

RACIAL DISCRIMINATION AT WORK AND HEALTH OF CANADIAN WORKERS:

A MIXED METHODS STUDY

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PREFACE

Ethical Approval

This research project was approved by the University of Ottawa Research Ethics Board (REB # H-04-24-10107), Annex a: Ethic Certificate. The certificate of approval pertains to Studies 2 and 3, presented in Chapters 6 and 7, respectively. Study 1 presented in Chapter 5 involved secondary data analysis and was therefore exempt from REB approval.

Contributions of the authors

Article 1: Workplace racial discrimination as a major public health threat: Association with depression, anxiety, stress and PTSD symptoms among racialized and Indigenous peoples in Canada

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Article 2: Workplace Major Racial Discrimination and Chronic Disease Among Racialized Canadian Workers: The Moderating Effects of Work-Related Stress Perception

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Rose Darly Dalexis had full access to all study data and was responsible for data integrity and the accuracy of the analysis. **Dalexis:** Concept and design, formal analysis, Interpretation of data. **Dalexis, Dr. Bourgeault, Dr. Cénat:** Drafting, reviewing, and editing the manuscript. **Dr. Bourgeault, Dr. Cénat, Dr. Beogo, and Dr. Pakhalé:** Critical revision of the manuscript for important intellectual content. **Dr. Bourgeault:** Supervision.

Article 3: Workplace Racial Discrimination and the Impact of Actions taken Among Black Workers in Canada: An analysis of blood pressure responsivity

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Rose Darly Dalexis and **Dr. Cénat** had full access to all the data in the study and were responsible for the integrity and accuracy of the data analysis. **Dalexis:** Concept and design. **Dalexis and Dr. Cénat** Formal analysis. **Dalexis et Dr. Beogo:** Data interpretation. **Dalexis:** Drafting, reviewing, and editing the manuscript. **Dr. Bourgeault, Dr. Beogo, Dre. Pakahlé and Dr. Cénat:** Critical revision of the manuscript for important intellectual content. **Dr. Bourgeault:** Supervision.

ABSTRACT

Workplace racial discrimination remains a pervasive and harmful reality with profound implications for health and well-being. Drawing on evidence from three interrelated independent studies using both primary and secondary Canadian data, this research provides a comprehensive understanding of how workplace racial discrimination functions as both a social determinant of health and a chronic stressor contributing to adverse health outcomes and persistent health inequities. The findings demonstrate that workplace racial discrimination, manifesting through inequities in hiring, promotion, retention, and interpersonal interactions, increases the risks of significant psychological, physiological, and physical health outcomes for racialized workers. Experiencing workplace racial discrimination was strongly associated with heightened risks of anxiety, depression, stress and post-traumatic stress disorders, reinforcing mental health disparities across racialized groups. In addition, workplace racial discrimination increased perceptions of work-related stress, which in turn elevated the risk of diagnosed chronic conditions such as cardiovascular disease, Type 2 diabetes, high cholesterol, stroke effects and musculoskeletal disorders. Physiological assessments further revealed that recalling racial discrimination experiences contributes to dysregulated cardiovascular reactivity, including elevated systolic and diastolic blood pressure, as well as mean arterial pressure values above the normal range. Particularly severe forms of racial discrimination, implicating job loss, early retirement, undesirable resignation or leaves were linked to greater blood pressure increases. When incidents of racial discrimination were reported, especially when participants received acknowledgment of their experiences, physiological responses were attenuated. These results underscore the importance of personal action, recognition, accountability and institutional action in mitigating health risks. These findings underscore how workplace psychosocial stressors trigger harmful biological and physiological responses that may result in lasting health consequences.

Taken together, this research highlights workplace racial discrimination as a critical public health concern that transcends individual experiences and reflects broader organizational inequities. Conceptualizing discrimination as a chronic stressor provides an essential understanding in addressing racial health disparities. The evidence points to the urgent need for organizational reforms, robust anti-discrimination policies, and workplace practices that not only prevent discrimination but also support the mental and physical health of racialized workers. Addressing workplace racism is not solely a matter of social justice; it is a public health imperative with the potential to reduce disparities, promote workplace equity, and improve the overall well-being of diverse populations.

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*My faith and my goals have been a constant
source of hope and perseverance,
especially in moments of doubt and challenge.*

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LIST OF ABBREVIATIONS

Adjusted Odd Ratio	AOR
American College of Cardiology	(ACC)
Analysis of Variance	(ANOVA)
Blood Pressure	(BP)
Canadian Community Health Survey	(CCHS)
Comma-Separated Values	(CSV)
Commission on Social Determinants of Health	(CSDH)
Computer-Assisted Web Interviewing	(CAWI)
Confidence Intervals	(CI)
Depression, Anxiety and Stress Scale - 21 Items	(DASS-21)
Diastolic Blood Pressure	(DBP)
Director General	(DG)
Equity, Diversity and Inclusion	(EDI)
Human Resources	(HR)
Job Demands-Resources model	(JD-R)
Major Racial Discrimination in the Workplace	(MRD-W)
Major Racial Discrimination Scale	(MRDS)
Mean Arterial Pressure	(MAP)
National Occupation Classification	(NOC)
Odds Ratios	(OR)
Post-Traumatic Stress Disorder	(PTSD)
Post-traumatic Stress Disorder Checklist for DSM-5	(PCL-5)
Quick Response	(QR)

Resting Mean Arterial Pressure
(RMAP)
Social Ecological Model
(SEM)
Social Ecological Theory
(SET)
Socioeconomic Status
(SES)
Systolic Blood Pressure
(SBP)
United States of America
(USA)
Version 29 of the Statistical Package for the Social Sciences
(SPSS 29)
Workplace Racial Discrimination
(WRD)
World Health Organization
(WHO)

CHAPTER 1 : INTRODUCTION – RACIAL DISCRIMINATION IN THE WORKPLACE AND HEALTH

Nearly a quarter (23%) of the Canadian population self-identified as visible minorities,¹ with the first three racialized groups being South Asian (7.1%), followed by Chinese (4.7%) and Black (4.3%) (Statistics Canada, 2022c). These proportions are up from 4.7% in 1981 and 13.4% in 2001 (Statistics Canada, 2003), with most of the racialized population living in Ontario (38.6%) and Quebec (22.9%) (Statistics Canada, 2023b). By 2041, about 2 in 5 Canadians will be part of a racialized group, account for 38.2 % to 43.0 % of the Canadian population, and the Black population would double in reference to 2016 (1,2 million) (Statistics Canada, 2022a).

Despite this high degree of diversity, racialized people continue to face discrimination in Canadian society, including in the workplace. Discrimination is a pervasive issue in the workplace, with racial discrimination being particularly prevalent (De Castro et al., 2008; Mooten, 2021; Statistics Canada, 2024b; M. T. Williams et al., 2022). Racial discrimination in the workplace is a differential treatment of racialized individuals that can be either *institutional*, when it is part of the organizational structure (policies, rules, informal and formal activities, etc.), *interpersonal*, when it is structured by a set of ideas, values and beliefs that frame negative attitudes and behaviours toward racialized groups, or *internalized*, when these believes and stereotypes about their own racial groups are integrated, adopted, and reflected in their attitudes (Cénat, 2023; David et al., 2019; Haeny et al., 2021; Jones, 2000; Lett et al., 2022; Molina & James, 2016; Wingfield & Chavez, 2020).

¹ The Employment Equity Act (EEA) defines visible minority populations are as “persons, other than Aboriginal people, who are non-Caucasian in race or non-white in color.” This consists mainly of South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean and Japanese Canadians (Employment Equity Act, 1995; Statistics Canada, 2017). The more current terminology used is “*Racialized populations*”, “*Racialized groups*” or “*Racialized people*” which will be used throughout this thesis document.

The portrait of racialized people in the Canadian labour market is alarming. While racialized workers are more active in the labour market (working or looking for work), their employment outcomes are not better (Block et al., 2019). The unemployment rate for racialized populations is often higher than that of non-racialized populations and higher than the overall unemployment rate (Government of Canada, 2016; E. S. Ng & Gagnon, 2020). In the 2016 census, racialized individuals had higher unemployment rates (9.2%) than non-racialized individuals (7.3%) (E. S. Ng & Gagnon, 2020). The rate was higher, especially among Arab (13.5%) and Black individuals (12.5%) (Block et al., 2019; E. S. Ng & Gagnon, 2020). In the 2021 census, the unemployment rate increased by 1.1 and 0.2 points for racialized and non-racialized individuals, respectively, compared to 2016, and their high representation in certain occupations (e.g., manufacturing, utilities) that might be affected by the COVID-19 pandemic was also highlighted (Norris, 2022).

Higher education is often associated with better employment conditions, including earnings (Pendakur & Woodcock, 2010; Picot & Hou, 2003). However, for decades, racialized people have been more highly educated (bachelor's degree or higher) in comparison with non-racialized workers (Masella & McIntosh, 2019),² yet their employment outcomes are less favourable for the educated racialized population, whether born in Canada or overseas (Pendakur & Woodcock, 2010; Picot & Hou, 2003). Racialized people have more difficulty accessing or getting hired in industries or sectors with good earnings or working conditions (Hou & Coulombe, 2010; Schirle & Sogaolu, 2020). Conversely, they are more often employed in non-unionized positions or in lower-benefit positions, such as lower pension coverage and lower-wage jobs, than non-racialized graduates (Galarneau et al., 2023). They are also overrepresented in lower-level occupations and are less likely to hold full-time, permanent positions (Lehmann, 2011). They are underrepresented in higher-paid positions, in

² In the 2014 and 2017 cohort, one-third (30%) of bachelor graduate were racialized. South Asian, Chinese and Black) accounted for roughly 67% of graduates and most of them were women (Galarneau et al., 2023; Statistics Canada, 2023a).

specific sectors, and at the management level across most occupations (Lehmann, 2011). The underrepresentation is higher among Black individuals (Employment and Social Development Canada, 2019; Jain & Lawler, 2004; E. Ng et al., 2014; Statistics Canada, 2021).

The number of people living in poverty has increased in the general population from 2021 (7.4%) to 2022 (9.9%), but the increase was 3.5 percentage points higher for racialized individuals compared to 2.5 points for the general population (Employment and Social Development Canada, 2024; Statistics Canada, 2024a). Indeed, no significant changes have been made in the earning disparity between racialized and non-racialized individuals in Canada. Less recent Canadian studies have found that racialized populations' earnings are up to 25% less than those of whites with similar qualifications (Howland & Sakellariou, 1993; Reitz, 2001). The earnings gap from 2005 to 2015 remained the same for men, at 0.78 cents per dollar compared to non-racialized men (Block et al., 2019). Little change for racialized women in 2015 (0.59 per dollar compared to 0.56 for non-racialized men) (Block et al., 2019). In 2021, the earnings of racialized graduates were between 8% and 16% lower than those of non-racialized women, and the gap was between 11% and 13% among men; the gap varies by race (Statistics Canada, 2023a). Studies have shown that the earning gap remains higher among men, especially among Black men born in Canada (Banerjee, 2008; Hou & Coulombe, 2010). In 2021, employment income for racialized women and men was \$45,700 and \$51,600, respectively, compared to \$47,800 and \$54,100 for non-racialized individuals (Statistics Canada, 2023a).

Previous research indicates that these poorer economic outcomes stem from workplace racial discrimination (Bertrand & Mullainathan, 2018; Eid, 2012; Light et al., 2011). In the 2016 Canadian census, 17.6% of employed persons reported experiencing workplace racial discrimination (Jones et al., 2018; Statistics Canada, 2022b). It has found that racialized and Aboriginal federal employees had twice the likelihood of encountering discrimination in the workplace compared to

their non-racialized counterparts (Jones et al., 2018). Indeed, Black workers in Canada are 2 to 2.9 times more likely to report racial discrimination at work than White workers (Banerjee, 2008; Waite, 2020). They are also more at risk of experiencing racial discrimination in the workplace than other groups of racialized workers (Banerjee, 2008; Statistics Canada, 2023a; Turcotte, 2020). Although the racialized population in the Canadian workforce has increased, and legislation and regulations have outlawed racial discrimination in various domains, including loans, services, and employment, racial discrimination persists in Canadian society (Boulet et al., 2023; Cénat et al., 2021; Kyriakides & Virdee, 2003).

Along with other social determinants such as gender, education, income, and work, racism has been identified as a significant determinant of health (Paradies et al., 2015; Solar & Irwin, 2010). Racism is consistently linked to adverse mental and physical health outcomes (Brondolo et al., 2011; Cénat, 2023; Chen & Mallory, 2021; Schouler-Ocak & Moran, 2023; Williams et al., 2019). Based on the literature, workplace racial discrimination acts as both a direct stressor and an indirect health risk by limiting access to secure, well-paid, and safe jobs, impacting workplace environment and generating additional stress among racialized workers (Allan et al., 2021; J. Benach et al., 2007; T. Benach, 2014; De Castro et al., 2008; Schnall et al., 2016; Wallis et al., 2021). These conditions increase the likelihood of mental health disorders, chronic diseases, workplace injuries, and poor health behaviours (Chavez et al., 2015; Lewchuk et al., 2008; Sawyer et al., 2012; Shannon et al., 2009). Indeed, the economic burden of mental health issues and illness in Canada is estimated at \$50 billion annually since 2011 and is projected to rise to \$ 88.8 billion by 2031 (Lim et al., 2008; Mental Health Commission of Canada, 2013). The proportion of workplace insurance claims and disabilities related to mental health problems and illness accounts for approximately 80% among Canadian employers, which may cost about 16 billion in 2041 (Sairanen et al., 2011; Smetanin et al., 2011; Towers, 2012).

CHAPTER 2 : LITERATURE REVIEW

2.1 2.1. Racial discrimination

The dominance of a race group over another one, surrounded by beliefs (racial prejudices), practices (racial discrimination) and policies, is known as “Racism”(Haeny et al., 2021). Racial discrimination is a broad form of racist practices that aims to generate differential treatment based on stereotypes and prejudices of racial or ethnic groups. It is also considered a disparate impact when rules or procedures that are not designed to discriminate still tend to advantage one group over another (Cénat, 2023; Haeny et al., 2021; Pager & Shepherd, 2008). In the workplace, racism can manifest itself at different levels: the individual level, fuelled by racial prejudice and beliefs (Internalized racism and Interpersonal racism) and the organizational level, composed of policies, decision-making processes and practices that generate racial inequity (Haeny et al., 2021; Lett et al., 2022; Solar & Irwin, 2010).

Whatever form racism takes in the workplace, prejudices play a key role in perpetuating racial discrimination and sustaining racism (Haeny et al., 2021). While organizational policies, procedures, or practices were not intended to discriminate against a particular group of people, the prejudices that do exist ensure that racialized groups are at a disadvantage compared to non-racialized groups. This study will focus on racist practices, such as racial discrimination and interpersonal racism, which are the primary forms of racism in the workplace.

In Canada, discrimination in employment is prohibited by laws, regulations, and programs. Protection against discrimination is provided in various areas, including housing, goods, services, and facilities, contracts, and employment (Canadian Human Rights Act, 1985). In the provinces of Quebec and Ontario, the “Canadian Human Rights” (Ontario) and the “Charter of Human Rights and Freedoms” (Quebec) are the main laws used for individual or personal discrimination concerns. These laws provide the right to equal protection against discrimination based on personal

characteristics, including race, skin color, and ethnic or national origin. In Ontario and in federally regulated sectors of other provinces, in addition to the Canadian Human Rights Act, protection in employment is mainly supported by the “Employment Equity Act”. In Quebec, the “Quebec Labour Standards Act” (General workers) and the “Act Respecting Equal Access to Employment in Public Bodies” (Public sector workers) are used for systemic discrimination, including in the workplace. Furthermore, programs such as “Workplace Equity Programs” (Ontario), “Equal Access Employment Programs” and “Quebec Public Sector Equity Programs” (Quebec) provide measures to improve employment opportunities for specific groups within their respective provinces.

2.2 Manifestations of Racism in Employment

2.2.1 Major racial discrimination

Major racial discrimination is a racist practice that goes beyond mistreatment. It is considered a bond that keeps racialized people in a precarious situation with long-term economic and personal consequences (Cénat, 2023; Cénat et al., 2022; Shippee et al., 2012; Williams et al., 2019), encompasses structural discrimination, and raises equity concerns. Whatever form racism takes in the workplace, negative consequences for racialized people are unavoidable. In the workplace, racial discrimination manifests itself in multiple domains:

a) **Hiring:** racial discrimination in hiring can occur at any stage of the job-seeking process and is considered pre-employment racial discrimination (Quillian et al., 2020; T. R. Whitaker, 2019).

Racial discrimination can occur in: **1) The pre-selection stage:** At this stage, race-based personal information provided in the resume, such as name, previous work experience location, home postal code as well as accent during the screening phone call and selection criteria can enable racial identification and racial discrimination (Bertrand & Mullainathan, 2018; McCluney et al., 2021; Tran et al., 2023). Racialized applicants are then less likely to be selected for the second step, the interview. Research has found that racialized people who omit or mask racial information in their

resume or ‘whitened’ their resume (name, experience, etc.) have a greater callback for an interview than those who don’t (Kang et al., 2016). **2) the selection stage:** Consists of face-to-face or video call interviews and a selection test; an applicant for whom race might be missed in the screening process is now prominent. In a face-to-face contact, racial stereotypes or attitudes may be stronger and oriented on key factors in the hiring process (Light et al., 2011; Pierce, 2003). The organizational fit (cultural fit such as way to dress, to talk, hair style, etc.), and the “soft skills” (friendliness, appearance, attitude, and commitment), are might be predominated over qualification and disadvantage racialized candidates (McCluney et al., 2021; Wingfield & Chavez, 2020); and **3) the reference check stage:** Referral stage will serve as both as informal means to fill job vacancies. It is also used as a candidate qualification and post-selection method to assess candidates’ capacities. Differential treatment often manifests as subjective judgments about the qualifications or abilities of racialized employees (Light et al., 2011).

b) Career Mobility: Racial discrimination not only affects the ability of racialized people to get a job but also affects their career mobility (T. R. Whitaker, 2019). Characterized by the three phenomena **1) the “Glass ceiling”** which prevent minority group, who already have a reasonably good job from advancing to the higher levels of the career ladder (Pendakur & Woodcock, 2010; Yap & Konrad, 2009); and **2) The “mid-level bottleneck”** which keeps racialized employees in the middle levels of the organization, in non-managerial positions (Yap & Konrad, 2009); **3) the “sticky floor”** which keeps them at the bottom of the job level or pay scale for racialized employees appointed to the same pay scale (Pendakur & Woodcock, 2010; Yap & Konrad, 2009). For a given level of effort, performance and qualification, White employees are more likely to be promoted than racialized employees, and differences in training remain important between racialized and non-racialized employees (Dostie & Javdani, 2020; Javdani, 2020).

- c) **Wages:** In addition to having more difficulty being hired, when racialized candidates receive a job offer, the proposed salary tends to be lower than that of their white counterparts for the same job, regardless of their level of education or experience (Banerjee, 2008; Block et al., 2019; Hou & Coulombe, 2010; Statistics Canada, 2023a). When salary analysis criteria privilege the White employees over racialized employees, it can be considered an organizational level of discrimination (Fryer et al., 2013).
- d) **Occupation:** Ethnic and racialized people have fewer job options than Whites and are more likely to be employed in more dangerous, lower-status jobs, with fewer opportunities for career advancements (Landsbergis et al., 2014; Williams et al., 2016). These groups are also more concentrated in precarious jobs (fixed-term, casual) with the worst employment conditions (wages, benefits, long and atypical working hours, temporary and casual work, etc.) and job security. These job categories are often characterized by lower job authority and control and higher job demands, and their occupants tend to receive less training, have fewer social ties, and receive less social support than their white counterparts in the organization (Richardson et al., 2012).
- e) **Work organization:** The division of tasks, often influenced by racial discrimination. Racialized employees are frequently assigned to tasks with high physical and psychological demands, repetitive and less interesting tasks (Lehmann, 2011). Jobs with higher skill requirements and more complex functions are more likely to be allocated to White workers (Golan et al., 2019). Therefore, they gained better experience, which enhances their eligibility for future promotion or career advancement and plays an essential role in the wage gap (Golan et al., 2019).
- f) **Firing:** Racial discrimination can also influence the reason to fire an employee. Firing includes several race-based actions taken by the employer, such as dismissal, layoff, involuntary retirement, or pressure to quit (Roscigno et al., 2012). It occurs when race-based prejudice, bias or policies are used to fire racialized employees ahead of White employees.

2.2.2 Interpersonal racism

Interpersonal racism refers to racial discrimination between individuals, such as negative behaviour of a non-racialized person toward a racialized person or group (Cénat, 2023; Haeny et al., 2021; Lett et al., 2022). In the workplace, such behaviours can come from co-workers, supervisors or customers. It consists of behaviours such as harassment, incivility, and racial microaggressions (Beagan et al., 2023; Ruggs et al., 2011) and includes verbal (e.g., racist jokes, incivility or dismissive language), nonverbal (e.g., exclusion from work activities, less support, ignorance, avoidance or any type of relationship) and paraverbal behaviours (e.g., tone of voice) (Cénat, 2023; Kaida et al., 2022; Light et al., 2011; Ruggs et al., 2011).

2.2.3 Internalized racism

Internalized racism is characterized by the acceptance of racial beliefs, stereotypes and values perpetuated by the dominant race (White). In the workplace, internalized racism can be intrapersonal, when racialized people hold these beliefs about themselves; interpersonal, when racialized people accept and participate in racist behaviours, prejudices, attitudes, or beliefs about other racialized people; and institutional, when these attitudes and beliefs are normalized (Cénat et al., 2024; David et al., 2019; Haeny et al., 2021). Internalized racism can affect racialized people's self-esteem, self-respect, and self-appreciation (Cénat et al., 2024; Haeny et al., 2021), as well as career aspirations, job performance, and employment (D. L. Brown & Segrist, 2016).

2.3 Intersecting risk factors associated with racial discrimination

When socioeconomic factors such as race, ethnicity, gender, sexual orientation, income, education level, and immigration status intersect with racial discrimination in the workplace, it creates a compound effect that puts individuals with multiple marginalized identities at increased risk of discrimination and amplifies socioeconomic and health impacts. Studies have indicated that racial and ethnic minorities are more likely to report racial discrimination in the workplace than White

workers (Krieger et al., 2006; Nunez-Smith et al., 2009; Waite, 2020). Differences also exist between racial groups, as Black Canadians reported experiencing racial discrimination at a higher rate than any other minority group (Turcotte, 2020).

Along with race, skin color is a physical characteristic that elevates the risk of racial discrimination in the workplace. Within minority groups, there is an increased risk of discrimination for those with darker skin than lighter skin (Derous et al., 2017; Espino & Franz, 2002).

Irrespective of race group affiliation, women are more likely than men to experience or report racial discrimination in the workplace. Additionally, identifying as a Black woman increases the likelihood of mistreatment and experiencing or reporting workplace racial discrimination (Browne & Misra, 2003; O'Brien et al., 2014). Moreover, individuals who identify as non-cisgender are at a greater risk of reporting workplace racial discrimination (Badgett et al., 2007; Hebl et al., 2002; Ruggs et al., 2011).

