

Another research gap identified in our review is the diversity of outcome measures used to capture perceived medical racism. This variation in outcome measurement may limit pooling of data across multiple studies, and the pooling is further complicated by the premise that racism is a latent construct. The construct of medical racism may be better measured using different sets of questions capturing different facets of medical racism across diverse health care settings. For example, rather than using a single item to rate the extent of perceived medical racism on a likert scale, studies may also consider using questions on descriptive questions such as whether physicians were less

attentive to their concerns etc. Therefore, future research efforts may consider using standardized tools (e.g., perceived medical discrimination in health care tool) for use in both research and clinical contexts to measure perceived medical racism.

The limited extent of health disabilities/conditions on which medical racism studies have been conducted is another gap we identified in our review. The majority of the studies are conducted on spinal cord injury and the results of these studies may not necessarily be applicable to persons with other disabilities. Therefore, we recommend further research initiatives to focus on different health conditions/disabilities on this topic.

## Conclusion

To conclude, our review identified 9 studies that reported the experiences and extent of medical discrimination experienced by Black individuals with disabilities in health care settings. The qualitative studies reported different experiences with racism in health care such as delayed referral, and denying treatment. When discrimination was evaluated quantitatively on likert scale, Black individuals with disabilities reported higher ratings of discrimination compared to their White counterparts. In addition, such experiences of discrimination were associated in some studies (but not all) with negative health outcomes and decreased trust in the health care system. However, it is not entirely clear if the poorer outcomes were entirely associated with medical discrimination or other contributing or confounding factors.

One important finding we noticed in our review is the lack of research from Canadian health care settings on the medical discrimination of Black Canadians. We propose a strong need for future studies addressing this knowledge gap which would eventually shed light on the topic of racism experienced by Black individuals with disabilities in Canadian health care settings.

Such research would enable us to capture the extent of medical racism in the Canadian health care context and possibly develop interventions to reduce the negative effects of discrimination against Black disabled Canadians in health care settings.

# References

1. [https://www.statcan.gc.ca/en/subjects-start/immigration\\_and\\_ethnocultural\\_diversity](https://www.statcan.gc.ca/en/subjects-start/immigration_and_ethnocultural_diversity)
2. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=9810035101>
3. Dryden O, Nnorom O. Time to dismantle systemic anti-Black racism in medicine in Canada. *Cmaj*. 2021 Jan 11;193(2):E55-7.
4. <https://www.canada.ca/en/health-canada/services/canada-health-care-system.html>
5. Veenstra, G., Patterson, A.C. Black–White Health Inequalities in Canada. *J Immigrant Minority Health* 18, 51–57 (2016).
6. Mahabir DF, O'Campo P, Lofters A, Shankardass K, Salmon C, Muntaner C. Experiences of everyday racism in Toronto's health care system: a concept mapping study. *International Journal for Equity in Health*. 2021 Dec;20(1):1-5.
7. Veenstra G. Mismatched racial identities, colourism, and health in Toronto and Vancouver. *Soc Sci Med*. 2011;73(8):1152–62.
8. Benjamins MR, Whitman S. Relationships between discrimination in health care and health care outcomes among four race/ethnic groups. *Journal of Behavioral Medicine*. 2014 June;37:402-13.
9. <https://www.who.int/teams/noncommunicable-diseases/sensory-functions-disability-and-rehabilitation/global-report-on-health-equity-for-persons-with-disabilities>.
10. Lagu T, Haywood C, Reimold K, DeJong C, Walker Sterling R, Iezzoni LI. 'I Am Not The Doctor For You': Physicians' Attitudes About Caring For People With Disabilities: Study examines physician attitudes about caring for people with disabilities. *Health Affairs*. 2022 Oct 1;41(10):1387-95.
11. Dababnah S, Shaia WE, Campion K, Nichols HM. "We had to keep pushing": Caregivers' perspectives on autism screening and referral practices of black children in primary care. *Intellectual and Developmental Disabilities*. 2018 Oct 1;56(5):321-36.
12. Bergmans RS, Chambers-Peeple K, Aboul-Hassan D, Dell'Imperio S, Martin A, Wegryn-Jones R, Xiao LZ, Yu C, Williams DA, Clauw DJ, DeJonckheere M. Opportunities to improve long COVID care: implications from semi-structured interviews with black patients. *The Patient-Patient-Centered Outcomes Research*. 2022 Nov;15(6):715-28.
13. Meade M, Carr L, Ellenbogen P, Barrett K. Perceptions of provider education and attitude by individuals with spinal cord injury: implications for health care disparities. *Topics in Spinal Cord Injury Rehabilitation*. 2011 Oct 1;17(2):25-37.
14. Hogaboom N, Fyffe DC, Botticello AL, Worobey LA, Boninger ML. A cross-sectional study to investigate the effects of perceived discrimination in the health care setting on pain and depressive symptoms in wheelchair users with spinal cord injury. *Archives of Physical Medicine and Rehabilitation*. 2019 Dec 1;100(12):2233-43.
15. Myaskovsky L, Gao S, Hausmann LR, Bornemann KR, Burkitt KH, Switzer GE, Fine MJ, Phillips SL, Gater D, Spungen AM, Boninger ML. How are race, cultural, and psychosocial factors associated with outcomes in veterans with spinal cord injury?. *Archives of physical medicine and rehabilitation*. 2017 Sep 1;98(9):1812-20.
16. Whiteneck G, Brooks C, Charlifue S, et al. Guide for use of the CHART: Craig Handicap Assessment and Reporting Technique. Englewood: Craig Hospital; 1992.
17. Myaskovsky L, Burkitt KH, Lichy AM, Ljungberg IH, Fyffe DC, Ozawa H, Switzer GE, Fine MJ, Boninger ML. The association of race, cultural factors, and health-related quality of life in persons with spinal cord injury. *Archives of physical medicine and rehabilitation*. 2011 Mar 1;92(3):441-8.
18. Smith DL, Alston RJ. The relationship of race and disability to life satisfaction in the United States. *Journal of Rehabilitation*. 2009 Jan 1;75(1).
19. LaVeist TA, Rolley NC, Diala C. Prevalence and patterns of discrimination among US health care consumers. *International Journal of Health Services*. 2003 Apr;33(2):331-44.

20. Hong J, Aspey L, Bao G, Haynes T, Lim SS, Drenkard C. Chronic cutaneous lupus erythematosus: depression burden and associated factors. *American journal of clinical dermatology*. 2019 June 1;20:465-75.