Among various determinants, socioeconomic status (SES) significantly influences an individual's life course and pathways (Williams et al., 2016). SES affects one's health, wealth, education level, social status, job market integration, and income (Williams et al., 2016). As a mechanism of power, workplace racial discrimination is more frequently experienced by individuals with lower economic status than by those with higher socioeconomic status, whose tenure and positions within the organization often confer greater power (Bergman et al., 2013; Lott, 2002). Although education level is associated with differences in job finding and wages, its effects are less pronounced among racialized people (Pendakur & Woodcock, 2010; Picot & Hou, 2003). However, racial discrimination might mitigate the protective factors of having a higher level of education or higher socioeconomic status, especially among Black populations (Hudson et al., 2013). Racial discrimination also affects other intersecting factors associated with labour market outcomes, including social networks,

immigrant status, and levels of integration and employment, which contribute to the gap between racialized and non-racialized individuals.

2.4 Health Implications

Given the pervasiveness of racism, various studies have been conducted to understand how it affects mental and physical health and well-being, and findings consistently show that all types of racism are associated with adverse health outcomes (Brondolo et al., 2011; Chen & Mallory, 2021; Harris et al., 2006; Paradies et al., 2015; Schouler-Ocak & Moran, 2023; Triana et al., 2015; Williams et al., 2009, 2019). Findings also indicate that ethnic minorities are more likely than Whites to experience mental health symptoms or physical health problems when it comes to racial discrimination, and the differences persist across racial groups (Williams et al., 2009, 2019).

Studies have explicitly considered racism as a general and an occupational stressor (Clark et al., 1999; Contrada et al., 2001; Hughes & Dodge, 1997; Lim et al., 2008). Research on racism and racial discrimination in the workplace has found that they increase the likelihood of developing common mental health disorders such as depression, psychological distress, anxiety, substance use, and sleep disturbances (Brondolo et al., 2011; Hudson et al., 2013; Paradies et al., 2015; Pieterse et al., 2012; Roberts et al., 2004; Williams et al., 2009), as well as physical conditions such as hypertension, cardiovascular disease, diabetes, and comorbidity symptoms such as chronic pain, back pain, headaches and poor health behaviours (Allen, 2019; Anderson, 2013; T. T. Brown et al., 2018; Chen & Mallory, 2021; Dawson & Fletcher, 2021; Fujishiro, 2009; Merritt et al., 2006; Sawyer et al., 2012; Williams et al., 2019).

2.5 Workplace Racial Discrimination and Health

Although the workplace remains one of the main settings in which racial discrimination occurs, limited research has been conducted on the effects of racial discrimination on workers' health.

Studies on racial discrimination in the workplace have found that it is detrimental to workers' mental and physical health (De Castro et al., 2008; Dhanani et al., 2016; Okechukwu et al., 2014; Pavalko et al., 2003; Roberts et al., 2004; Triana et al., 2015). Studies also indicate that workplace discrimination is associated with poorer physical and psychological health than non-workplace discrimination (Benoit et al., 2015; De Castro et al., 2008; Hammond et al., 2010; Okechukwu et al., 2014).

Workplace racial discrimination affects health both directly, through the stress of discriminatory events, and indirectly, through income and job-related factors (De Castro et al., 2008). Previous research suggests that job characteristics such as job demands, job authority, job control, job stress (such as exposure to environmental and hazardous conditions and discrimination), job security, wages, and work environment, are strongly associated with escalating physical and mental health hazards (Cadieux & Marchand, 2014; Landsbergis et al., 2014; Marchand et al., 2015; Schnall et al., 2016; Wallis et al., 2021).

Because racial discrimination has the potential to concentrate racialized groups in precarious jobs characterized by job insecurity, instability, high demands, powerlessness, lower wages, poorer working conditions, and high stress (Allan et al., 2021; J. Benach et al., 2007; T. Benach, 2014), they are more likely to have poor health, which may be associated to work-related stress responses (Lewchuk et al., 2008; Sawyer et al., 2012). Furthermore, racial discrimination in the workplace is associated with work-related health outcomes such as illness, injury, and assault (Chavez et al., 2015; Shannon et al., 2009). However, addressing and acknowledging racial discrimination may result in fewer adverse health outcomes compared to internalizing it (Krieger, 1990; Ruggiero & Taylor, 1995).

In sum, racial discrimination in the workplace can occur at both the interpersonal and organizational levels. It may affect various domains, such as hiring, promotion, wages, work organization, firing, and interpersonal relations at work. More than an isolated practice, workplace

racial discrimination impacts social relationships, sense of belonging, and health primarily through stress exposure. Despite its significant effects on individuals' personal and professional lives, it remains under-studied, and existing studies often fail to address its various domains. This study provides prevalence estimates of different types of workplace racial discrimination in the Canadian context. It offers an overview of the experience of Black individuals, who tend to report higher levels of racial discrimination in Canadian workplaces. It also examines how these different forms of workplace racial discrimination may influence stress, mental and physical health.

2.6 Rational

Given the association of racism and health issues and the high rate of reported racial discrimination among Canadian workers, it is essential to investigate the impact of workplace racial discrimination on the health of workers in Canada. Although the workplace is significantly impacted by racial prejudice, only a few studies have delved into the connection between workplace discrimination, health and well-being (De Castro et al., 2008). Furthermore, existing studies only consider the general experience of workplace racial discrimination with no consideration of the different domains in which it can occur. Indeed, as far as I am aware, no Canadian study has yet explored health outcomes of workplace racial discrimination, and no specific prevalence has been reported.

2.7 Research objectives

This thesis aims to (1) assess the extent, risk and protective factors associated with different forms of workplace racial discrimination; (2) examine the relationship between workplace racial discrimination, stress and both mental and physical health outcomes; (3) explore the experience of workplace racial discrimination specifically among Black workers and analyze its impact on blood pressure as a health indicator.

2.8 Research questions

The current study will address the following research questions:

- 1- What forms of racial discrimination do racialized workers face in the Canadian workplace?
 - a. What are the risk and protective factors associated with racial discrimination in the workplace among racialized Canadian workers?
- 2- What are the associations of racial discrimination and health among racialized Canadian workers?
 - a. Can work-related stress moderate the relationship between racial discrimination in the workplace and health?
- 3- What is the experience of Black Canadian workers regarding racial discrimination in the workplace?
 - a. Is there a connection between this discrimination experience and the increase in high blood pressure?

2.9 Implication for Population Health

Given that race and the circumstances surrounding race are key social determinants of health, this thesis has essential population health implications. It yields findings that benefit not only racialized workers but also employers and society more broadly. This study provides employers and policymakers with information on the extent of racial discrimination in the Canadian workplace, its roots, and its manifestations. These findings provide a guide to concerned parties on how to tackle racial discrimination in the workplace and to improve the working conditions of racialized individuals, thus improving their health by targeting associated factors.

CHAPTER 3 : THEORETICAL AND CONCEPTUAL FRAMEWORKS

This study is guided by the Social Determinants of Health (CSDH) framework, the Social Ecological Theory (SET), the Intersectional Theory and Job Demands-Resources model (JD-R). The study framework (Figure 2) conceptualizes workplace racial discrimination as a multidimensional phenomenon occurring at both the organizational and interpersonal levels, in line with the Social Ecological Theory. These forms of discrimination act as structural and psychosocial stressors that contribute to work-related stress, which negatively affects mental and physical health outcomes. Drawing on the Social Determinants of Health framework, the model situates workplace racial discrimination within broader societal inequities, where determinants such as income, education, gender, and race influence both the likelihood of experiencing discrimination and the capacity to mitigate its effects. Intersectional theory further underscores how overlapping social identities may compound disadvantage, increasing exposure to discrimination and exacerbating its health consequences. From the perspective of the Job Demands–Resources theory, racial discrimination functions as a hindrance to job demands that heightens work-related stress and contributes to adverse health outcomes through stress response.

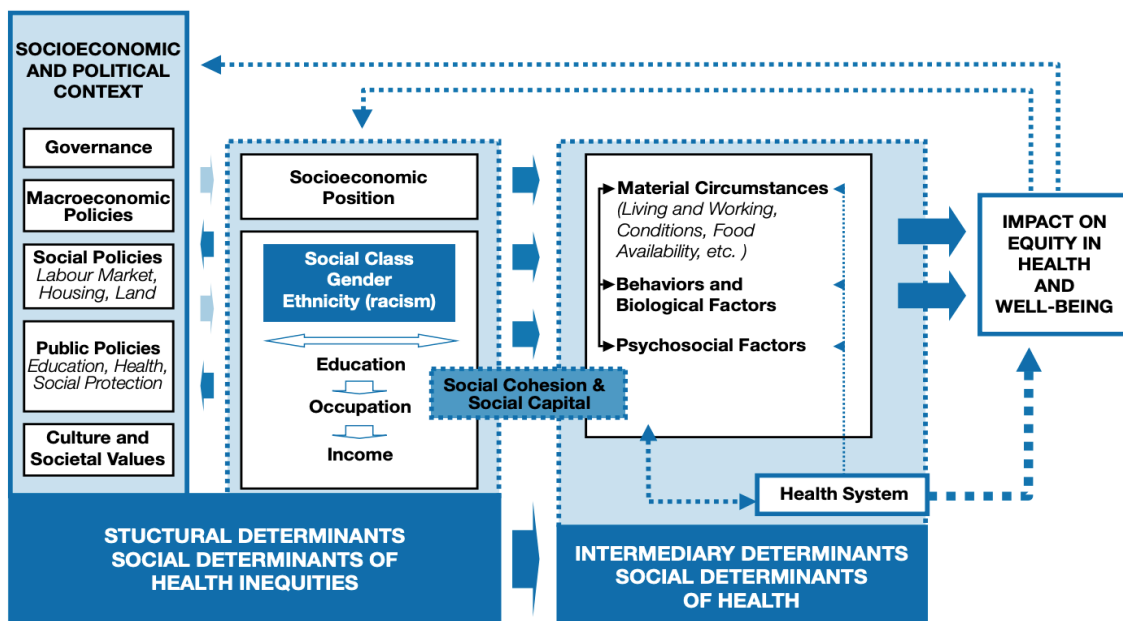
3.1 Social Determinants of Health Framework

The SDH framework (Figure 3.1:Social Determinants of Health Framework) was developed by the World Health Organization Commission to capture the complexity of health resulting from multiple social interactions, norms, and institutions that affect population health (Solar & Irwin, 2010). This framework shows how social, economic, and political mechanisms create and reinforce a set of socioeconomic positions that stratify populations according to income, education, occupation, social class, gender, and race/ethnicity. Socioeconomic position shapes specific determinants of

health status through people's social hierarchy and status, as well as individual differences in exposure and vulnerability to health-threatening conditions.

The framework includes racism as a social determinant of health inequity and how that interacts with socioeconomic position (social class, power, and prestige), defined by education level, occupation types, and income. In normal conditions, education level determines the occupation and position held, as well as the related income. Health determinants such as material access, health behaviours, biological and psychosocial factors are influenced by socioeconomic position and impact health outcomes and health equity. In return, health equity and well-being status also influence socioeconomic position. This normative pathway is affected by socioeconomic factors such as social class, gender and racism. This interrelation explains that someone's identity, such as social class, race or ethnic background, or gender, can create socioeconomic disadvantage, individually and intertwined with others, and impact health outcomes and amplify socioeconomic status.

Figure 3.1: Social Determinants of Health Framework



3.2 Social Ecological Theory

The social determinants of health framework focuses on structural macro-level determinants (e.g., social policies) and integrates sociodemographic factors such as gender, ethnicity, and racism as determinants of socioeconomic position, which, in turn, shape health outcomes. To capture the occurrence of racial discrimination at both micro and macro levels and its interaction with sociodemographic factors (e.g., race and age), the Social Ecological Theory was used as a complementary framework. This theory recognizes the cumulative and interactive effect of individual (gender, age, race/ethnicity, etc.) and environmental factors within a social context (individual's direct relationship/social network with co-workers or family), and institutional and cultural context (work policies/practices, work environment) that underlie the health status of individuals (Stokols, 1992; Stokols et al., 1996). The model proposes an interdependent and interactive multilevel system (individual, microsystem, mesosystem, ecosystem, macrosystem, and chronosystem) that shapes individual health (Stokols et al., 1996). Adopting this theory allows us to consider the existence of different levels of racial discrimination in the workplace that may affect health and how these levels reinforce one another to determine the health of racialized workers (Golden & Earp, 2012).

3.3 Intersectional theory

"Intersectionality" describes how multiple identities interact and produce cumulative effects across the life course (Crenshaw, 1989). In this study, intersectionality was used to address the weakness of the Social Ecological Theory, which considers race and gender as an identity with no consideration of social and historical influence (e.g., colonialism, patriarchy) on creating unique vulnerabilities and inequalities. The intersectional theory analyzed gender more than identity, encompassing roles, socialization, and the systems of oppression (sexism, racism) attached to it. It assumes that each social identity (e.g., gender and race) has forms of inequality that shape social

group belonging and influence both experiences of oppression and privilege (Eaton, 1994; Else-Quest & Hyde, 2016). The intersectional theory illustrates how racism is intertwined with other forms of marginalization (e.g., gender, age, race/ethnicity) and produces compounding effects on health and other social phenomena. Previous studies have found that health outcomes cannot be attributed to a single exposure alone, but to a combination of multiple exposures that produce more adverse health outcomes (Eaton, 1994; Else-Quest & Hyde, 2016). This study will adopt an intersectional lens to provide a global and interrelated understanding of the complexities of racialized workers' health.

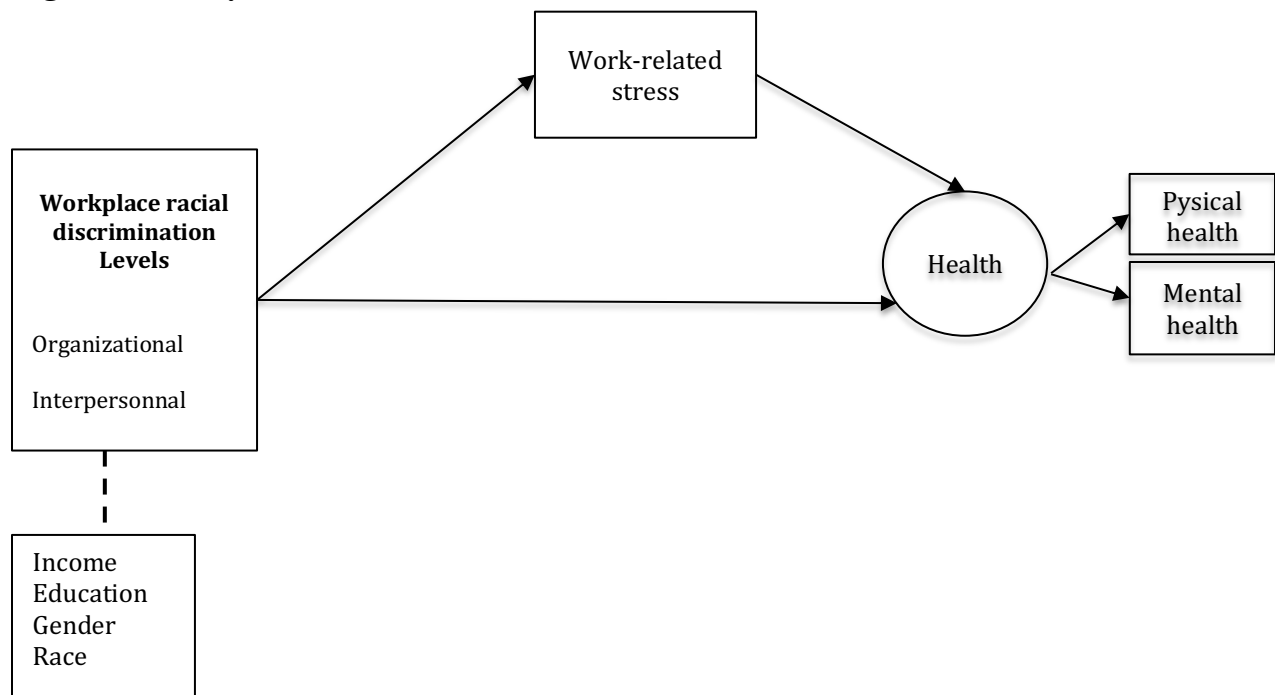
3.4 Job Demands-Resources Model

The Job Demands-Resources (JD-R) Model provides a framework that examines how psychosocial aspects of work influence health outcomes (Demerouti et al., 2001). Job demands are categorized into physical, social, and organizational elements that require sustained effort and may lead to psychological or physiological issues. These demands can be “challenge stressors,” promoting workers' growth, or “hindrance stressors,” impeding workers' career and professional development and producing adverse outcomes (Crawford et al., 2010; Podsakoff et al., 2007). Job resources are factors that facilitate goal achievement, reduce demands, or foster personal growth. From the JD-R perspective, a previous study has considered workplace racial discrimination as a hindrance stressor, predicting biological dysregulation (Jang et al., 2019). In this study, it is conceptualized as an organizational barrier embedded in organizations' practices that restricts access to employment, career advancement, equitable pay, and critical resources such as training, social networks, and inclusion. Workplace racial discrimination disrupts the balance between demands and resources, elevating stress levels and contributing to long-term adverse economic and health outcomes for racialized workers.

3.5 Models' integration and study framework

This study examines the association between workplace racial discrimination and the health of racialized workers, framing race and racial discrimination as social determinants of health. Guided by the Social Ecological Theory (SET), which views racism as pervasive across all societal levels, the study focuses on two levels where workplace racial discrimination most often occurs: the macrosystem (organizational) and the microsystem (interpersonal). The interpersonal level (internalized racism) was not examined, as the focus is on the expression of racism in the form of practice or prejudicial treatments that impose burdens, restrict, or limit opportunities for racialized workers, rather than on individuals' personal beliefs or internalized racist constructs. Within the SDH framework, the SET incorporates the interpersonal level alongside the structural level to capture where racial discrimination occurs in the workplace, thereby shaping both the working environment (e.g., work stress) and social conditions at work (e.g., social ties, sense of belonging). The study's framework is presented below.

Figure 3.2: Study's Framework



CHAPTER 4 : METHODOLOGICAL OUTLINE

4.1 Research design, data collection and data analysis

This thesis consists of a multi-method study that combines both secondary and empirical data. It also includes quantitative and mixed methods studies (quantitative-qualitative). Secondary data are from a pan-Canadian study. Empirical data were derived from an online survey administered via Qualtrics, and qualitative data were generated through in-depth, recorded interviews. Studies 1 and 2 are both quantitatively oriented, as Study 1 assesses workplace racial discrimination in one distinct and two indistinct domains, whereas Study 2 explores such experience across five different domains. The datasets are summarized in Table 4-1: Studies Overview.

This study includes only individuals aged 25 and over. The exclusion of individuals aged 18–24 was based on methodological considerations rather than an assumption that younger workers cannot experience workplace racial discrimination. Individuals in this age group are more likely to be students, employed part-time, or working in temporary or entry-level positions, resulting in less stable employment trajectories and reduced exposure to organizational processes where workplace racial discrimination typically occurs. Restricting the sample to participants aged 25 and older enhances comparability, reduces labour-market heterogeneity, and strengthens the validity and interpretability of the findings. This approach aligns with Statistics Canada data, which identifies individuals aged 25–54 as the core working-age population.

Different statistical analyses were conducted, including descriptive analyses, mean comparisons, regression analyses (e.g., odds ratios), and mediation analyses. In the mixed-methods approach, thematics and triangulation analysis were prioritized. The methodology was strengthened with a special consideration of issues related to equity, diversity and inclusion (EDI) by integrating gender and race analysis to better understand the higher proportion of racialized population, especially

Black individuals, among those reporting more racial discrimination at work. More details are provided within the studies.

Table 4-1: Studies Overview

Study	Study design	Total population	Population included in the studies (racialized participants only)
Study 1	Secondary data analysis/ Quantitative Survey	4,420	1,535
Study 2	Primary data Quantitative Survey	519	273
Study 3	Primary data Mixed methods (quantitative and qualitative) /In-depth interview and physiological measures	13	13

4.2 Ethical consideration

All studies obtained approval from the University of Ottawa Research Ethics Board (H-04-24-10107) before participant recruitment. The first study received expedited review for secondary data analysis. Participants in studies two and three received sufficient information about the study's objectives, duration, benefits, and risks to enable them to make an informed decision to participate. To ensure participant autonomy, consent was obtained before conducting the studies. Participants were informed of their right to withdraw at any time. None chose this option. See Appendix 1 for the ethics certificate.

4.3 Studies overview

In the following section, Chapters 5-7 present the studies conducted to address the research questions. Chapter 5 features Study 1, which analyzes quantitative secondary data from a nationally representative and ethnically diverse survey panel of 4,420 participants in Canada. This study gains

more profound insight into the association between race and ethnic background, workplace racial discrimination in hiring, firing and promotion denial and mental health outcomes. This study found higher rates of workplace racial discrimination among Black and indigenous participants. The reporting type of racial discrimination varied across racial/ethnic groups. Experiencing workplace racial discrimination was associated with more symptoms of depression, anxiety, stress and post-traumatic stress disorder (PTSD), with higher odds of mental health issues among those who reported experiencing discrimination in hiring.

The second study (Study 2) presented in Chapter 6 uses empirical cross-sectional data to examine the association between five forms of workplace racial discrimination and physical health outcomes (chronic conditions) among 273 racialized Canadian workers. More than two of three participants have reported experiencing at least one form of workplace racial discrimination. Over one in two participants has reported racial discrimination in hiring, and slower promotion and pay raises. Public servants reported an overall higher rate of workplace racial discrimination compared to other worker sectors. Each form of workplace racial discrimination was associated with different physical health issues. Workplace racial discrimination was positively associated with chronic diseases, and this association was fully mediated by work-related stress perception.

Chapter 7 presents the third study (Study 3), which employs a mixed-methods approach (qualitative and quantitative), identifies forms of workplace racial discrimination experienced by 13 Black Canadian workers, and analyzes them using a Social Ecological Framework. This study also determines to what extent recounting these incident experiences and the action taken interplay with blood pressure rise. The results show that these experiences are varied and occur at the structural level, within organizational practices, and at the interpersonal level, including mistreatment in interpersonal relationships. Experiencing workplace racial discrimination interplayed with elevated

blood pressure (BP). Resting Mean Arterial Pressure (RMAP) was higher among participants who experienced job loss than among those who did not. However, participants who reported these incidents and received acknowledgment exhibited either no significant change or only modest change in blood pressure. Those who received acknowledgment following complaints showed a RMAP within the normal range.

The final chapter (Chapter 8) presents an integrative discussion of the three studies in the light of the existing literature, demonstrating how they collectively address knowledge gaps and highlighting key findings that advance theoretical understanding. This chapter also outlines the thesis strengths and limitations, followed by implications for research, public and population health interventions and prevention, and concludes with an overall summary.

CHAPTER 5 : STUDY 1 - Workplace racial discrimination as a major public health threat: Association with depression, anxiety, stress and PTSD symptoms among racialized and Indigenous peoples in Canada

PREFACE

Study 1 aims to (1) document the rate of WRD across different racial groups, and (2) investigate its impact on the mental health of racialized and Indigenous individuals in Canada. This secondary data analysis was granted expedited approval from the University of Ottawa Research Ethics Board (# H-04-23-9199). This study is published in the Journal of Psychiatry Research.

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5.1.1 Abstract

Objective. Workplace racial discrimination (WRD) is a well-recognized issue; its impacts remain limitedly explored. This study examines the rate of WRD and its association with mental health among Arab, Asian, Black, and Indigenous individuals in Canada.

Study design. Cross-sectional analysis of data from a nationally representative and ethnically diverse survey panel.

Methods. Descriptive and logistic regression analyses were conducted on a subsample of 1,535 Arab, Asian, Black, and Indigenous participants aged 25 and older (55.31% women).

Results. Black and Indigenous individuals reported higher rates for both types of workplace racial discrimination. Respectively, Indigenous (OR= .62 and OR=1.96, $p<.001$) and Black (OR=2.31, $p<.001$ and OR=1.60, $p=.006$) participants were more likely to experience both racial discrimination in the hiring process and in promotion denial or firing compared to Arab participants. Participants who experienced racial discrimination in promotion denial or firing were more likely to present symptoms of anxiety (AOR=2.37, $p<.001$, 95% CI [1.82–3.09]), depression (AOR=2.80, $p<.001$, 95% CI [2.22–3.54]), stress (AOR=2.43, $p<.001$, 95% CI [1.89–3.14]), and PTSD (AOR=2.43, $p<.001$, 95% CI [1.77–3.32]) than those who have not. Similarly, racial discrimination in the hiring process was associated with higher odds of anxiety (AOR=2.24, $p<.001$, 95% CI [1.71–2.92]), depression (AOR=2.18, $p<.001$, 95% CI [1.73–2.75]), stress (AOR=2.01, $p<.001$, 95% CI [1.56–2.59]), and PTSD (AOR=1.99, $p<.001$, 95% CI [1.45–2.72]).

Conclusions. Workplace racial discrimination is strongly associated with mental health problems among Indigenous and racialized individuals. Race-specific organizational interventions and anti-racist programs are recommended to improve workplace well-being and racialized workers' health.

Keywords: Workplace racial discrimination, Racialized individuals, Indigenous peoples, Canada, mental health.

5.2 Introduction

Work is a fundamental aspect of life, occupying a significant portion of daily waking hours and playing a crucial role in shaping identity, fostering a sense of purpose, and providing opportunities for achievement and fulfillment (Hansson et al., 2022; Phelan & Kinsella, 2009; Steger et al., 2012; Ward & King, 2017). Beyond its economic and social contributions, employment influences health outcomes through both direct and indirect pathways, through stress responses (Aittomäki et al., 2003; Lewchuk et al., 2008; MacDonald et al., 2008; Sawyer et al., 2012). These pathways include work-related factors such as income, advancement issues, precarious employment and exposure to environmental and hazardous conditions; and the physiological effects of chronic stress caused by job strain, workplace discrimination, or job insecurity, which can increase the risk of cardiovascular, metabolic, and mental health problems. Indirectly, employment shapes health behaviours, access to healthcare, and social support networks, all of which contribute to overall well-being (De Castro et al., 2008; Landsbergis et al., 2014; Power et al., 2020; Siegrist et al., 2012). The World Health Organization (WHO) views occupation as a key social determinant of health, impacting individuals through environmental exposures, income levels, social networks, and psychosocial processes such as job control and autonomy (Siegrist & Theorell, 2006; Solar & Irwin, 2010). Job quality is an essential factor in determining workers' well-being (Frank et al., 2023; Julià et al., 2017; Siegrist & Theorell, 2006). Having a job is insufficient; what matters is having decent work, which encompasses fair wages, safe working conditions, job security, social protection, and fundamental rights, including protection against workplace discrimination, as defined by the International Labour Organization and the WHO (Ghai, 2003; WHO, 2022).

In the present study, we use the term “racialized” (racialized person and group) to refer to individuals or groups to whom society assigns a racial identity through a process of social classification, and who, as a result of this assignment, may be subject to unequal treatment,

discrimination, or structural disadvantage, with implications for social, economic, and political life (IRCC, 2022; Ontario Human Rights Commission, n.d.). Indeed, despite Canadian legal protections against discrimination based on personal attributes such as race (CQLR c C-12, n.d.; RSC, 1985), racialized groups in Canada continue to experience significant disparities in employment, career advancement, wages, and working conditions (Pendakur & Woodcock, 2010). They face higher unemployment rates, lower representation in senior-level positions and are more likely to be concentrated in low-wage and hazardous jobs (Government of Canada, 2016; Landsbergis et al., 2014; Ng & Gagnon, 2020). Workplace racial discrimination (WRD) remains a pervasive concern, affecting nearly three out of five racialized individuals (Foster et al., 2023; KPMG, 2024). Black, Filipino, and Indigenous individuals reported the highest rates of WRD, evident in hiring biases, wage gaps, and limited career advancement (Lam et al., 2023; Masella & McIntosh, 2019; Pendakur & Woodcock, 2010; Turcotte, 2020; Yap & Konrad, 2009). In 2005, racialized workers earned 81 cents for every dollar earned by White workers, a gap that widened to 76 cents by 2015 (Block et al., 2019; Block & Galabuzi, 2011). Racialized workers, especially women, face overqualification, lower-skilled roles, higher wage gaps, job insecurity and unemployment rates compared to both racialized men and White men and women (Block et al., 2019; Block & Galabuzi, 2011; Lehmann, 2011). Such inequities highlight the structural racism embedded within the Canadian labour market and emphasize the urgent need for systemic reform.

While decent work promotes well-being and life satisfaction, indecent work harms health (Bakker & de Vries, 2021; Demerouti et al., 2001; Julià et al., 2017; Lewchuk et al., 2008). Workplace racial discrimination, as a key determinant of socioeconomic status, worsens social exclusion, better job access, living conditions and health (Pullen et al., 2023; Siegrist & Theorell, 2006; Solar & Irwin, 2010; Triana et al., 2015). Recognized psychological stressor (Contrada et al., 2000), it heightens

work-related stress, anxiety, depression, burnout, and psychological distress (Benoit et al., 2015; Bond M. et al., 2007; Brown et al., 2000; Contrada et al., 2000; Hammond et al., 2010; Jackson et al., 2003; Krieger, 1990; Miller & Travers, 2005), especially among racialized individuals (Smith et al., 2005). United States studies demonstrated a strong association between WRD and both mental and physical health disparities, especially among Indigenous, Black, and Asian individuals (Brown et al., 2000; Smith et al., 2005). However, Canadian research on WRD's health impact is limited.

5.2.1 The present study

The lack of race-based and socio-demographic data hinder efforts to address WRD in Canada. Although the adverse effects of racial discrimination on workers' mental health and associated health disparities are well established, empirical research examining workplace discrimination specifically among racialized populations (Arab, Asian, and Black) and Indigenous individuals in Canada remains scarce. Additionally, few studies consider a wide range of racial and ethnic groups, leaving significant gaps in understanding how different communities are affected. Addressing these gaps is critical for advancing workplace equity, improving mental health outcomes, and fostering inclusive labour market policies in Canada. To address these gaps and advance research on the health of racialized and Indigenous workers, this study aims to (1) examine the rates of WRD among Arab, Asian, Black, and Indigenous individuals, according to sociodemographic factors (e.g., gender, age, province of residence, and education level), and (2) investigate the association between WRD and mental health outcomes (depression, anxiety, stress, and PTSD) among racialized and Indigenous individuals in Canada.

5.3 Methods

5.3.1 Design and data collection

Power analyses conducted with G*Power indicated that at least 1,812 participants were required to achieve 95% statistical power ($1 - \beta = 0.95$) for detecting small effect size differences ($f = 0.10$, equivalent to $\eta^2 = 0.01$) between racial groups. This estimate was calculated using a conventional significance level of 0.05. Participants were recruited via an online survey using Computer Assisted Web Interviewing (CAWI) conducted by Léger firm, inviting randomly 41,931 individuals out of a panel of over 420,000 Canadian households in October 2023. A total of 4,935 individuals accessed the survey link, of whom 118 did not meet the inclusion criteria. Of the remaining 4,817 eligible participants, 373 declined to participate, and 224 began the survey but did not complete it, resulting in a final response rate of 87.61% ($N = 4,220$). The survey was administered in both official languages, with a median completion time of 14 minutes and 29 seconds.

A total of 4,220 individuals completed the survey. Recruitment criteria included being 16+, living in Canada, and able to communicate in English or French. The final sample of 4,220 exceeded the minimum calculated by G*Power, ensuring sufficient statistical power for primary group comparisons and planned multivariate analyses. The present study includes a subsample of individuals who self-identify as racialized (Arab, Asian, and Black, Mixed) or Indigenous ($N=1,535$), aged 25 years or older, working or have worked in any sectors (private or public) or profession, and either employed or retired at the time of the study. This selection reduces age-related difference in job or promotion seeking and assures the ability to identify racial discrimination practices through experiences. Ethics approval was granted by the University of Ottawa Research Ethics Board (# H-04-23-9199), and participants provided electronic informed consent.

5.3.2 Measures

5.3.2.1 Sociodemographic questionnaire

Sociodemographic characteristics included gender, age, education, religion, province, race, language, job status, annual household income, and marital status.

5.3.2.2 Workplace racial discrimination

Two specific items of the Major Racial Discrimination Scale (MRDS) were used to assess participants' experiences of workplace racial discrimination (Williams et al., 1997). This domain of the MRDS specifically asks whether participants had ever been unfairly: 1) Fired, denied a promotion, and 2) Not hired for a job because of their race or ethnic background. Responses were coded dichotomously ("yes" or "no"). Previous research has shown that the MRDS workplace discrimination item captures salient forms of structural and interpersonal racism within employment settings and has been used in diverse racialized populations with strong reliability and construct validity (Cénat et al., 2022). The current study draws on this item to document the prevalence of workplace racial discrimination experiences among participants.

5.3.3 5.3.3. Outcomes

5.3.3.1 Anxiety, Depression, and Stress

The Depression, Anxiety and Stress Scale - 21 Items (DASS-21) (Lovibond & Lovibond, 1995); was used to measure anxiety, depression, and stress, with 7 items for each subscale and response options range from 0 to 3. Participants were categorized based on symptom severity: anxiety (score ≥ 8), depression (score ≥ 10), and stress (score ≥ 15). The DASS-21 had excellent internal consistency across different racial groups, including among Black individuals in both Canada and the United States with internal consistency coefficients varying from .81 to .91 (Cénat, 2023; Norton, 2007). In this study, Cronbach's alpha was .91 for anxiety, .94 for depression, and .92 for stress.

5.3.3.2 PTSD symptoms

Posttraumatic stress symptoms were assessed using the PTSD Checklist for DSM-5 (PCL-5), a 20-item self-report measure designed to capture the full spectrum of PTSD criteria (Blevins et al., 2015; Weathers et al., 2013). Items probe experiences such as distress when reminded of a traumatic event, and responses are provided on a 5-point Likert scale ranging from 0 (Not at all) to 4 (Extremely). Consistent with prior validation work, a total score of 33 or higher has been suggested as an indicator of probable PTSD (Ashbaugh et al., 2016; Blevins et al., 2015). The PCL-5 has been extensively validated in Canadian samples and demonstrates strong psychometric properties (Ashbaugh et al., 2016). In the present study, internal consistency was excellent (Cronbach's $\alpha = .97$).

5.4 Statistical Analysis

There were no missing observations for the WRD or DASS-21 measures. In contrast, 25.5% of participants had missing data on the PCL-5. Importantly, these were not true missing observations; the PTSD items were administered only to participants who reported exposure to at least one qualifying life event. Regarding sociodemographic factors, there were .8% missing observations for marital status, .3% for language, .5% for education, 7.5% for religion, .5 for gender, and 6.6% for sexual orientation. Missing data were addressed using pairwise deletion. As a result, the effective sample size varies across analyses depending on the availability of each variable. The rate of racial discrimination in workplace and hiring process was computed and compared across sociodemographic factors using chi-square tests (χ^2). Moreover, the differences were tested across racialized groups using chi-square tests (χ^2). A series of simple logistic regression analyses were performed to test the association of workplace racial discrimination with the outcome variables and sociodemographic factors. The odds ratios (ORs) with 95% confidence intervals (CIs) were reported for the total sample and each racial group. A set of independent t-tests were conducted to compare

mean scores of all the outcome variables, among those who experienced racial discrimination in firing or promotion denial or racial discrimination in hiring process, and those who did not. These analyses were also performed for the total sample and each racial group. Simple and multiple logistic regression analyses were also performed to test the association of racial discrimination in firing or promotion denial and in hiring process with the outcome variables. Control variables in multiple logistic regression included gender and age. Outcome variable reference groups were set to participants without anxiety, depression, stress, and PTSD. A significance level of .05 was set for the statistical tests. Data analysis was performed using SPSS 29.

5.5 Results

5.5.1 Sociodemographic characteristics of the sample

Of 1,535 participants (55.31% women), 24.82% were Black, 24.23% were Indigenous, 21.24% were Arab, 14.14% were from other racial groups, 12.70% were Asian, and 2.87% had mixed racial identity. [Table 5.1](#) presents sociodemographic characteristics, according to age, inhabited provinces, place of birth, religion, marital status, household income, language, education level, and job status.

5.5.2 Rate of workplace racial discrimination by race groups

The rate of racial discrimination in hiring process was 27.43% in the sample. Significant differences were observed between racial groups, $\chi^2(5) = 28.31, p < .001$. The rate was 36.48% among Black, 28.76% among Indigenous, 25.81% among other, 22.73% among mixed group, 22.56% among Asian, and 19.94% among Arab participants. Results also showed significant differences according to spoken language, but not for other sociodemographic factors, including gender (See [Table 5.2](#)).

The rate for racial discrimination promotion denial or firing was 29.90%, with significant differences between racial groups, $\chi^2(5) = 20.63$, $p < .001$: 36.56% among Indigenous, 32.02% among Black, 31.82% among mixed group, 30.88% among other, 23.59% among Asian, and 22.70% among Arab participants. Significant differences were found according to age, $\chi^2(5) = 21.18$, $p < .001$, place of birth, $\chi^2(1) = 5.31$, $p = .021$, and spoken language, $\chi^2(3) = 14.28$, $p = .003$ across race groups. Results are presented in [Table 5.3](#).

5.5.3 Factors associated with workplace racial discrimination by race groups

Black and Indigenous participants were 2.31 and 1.62 times more likely to report racial discrimination in hiring process compared to Arab participants, respectively ($p < .007$, 95% CI [1.64, 3.25]; $p = .007$, 95% CI [1.13, 2.31]). The [Table 5.4](#) presented results according to the other sociodemographic characteristics of the sample.

Table 5.5 summarizes sociodemographic factors associated with racial discrimination in promotion denial or firing across racialized groups. Black participants and Indigenous participants were 1.60 and 1.96 times more likely to report such type of racial discrimination compared to Arab participants, respectively ($p = .006$; 95% CI [1.15, 2.15]; $p < .001$; 95% CI [1.40, 2.74]). Moreover, participants with other racial identity were 1.52 times more likely to report racial discrimination in promotion denial or firing ($p = .034$). Results are presented in [Table 5.5](#)

5.5.4 Mental health outcomes by workplace racial discriminations and race group

We first compared means of scores for different mental health outcomes according to the experiencing workplace racial discrimination or not. Results showed that mean scores of anxiety ($M = 9.31$, $SD = 9.85$), depression ($M = 11.69$, $SD = 11.15$), stress ($M = 11.56$, $SD = 10.31$), and PTSD ($M = 27.98$, $SD = 20.14$) were higher among participants who experienced racial discrimination in the hiring process compared to those who did not (see [Table 5.6](#)). Similar differences were observed for all the racial groups, except for Asian participants ([Table 5.6](#)).

Similar results were found for promotion denial or firing (Table 5.6). Mean scores of anxiety ($M = 9.56$, $SD = 10.18$), depression ($M = 11.97$, $SD = 11.34$), stress ($M = 11.95$, $SD = 10.48$), and PTSD ($M = 28.76$, $SD = 20.65$) were higher among participants who experienced racial discrimination in promotion denial or firing compared to those who did not (Table 5.6). Similar differences were observed among all racial groups, except for anxiety among Asian individuals.

Table 7 shows logistic regression results on the relationship between racial discrimination in hiring process and depression, anxiety, stress, and PTSD. After controlling for gender and age, results showed that participants who experienced racial discrimination in the hiring process were more likely to present anxiety (AOR = 2.24, $p < .001$, 95% CI [1.71 – 2.92]), depression (AOR = 2.18, $p < .001$, 95% CI [1.73 – 2.75]), stress (AOR = 2.01, $p < .001$, 95% CI [1.56 – 2.59]), and PTSD symptoms (AOR = 1.99, $p < .001$, 95% CI [1.45 – 2.72]). Similar differences were found for the different racial groups (see Table 5-7).

Table 8 shows logistic regression results on the relationship between racial discrimination in promotion denial or firing and depression, anxiety, stress, and PTSD. After controlling for gender and age, results showed that participants who experienced racial discrimination in promotion denial or firing were more likely to present anxiety (AOR = 2.37, $p < .001$, 95% CI [1.82 – 3.09]), depression (AOR = 2.80, $p < .001$, 95% CI [2.22 – 3.54]), stress (AOR = 2.43, $p < .001$, 95% CI [1.89 – 3.14]), and PTSD symptoms (AOR = 2.43, $p < .001$, 95% CI [1.77-3.32]). Differences were also observed for different racial groups (see Table 5-8).

5.6 Discussion

The first objective of this study was to document workplace racial discrimination across different rates across racial groups. Findings reveal that Black and Indigenous report a significantly higher rate of workplace discrimination compared to Arab, Asian and the other racial groups. Black individuals report more racial discrimination in the hiring process, while Indigenous participants

report more racial discrimination in promotion denial or firing. Compared to Arab individuals, Black and Indigenous participants are 2.31 and 1.62 times more likely to report racial discrimination in hiring, and 1.60 and 1.96 times more likely to report racial discrimination in firing or promotion denial.

These findings are consistent with other studies showing that Black and Indigenous individuals are among the groups most likely to experience racial discrimination in the Canadian society (Godley, 2018). The 2019 General Survey reported that Black (41%) and Indigenous (33%) had higher rate of racial discrimination in broader societal context (Cotter, 2022), while nearly half of Black workers (48%) faced workplace discrimination in Canada between 2021 and 2024 (Statistics Canada, 2024). Moreover, another Canadian study reveals that 47% of Black respondents experience racial discrimination in hiring, pay or promotion, compared to 23% of Indigenous and 24% of Asian individuals (Foster et al., 2023). Unfortunately, there is limited research among Indigenous, Asian and Arab groups to comprehensively discuss the results regarding experiences of racial discrimination, both generally and in workplace settings. This study addresses that gap, highlighting the need for race-based research to inform effective intervention and prevention policies.

Across age groups, Black and Indigenous individuals show significant differences in workplace racial discrimination. Black participants aged 45 to 54 report higher rates of promotion denial and firing, while younger Indigenous participants (35 to 44) report more such discrimination. Although racial discrimination in the hiring process rates is not significant for Arab, Asian or Indigenous groups, Black individuals aged 45 to 54 are 2.16 times more likely to report discrimination in hiring compared to those aged 25-34.

Previous findings are controversial. A Canadian study indicated that the risk of experiencing discrimination in the workplace peaks at age 49 (Jones et al., 2018). Similarly, a USA study on the Asian population found that Asians aged 41 to 50 reported more racial discrimination compared to

other age groups (Yip et al., 2008). However, contrasting findings suggest that perception of workplace racial discrimination tends to be higher in young adulthood (ages 28 to 31), peaks in adulthood (ages 33 to 37), and diminish in middle age (Han et al., 2023) with no race group reference. While limited studies have specifically presented racial discrimination rates by age, the increased job-seeking and employment expectations, the more extensive experience in the labour market, be seeking career advancement opportunities, and a greater ability to recognize instances of racial discrimination or categorized racial discrimination as abnormal and unacceptable come with ages and multiples experiences. This shift in perspective may influence how discrimination is perceived across different stages of life.

The second objective of this study was to examine the association between workplace racial discrimination and the mental health outcomes among racialized individuals in Canada. The findings reveal that individuals who experienced both types of workplace racial discrimination reported significantly more symptoms of anxiety, depression, stress, and PTSD. This pattern is consistent across most racial groups. Black, Arab, and Indigenous participants who experienced racial discrimination in hiring reported elevated symptoms of anxiety, depression, and stress, with similar results for PTSD among Indigenous participants. Although no significant mental health outcomes were found for Asian participants in hiring-related discrimination.

The findings regarding racial discrimination in promotion denial or firing reveal notable disparities. Such discriminations were associated with higher anxiety and depression symptoms among Black, Arab, Indigenous, and Asian participants compared to those without these experiences. Black, Arab, and Indigenous individuals also reported higher levels of PTSD and stress, while no significant PTSD or stress effects were observed for Asians.

Limited research has explored the association between workplace racial discrimination and mental health outcomes, but existing studies have shown that it leads to both short-term and long-

term negative impacts (Han et al., 2023) , such as depression (Buchanan & Fitzgerald, 2008; Hammond et al., 2010; Han et al., 2023; Stone & Carlisle, 2019), anxiety, and stress (Buchanan & Fitzgerald, 2008; Foynes et al., 2013; Jasinskaja-Lahti et al., 2007; Raver & Nishii, 2010; Rospenda et al., 2008; Triana et al., 2015). No research has yet examined the impact on PTSD symptoms, nor the mental health impacts on Arab and Indigenous populations. However, previous studies have established that racism is strongly associated with anxiety, stress, and PTSD symptoms in racialized communities (Anderson, 2013; Chae et al., 2021; Harrell, 2000; Molina & James, 2016; Paradies et al., 2015; Pieterse et al., 2012; Rattani, 2021; Williams & Williams-Morris, 2000; Zhou et al., 2022). This study provides insights into mental health outcomes among understudied racial groups, highlighting concerns due to their impact on global health, workplace productivity, earnings, and poorer work performance; all of which contribute to the perpetuation of health disparities. It suggests that racial discrimination poses a major threat to the mental health of racialized individuals which can contribute to significant economic costs in Canada

5.7 Limitations

Despite the significance of this study, it has some limitations. As a cross-sectional study, it cannot establish causal relationships between independent and dependent variables. Longitudinal study would be necessary to address this limitation. It also assessed only two racial discrimination situations and did not assess working sector or professions, limiting its scope. A broader approach would provide more insights. As the data are self-reported, responses may be influenced by minimization bias, shame, and lack of awareness leading to underreporting, especially since some forms of discrimination can be subtle. Additionally, the dataset lacked specific descriptions of workplace racial discrimination, potentially causing biased data due to unrecognized experiences. It is true that major events such as being “not hired” or “fired/denied promotion” due to skin color were used as indicators of workplace racial discrimination, which may not reflect the full range of

experiences reported by participants. This approach likely led to an underestimation of subtler forms of discrimination, such as microaggressions, biased evaluations, exclusion from key opportunities, being assigned less valued tasks, or atypical work schedules, among others. Finally, the limited existing research on this topic in Canada made it difficult to contextualize the findings, highlighting the need for further studies in this area.

5.8 Implications For Research, Public Health Prevention and Intervention

Despite these limitations, this first study on the association between workplace racial discrimination and mental health in Canada has significant implications for research and public health prevention and intervention. Future studies should employ comprehensive quantitative methods to identify predictors and long-term effects using longitudinal designs and evaluate the effectiveness of both prevention and intervention measures and strategies implemented.

Longitudinal studies are indeed needed to further investigate the findings of this research and to more closely examine the potentially causal links between racial discrimination at work and long-term mental health outcomes. Additionally, qualitative research should explore the mechanisms and group dynamics shaping discrimination experiences within racialized communities. Given the high rates of workplace racial discrimination across racialized and Indigenous groups, it is crucial to examine organizational structures and systemic factors that contribute to the persistence of racism in the workplace. Understanding personal, cultural, and institutional contexts will help create more effective solutions to address and prevent workplace discrimination.

Organizations must move beyond basic Equity, Diversity, and Inclusion training by actively monitoring workplace racial discrimination, implementing clear prevention measures, and ensuring accessible reporting mechanisms for racialized employees. Holding perpetrators accountable through targeted training, warnings, and defined sanctions is essential. Given the strong association between workplace discrimination and mental health outcomes such as anxiety, depression, and PTSD,

tailored interventions are necessary. Providing culturally responsive mental health support and antiracist organizational programs can help mitigate harm, enhance resilience, and promote a more equitable work environment.

5.9 Conclusions

This first study comparing workplace racial discrimination and mental health outcomes among different racialized groups in Canada provides groundbreaking evidence that workplace racial discrimination is a pervasive and harmful reality for Black, Indigenous, Arab and Asian individuals in Canada, leading to significant mental health challenges such as anxiety, depression, and PTSD. The findings unequivocally demonstrate that racialized workers face systemic barriers in hiring, promotion, and job retention based on their skin color, highlight the urgent need for workplace reforms, stronger anti-discrimination policies, and mental health interventions tailored to the experiences of racialized employees. Addressing this issue as a public health concern can help reduce health disparities, promote workplace equity, and enhance overall societal well-being.

5.10 Ethical Approval

The University of Ottawa Research Ethics Board granted approval for this study. All participants provided an electronic informed consent.

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5.12 Declaration of Competing Interests

The authors declare no conflicts of interest.

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5.14 Supplemental material - STUDY 1

Table 5-1: Sociodemographic Characteristics of the Sample (N=1535)

	Total		Black		Arab		Asian		Indigenous		Mixed		Other	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Total	1535		381	24.82	326	21.24	195	12.70	372	24.23	44	2.87	217	14.14
Gender														
Men	678	44.17	161	42.26	127	38.96	113	57.95	163	43.82	28	63.64	86	39.63
Women	849	55.31	217	56.96	199	61.04	82	42.05	207	55.65	16	36.36	128	58.99
Non-binary	8	.52	3	.79					2	.54			3	1.38
Age														
25-34	382	24.89	106	27.82	82	25.15	65	33.33	75	20.16	3	6.82	51	23.50
35-44	407	26.51	140	36.75	103	31.60	41	21.03	66	17.74	3	6.82	54	24.88
45-54	292	19.02	72	18.90	64	19.63	44	22.56	64	17.20	10	22.73	38	17.51
55-64	245	15.96	28	7.35	47	14.42	31	15.90	88	23.66	16	36.36	35	16.13
65-74	158	10.29	26	6.82	21	6.44	9	4.62	61	16.40	8	18.18	33	15.21
75 and above	51	3.32	9	2.36	9	2.76	5	2.56	18	4.84	4	9.09	6	2.76
Province														
Ontario	534	34.79	155	40.68	108	33.13	82	42.05	87	23.39	20	45.45	82	37.79
Quebec	475	30.94	133	34.91	189	57.98	10	5.13	97	26.08	6	13.64	40	18.43
The Prairies and British Columbia	442	28.79	72	18.90	22	6.75	98	50.26	155	41.67	14	31.82	81	37.33
The Atlantic	73	4.76	20	5.25	7	2.15	3	1.54	28	7.53	2	4.55	13	5.99
Territories	11	.72	1	.26			2	1.03	5	1.34	2	4.55	1	.46
Education														
Primary/secondary/high school	249	16.30	46	12.20	30	9.26	12	6.15	116	31.18	10	22.73	35	16.20
College	407	26.64	98	25.99	60	18.52	27	13.85	138	37.10	14	31.82	70	32.41
University certificate/bachelor's degree	586	38.35	142	37.67	153	47.22	106	54.36	95	25.54	15	34.09	75	34.72
Graduate degree (Master's/PhD)	286	18.72	91	24.14	81	25.00	50	25.64	23	6.18	5	11.36	36	16.67
Place of Birth														
Canada	895	58.31	135	35.43	87	26.69	86	44.10	369	99.19	33	75.00	185	85.25
Abroad	640	41.69	246	64.57	239	73.31	109	55.90	3	.81	11	25.00	32	14.75
Language														
English	808	52.81	226	59.32	72	22.29	88	45.36	246	66.31	28	63.64	148	68.20
French	295	19.28	79	20.73	78	24.15	2	1.03	98	26.42	8	18.18	30	13.82
Other	119	7.78	14	3.67	54	16.72	35	18.04	6	1.62	3	6.82	7	3.23
Bilingual	308	20.13	62	16.27	119	36.84	69	35.57	21	5.66	5	11.36	32	14.75
Job status														
Employed (part-time/full-time/self-employed)	1295	84.36	348	91.34	296	90.80	177	90.77	270	72.58	30	68.18	174	80.18
Retired	240	15.64	33	8.66	30	9.20	18	9.23	102	27.42	14	31.82	43	19.82
Household income														
Below \$10,000	22	1.55	7	1.98	4	1.32	1	.56	7	2.01			3	1.50
\$10,000-\$19,999	48	3.38	9	2.55	7	2.31	4	2.22	22	6.32	1	2.70	5	2.50
\$20,000-\$39,999	196	13.79	51	14.45	34	11.22	11	6.11	69	19.83	6	16.22	25	12.50
\$40,000-\$59,999	240	16.89	64	18.13	52	17.16	28	15.56	57	16.38	3	8.11	36	18.00
\$60,000-\$79,999	236	16.61	58	16.43	68	22.44	26	14.44	54	15.52	6	16.22	24	12.00
\$80,000-\$99,999	201	14.14	39	11.05	44	14.52	34	18.89	51	14.66	7	18.92	26	13.00
\$100,000-\$124,999	194	13.65	56	15.86	39	12.87	26	14.44	35	10.06	7	18.92	31	15.50
\$125,000-\$149,999	108	7.60	26	7.37	17	5.61	17	9.44	20	5.75	5	13.51	23	11.50
\$150,000-\$199,999	112	7.88	32	9.07	17	5.61	23	12.78	23	6.61	1	2.70	16	8.00
\$200,000 and above	64	4.50	11	3.12	21	6.93	10	5.56	10	2.87	1	2.70	11	5.50

Religion														
Christian	737	51.90	291	80.39	108	34.84	52	28.42	179	54.91	14	37.84	93	46.04
Muslim	216	15.21	23	6.35	169	54.52	16	8.74			1	2.70	7	3.47
Other	180	12.68	25	6.91	14	4.52	60	32.79	51	15.64	7	18.92	23	11.39
No religion	287	20.21	23	6.35	19	6.13	55	30.05	96	29.45	15	40.54	79	39.11
Marital status														
Single	412	27.07	115	30.50	79	24.53	55	28.35	100	26.95	10	22.73	53	24.77
Married/common-law partner	955	62.75	233	61.80	209	64.91	132	68.04	219	59.03	27	61.36	135	63.08
Divorced/widowed	155	10.18	29	7.69	34	10.56	7	3.61	52	14.02	7	15.91	26	12.15
Sexual orientation														
Heterosexual	1162	81.09	306	85.00	236	79.46	135	76.70	272	78.16	34	82.93	179	84.83
Bisexual	90	6.28	17	4.72	19	6.40	6	3.41	37	10.63	2	4.88	9	4.27
Asexual	103	7.19	22	6.11	34	11.45	21	11.93	17	4.89	1	2.44	8	3.79
Homosexual	38	2.65	8	2.22	3	1.01	7	3.98	11	3.16	1	2.44	8	3.79
Other	40	2.79	7	1.94	5	1.68	7	3.98	11	3.16	3	7.32	7	3.32

Table 5-2: Prevalence of Workplace Racial Discrimination in Hiring Process by Sociodemographic Factors According to Race (N = 1535)

	Total %	Black %	Arab %	Asian %	Indigenous %	Mixed %	Other %	χ^2 (df), <i>p</i> -value
Total	27.43	36.48	19.94	22.56	28.76	22.73	25.81	28.31 (5), <.001
Gender								
Men	27.14	39.13	20.47	20.35	26.38	21.43	26.74	17.71 (5), .003
Women	27.44	34.10	19.60	25.61	30.92	25.00	24.22	13.09 (5), .023
χ^2 (df), <i>p</i> -value	.02 (1), .894	1.01 (1), .315	.04 (1), .847	.75 (1), .386	.91 (1), .339	.07 (1), 1	.17 (1), .677	
Age								
25-34	26.44	29.25	19.51	24.62	38.67		13.73	12.65 (4), .013
35-44	30.22	37.86	25.24	17.07	34.85		25.93	9.54 (4) .049
45-54	29.11	47.22	15.63	20.45	28.13		36.84	19.28 (4), <.001
55-64	24.08	35.71	14.89	29.03	25.00	31.25	17.14	6.07 (5), .299
65-74	27.85	30.77	23.81		21.31		42.42	4.99 (3), .172
75 and above	17.65				11.11			
χ^2 (df), <i>p</i> -value	6.04 (5), .302	6.46 (4), .167	3.47 (4), .482	1.71 (3), .634	9.79 (5), .081		12.35 (4), .015	
Province								
Ontario	28.46	36.13	14.81	28.05	29.89	20.00	32.93	15.95 (5), .007
Quebec	25.47	33.08	22.22		25.77		20.00	5.63 (3) .131
The Prairies and British Columbia	28.51	48.61	13.64	18.37	32.26		22.22	23.97 (4), <.001
The Atlantic	23.29	20.00			14.29		23.08	12.12 (2), .002
χ^2 (df), <i>p</i> -value	2.08 (3), .556	7.58 (3), .056	2.90 (2), .235	2.38 (1), .123	4.27 (3), .233		3.46 (3), .326	
Education								
Primary/secondary/high school	24.90	30.43	10.00		29.31		25.71	5.05 (3), .168
College	26.04	36.73	16.67	3.70	30.43		22.86	16.93 (4), .002
University certificate/bachelor's degree	26.11	33.80	22.22	21.70	27.37	40.00	21.33	9.09 (5) .106
Graduate degree (Master's/PhD)	33.92	42.86	20.99	38.00	21.74		41.67	12.16 (4), .016
χ^2 (df), <i>p</i> -value	7.76 (3), .051	2.78 (3), .429	2.83 (3), .419	11.93 (2), .003	.85 (3), .838		5.81 (3), .121	
Place of Birth								
Canada	26.93	37.04	21.84	13.95	29.00	21.21	24.86	17.27 (5), .004
Abroad	28.13	36.18	19.25	29.36			31.25	17.39 (3), <.001
χ^2 (df), <i>p</i> -value	.27 (1), .604	.03 (1), .868	.27 (1), .604	6.53 (1), .011			.58 (1), .446	
Language								
English	29.46	36.73	22.22	22.73	28.46	28.57	27.70	9.83 (5), .080
French	22.37	29.11	15.38		24.49		16.67	5.06 (3), .167
Other	19.33	28.57	14.81	20.00				1.48 (2), .476
Bilingual	29.87	46.77	22.69	23.19	42.86		31.25	14.53 (4), .006
χ^2 (df), <i>p</i> -value	10.31 (3), .016	5.07 (3), .167	2.71 (3), .439	.15 (2), .930	2.90 (2), .234		1.96 (2), .375	
Job status								
Employed (part-time/full-time/self-employed)	28.34	37.07	20.61	21.47	33.70	26.67	22.99	32.20 (5), <.001
Retired	22.50	30.30	13.33	33.33	15.69		37.21	11.64 (4), .020
χ^2 (df), <i>p</i> -value	3.47 (1), .063	.60 (1), .440	.90 (1), .342	1.32 (1), .251	11.73 (1), <.001		3.64 (3), .056	
Household income								

Below \$10,000	40.91							
\$10,000-\$19,999	27.08							
\$20,000-\$39,999	30.10	35.29	35.29		24.64	24.00	2.51 (3), .473	
\$40,000-\$59,999	31.67	35.94	25.00	25.00	36.84	33.33	2.90 (4), .575	
\$60,000-\$79,999	28.39	46.55	17.65	19.23	29.63	29.17	14.11 (4), .007	
\$80,000-\$99,999	22.89	28.21	13.64	14.71	25.49	26.92	4.49 (4), .344	
\$100,000-\$124,999	30.93	41.07	20.51	30.77	31.43	29.03	4.65 (4), .325	
\$125,000-\$149,999	20.37	30.77	5.88	23.53	25.00	8.70	6.40 (4), .171	
\$150,000-\$199,999	22.32	28.13	17.65	21.74	17.39	25.00	1.22 (4), .876	
\$200,000 and above	28.13		19.05					
χ^2 (df), <i>p</i> -value	12.26 (9), .199	5.57 (6), .473	9.25 (7), .235	2.50 (5), .777	4.39 (6), .624	4.93 (6), .552		
Religion								
Christian	27.68	37.46	17.59	28.85	20.67	20.43	26.34 (4), <.001	
Muslim	24.54	34.78	22.49	37.50			3.08 (2), .215	
Other	29.44	28.00		20.00	41.18	39.13	6.70 (3), .082	
No religion	26.48	30.43	15.79	12.73	37.50	13.33	13.92 (5), .016	
χ^2 (df), <i>p</i> -value	1.39 (3), .707	1.28 (3), .734	1.23 (2), .541	6.58 (3), .086	13.11 (2), .001	3.58 (2), .167		
Marital status								
Single	28.40	34.78	21.52	18.18	37.00	20.75	12.07 (4), .017	
Married/common-law partner	27.43	37.77	19.14	25.00	26.03	25.93	20.36 (5), .001	
Divorced/widowed	24.52	31.03	20.59		23.08	30.77	1.44 (3), .696	
χ^2 (df), <i>p</i> -value	.85 (2), .652	.68 (2), .712	.22 (2), .898	1.02 (1), .313	4.94 (2), .084	1.20 (2), .550		
Sexual orientation								
Heterosexual	26.08	35.62	19.49	20.00	27.21	23.53	24.36 (5), <.001	
Bisexual	30.00	47.06	15.79		29.73		4.17 (2), .124	
Asexual	33.98	40.91	26.47	33.33	23.53		1.84 (3), .607	
Homosexual	26.32							
Other	37.50							
χ^2 (df), <i>p</i> -value	5.65 (5), .227	1.10 (2), .576	1.13 (2), .567	1.90 (1), .253	.23 (2), .890			

Table 5-3: Prevalence of Racial Discrimination in Promotion Denial or Firing by Sociodemographic Factors According to Race (N = 1535)

	Total %	Black %	Arab %	Asian %	Indigenous %	Mixed %	Other %	χ^2 (df), <i>p</i> -value
Total	29.90	32.02	22.70	23.59	36.56	31.82	30.88	20.63 (5), <.001
Gender								
Men	31.12	35.40	24.41	24.78	35.58	32.14	32.56	7.78 (5), .169
Women	28.39	28.57	21.61	21.95	36.71	31.25	28.91	13.32 (5), .021
χ^2 (df), <i>p</i> -value	1.35 (1), .245	2.00 (1), .157	.35 (1), .556	.21 (1), .646	.05 (1), .822	.00 (1), .961	.32 (1), .569	
Age								
25-34	21.73	21.70	20.73	16.92	30.67		13.73	6.42 (4), .170
35-44	30.22	29.29	21.36	24.39	45.45		37.04	12.94 (4), .012
45-54	36.30	44.44	26.56	27.27	43.75		36.84	7.75 (4), .101
55-64	33.47	39.29	21.28	29.03	39.77	37.50	31.43	5.59 (5), .348
65-74	36.08	42.31	33.33		31.15		42.42	1.72 (3), .632
75 and above	15.69				5.56			
χ^2 (df), <i>p</i> -value	27.18 (5), <.001	12.78 (4), .012	2.20 (4), .700	2.47 (3), .481	13.42 (5), .020		10.60 (4), .031	
Province								
Ontario	32.02	34.84	17.59	25.61	41.38	40.00	40.24	19.07 (5), .002
Quebec	26.95	28.57	24.34		31.96		22.50	2.47 (3), .481
The Prairies and British Columbia	30.77	34.72	27.27	20.41	40.65		24.69	13.90 (4), .008
The Atlantic	23.29	25.00			10.71		30.77	5.95 (2), .051
χ^2 (df), <i>p</i> -value	4.79 (3), .188	1.98 (3), .576	2.15 (2), .341	.69 (1), .407	10.96 (3), .012		6.16 (3), .104	
Education								
Primary/secondary/high school	29.72	36.96	26.67		31.90		28.57	1.10 (3), .778
College	32.19	34.69	16.67	11.11	41.30		34.29	17.66 (4), .001
University certificate or bachelor's degree	28.16	28.87	23.53	22.64	37.89	60.00	25.33	15.52 (5), .008
Graduate degree (Master's/PhD)	30.77	31.87	24.69	36.00	26.09		38.89	3.43 (4), .488
χ^2 (df), <i>p</i> -value	1.97 (3), .580	1.48 (3), .687	1.75 (3), .627	6.37 (2), .041	3.59 (3), .310		2.62 (3), .454	
Place of Birth								
Canada	32.18	39.26	22.99	17.44	36.59	30.30	29.73	18.87 (5), .002
Abroad	26.72	28.05	22.59	28.44			37.50	4.37 (3), .224
χ^2 (df), <i>p</i> -value	5.31 (1), .021	5.03 (1), .025	.01 (1), .940	3.23 (1), .072			.77 (1), .380	
Language								
English	33.04	33.63	27.78	25.00	37.80	32.14	31.76	6.15 (5), .292
French	22.71	20.25	24.36		24.49		20.00	.69 (3), .875
Other	22.69	35.71	16.67	14.29				3.29 (2), .193
Bilingual	31.17	40.32	21.01	26.09	66.67		34.38	21.62 (4), <.001
χ^2 (df), <i>p</i> -value	14.28 (3), .003	7.34 (3), .062	2.50 (3), .475	2.02 (2), .364	14.57 (2), <.001		1.90 (2), .387	
Job status								
Employed (part-time/full-time/self-employed)	29.88	31.61	22.97	23.16	39.63	40.00	28.16	25.01 (5), <.001
Retired	30.00	36.36	20.00	27.78	28.43		41.86	4.92 (4), .296
χ^2 (df), <i>p</i> -value	.00 (1), .971	.31 (1), .576	.14 (1), .711	.19 (1), .660	4.00 (1), .045		3.02 (3), .082	
Household income								
Below \$10,000	27.27							
\$10,000-\$19,999	29.17							
\$20,000-\$39,999	34.18	33.33	41.18		34.78		32.00	.73 (3), .867
\$40,000-\$59,999	31.25	26.56	26.92	25.00	42.11		36.11	5.09 (4), .278
\$60,000-\$79,999	28.39	41.38	14.71	15.38	40.74		25.00	17.31 (4), .002

\$80,000-\$99,999	30.85	25.64	20.45	29.41	37.25		34.62	4.82 (4), .431
\$100,000-\$124,999	33.51	35.71	23.08	34.62	34.29		38.71	2.43 (4), .657
\$125,000-\$149,999	22.22	23.08	11.76	17.65	30.00		21.74	2.01 (4), .734
\$150,000-\$199,999	26.79	31.25	23.53	17.39	30.43		31.25	1.76 (4), .780
\$200,000 and above	29.69		14.29					
χ^2 (df), <i>p</i> -value	7.02 (9), .635	5.30 (6), .506	11.89 (7), .104	4.15 (5), .528	2.07 (6), .914		2.66 (6), .850	
Religion								
Christian	30.53	33.33	21.30	21.15	32.96		30.11	8.09 (4), .088
Muslim	25.93	26.09	25.44	37.50				1.09 (2), .579
Other	33.89	20.00		25.00	50.98		43.48	11.52 (3), .009
No religion	28.57	34.78	10.53	16.36	38.54	26.67	27.85	12.21 (5), .032
χ^2 (df), <i>p</i> -value	3.38 (3), .337	2.34 (3), .505	2.42 (2), .298	3.53 (3), .317	5.58 (2), .062		2.08 (2), .354	
Marital status								
Single	31.07	33.04	24.05	10.91	46.00		28.30	23.15 (4), <.001
Married/common-law partner	28.38	30.04	22.49	28.03	30.59	33.33	30.37	5.01 (5), .414
Divorced/widowed	35.48	44.83	20.59		42.31		34.62	5.39 (3), .145
χ^2 (df), <i>p</i> -value	3.63 (2), .163	2.65 (2), .265	.17 (2), .917	6.43 (1), .011	7.96 (2), .019		.33 (2), .848	
Sexual orientation								
Heterosexual	29.00	32.35	22.03	19.26	36.76	35.29	26.82	22.49 (5), <.001
Bisexual	33.33	35.29	21.05		29.73			.92 (2), .631
Asexual	33.98	36.36	29.41	14.29	52.94			6.76 (3), .080
Homosexual	39.47							
Other	42.50							
χ^2 (df), <i>p</i> -value	6.32 (4), .177	.20 (2), .904	.95 (2), .620	.30 (1), .767	2.70 (2), .259			

Factors Associated with Workplace Racial Discrimination by Race Groups

Table 5-4: Logistic regression for the racial discrimination in hiring process by sociodemographic factors and mental health outcomes

	Total OR (95% CI)	p-value	Black OR (95% CI)	p-value	Arab OR (95% CI)	p-value	Asian OR (95% CI)	p-value	Indigenous OR (95% CI)	p-value	Other OR (95% CI)	p-value
Race (reference: Arab)	-		2.31 (1.64 – 3.25)	<.001	Reference		1.17 (.76 – 1.80)	.476	1.62 (1.14 – 2.31)	.007	1.40 (.93 – 2.10)	.108
Gender (reference: Men)												
Women	1.02 (.81 – 1.27)	.894	.73 (.47 – 1.13)	.158	.95 (.54 – 1.65)	.847	1.35 (.69 – 2.65)	.387	1.25 (.79 – 1.97)	.340	.88 (.46 – 1.64)	.677
Age (reference: 25-34)												
35-44	1.20 (.88 – 1.64)	.239	1.47 (.86 – 2.53)	.159	1.39 (.69 – 2.82)	.356	.63 (.23 – 1.70)	.361	.85 (.43 – 1.69)	.639	2.20 (.81 – 6.00)	.123
45-54	1.14 (.81 – 1.60)	.442	2.16 (1.16 – 4.04)	.015	.76 (.32 – 1.82)	.543	.79 (.31 – 1.99)	.613	.62 (.30 – 1.27)	.192	3.67 (1.30 – 10.32)	.014
55-64	.88 (.61 – 1.28)	.509	1.34 (.56 – 3.24)	.510	.72 (.27 – 1.91)	.511	1.25 (.48 – 3.27)	.645	.53 (.27 – 1.03)	.062	1.30 (.40 – 4.26)	.664
65-74	1.07 (.71 – 1.63)	.737	1.08 (.42 – 2.73)	.879	1.29 (.41 – 4.04)	.663			.43 (.20 - .93)	.031	4.63 (1.61 – 13.30)	.004
75 and above	.60 (.28 – 1.27)	.179							.20 (.04 - .93)	.040		
Province (reference: Ontario)												
Quebec	.86 (.65 – 1.14)	.286	.87 (.54 – 1.42)	.588	1.64 (.87 – 3.09)	.124			.81 (.43 – 1.55)	.534	.51 (.21 – 1.25)	.142
The Prairies and British Columbia	1.00 (.76 – 1.32)	.988	1.67 (.95 – 2.95)	.075	.91 (.24 – 3.43)	.887	.58 (.29 – 1.17)	.125	1.12 (.63 – 1.97)	.703	.58 (.29 – 1.17)	.128
The Atlantic	.76 (.43 – 1.35)	.356	.44 (.14 – 1.39)	.162					.39 (.12 – 1.24)	.111	.61 (.16 – 2.40)	.481
Education (reference: primary/secondary/high school)												
College	1.06 (.74 – 1.53)	.744	1.33 (.63 – 2.81)	.460	1.80 (.46 – 7.10)	.401	Reference		1.06 (.62 – 1.81)	.845	.86 (.33 – 2.19)	.746
University certificate/bachelor's degree	1.07 (.76 – 1.50)	.715	1.17 (.57 – 2.39)	.673	2.57 (.74 – 9.00)	.139	7.20 (.93 – 55.97)	.059	.91 (.50 – 1.66)	.756	.78 (.31 – 2.00)	.610
Graduate degree (Master's/PhD)	1.55 (1.06 – 2.26)	.023	1.71 (.81 – 3.64)	.161	2.39 (.65 – 8.84)	.191	15.94 (2.00 – 127.22)	.009	.67 (.23 – 1.95)	.462	2.06 (.75 – 5.65)	.158
Place of Birth (reference: Canada)												
Abroad	1.06 (.85 – 1.33)	.604	.96 (.62 – 1.49)	.868	.85 (.47 – 1.56)	.605	2.56 (1.23 – 5.35)	.012			1.37 (.61 – 3.11)	.447
Language (reference: English)												
French	.69 (.50 – .94)	.020	.71 (.41 – 1.23)	.222	.64 (.28 – 1.46)	.285			.82 (.48 – 1.40)	.457	.52 (.19 – 1.46)	.214
Other	.57 (.36 – .93)	.023	.69 (.21 – 2.27)	.540	.61 (.24 – 1.55)	.298	.85 (.32 – 2.23)	.742				
Bilingual	1.02 (.77 – 1.36)	.892	1.51 (.86 – 2.67)	.152	1.03 (.51 – 2.07)	.940	1.03 (.49 – 2.17)	.946	1.89 (.76 – 4.67)	.171	1.19 (.52 – 2.72)	.687
Job status (reference: employed)												
Retired	.73 (.53 – 1.02)	.063	.74 (.34 – 1.60)	.442	.59 (.20 – 1.76)	.347	1.83 (.64 – 5.19)	.257	.37 (.20 - .66)	<.001	1.99 (.97 – 4.05)	.059
Household income (reference: below \$59,999)												
\$60,000-\$79,999	.88 (.63 – 1.24)	.466	1.61 (.86 – 3.02)	.138	.53 (.25 – 1.13)	.101	.71 (.22 – 2.35)	.580	.91 (.46 – 1.79)	.786	.94 (.34 – 2.61)	.907
\$80,000-\$99,999	.66 (.45 - .96)	.032	.73 (.33 – 1.59)	.423	.39 (.15 – 1.02)	.056	.52 (.16 – 1.66)	.269	.74 (.36 – 1.51)	.409	.84 (.34 – 2.31)	.738
\$100,000-\$124,999	1.00 (.70 – 1.42)	.980	1.29 (.68 – 2.45)	.440	.64 (.26 – 1.55)	.320	1.33 (.45 – 3.91)	.600	.99 (.45 – 2.18)	.983	.94 (.37 – 2.37)	.887
\$125,000-\$149,999	.57 (.34 - .94)	.028	.77 (.39 – 1.50)	.436	.33 (.11 – 1.02)	.054	.92 (.25 – 3.43)	.905	.72 (.25 – 2.10)	.548	.22 (.05 – 1.01)	.052
\$150,000 and above	.72 (.49 – 1.06)	.099	1.54 (.45 – 5.32)	.495	.58 (.18 – 1.88)	.363	1.12 (.40 – 3.14)	.822	.58 (.24 – 1.43)	.239	.65 (.23 – 1.85)	.423
Religion (reference Christian)												
Muslim	.85 (.60 – 1.20)	.360	.89 (.37 – 2.17)	.799	1.36 (.74 – 2.51)	.228	1.48 (.46 – 4.80)	.514				
Other	1.09 (.76 – 1.56)	.637	.65 (.26 – 1.60)	.350			.62 (.26 – 1.47)	.277	2.69 (1.38 – 5.22)	.004	2.50 (.94 – 6.65)	.066
No religion	.94 (.69 – 1.28)	.699	.73 (.29 – 1.83)	.503	.88 (.23 – 3.32)	.848	.36 (.13 - .97)	.044	2.30 (1.33 – 3.99)	.003	1.41 (.69 – 2.87)	.342
Marital status (reference: single)												

Married/common-law partner	.95 (.74 – 1.23)	.715	1.14 (.71 – 1.81)	.587	.86 (.46 – 1.63)	.651	1.50 (.68 – 3.31)	.315	.60 (.36 - .99)	.047	1.44 (.67 – 3.09)	.348
Divorced/widowed	.82 (.54 – 1.25)	.356	.84 (.35 – 2.02)	.704	.95 (.35 – 2.54)	.912			.51 (.24 – 1.09)	.084	1.70 (.58 – 4.92)	.330
Sexual orientation (reference: heterosexual)												
Bisexual	1.21 (.76 – 1.94)	.416	1.61 (.60 – 4.28)	.343	.77 (.22 – 2.77)	.694			1.13 (.53 – 2.41)	.747		
Asexual	1.46 (.95 – 2.24)	.084	1.25 (.52 – 3.02)	.618	1.49 (.65 – 3.40)	.347	2.00 (.74 – 5.44)	.175	.82 (.26 – 2.61)	.741		
Homosexual	1.01 (.49 – 2.11)	.974										
Other	1.70 (.88 – 3.27)	.111										
Anxiety (reference: no)												
Yes	2.03 (1.61 – 2.55)	<.001	2.41 (1.49 – 3.90)	<.001	2.05 (1.18 – 3.55)	.010	1.18 (.58 – 2.41)	.648	1.91 (1.21 – 3.01)	.005	3.51 (1.86 – 6.62)	<.001
Depression (reference: no)												
Yes	2.21 (1.76 – 2.77)	<.001	2.69 (1.72 – 4.21)	<.001	2.20 (1.27 – 3.81)	.005	1.45 (.73 – 2.87)	.290	2.68 (1.69 – 4.25)	<.001	2.57 (1.38 – 4.78)	.003
Stress (reference: no)												
Yes	2.01 (1.57 – 2.58)	<.001	1.95 (1.17 – 3.25)	.011	2.45 (1.37 – 4.40)	.003	1.00 (.43 – 2.29)	.991	2.39 (1.48 – 3.86)	<.001	2.81 (1.48 – 5.31)	.002

Table 5-5 : Logistic Regression for Racial Discrimination in Promotion Denial or Firing by Sociodemographic Factors and Mental Health Outcomes

	Total OR (95% CI)	p-value	Black OR (95% CI)	p-value	Arab OR (95% CI)	p-value	Asian OR (95% CI)	p-value	Indigenous OR (95% CI)	p-value	Other OR (95% CI)	p-value
Race (reference: Arab)	-		1.60 (1.15 – 2.15)	.006	Reference		1.05 (.69 – 1.60)	.815	1.96 (1.40 – 2.74)	<.001	1.52 (1.03 – 2.24)	.034
Gender (reference: men)												
Women	.88 (.70 – 1.09)	.245	.73 (.47 – 1.13)	.158	.85 (.50 – 1.45)	.556	.85 (.43 – 1.68)	.646	1.05 (.68 – 1.61)	.822	.84 (.47 – 1.52)	.569
Age (reference: 25-34)												
35-44	1.56 (1.13 – 2.15)	.007	1.49 (.83 – 2.69)	.181	1.04 (.51 – 2.12)	.917	1.58 (.60 – 4.15)	.350	1.88 (.95 – 3.76)	.072	3.70 (1.40 – 9.75)	.008
45-54	2.05 (1.46 – 2.89)	<.001	2.89 (1.50 – 5.56)	.002	1.38 (.64 – 2.99)	.409	1.84 (.73 – 4.65)	.197	1.76 (.88 – 3.53)	.112	3.67 (1.30 – 10.32)	.014
55-64	1.81 (1.26 – 2.60)	.001	2.34 (.96 – 5.67)	.061	1.03 (.43 – 2.49)	.942	2.01 (.73 – 5.52)	.176	1.49 (.78 – 2.86)	.227	2.88 (.99 – 8.40)	.053
65-74	2.03 (1.36 – 3.05)	<.001	2.65 (1.07 – 6.54)	.035	1.91 (.67 – 5.48)	.228			1.02 (.49 – 2.12)	.952	4.63 (1.61 – 13.30)	.004
75 and above	.67 (.30 – 1.48)	.323							.12 (.02 – 1.06)	.057		
Province (reference: Ontario)												
Quebec	.78 (.60 – 1.03)	.078	.75 (.45 – 1.23)	.256	1.51 (.83 – 2.74)	.178			.67 (.36 – 1.22)	.186	.43 (.18 – 1.02)	.056
The Prairies and British Columbia	.94 (.72 – 1.24)	.675	.99 (.55 – 1.79)	.986	1.76 (.61 – 5.08)	.298	.74 (.37 – 1.50)	.408	.97 (.57 – 1.65)	.911	.49 (.25 - .95)	.035
The Atlantic	.64 (.36 – 1.14)	.132	.62 (.21 – 1.81)	.384					.17 (.05 - .61)	.006	.66 (.19 – 2.32)	.517
Education (reference: primary/secondary/high school)												
College	1.12 (.80 – 1.58)	.508	.91 (.44 – 1.88)	.791	.55 (.19 – 1.58)	.267	Reference		1.50 (.90 – 2.52)	.123	1.30 (.54 – 3.16)	.556
University	.93 (.67 – 1.28)	.648	.69 (.34 – 1.39)	.304	.85 (.35 – 2.06)	.713	2.34 (.65 – 8.45)	.194	1.30 (.74 – 2.30)	.363	.85 (.35 – 2.08)	.720
certificate/bachelor's degree												
Graduate degree (Master's/PhD)	1.05 (.73 – 1.52)	.792	.80 (.38 – 1.68)	.552	.90 (.35 – 2.34)	.832	4.50 (1.19 – 17.05)	.027	.75 (.27 – 2.07)	.583	1.59 (.59 – 4.30)	.360
Place of Birth (reference: Canada)												
Abroad	.77 (.61 - .96)	.021	.60 (.39 – .90)	.025	.98 (.55 – 1.75)	.940	1.88 (.94 – 3.77)	.075			1.42 (.65 – 3.10)	.381
Language (reference: English)												
French	.60 (.44 - .81)	.001	.50 (.27 – .93)	.028	.84 (.40 – 1.74)	.634			.53 (.31 - .90)	.020	.54 (.21 – 1.40)	.204
Other	.59 (.39 – .94)	.025	1.10 (.36 – 3.39)	.873	.52 (.22 – 1.26)	.146	.50 (.17 – 1.45)	.201				
Bilingual	.92 (.69 – 1.22)	.550	1.33 (.75 – 2.38)	.329	.69 (.35 – 1.36)	.287	1.06 (.51- 2.18)	.877	3.29 (1.28 – 8.45)	.013	1.13 (.50 – 2.52)	.774
Job status (reference: employed)												
Retired	1.01 (.74 – 1.36)	.971	1.24 (.59 – 2.60)	.576	.84 (.33 – 2.13)	.711	1.28 (.43 – 3.79)	.661	.61 (.37 - .99)	.047	1.84 (.92 – 3.66)	.084
Household income (reference: below \$59,999)												
\$60,000-\$79,999	.84 (.60 – 1.18)	.320	1.79 (.94 – 3.42)	.077	.37 (.17 - .81)	.014	.62 (.17 – 2.22)	.461	1.15 (.61 – 2.16)	.666	.59 (.21 – 1.67)	.318
\$80,000-\$99,999	.95 (.67 – 1.35)	.763	.88 (.39 – 1.98)	.750	.55 (.23 – 1.28)	.164	1.42 (.51 – 3.93)	.504	.99 (.52 – 1.91)	.983	.93 (.36 – 2.40)	.884
\$100,000-\$124,999	1.07 (.75 – 1.52)	.706	1.41 (.73 – 2.75)	.310	.64 (.27 – 1.51)	.306	1.80 (.62 – 5.26)	.283	.87 (.40 – 1.88)	.729	1.11 (.46 – 2.66)	.812
\$125,000-\$149,999	.61 (.37 - .99)	.046	.97 (.49 – 1.93)	.926	.46 (.17 – 1.22)	.116	.73 (.17 – 3.05)	.665	.72 (.26 – 1.97)	.518	.49 (.16 – 1.48)	.205
\$150,000 and above	.82 (.56 – 1.20)	.302	2.12 (.61 – 7.36)	.238	.35 (.10 – 1.30)	.117	1.27 (.45 – 3.61)	.647	.84 (.38 – 1.85)	.659	.62 (.23 – 1.66)	.338
Religion (reference: Christian)												

Muslim	.80 (.57 – 1.12)	.193	.71 (.27 – 1.85)	.478	1.26 (.72 – 2.24)	.430	2.24 (.76 – 7.51)	.193					
Other	1.17 (.83 – 1.65)	.383	.50 (.18 – 1.37)	.179			1.24 (.51 – 3.01)	.631	2.12 (1.13 – 3.98)	.020	1.79 (.70 – 4.55)	.225	
No religion	.91 (.67 – 1.23)	.539	1.07 (.44 – 2.60)	.887	.43 (.09 – 2.02)	.288	.73 (.27 – 1.94)	.526	1.28 (.76 – 2.14)	.355	.90 (.46 – 1.74)	.745	
Marital status (reference: single)													
Married/common-law partner	.88 (.69 – 1.13)	.315	.87 (.54 – 1.40)	.569	.92 (.50 – 1.69)	.778	3.18 (1.26 – 8.05)	.015	.52 (.32 – .84)	.008	1.10 (.55 – 2.23)	.780	
Divorced/widowed	1.22 (.83 – 1.80)	.317	1.65 (.72 – 3.77)	.238	.82 (.31 – 2.18)	.689			.86 (.44 – 1.69)	.664	1.34 (.49 – 3.66)	.567	
Sexual orientation (reference: heterosexual)													
Bisexual	1.22 (.78 – 1.93)	.385	1.14 (.41 – 3.17)	.801	.94 (.30 – 2.97)	.921			.73 (.34 – 1.54)	.404			
Asexual	1.26 (.82 – 1.93)	.289	1.19 (.49 – 2.94)	.699	1.47 (.66 – 3.28)	.341	.70 (.19 – 2.55)	.587	1.93 (.72 – 5.18)	.188			
Homosexual	1.60 (.82 – 3.10)	.166											
Other	1.81 (.95 – 3.43)	.069											
Anxiety (reference: no)													
Yes	2.15 (1.71 – 2.69)	<.001	2.02 (1.24 – 3.29)	<.001	2.31 (1.37 – 3.91)	.002	1.79 (.90 – 3.56)	.096	1.76 (1.15 – 2.71)	.009	2.93 (1.61 – 5.35)	<.001	
Depression (reference: no)													
Yes	2.21 (1.76 – 2.77)	<.001	2.32 (1.48 – 3.65)	<.001	2.44 (1.33 – 3.80)	.003	2.10 (1.07 – 4.12)	.030	2.82 (1.82 – 4.36)	<.001	3.25 (1.79 – 5.90)	<.001	
Stress (reference: no)													
Yes	2.01 (1.57 – 2.58)	<.001	1.55 (.92 – 2.62)	.100	3.14 (1.80 – 5.51)	<.001	1.78 (.83 – 3.83)	.140	2.19 (1.38 – 3.48)	<.001	2.51 (1.36 – 4.63)	.003	
PTSD (reference: no)													
Yes	2.11 (1.63 – 2.74)	<.001	1.58 (.94 – 2.66)	.082	1.96 (1.03 – 3.72)	.040	1.80 (.73 – 4.44)	.205	2.87 (1.78 – 4.65)	<.001	2.51 (1.29 – 4.87)	.007	

Table 5-6: Mean Differences in the Outcome Variables by the Racial Discrimination in Hiring Process and Fring

Mean differences in the outcome variables by the racial discrimination in hiring process																		
	Total			Black			Arab			Asian			Indigenous			Other		
	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value
Anxiety	6.20 (8.53)	9.31 (9.85)	-5.73 (671), <.001	4.89 (7.53)	8.09 (9.75)	-3.33 (233), .001	7.31 (9.49)	10.83 (10.06)	-2.65 (324), .009	6.45 (8.57)	6.64 (8.31)	-.13 (193), .889	7.25 (8.99)	10.65 (9.98)	-3.21 (370), <.001	5.12 (7.60)	11.00 (10.63)	-3.82 (75), <.001
Depression	7.49 (9.90)	11.69 (11.15)	-6.78 (685), <.001	6.06 (9.72)	10.16 (10.63)	-3.74 (267), <.001	8.15 (10.13)	13.14 (12.14)	-3.06 (87), .003	7.18 (9.22)	8.32 (9.21)	-.72 (193), .472	8.72 (10.59)	13.42 (11.23)	-3.80 (370), <.001	7.52 (9.56)	14.11 (12.15)	-3.68 (80), <.001
Stress	8.11 (9.34)	11.56 (10.31)	-6.00 (696), <.001	6.55 (8.92)	10.09 (10.58)	-3.32 (250), .001	8.67 (9.79)	12.34 (10.93)	-2.64 (324), .009	7.62 (8.46)	8.45 (8.44)	-.58 (193), .563	9.41 (10.07)	13.35 (9.79)	-3.44 (370), <.001	8.57 (9.00)	14.18 (10.88)	-3.47 (83), <.001
PTSD	20.67 (18.34)	27.98 (20.14)	-5.86 (642), <.001	20.92 (19.63)	26.97 (21.68)	-2.37 (262), .019	22.35 (18.10)	28.94 (17.52)	-2.29 (206), .023	19.96 (17.44)	19.56 (15.11)	.12 (115), .906	21.33 (19.27)	31.50 (20.46)	-4.30 (370), <.001	19.18 (16.61)	30.22 (20.85)	-3.47 (81), <.001

Mean differences in the outcome variables by the racial discrimination in promotion denial or firing																		
	Total			Black			Arab			Asian			Indigenous			Other		
	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value	No	Yes	t (df), p-value
Anxiety	5.98 (8.24)	9.56 (10.18)	-6.67 (726), <.001	5.28 (7.82)	7.70 (9.73)	-2.41 (197), .017	7.13 (9.29)	11.03 (10.45)	-2.89 (109), .005	6.00 (8.31)	8.09 (8.93)	-1.46 (193), .145	6.64 (8.02)	10.99 (10.91)	-4.06 (220), <.001	5.00 (7.62)	10.30 (10.25)	-3.79 (100), <.001
Depression	7.22 (9.67)	11.97 (11.34)	-7.85 (755), <.001	6.60 (9.91)	9.57 (10.67)	-2.66 (379), .008	7.96 (9.99)	13.16 (12.19)	-3.36 (103), .001	6.67 (8.95)	9.91 (9.68)	-2.11 (193), .037	7.97 (9.76)	13.72 (21.01)	-4.75 (238), <.001	7.23 (9.77)	13.67 (11.27)	-4.28 (215), <.001
Stress	7.82 (9.13)	11.95 (10.48)	-7.33 (768), <.001	6.98 (9.29)	9.66 (10.31)	-2.53 (379), .012	8.47 (9.69)	12.57 (10.94)	-2.91 (109), .004	7.06 (7.91)	10.22 (9.66)	-2.24 (193), .026	8.72 (9.30)	13.71 (10.76)	-4.70 (370), <.001	8.35 (9.13)	13.76 (10.31)	-3.88 (215), <.001
PTSD	19.90 (17.67)	28.76 (20.65)	-7.26 (707), <.001	20.99 (19.59)	27.64 (21.91)	-2.56 (262), .011	22.55 (17.82)	28.23 (18.57)	-1.98 (206), .049	17.73 (15.09)	24.08 (19.19)	-1.96 (115), .053	19.31 (17.67)	32.12 (21.30)	-5.70 (239), <.001	18.92 (16.73)	29.16 (20.22)	-3.47 (106), <.001

Table 5-7: Logistic Regressions for Depression, Anxiety, Stress, and PTSD Symptoms Based on Racial Discrimination in Hiring

	Total		Black				Arab				Asian				Indigenous				Other					
	Unadjusted		Adjusted		Unadjusted		Adjusted		Unadjusted		Adjusted		Unadjusted		Adjusted		Unadjusted		Adjusted		Unadjusted		Adjusted	
	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value
Anxiety	2.03 (1.61 - 2.55)	<.001	2.24 (1.71 - 2.92)	<.001	2.23 (1.41 - 3.50)	<.001	2.41 (1.49 - 3.88)	<.001	2.05 (1.18 - 3.55)	.010	2.00 (1.15 - 3.50)	.015	1.18 (.58 - 2.41)	.648	1.21 (.58 - 2.51)	.615	1.91 (1.21 - 3.01)	.005	1.68 (1.04 - 2.69)	.032	3.51 (1.86 - 6.62)	<.001	3.72 (1.92 - 7.22)	<.001
Depression	2.21 (1.76 - 2.77)	<.001	2.18 (1.73 - 2.75)	<.001	2.69 (1.72 - 4.21)	<.001	2.83 (1.78 - 4.50)	<.001	2.20 (1.27 - 3.81)	.005	2.16 (1.24 - 3.77)	.007	1.45 (.73 - 2.87)	.290	1.48 (.73 - 2.99)	.279	2.68 (1.69 - 4.25)	<.001	2.34 (1.45 - 3.79)	<.001	2.57 (1.38 - 4.78)	.003	2.63 (1.38 - 5.00)	.003
Stress	2.01 (1.57 - 2.58)	<.001	2.01 (1.56 - 2.59)	<.001	1.95 (1.17 - 3.25)	.011	2.27 (1.33 - 3.87)	.003	2.45 (1.37 - 4.40)	.003	2.40 (1.33 - 4.33)	.004	1.00 (.43 - 2.29)	.991	.99 (.42 - 2.31)	.983	2.39 (1.48 - 3.86)	<.001	2.09 (1.26 - 3.44)	.004	2.81 (1.48 - 5.31)	.002	3.00 (1.53 - 5.91)	.001
PTSD	1.85 (1.42 - 2.41)	<.001	1.99 (1.45 - 2.72)	<.001	1.32 (.79 - 2.20)	.290	1.35 (.79 - 2.32)	.270	1.65 (.86 - 3.15)	.129	1.51 (.77 - 2.95)	.229	.54 (.19 - 1.59)	.265	.48 (.16 - 1.47)	.201	2.98 (1.82 - 4.90)	<.001	2.44 (1.44 - 4.12)	<.001	2.81 (1.42 - 5.55)	.003	2.92 (1.42 - 6.00)	.004

Note. Control variables included gender and age.

Table 5-8: Logistic Regressions for Depression, Anxiety, Stress, and PTSD Symptoms Based on Racial Discrimination in Promotion Denial or Firing.

	Total		Black		Arab		Asian		Indigenous		Other													
	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted												
	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value	OR (95% CI)	p- value		
Anxiety	2.15 (1.71 - 2.69)	<.001	2.37 (1.82 - 3.09)	<.001	2.22 (1.37 - 3.46)	<.001	2.89 (1.74 - 4.80)	<.001	2.31 (1.37 - 3.91)	.002	2.44 (1.42 - 4.18)	.001	1.79 (.90 - 3.56)	.096	2.10 (1.02 - 4.32)	.043	1.76 (1.15 - 2.71)	.009	1.75 (1.12 - 2.73)	.014	2.93 (1.61 - 5.35)	<.001	3.11 (1.66 - 5.83)	<.001
Depression	2.53 (2.04 - 3.17)	<.001	2.80 (2.22 - 3.54)	<.001	2.32 (1.48 - 3.65)	<.001	2.85 (1.75 - 4.65)	<.001	2.24 (1.33 - 3.80)	.003	2.35 (1.38 - 4.02)	.002	2.10 (1.07 - 4.12)	.030	2.52 (1.24 - 5.11)	.011	2.82 (1.82 - 4.36)	<.001	2.93 (1.85 - 4.64)	<.001	3.25 (1.79 - 5.90)	<.001	3.44 (1.85 - 6.40)	<.001
Stress	2.15 (1.68 - 2.75)	<.001	2.43 (1.89 - 3.14)	<.001	1.55 (.92 - 2.62)	.100	2.15 (1.23 - 3.75)	.007	3.14 (1.80 - 5.51)	<.001	3.32 (1.87 - 5.87)	<.001	1.78 (.83 - 3.83)	.140	2.07 (.94 - 4.58)	.073	2.19 (1.38 - 3.48)	<.001	2.30 (1.42 - 3.72)	<.001	2.51 (1.36 - 4.63)	.003	2.74 (1.42 - 5.25)	.002
PTSD	2.11 (1.63 - 2.74)	<.001	2.43 (1.77- 3.32)	<.001	1.58 (.94 - 2.66)	.082	1.97 (1.12 - 3.46)	.019	1.96 (1.03 - 3.72)	.040	2.14 (1.09 - 4.20)	.028	1.80 (.73 - 4.44)	.205	2.39 (.89 - 6.43)	.084	2.87 (1.78 - 4.65)	<.001	2.96 (1.78 - 4.94)	<.001	2.51 (1.29 - 4.86)	.007	2.65 (1.31 - 5.36)	.007

Note. Control variables included gender and age.

CHAPTER 6 : STUDY 2 - Workplace Major Racial Discrimination and Chronic Disease Among Racialized Canadian Workers: The Moderating Effects of Work-Related Stress perception

PREFACE

This study aims to: (1) determine the rate of different types of major racial discrimination in the workplace and to assess work-related stress perception among racialized groups, (2) examine the association between major racial discrimination in the workplace and chronic diseases (prediabetes, Type 2 diabetes, blood pressure, heart disease, effect of stroke, cholesterol and back pain); and (3) investigate the mediating role of work-related stress perception in the association between racial discrimination and chronic diseases. The study received approval from the University of Ottawa Research Ethics Board (# H-04-24-10107). This article will be submitted to a scientific Journal.

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Rose Darly Dalexis, had full access to all the data in the study and took responsibility for the integrity of the data and the accuracy of the data analysis. **Dalexis**: Concept and design. **Dalexis**: Formal analysis. **Dalexis**: Interpretation of data. **Dalexis, Dr. Bourgeault, Dr. Cénat** : Drafting, review and editing the manuscript. **Dr. Bourgeault, Dr. Cénat, Dr. Beogo, and Dr. Pakhalé**: Critical revision of the manuscript for important intellectual content. **Dr. Bourgeault**: Supervision.

6.1 Abstract

Workplace stressors, such as racial discrimination, are associated with adverse health outcomes. Yet research on the impact of Major Racial Discrimination in the Workplace (MRD-W) on health remains limited. This study investigates the association between MRD-W and chronic diseases and determines the moderated role of work-related stress perception. An online survey of 519 participants aged 25 to 65 collected data on demographics, perceptions of work-related stress, MRD-W, and chronic diseases. A subsample of 273 racialized participants was analyzed. About 70% of the participants reported experiencing at least one type of MRD-W, with over half reporting racial discrimination in hiring, and slower promotion and pay raises. Public servants and unionized workers reported higher overall MRD-W rates. The odds of having Type 2 diabetes or back pain were significantly higher for participants with almost all types of MRD-W. Cholesterol diseases and the effect of stroke were more likely to be reported for some specific types of MRD-W. Work-related stress perception fully mediated the association between MRD-W and chronic diseases, indicating that MRD-W is significantly associated with chronic diseases, primarily through work-stress perception. The findings highlight the urgent need for workplace policies and interventions to address MRD-W, reduce stress, and prevent long-term health consequences among Canadian racialized workers. It also calls for research into the effectiveness of existing anti-racism policies to address these issues better.

Keywords: Racial discrimination in the workplace, racialized individuals, chronic diseases, work-related stress, Canada

6.2 Introduction

Workplace discrimination has emerged as a significant concern for occupational health and safety, particularly because it contributes to increased employee stress (Okechukwu et al., 2014). Workplace racial discrimination manifests through subtle microaggressions (e.g., being repeatedly mispronounced, overlooked in meetings), overt bias (e.g., racially charged comments or stereotypes), unequal treatment in job domains (e.g., in performance evaluations or disciplinary actions, being passed over for promotions, advancement, employment), and social isolation and exclusion from opportunities for growth and leadership (e.g., not being invited to key networking events, or denied access to high-visibility projects, not being heard in meetings) (Beagan et al., 2023; Cénat, 2023; Fryer et al., 2013; Lehmann, 2011; Pendakur & Woodcock, 2010; Quillian et al., 2020; Roscigno et al., 2012; Ruggs et al., 2011; T. R. Whitaker, 2019). Workplace racial discrimination constitutes a salient psychosocial stressor contributing to elevated stress levels among racialized and Indigenous workers in North America (Jackson et al., 2003). Indeed, racial discrimination in the workplace plays a critical role in determining the health of racialized workers (Paradies et al., 2015; Solar & Irwin, 2010). Experiences of workplace racial discrimination contribute to chronic stress, mental illness (e.g., anxiety, depression, and feelings of isolation) and physical illness (E. Allen, 2019; Chen & Mallory, 2021; Dalexis et al., 2025; Y. Lee, 2019; Paradies et al., 2015; Williams et al., 2009, 2019).

Canadian data from the 2021 to 2024 Social Survey indicated that 41% of the racialized individuals and 48% of Black individuals declared having experienced discrimination when applying for jobs or promotions (Statistics Canada, 2024). Workplace racial discrimination was reported by two out of five racialized employees, with prevalence rising to one in two among Black employees, according to a pan-Canadian survey (Zou et al., 2022). Others have presented more disaggregated data showing that 28% of non-white and 48% of Black participants have reported experiencing unfair treatment in hiring, pay or promotion because of their race (Foster et al., 2023).

6.2.1 Work stress, racial discrimination, and health risks

Work-related stress arises from workplace demands and pressures, which include work conditions such as workload, task complexity, job security, lack of autonomy, and work-life balance, as well as environmental elements like lack of support, job safety, interpersonal conflicts, harassment, and discrimination (Barnay, 2016; Bassanini & Caroli, 2015; J. Benach et al., 2016; T. Benach, 2014; Julià et al., 2017). In 2010, 62% of the Canadian population identified work as their primary source of stress (Crompton, 2011) and work-related stress has previously been recognized as one of the most important factors explaining absenteeism in Canada (Park, 2007). According to the 2023 Canadian Labour Force Survey, over 4.1 million people (21.2%) reported experiencing a high or very high level of work-related stress (Statistics Canada, 2023). Of those, 7.5% took an average of 2.4 days off in 12 months before the study because of the stress experienced at work (Statistics Canada, 2023)

Beyond workplace physical and biological hazards, work stress is a key factor in workers' deterioration in health (Burgard & Lin, 2013; Johnson et al., 1989; Karasek, 1979). While precarious work conditions, excessive work demands, and employees' limited control have a significant impact by increasing stress levels among workers (Ferrante et al., 2019; Julià et al., 2017; Perri et al., 2024), racial discrimination has also identified as a significant workplace stressor (Hughes & Dodge, 1997; Lim et al., 2008). Previous studies have well established the connection between work and health through stress response (Hansen et al., 2006; Henseke, 2018; Lundberg, 2005). Studies have found that work-related stress is associated with chronic conditions such as, hypertension, musculoskeletal disorders, heart diseases, cardiovascular diseases, coronary diseases, stroke, diabetes types 2 and other physiological conditions that can lead to cardiovascular complications and diseases (Berger & Sarnyai, 2015; Bourbonnais et al., 1996; Burgard et al., 2007; Burgard & Lin, 2013; Cesana et al., 2003; Contrada

et al., 2000; Houtman et al., 1994; Johnson et al., 1989; Landsbergis et al., 1994; Niedhammer et al., 2021; Schnall et al., 1992; Toomingas et al., 1997; von Thiele et al., 2006).

Workplace racial discrimination can affect health both directly, through the stress of discriminatory events, and indirectly, by heightening other workplace stressors related to working conditions, work environment, and job satisfaction. The toxicity of a workplace impregnated with racial discrimination not only harms individuals' health but also perpetuates systemic inequality by undermining their professional potential and aspirations, and opportunities for career advancement (Asey, 2022; Block et al., 2019; Lopes & Thomas, 2006). Studies have shown that experiencing racial discrimination can lead to chronic and long-term stress, which is a significant factor in chronic health issues (Berger & Sarnyai, 2015; Djuric et al., 2008; Schneiderman et al., 2005). The experience of general form of racism and racial discrimination in the workplace has been found as risk factor increasing the likelihood of developing physical conditions such as hypertension, cardiovascular disease, diabetes, and comorbidity symptoms such as chronic pain, musculoskeletal disorders, back pain, headaches and poor health behaviours, with a greater impact among racialized population (E. Allen, 2019; Anderson, 2013; Brown et al., 2018; Chen & Mallory, 2021; Dawson & Fletcher, 2021; Fujishiro, 2009; Merritt et al., 2006; Sawyer et al., 2012; Williams et al., 2019). Studies indicate that workplace discrimination is associated with poorer physical and psychological health when compared to non-workplace discrimination (Benoit et al., 2015; De Castro et al., 2008; Hammond et al., 2010; Okechukwu et al., 2014) and the continuous exposure to a hostile work environment exacerbated adverse health conditions (Djuric et al., 2008).

6.3 A Theoretical Model of Workplace Stressors and Health Outcomes

The Job Demands-Resources model (JD-R) provides a foundational basis for this examination of the psychosocial dimensions of work and their impact on health outcomes (Demerouti et al., 2001). The JD-R theory encompasses the physical, social, or organizational

aspects of a job that require employees to exert mental and physical effort, often resulting in physiological and/or psychological costs (Demerouti et al., 2001). Within this model, job demands are categorized into two types: “challenge stressors,” which can foster personal growth and achievement, and “hindrance stressors,” which obstruct personal development and lead to adverse outcomes (Crawford et al., 2010; Podsakoff et al., 2007). In contrast, job resources refer to physical, social, or organizational elements of the job that enable the achievement of work goals, reduce job-related strain, and foster personal and professional development (Demerouti et al., 2001). From the JR-D perspective, major racial discrimination in the workplace is considered a “hindrance stressor” increasing chronic disease health risks through work-related stress perception as presented in the study's conceptual model (Figure 6.1: Conceptual Model). Workplace racial discrimination functions as a *social* hindrance demand, involving exposure to bias and microaggression that impacts workplace interpersonal relationships and heightens exclusion and decreases support of racialized workers (Jang et al., 2019). It also functions as a *structural* hindrance demand, blocking access to valued outcomes such as career advancement and financial security by limiting employment opportunities, fair and equitable wages, mobility, and better occupation and position.

While JD-R theory emphasizes that in the presence of high demands, adequate resources motivate and sustain engagement and lead to organizational commitment, structural discrimination does more than increasing demands, it systematically withhold or remove career resources (advancement opportunity, skill development, leadership visibility), material resources (pay raises, job security and benefits entitled with permanent position, e.g., health and retirement plan), job resources (e.g., social and supervisor support, training, social and organization justice), social resources (e.g., social ties and inclusion) and personal resources (self-esteem and confidence and sense of belonging) and limiting the overall professional and personal fulfillment. From this perspective, the imbalance between demands and resources disrupts the motivation pathway and

produces cumulative strain, leading to disengagement (reduced work engagement, lower organizational commitment, and increased turnover). The impact goes beyond personal attitudes by increasing stress and emotional exhaustion and increasing the risk of physical health problems through chronic stress exposure. These outcomes often lead to long-term adverse economic and health outcomes (Cénat, 2023; Cénat et al., 2021; Jang et al., 2019; Shippee et al., 2012; Williams et al., 2019).

Since health outcome is analyzed through the stress pathway and JD-R model refers to non-specific illness, this study utilized chronic disease outcomes that are mainly associated with prolonged exposition to stressors, created wear and tears of the physiological system exceeding the normal operating range of physiological response, the Allostatic Load.

6.4 Purpose And Hypothesis

Although studies have demonstrated the relationship between structural discrimination (e.g., employment, housing) and health outcomes, the majority have focused on mental health. Furthermore, most existing studies on workplace racial discrimination have examined it as a general construct, without distinguishing among specific domains of workplace discrimination (e.g., hiring, firing, promotion issues). The few studies that have explored specific domains have predominantly focused on limited forms of workplace discrimination, such as hiring practices. (Jang et al., 2019; Kunz & Ludwig, 2022; Lippens et al., 2023; Quillian et al., 2020). Consequently, the current understanding of the health impacts associated with distinct domains of major racial discrimination in the workplace remains incomplete. This study aims to address these gaps in the literature by exploring five distinct workplace racial discrimination domains, including the hiring process, promotion, pay, and other forms, such as isolation and being prevented from doing something.

This study aims to: (1) determine the rate of different type of major racial discrimination in the workplace and to assess work-related stress perception among racialized groups while considering other sociodemographic characteristics of the sample (e.g., gender, age, disability status, race, etc.); (2) examine the association between major racial discrimination in the workplace and chronic diseases (prediabetes, Type 2 diabetes, blood pressure, heart disease, effect of stroke, cholesterol and back pain); and (3) investigate the mediating role of work-related stress perception in the association between racial discrimination and chronic diseases. The “chronic disease” outcomes include prediabetes, Type 2 diabetes, blood pressure, heart disease, the effects of stroke, cholesterol and back pain. These outcomes are mainly chronic conditions associated with prolonged exposure to stressors, and the wear and tear of the physiological system from exceeding the normal operating range of physiological responses to stress is the Allostatic Load. They are also either the leading cause of morbidity and mortality among the Canadian population, or the leading physical disability cause in the workplace (musculoskeletal issue, e.g., back pain) and are highly prevalent among racialized individuals in Canada.

Based on the literature, we hypothesize that:

Hypothesis 1: Work-related stress perception and major racial discrimination in the workplace will be positively associated with a higher risk of chronic diseases.

Hypothesis 2: The experience of major racial discrimination in the workplace is associated with an increase in work-related stress perception and heightens the risk of chronic disease among racialized workers.

6.5 Methods

6.5.1 Design and Data Collection

This cross-sectional study was conducted from May to August 2024 across the Canadian provinces. An online, bilingual (English and French) questionnaire, hosted on Qualtrics, gathered sociodemographic data, validated measures of major workplace racial discrimination, and included specific items assessing perceptions of work-related stress and chronic diseases such as diabetes, cardiovascular disease, and hypertension. Data were collected from 519 respondents. This study uses a subsample of 273 participants who self-identified as racialized, as belonging to a racial or ethnic group as defined by IRCC, (2022). Racial background was determined through a self-report screening question in which participants selected their racial/ethnic identity from a predefined list (with the option to precise race-group if not listed). Eligibility criteria included: (1) Proficiency in English or French, (2) currently employed or unemployed within the past year, and (3) aged between 25 and 65, ensuring sufficient work experience to identify workplace racial discrimination. Those who did not meet the criteria, including self-employed individuals, were excluded from the analysis.

6.5.2 Recruitment Procedure

To ensure racial diversity, recruitment targeted both the general population and racialized communities. Invitations were shared through social media (LinkedIn, Twitter, Facebook), unions, professional organizations, and email (with survey links or QR codes). Outreach to racialized groups included ethnic associations, religious institutions, and community centers, with flyers and posters distributed in these locations. The survey was completed after informed consent, with email support available. The study received approval from the University of Ottawa Research Ethics Board (#H-04-24-10107).

6.6 Measures

Sociodemographic. Sociodemographic characteristics included gender, age, education level, race/ethnicity, place of birth, immigration status, disability status, employment status, and marital status.

Work-related factor. Specific questions were asked to collect data on work status, work sector, employment type, work schedule, union representation, hourly wage, and province of work. The National Occupational Classification (NOC) was used to determine the broad occupational category (ESDC, n.d.).

Work Stress Perception: Participants were asked to indicate their work stress perception in the past 12 months or the past 12 months of employment for the unemployed participants. Based on a five-point Likert scale, they were asked: *How would you describe most days at work?* Response categories were: *not at all stressful, not very stressful, a bit stressful, quite a bit stressful, and extremely stressful.* Work stress perception was measured using the following item from the Canadian Community Health Survey (CCHS) (Government of Canada, 2023): Work stress perception was measured over the past 12 months for employed participants and the 12 months before unemployment for unemployed participants. In addition to the CCHS, other studies have used a single-item measure to assess work stress perception (Government of Canada, 2023; Metzenthin et al., 2009). Vinstrup et al. (2021) have found that the use of a single item to measure perceived stress at work was strongly associated with the Cohen's Perceived Stress Scale scores, confirming its feasibility.

Major Racial Discrimination in the Workplace. Five items from the expanded 19-item version of the Major Experiences of Discrimination Scale from the 1995 Detroit Area Study and the MIDUS study were used to assess workplace racial discrimination (Williams et al., 2012). The five items assess discrimination in job domains such as firing, hiring, slower promotion or pay raises, promotion denied and any other discrimination. The scale was slightly modified to require

participants to answer the question with “yes” or “no” regarding whether they were unfairly treated in employment because of their race/ethnicity or skin color, as per the Major discrimination scale (Sternthal et al., 2011). For example, participants were asked: In the past year or in your last employment, because of your skin color, race or ethnicity “*Have you been unfairly fired? Firing: “is there any other way you have been treated unfairly at work, for example, prevented from doing something or been hassled or made to feel inferior? _ Other workplace racial discrimination.* The answer was recoded into binary values (0, 1), with 0 indicating no workplace racial discrimination and 1 indicating workplace racial discrimination. In general, the higher the score, the greater the experience of major racial discrimination. At the beginning of this section, a specific description of workplace racial discrimination was added to help respondents who are unaware of racist behaviours or practices to recognize or report such experiences, resulting in less biased data. (Kessler et al., 1999; Williams et al., 1997, 2012).

Chronic diseases. To measure chronic diseases, participants were presented with a list of 17 stress-related chronic diseases from the Canadian Community Health Survey chronic diseases list (Statistics Canada, 2022). Only the eight physical conditions were considered in this study (e.g., diabetes, cholesterol, and back pain). Participants were asked whether a medical doctor or health professional had diagnosed them with the medical conditions below, which are expected to last or have already lasted 6 months or more. Among them, for each condition, the possible answers were “Yes” or “No”.

6.7 Statistical Analyses

Analyses were performed among racialized participants (n=273). Frequency analyses were performed to characterize the sample. The rate of major workplace racial discrimination was computed and compared across sociodemographic and socioeconomic factors using chi-square tests

(χ^2). A set of independent t-tests and ANOVA were conducted to compare mean scores for work-related stress perception and major racial discrimination in the workplace between participants who reported these experiences and those who did not.

A series of binary logistic regression analyses were performed to test the association of major racial discrimination in the workplace types with the outcome variables: prediabetes, Type 2 diabetes, blood pressure, heart disease, effect of stroke, cholesterol and back pain. The odds ratios (ORs) and adjusted odds ratios (AORs) with 95% confidence intervals (CIs) were reported for the total sample and each racial group. For the AORs, control variables were gender, age, racial background, marital status and education level. Simple logistic regression analyses were performed to test the association of major racial discrimination in the workplace with chronic diseases.

A mediation analysis was developed to test the relationship between the experience of major racial discrimination and chronic diseases variable through work stress. Covariates included sociodemographic factors: education, gender, age, and race. Categorical variables were converted to dummy variables, where each category was compared with other categories of the variable (e.g., Black vs other, including Asian and other racial identities). A latent variable was created for the outcome variables, including chronic diseases (prediabetes, Type 2 diabetes), blood pressure, stroke risk, cholesterol, and back pain. A significance level of .05 was set for the statistical tests. Data analysis was performed in SPSS 29 and STATA.

6.8 Results

6.8.1 Descriptive results

Table 1 presents the sociodemographic characteristics of the sample. Of the 273 racialized respondents who completed the survey, 64.47% were women, 25.27% were men, and 1.10% identified as other genders. A total of 68.86% were Black, 11.36% were Asian, 5.13% were identified as mixed (more than one race), and 14.65% were from other racialized or ethnic groups. Most

participants were employed (91.94%), with only 8.06% unemployed for less than 12 months.

Detailed descriptive results are presented in [Table 6.1](#).

6.8.2 Rates of Major racial discrimination in the workplace according to sociodemographic factors

In general, 69.53% of the studied population reported having experienced at least one type of major racial discrimination in the workplace. In total, 53.02% of the participants have reported having experienced racial discrimination in hiring, 54.51% have experienced slower promotion and pay raises, 34.20% have been denied promotion, 21.89% have been fired, and 44.59 % have experienced other types of workplace racial discrimination, such as being prevented from doing something or being hassled or made to feel inferior.

For racial discrimination in the *hiring process*, significant differences were found for the working sector with a higher rate among public servants (58.62 %), compared to para-public (13.79%), private (19.83), and other sector (7.76%), $\chi^2 (3) = 14.66, p = .002$. The rate was also higher among unionized workers (69.17%) than among non-unionized workers (30.83%), $\chi^2(1) = 9.79, p = .002$.

For slower *promotion and pay raise*, significant differences were found for the working sector with a higher rate among public servants (60.48 %), compared to para public (12.90%), Private (20.16), and other sector (6.45%), $\chi^2 (3) = 18.20, p < .001$. The rates were also higher among worker without disability (86.61 %), compared to those with disability (13,39%), $\chi^2 (1) = 15.31, p < .001$; and among Canadian citizen (88.19 %) compared to permanent resident (4.72%) and temporary resident (7.09%), $\chi^2 (2) = 11.52, p = .003$.

For *promotion denial*, significant differences were found for working sector with a higher rate among public sector workers (67.11 %), compared to para public (13.16%), private (14.47), and other sector (5.26%), $\chi^2 (3) = 18.16, p < .001$; worker without disability (86.08 %), compared to those with disability (13.92%), $\chi^2 (1) = 7.59, p = .006$; immigration status, with an higher rate among

Canadian citizen (91.14%) compared to permanent resident (6.33%) and temporary resident (2.53%), $\chi^2 (2) = 9.27, p = .010$. The rates were also higher among unionized workers (72.71%), compared to non-unionized one (27.27%), $\chi^2 (1) = 8.06, p = .005$ and among married/common-law partner participants (71.62 %) compared to single (14.86%) and divorce/separated or widowed participants (13.51%), $\chi^2 (2) = 9.57, p = .008$. Similar trends were observed for other forms of racial/ethnic discrimination, except for union representation.

For racial discrimination in *firing*, the rate was higher among public servants (70.00%) compared to para-public (8.00%), Private (16.00), and other sectors (6.00%), $\chi^2 (3) = 10.75, p=.013$; and among workers without disability (84.32 %), compared to those with disability (15.68%). The differences across sociodemographic factors are presented in [Table 6.2](#).

6.8.3 Work-related stress perception and major racial discrimination in the workplace by sociodemographic factors.

Results of t-test and ANOVA for the independent variables are presented in [Table 6.3](#). Mean of work-related stress perception was higher among participants working in para public sector ($M = 2.13, SD = 1.01$) compared to public sector ($M = 2.09, SD = 1.05$), private sector ($M = 1.65, SD = 1.02$) and OBNL/other sector ($M = 1.74, SD = .99, t (2.87) = 3, p = .038$). No significant difference was observed for the other factors.

For major racial discrimination in the workplace, the mean was higher among participants with disability ($M = 3.65, SD = 1.32$) compared to those who had no disability ($M = 1.95, SD = 1.76, t (3.89) = 231, p = .022$). Participants aged 55 to 65 reported higher mean of major racial discrimination in the workplace ($M = 2.59, SD = 2.00$) compared to those aged 45 to 54 ($M = 2.39, SD = 1.74$), 35 to 44 ($M = 1.97, SD = 1.79$) and 25 to 34 ($M = 1.64, SD = 1.64, t (2.88) = 3, p = .037$). Also, participants who perceived their work as extremely stressful also reported higher mean of major racial discrimination in the workplace ($M = 3.75, SD = 1.57$) compared to those who

perceive their it as quite a bit stressful ($M = 2.64, SD = 1.63$), a bit stressful ($M = 1.77, SD = 1.85$), not very ($M = 1.73, SD = 1.59$) and not at all stressful ($M = 1.06, SD = 1.66, t(7.94) = 4, p < .001$). Similarly, significant mean differences were shown for marital status, immigration status, and work sector.

6.8.4 Major racial discrimination and chronic diseases.

The [Table 6.4](#) presents the logistics regression results on the relationship between major racial discrimination and stress-related diseases such as prediabetes, Type 2 diabetes, blood pressure, heart disease, stroke, cholesterol and back pain.

After controlling for sociodemographic factors, results showed that participants who experienced racial discrimination in the hiring process were more likely to report back pain (AOR = 2.36, $p = .006$). Participants who experienced slower promotion or a pay raise were more likely to report having Type 2 diabetes (AOR = 6.69, $p = .033$), high cholesterol (AOR = 3.12, $p = .021$), and back pain (AOR = 2.75, $p = .002$). Participants who experienced racial discrimination in promotion denial were more likely to report suffering from Type 2 diabetes (AOR = 4.38, $p = .037$) and cholesterol (AOR = 3.01, $p = .012$). Those who experienced racial discrimination in firing were more likely to report suffering from Type 2 diabetes (AOR = 4.07, $p = .035$) and the effect of stroke (AOR = 9.62, $p = .032$). Participants who experienced other types of workplace racial discrimination were more likely to report suffering from Type 2 diabetes (AOR = 5.78, $p = .024$) and back pain (AOR = 2.54, $p = .003$).

6.8.5 The mediating role of workplace stress in the relationship between major racial discrimination and chronic diseases

A mediation analysis was conducted to test the relationship between the experience of major racial discrimination in the workplace and the outcome variables through work stress. The outcome variable was a latent factor that included chronic diseases. Results showed that age is positively associated with chronic diseases ($\beta = .26, p < .001$) while no significant relationship was found for

work-related stress perception. Similarly, gender showed no significant relationship with either stress or chronic diseases. Black ($\beta = -0.19, p = .032$) and Asian ($\beta = -0.17, p < .001$) report significantly lower work-related stress perception; however, only Black individuals showed significantly lower risk of chronic diseases ($\beta = -0.34, p = .024$). Lower education levels were positively associated with work-related stress perception ($\beta = 1.74, p < .001$), while participants with higher education levels reported a lower risk of chronic diseases.

Results showed that experience of major racial discrimination was positively associated with work stress ($\beta = .33, p < .001$). A similar result was found for work-related stress perception and chronic disease ($\beta = .30, p < .001$). Before adding the mediator to the model, experience of major racial discrimination was positively associated with chronic ($\beta = .17, p = .029$). No significant relationship between experience of major racial discrimination and the outcome variable was found after including work-related stress as a mediator in the model ($\beta = .04, p = .431$), indicating a complete mediation. (See [figure 6.2](#) and [Table 6.5](#))

6.9 Discussion

The primary aim of this study was to document the rates of various forms of major workplace racial discrimination in Canada. Results reveal that more than 3 out of 5 racialized Canadian workers reported experiencing major racial discrimination in the workplace. More than half of the participants have reported experiencing slower promotion or pay raise, and racial discrimination in hiring. 34.20 % in promotion denial, 21.9 % in firing and 44.59% in other workplace racial discrimination.

While few domains of discrimination in the workplace are explored in existing studies, the rates of workplace racial discrimination reported in the current studies are notably higher than those reported in previous studies. For example, respectively, 41% of racialized Canadians have reported experiencing discrimination when applying for jobs or promotions (Statistics Canada, 2024).

Workplace racial discrimination experience and specifically the experience of unfair treatment in hiring, pay or promotion because of racial background was also reported among racialized employees. While no differences were found between racialized groups in reporting workplace racial discrimination, the prevalence rose to one in two among Black employees (Foster et al., 2023; Zou et al., 2022). A U.S study found that 47% of racialized participants have experienced workplace racial discrimination (Salari et al., 2024). While rates in findings vary, they consistently highlight a significant rate from 21% to nearly 50% of workplace racial discrimination. Previous studies often lack detailed breakdowns of discrimination types and tend to focus primarily on specific racial groups, such as Black people, limiting the scope of comparison (Jang et al., 2019; Kunz & Ludwig, 2022; Lippens et al., 2023; Quillian et al., 2020).

Across the working sectors, public sector workers reported the highest rates for all types of workplace racial discrimination. About 2.5 out of 5 public sector workers indicated experiencing major racial discrimination in the workplace. Few studies have examined sector-based differences, but one found that 32.9% of federally regulated Canadian workers experienced workplace racial discrimination (ESDC, 2025). Additionally, perceived race/sex-based discrimination at work was reported to be 1.64 times higher in the Canadian public administration compared to other sectors (Boulet, 2023). This finding is not surprising, given actual Canadian results indicating a high rate of workplace racial discrimination among Black workers in the federal civil service (Asey, 2022; Foster et al., 2023; Mugambi et al., 2025) and the increased number of complaints received by the Human Rights Commission since 2020. (CHRC, 2025). Indeed, in 2022, 4 out of 10 race-based complaints were work-related (CHRC, 2022). These findings raised serious concerns for the public sector, requiring correction.

While participants without disabilities have reported a higher overall rate of workplace racial discrimination, the average of major racial discrimination in the workplace was significantly higher

among people with disabilities. A similar trend was observed with age: participants aged 55–65 reported higher average levels of major racial discrimination. These findings align with the intersecting or "double jeopardy" effect, where individuals face compounded discrimination based on both race and another identity, such as disability or age (Lippens et al., 2023). No significant association were found for gender.

Unionized workers also have a higher average of workplace racial discrimination compared to non-unionized workers. This finding is consistent with previous research suggesting that unionized employees may be more aware of their rights and discriminatory practices and better able to recognize and report them (Hirsh & Lyons, 2010). More than having the ability to identify these practices, unionized employees may also have a greater expectation for equity or representation from the union when racial discrimination is experienced. If a union lacks support from employees experiencing workplace racial discrimination, it might reinforce their perception of it.

The second aim of this study was to analyze factors associated with chronic diseases, including major racial discrimination in the workplace and work-related stress perception. Results showed that major racial discrimination in the workplace was positively associated with both chronic diseases and work-related stress perception. Nearly all forms of workplace racial discrimination were linked to type 2 diabetes, except discrimination in hiring. Workers reporting slower promotion or pay raise had 6.69 times higher risk of having Type 2 diabetes compared to those who didn't have such experience. The odds ratio of Type 2 diabetes varies from 4 to 6 times for all the other types of workplace racial discrimination. Although few studies have explored this specific relationship, a longitudinal study had found that people who report experiencing major racial discrimination in two or more contexts, including employment, had a 36% higher risk of developing Type 2 diabetes compared to those who have not such experience or those whose discrimination was unrelated to race/ethnicity (13%) (K. M. Whitaker et al., 2017). Another study has found similar results,

concluding that people who experience major racial discrimination, including in employment, had 25% increased risk of having Type 2 diabetes (Ewen, 2024).

This study also found that workers who experienced racial discrimination in firing were 9.62 times more likely to suffer from stroke compared to those who did not. Prior studies have found a significant association between the experience of racial discrimination in the workplace and stroke, stroke-related deaths, and cardiovascular diseases, among racialized groups, particularly Black individuals (Jackson et al., 2003; Polineni et al., 2025). Experiencing discrimination in promotion was found to be positively associated with heart failure. Additionally, studies have shown that racialized groups are more likely to have chronic conditions, including cardiovascular disease (Banerjee et al., 2021; Coates et al., 2024; Wells et al., 2025). This increased risk might be linked to additional specific stressful conditions faced by racialized individuals, including racial discrimination.

Cholesterol disease was associated with experiencing racial discrimination in slower promotion or pay raise and promotion denial. While studies investigating the association between workplace racial discrimination and cholesterol are lacking, one study found that discrimination in firing was associated with greater biological dysregulation, indicating a higher level of allostatic load, which can elevate the risk of cholesterol disease (Jang et al., 2019).

Back pain was associated with racial discrimination in firing, slower promotion, and pay raises, and other types of workplace racial discrimination. Psychosocial factors associated with back pain among workers are not well studied in Canada. Previous studies have shown that workers who experience workplace discrimination, including race-based discrimination, are more likely to report back pain than those who do not (Kim et al., 2013; N. Lee et al., 2017; Yang et al., 2022).

Although adjusted models showed no significant link between workplace racial discrimination and blood pressure, unadjusted models did. This result contrasts with the existing literature, in which blood pressure is among the most frequently studied outcomes (Coates et al.,

2024; Li et al., 2023; Wells et al., 2025). The absence of association of workplace racial discrimination and blood pressure in this study may be due to the younger age profile of the sample, as hypertension often develops later in life. Indeed, older participants showed a significantly higher risk of chronic diseases. Previous studies have found similar results, indicating that most chronic diseases develop with age and highlighting the long-term impact of stress on health (J. O. Allen, 2016; Huang et al., 2010).

Workplace racial discrimination was initially linked to chronic diseases, but this direct association became non-significant after accounting for work-related stress perception. Discrimination remained indirectly associated with chronic diseases through its impact on work-related stress perception, suggesting that racial discrimination increases work-related stress, which in turn elevates chronic disease risks among racialized individuals (Sørensen et al., 2022). Other studies have also brought evidence that psychosocial work stressors such as discrimination promote unhealthy behaviours, such as cigarette smoking, alcohol consumption, sedentary, and unhealthy eating habits that lead to weight gain and obesity, all of them are risk factors to cardiovascular disease, cholesterol and Type 2 diabetes (Cedillo et al., 2020; Schnall et al., 1992, 2016). No significant association were found for gender

These results confirmed our hypotheses, suggesting that work-related stress perception and workplace racial discrimination will be positively associated with chronic diseases; and the experience of major workplace discrimination will increase work-related stress perception and contribute to the presence of chronic diseases among racialized workers. Literature consistently shows health disparities between racialized and non-racialized groups, with racialized workers facing more job insecurity, lower income, fewer advancement opportunities, and lower inclusive work environments influenced by workplace racial discrimination (Rubin & Alteri, 2019). A work environment impregnated with major racial discrimination impacted marginal groups' ability to be

hired (T. R. Whitaker, 2019). It limited their financial resources, affected by lower access to employment or better-paid jobs, lower job quality, or voluntary or involuntary absence, and decreased or cut regular earnings (Schaufeli et al., 2009; Tabor & Dalton, 2021).

These findings examine specific types of workplace racial discrimination and their relationship to health outcomes among racialized workers, highlighting the need to improve workplace environments in Canada by eliminating racial discrimination as a major source of stress.

6.10 Limitations

First, as a cross-sectional study, participants' conditions before being hired were not assessed, the study cannot establish causal relationships between independent and dependent variables. Second, the study used a non-probabilistic sample, and the population is not representative of the Canadian population, which limits the generalizability of the findings. Indeed, some underrepresented racial groups were clustered, not enabling specific findings on the experiences and health risks of each group. A longitudinal study using a probabilistic sample would be necessary to identify the direct mental health consequences of workplace racial discrimination and allow generalizability to the Canadian population. Third, even if this study covers various workplace aspects where racial discrimination can arise and work-related stress perception, the data are self-reported, potentially resulting in some bias. Future studies should use an experimental design to collect data on stress levels using physiological and biological markers (e.g., cortisol, blood pressure) and include participants from ongoing workplace racial discrimination cases to enable causal inference. Fourth, the lack of existing studies on this topic limited our ability to contextualize and compare our findings. Most studies are among Black or Asian populations, and few have explored the relationship between workplace racial discrimination and diseases. Further research is required to foster more advanced and constructive studies in this field.

6.11 Implications for research, public health, and workplace health and safety

Despite these limitations, this study carries significant implications for research, occupational health and safety, and public health. First, the findings highlight the urgent need for more in-depth and intersectional research on racial discrimination in the workplace and its impact on health. Future studies should examine how intersecting identities, such as race, gender, disability status, immigration status, and age, interact to influence experiences of discrimination and vulnerability to chronic illness. Longitudinal research is also crucial to understanding how these experiences accumulate over time and affect long-term physical and mental health. It is equally important to conduct sector-specific studies to understand how institutional culture shapes the prevalence and consequences of racial discrimination. In this regard, research involving public servants is fundamental, as reported discrimination rates were particularly high among them. Future studies must also be based on representative samples of racialized populations to provide a more comprehensive picture of racial discrimination in Canada. Additionally, the mediating role of work-related stress perception between racial discrimination and chronic illness warrants deeper exploration of the biological and psychosocial mechanisms involved.

The results also emphasize the need to rethink occupational health and safety policies to incorporate concrete measures to prevent and address racial discrimination in the workplace. Research on existing policies and laws should be undertaken to evaluate their effectiveness, clarify the issue and provide evidence-based recommendations for antiracist law reform or program improvement. Employers should implement regular equity audits to identify systemic inequalities in hiring, promotion, compensation, and termination practices, particularly in the public and parapublic sectors, where discrimination was more frequently reported. Special attention must be given to protecting racialized workers who are older, have disabilities, or hold precarious immigration status, as they are especially vulnerable to discrimination and occupational stress. The role of unions

should also be examined, as the findings reveal a high prevalence of discrimination among unionized workers, calling for stronger union engagement in anti-racism training and the proactive defence of workers' rights. Moreover, implementing tailored stress management and psychological support programs can help mitigate the adverse effects of a discriminatory work environment. Nevertheless, federal and provincial governments need to establish clear standards to guide businesses and the public sector in reducing workplace racial discrimination. These standards should also ensure that racialized individuals can file complaints and receive appropriate support and redress in cases of workplace racial discrimination.

The results underscore that racial discrimination in the workplace is a major public health concern, contributing to the onset and worsening of chronic illnesses among racialized populations. The observed associations between discrimination and conditions such as type 2 diabetes, hypertension, and chronic pain should prompt health authorities to recognize workplace racial discrimination as an essential social determinant of health. Public health policies must adopt an antiracist approach focused on prevention, early intervention, and structural change in workplace environments. It is also essential that public health surveillance systems collect disaggregated data on racial discrimination in the workplace and its health impacts to inform targeted interventions. Finally, partnerships among public health agencies, unions, and racialized communities are necessary to co-develop culturally responsive and effective health promotion strategies to reduce work-related health inequities in Canada.

6.12 Conclusions

Workplace racial discrimination continues to underpin stress among racialized workers. This study highlights the significant association between workplace racial discrimination, work-related stress perception, and chronic diseases among racialized workers in Canada. It shows that racial discrimination contributes to adverse health outcomes by increasing work-related stress, which in turn

elevates the risk of chronic conditions such as Type 2 diabetes, cardiovascular disease, high cholesterol, and back pain. The results reinforce existing evidence that workplace psychosocial stressors can trigger biological responses harmful to long-term health. Given these findings, there is a pressing need to address systemic racism in the workplace, especially in the public sector. Efforts to improve workplace equity, reduce discrimination, and support inclusive work environments are essential not only for social justice but also for protecting public health and improving quality of life for racialized workers in Canada.

6.13 Declaration of interest statement

The authors declare no conflicts of interest.

6.14 Availability of data

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy and ethical restrictions.

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6.16 Supplemental Material - STUDY 2

Table 6-1: Characteristics of the sample (N = 273)

Total	N	%
Age (mean)	42.19	
Gender		
Women	176	64.47
Men	69	25.27
Other	3	1.10
Age		
25-34	75	27.47
35-44	93	34.07
45-54	73	26.74
55-65	32	11.72
Race		
Asian	31	11.36
Black	188	68.86
Mixte	14	5.13
Other	40	14.65
Disability status		
Yes	21	7.69
No	252	92.31
Place of Birth		
Canada	72	26.37
Abroad	201	73.63
Marital status		
Single, never married	67	24.54
Married/common-law partner	177	64.84
Divorced/separated	19	6.96
Prefer not to answer	10	3.66
Immigration and citizenship status		
Canadian citizen	217	79.49
Permanent Resident	28	10.26
Non-permanent Resident (Temp.resident/asylum seeker)	28	10.26
Education		
Primary/secondary/high school	24	8.79
College	46	16.85
University certificate/bachelor's degree	113	41.39
Graduate degree (Master's/PhD)	90	32.97
Province of work		
Alberta	6	2.21

British Columbia	9	3.32
Manitoba	1	.37
New Brunswick	2	.74
Nova Scotia	5	1.85
Ontario	93	34.32
Prince Edward Island	1	.37
Quebec	150	55.35
Saskatchewan	4	1.48
Work sector		
Public	136	51.91
Private	29	11.07
Para public	75	28.63
OBNL	17	6.49
Other	5	1.91
Occupational Category		
Legislative and senior management	37	13.55
Business, finance and administration	47	17.22
Natural and applied sciences	21	7.69
Health occupations	81	29.67
Education, law, social, community and government services	42	15.38
Art, culture, recreation and sport	3	1.10
Sales and service	11	4.03
Trades, transport and equipment operators	11	4.03
Natural resources, agriculture and related production occupations	2	0.73
Manufacturing and utilities	16	5.86
Employment status		
Employed	251	91.94
Unemployed <12 months	22	8.06
Employment type		
Regular	234	85.71
Term	30	7.33
Seasonal/On call	19	6.96
Work schedule		
Regular	191	69.96
Atypical	62	22.71
Union representation		
Unionized	143	52.38
Non-Unionized	91	33.33
Hourly wage (mean)	38.72	

Table 6-2: Rates of Major Workplace Racial Discrimination According to Sociodemographic and Socioeconomic factors (N=273)

	Total N %	No being hired	Total N %	Slower promotion and pay raise	Total N %	Promotion denial	Total N %	Getting fired	Total N %	Other racial discrimination	Total
Total		53.02		54.51		34.20		21.89		44.59	69.5
Gender	110		118		73		46		95		
Femme	83	75.45	89	75.42	52	71.23	34	73.91	69	72.63	75.71
Homme	27	24.55	29	24.58	21	28.77	12	26.09	26	27.37	24.29
χ2 (df), p-value		.003 (1), .959		.012 (1), .911		1.097 (1), .295		.104 (1), .747		.767 (1), .381	2.21 (5), .820
Age	123		127		79		51		103		
25-34	30	24.39	28	22.05	14	17.72	12	23.53	21	20.39	27.47
35-44	40	32.52	39	30.71	28	35.44	12	23.53	31	30.10	32.62
45-54	38	30.89	43	33.86	24	30.38	17	33.33	36	34.95	28.33
55-65	15	12.20	17	13.39	13	16.46	10	19.61	15	14.56	11.59
χ2 (df), p-value		1.59 (3), .661		7.09 (30), .069		7.23 (3), .065		6.23 (3), .101		7.77 (3), .051	18.21 (15), .252
Disability status	123		127		79		51		103		
Yes	12	9.76	17	13.39	11	13.92	8	15.68	14	13.59	7.30
No	111	90.24	110	86.61	68	86.08	43	84.32	89	86.41	92.70
χ2 (df), p-value		2.27 (1), .132		15.31 (1), <.001		7.59 (1), .006		6.79 (1), .009		10.59 (1), .001	16.12 (5), .007
Race	123		127		79		51		103		
Asian	12	9.76	12	9.45	10	12.66	8	15.69	12	11.65	66.95
Black	83	67.48	87	68.50	50	63.29	29	56.86	67	65.05	12.45
Mixte/Other	28	22.76	28	22.05	19	24.05	14	27.45	24	23.30	20.60
χ2 (df), p-value		2.14 (2), .343		2.39 (2), .301		.83 (2), .662		3.03 (2), .220		.763 (2), .683	17.78 (10), .059
Place of Birth	123		127		79		51		103		
Canada	30	24.39	34	26.77	18	22.78	13	25.49	29	28.16	73.39
Aboard	93	75.61	93	73.23	61	77.22	38	74.51	74	71.84	26.61
χ2 (df), p-value		.73 (1), .393		.004 (1), .951		1.01 (1), .316		.042 (1), .838		.16 (1), .686	1.17 (5), .947
Marital status	119		121		74		48		100		
Single, never married	25	21.01	28	23.14	11	14.86	6	12.50	19	19.00	24.78
Married/common-law partner	83	69.75	82	67.77	53	71.62	38	79.17	69	69.00	67.70
Divorced/separated/Widowed	11	9.24	11	9.09	10	13.51	4	8.33	12	12.00	7.52
χ2 (df), p-value		2.29 (2), .319		1.14 (2), .567		9.57 (2), .008		4.95 (2), .084		6.94 (2), .031	21.27 (10), .019
Immigration/citizenship status	123		127		79		51		103		
Canadian citizen	104	84.55	112	88.19	72	91.14	42	82.35	90	87.38	80.69
Permanent Resident	9	7.32	6	4.72	5	6.33	5	9.80	6	5.83	10.30
Temporary resident	10	8.13	9	7.09	2	2.53	4	7.84	7	6.80	9.01
χ2 (df), p-value		3.07 (2), .215		11.52 (2), .003		9.27 (2), .010		.14 (2), .934		5.89 (2), .053	16.65 (10), .083
Education	123		127		79		51		103		
Primary/secondary/high school	8	6.50	8	6.30	5	6.33	3	5.88	7	6.80	9.01
College	21	17.07	21	16.54	12	15.19	11	21.57	18	17.48	16.74
University certificate/bachelor's degree	56	45.53	54	42.52	33	41.77	24	47.06	49	47.57	41.63
Graduate degree (Master's/PhD)	38	30.89	44	34.65	29	36.71	13	25.49	29	28.16	32.62
χ2 (df), p-value		2.92 (3), .404		2.69 (3), .4411		1.79 (3), .617		3.09 (3), .377		3.64 (3), .303	22.18 (15), .103
Work sector	116		124		76		50		100		
Public	68	58.62	75	60.48	51	67.11	35	70.00	65	65.00	49.78
Para public	16	13.79	16	12.90	10	13.16	4	8.00	13	13.00	11.21
Private	23	19.83	25	20.16	11	14.47	8	16.00	14	14.00	30.04
Other	9	7.76	8	6.45	4	5.26	3	6.00	8	8.00	8.97
χ2 (df), p-value		14.66 (3), .002		18.20 (3), <.001		18.16 (3), <.001		10.75 (3), .013		24.32 (3), <.001	42.66 (15), <.001
Employment status	123		127		79		51		103		
Employed	115	93.49	116	91.34	72	91.14	46	90.20	95	92.23	93.99
Unemployed <12 months	8	6.50	11	8.66	7	8.86	5	9.80	8	7.77	6.01
χ2 (df), p-value		.102 (1), .750		3.48 (1), .062		1.65 (1), .198		1.67 (1), .197		.95 (1), .330	5.16 (5), .397
Employment type	123		127		79		51		103		
Regular	106	86.18	112	88.19	71	89.87	44	86.27	91	88.35	85.84
Term	10	8.13	7	5.51	4	5.06	4	7.84	6	5.83	7.30
Seasonal/On call	7	5.69	8	6.30	4	5.06	3	5.88	6	5.83	6.87
χ2 (df), p-value		.79 (2), .675		1.53 (2), .466		1.70 (2), .427		.12 (2), .942		1.07 (2), .586	15.55 (10), .113
Work schedule	122		127		79		51		102		
Regular	87	71.31	94	74.02	61	77.22	37	72.55	78	76.47	75.00
Atypical	35	28.69	33	25.98	18	22.78	14	27.45	24	23.53	25.00
χ2 (df), p-value		1.76 (1), .184		.15 (1), .703		.38 (1), .539		.21 (1), .647		.28 (1), .599	3.49 (5), .624
Union representation status	120		125		77		49		101		
Yes	83	69.17	80	64.00	56	72.73	32	65.31	66	65.35	40.18
No	37	30.83	45	36.00	21	27.27	17	34.69	35	34.65	59.82

χ^2 (df), p-value

9.79 (1), .002

2.06 (1), .152

8.06 (1), .005

.79 (1), .376

2.28 (1), .131

15.74(5), .008

Table 6-3: Mean differences in work-related stress Perception, and Workplace Racial Discrimination Across Sociodemographic and Socioeconomic Factors

	Work-related stress		Major workplace racial discrimination	
	M(SD)	<i>t</i> (df), <i>p</i> -value	M(SD)	<i>t</i> (df), <i>p</i> -value
Total	1.93 (1.05)		2.07 (1.78)	
Gender		1.21(193), .813		.6(208), .275
Homme	2.13 (1.05)		2.25(1.87)	
Femme	1.92 (1.03)		2.06(1.75)	
Age		.54(3), .654		2.88(3), .037
25-34	1.85(1.06)		1.64(1.64)	
35-44	2.03(.87)		1.97(1.79)	
45-54	1.97 (1.10)		2.39(1.74)	
55-65	1.77 (1.31)		2.59 (2.00)	
Disability status		4.26 (214), .435		3.89(231), .022
Yes	3.00(.93)		3.65 (1.32)	
No	1.85 (1.01)		1.95 (1.76)	
Race groups		3.03(2), .05		.85(2), .427
Asian	1.83(1.00)		1.86(2.01)	
Black	1.85(1.07)		2.03(1.69)	
Mixed, Indigenous and other racialized	2.28(.96)		2.35(1.92)	
Place of Birth		2.52(214), .625		.375(231), .881
Canada	2.21(1.02)		2.00(1.81)	
Aboard	1.82(1.04)		2.09(1.77)	
Marital status		2.55(2), .080		3.73(2), .026
Single, never married	2.00 (1.06)		1.59(1.42)	
Married/common-law partner	1.85 (1.03)		2.12 (1.86)	
Divorced/separated/Widowed	2.50 (1.23)		2.82 (1.74)	
Immigration/citizenship status		.58(2), .562		4.17(2), .017
Canadian citizen	1.97 (1.04)		2.23 (1.78)	
Permanent Resident	1.73 (1.03)		1.29 (1.65)	
Temporary resident/asylum seeker	1.84 (1.12)		1.52 (1.66)	
Education		1.35(3), .260		1.07(3), .364
Primary/secondary/high school	1.55 (1.23)		1.48 (1.44)	
College	1.83 (.88)		2.13 (1.79)	
University certificate/bachelor's degree	2.04 (1.09)		2.23 (1.90)	
Graduate degree (Master's/PhD)	1.94 (1.01)		2.01 (1.70)	
Province of work		.23(4), .924		.56(4), .689
Ontario	1.94 (1.06)		2.05 (1.79)	
Quebec	1.91 (1.01)		2.03 (1.71)	
British Columbia	2.22 (1.30)		1.67 (2.06)	
The Prairies	1.82 (1.40)		2.72 (2.19)	
The Atlantic	1.83 (.98)		2.43 (2.37)	
Work sector		2.87(3), .038		11.04(3), <.001
Public	2.09 (1.05)		2.65 (1.76)	
Para public	2.13 (1.01)		2.36 (1.58)	
Private	1.65 (1.02)		1.21 (1.60)	
Other/OBNL	1.74 (.99)		1.60 (1.60)	
Employment status		1.66(214), .562		1.55(231), .559
Employed	1.90(1.04)		2.03(1.78)	
Unemployed <12 months	2.42(1.08)		2.79(1.81)	
Employment type		1.22(2), .298		.49(2), .610
Regular	1.97 (1.03)		2.12 (1.79)	
Term	1.75 (1.07)		1.82 (1.78)	
Seasonal/On call	1.57 (1.22)		1.75 (1.69)	
Work schedule		1.74(213), .057		.32(230), .933
Regular	1.86(1.01)		2.05(1.80)	
Atypical	2.15(1.15)		2.14(1.76)	
Unionized		.22(205), .411		2.69(222), .427
Yes	1.95(1.09)		2.37(1.79)	
No	1.92(1.01)		1.72(1.69)	
Work-related stress				7.94(4), <.001
Not at all stressful			1.06 (1.66)	
Not very stressful			1.73 (1.59)	
A bit stressful			1.77 (1.85)	
Quite a bit stressful			2.64 (1.63)	
Extremely stressful			3.75 (1.57)	

Table 6-4: Rate of chronic diseases according to Workplace Major Racial Discrimination

	Prediabetes	<i>P-value</i>	Type 2 Diabetes	<i>P-value</i>	Blood Pressure	<i>P-value</i>	Heart disease	<i>P-value</i>	Stroke Effect	<i>P-value</i>	Cholesterol	<i>P-value</i>	Back pain	<i>P-value</i>
No being hired														
Yes	5.36		9.82		16.96		3.60		3.57		18.92		57.14	
No	6.60		6.60		12.26		3.77		3.77		15.09		33.02	
Unadjusted OR (95% CI)	.801(.26 – 2.46)	.698	1.54(.57 - 4.13)	.391	1.46(.68 – 3.13)	.329	.95(.23 – 3.91)	.947	.94(.23 – 3.88)	.937	1.31(.64 – 2.68)	.455	2.71(1.56 – 4.69)	<.001
Adjusted OR (95%CI)	1.04 (.29 – 3.64)	.950	1.58(.41 – 6.11)	.501	1.19 (.48 – 2.97)	.696	.75 (.12 – 4.59)	.755	.51 (.08 – 3.41)	.486	1.45 (.62 – 3.40)	.393	2.36(1.28 – 4.35)	.006
Slower promotion or pay raise														
Yes	5.93		11.86		17.80		3.42		5.08		22.88		56.78	
No	5.94		3.96		10.89		3.96		1.98		10.00		31.68	
Unadjusted OR (95% CI)	.99(.32 – 3.07)	.998	3.26(1.04 – 10.26)	.043	1.77(.81 – 3.88)	.153	.86(.21 – 3.52)	.832	2.65(.52 – 13.44)	.239	2.67(1.22 – 5.84)	.014	2.83(1.63 – 4.94)	<.001
Adjusted OR (95%CI)	1.18 9.33 -4.23)	.801	6.69(1.16 – 38.52)	.033	1.41 (.55 – 3.62)	.480	1.58(.24 – 10.35)	.634	4.15 (.41-41.91)	.228	3.12(1.18 – 8.19)	.021	2.75 (1.40 - 5.15)	.002
Promotion denial														
Yes	7.04		16.90		22.54		4.29		8.54		29.58		59.15	
No	5.44		4.08		10.88		3.40		1.36		10.96		38.78	
Unadjusted OR (95% CI)	1.32(.42 – 4.18)	.641	4.78(1.71 – 13.34)	.003	2.38(1.11 – 5.09)	.025	1.27(.29 – 5.48)	.747	6.69(1.32 – 34.05)	.022	3.41(1.65 – 7.06)	<.001	2.28(1.28 – 4.08)	.005
Adjusted OR (95%CI)	1.48 (.41 – 5.35)	.554	4.38(1.09 – 17.50)	.037	1.64 (.66 – 4.06)	.283	1.36 (.23 – 8.02)	.738	6.66 (.79 – 56.41)	.082	3.01 (1.27 – 7.10)	.012	1.87 (.97 – 3.59)	.062
Getting Fired														
Yes	8.16		20.41		24.49		6.12		10.20		24.49		59.18	
No	5.29		4.71		11.76		2.96		1.76		14.79		41.18	
Unadjusted OR (95% CI)	1.59(.47 – 5.40)	.457	5.19 (1.92 – 14.02)	.001	2.43(1.09 – 5.42)	.030	2.14(.49 – 9.29)	.310	6.33(1.46 – 27.49)	.014	1.87(.86 – 4.06)	.115	2.07(1.09 – 3.95)	.027
Adjusted OR (95%CI)	1.84 (.47 – 7.26)	.382	4.07 (1.10 – 15.02)	.035	1.59 (.60 – 4.16)	.350	4.21 (.69 – 25.86)	.121	9.62 (1.22 – 76.09)	.032	1.55 (.61 – 3.96)	.361	1.70 (.82 – 3.55)	.157
Other types of workplace racial discrimination														
Yes	7.14		14.29		17.35		3.09		4.08		22.45		59.18	
No	5.00		3.33		12.50		4.17		3.33		12.61		34.17	
Unadjusted OR (95% CI)	1.46(.48 – 4.50)	.508	4.83(1.54 – 15.21)	.007	1.47(.69 – 3.12)	.316	.73(.17 – 3.15)	.677	1.23(.30 – 5.06)	.770	2.01(.98 – 4.12)	.058	2.79(1.61 – 4.85)	<.001
Adjusted OR (95%CI)	1.77 (.51 – 6.22)	.372	5.78 (1.26 – 26.54)	.024	.92 (.37 – 2.26)	.858	1.09 (.19 – 6.05)	.923	.77 (.12 – 4.84)	.784	1.57 (.67 – 3.66)	.301	2.54(1.36 – 4.72)	.003

Table 6-5: Coefficients of Mediation Model

	Mediator Work-related stress				Outcome: Chronic disease			
	B (95% CI)	Z	SD	<i>p</i> value	B (95% CI)	Z	SD	<i>p</i> value
Gender	.06 (.06 -.18)	0.87	.06	.383	.09 (-.01 - .19)	1.85	.05	.064
Age	-.09 (-.22 - .04)	-1.37	.06	.169	.26 (.17 - .35)	5.87	.05	<.001
Race Background								
Asian	-.17(-.19 - -.15)	-17.42	.01	<.001	-.10 (-.33 - .12)	-.88	.12	.379
Black	-.19(-.36 - -.02)	-2.15	.09	.032	-.34 (-.63 - -.04)	-2.36	.15	.024
Other	1.33 (-.18 - .18)	0.01	.09	1.000	-.22(-.49 - .04)	-1.63	.14	.103
Education Levels								
Primary/secondary/high school	1.74 (1.54 - 1.93)	17.42	9.96	<.001	-.19 (-.24 - -.14)	-8.11	.02	<.001
College	.03 (-.15 - .22)	.31	.09	.760	-.56 (-.69 - -.42)	-8.07	.07	<.001
University certificate/bachelor's degree	.19 (-.02 - .39)	1.75	.11	.079	-.70(-.85 - -.55)	-8.86	.08	<.001
Graduate degree (Master's/PhD)	.18(-.02 - .37)	1.77	.11	.077	-.56(-.69 - -.41)	-7.56	.07	<.001
Workplace Major racial discrimination	.33(.21 - .45)	5.29	.06	<.001	.04(-.06 - .15)	.79	.05	.431
Work-related stress					.31 (.19 - .41)	5.48	.06	<.001

Figure 6.1: Conceptual Model

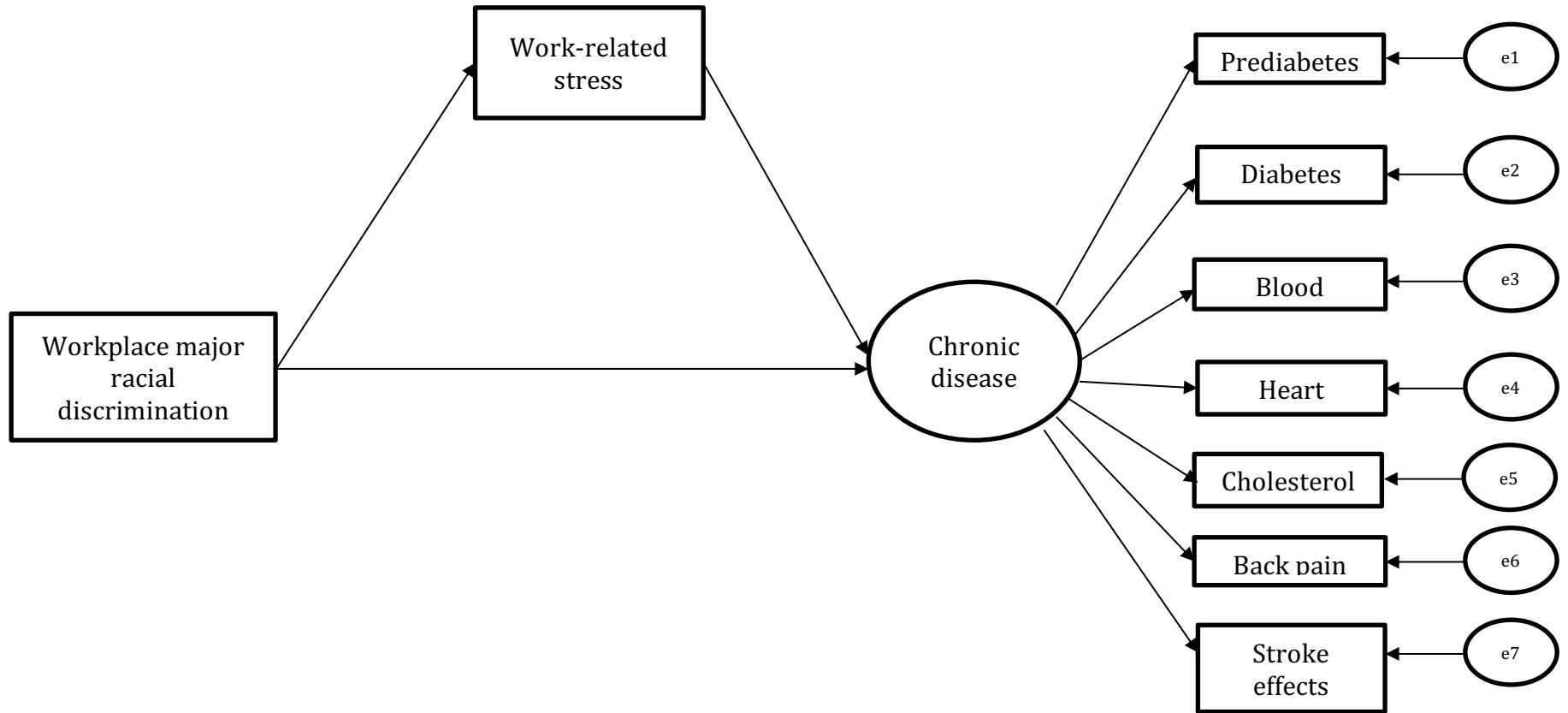
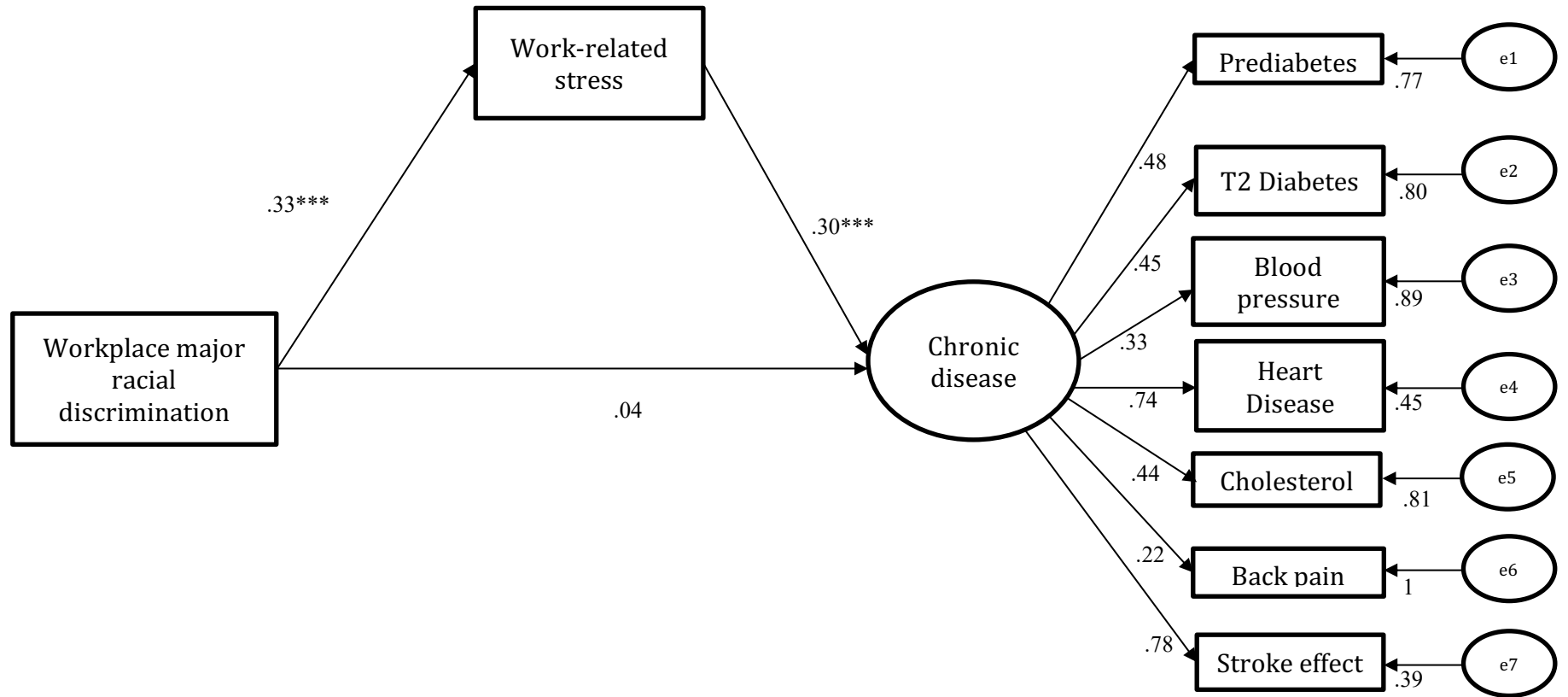


Figure 6.2: Mediation Model of Workplace Major Racial Discrimination on Chronic Disease Through Work-related Stress Perception



CHAPTER 7 : STUDY 3 - Workplace Racial Discrimination and the Impact of Actions taken Among Black Workers in Canada: An analysis of blood pressure responsivity

PREFACE

The STUDY 3 aims to underline types and levels of workplace racial discrimination experienced by Black workers in Canadian workplaces and investigate how these experiences are interconnected and affect blood pressure variation. The study received approval from the University of Ottawa Research Ethics Board (# H-04-24-10107). This article will be submitted to a scientific journal.

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Rose Darly Dalexis and **Dr. Cénat** had full access to all the data in the study and were responsible for the integrity and accuracy of the data analysis. **Dalexis**: Concept and design. **Dalexis and Dr. Cénat** Formal analysis. **Dalexis et Dr. Beogo**: Data interpretation. **Dalexis**: Drafting, reviewing, and editing the manuscript. **Dr. Bourgeault, Dr. Beogo, Dre. Pakahlé and Dr. Cénat**: Critical revision of the manuscript for important intellectual content. **Dr. Bourgeault**: Supervision.

7.1 Abstract

Workplace racial discrimination (WRD) remains a persistent and systemic issue across labour markets in Western countries. Based on a mixed-methods design, this study (1) investigates the lived experiences of 13 Black individuals in the Canadian workforce to examine manifestations of racial discrimination at both interpersonal and organizational levels, and (2) determines to what extent these experiences impacted their blood pressure. The findings revealed that discriminatory practices are not only varied but also often normalized within organizational cultures, contributing to adverse professional trajectories and social marginalization outcomes. Notably, experiencing WRD interplayed with elevated blood pressure. Resting Mean Arterial Pressure were markedly higher among participants reporting major forms of organizational discrimination (e.g., Firing, hiring, promotion), most prominently in job loss (firing, involuntary resignation or retirement). Conversely, participants who reported incidents of WRD and received acknowledgment exhibited either attenuated or no significant changes in blood pressure. Indeed, those who received acknowledgment following complaints showed an RMAP within the normal range. This underscores the potential protective effect of organizational responsiveness and support. Taken together, these findings highlight the profound health implications of occupational stress for racialized workers and emphasize the urgent need for systemic reform and institutional accountability. Beyond promoting equity and inclusion, organizations bear a responsibility to safeguard the physical and psychological well-being of racialized workers.

Keywords: Workplace racial discrimination, Interpersonal racial discrimination, Blood pressure, Black workers, Canada

7.2 Introduction

Racial discrimination represents a key risk factor affecting workers' mental and physical health (Chen & Mallory, 2021; Contrada et al., 2001; Pullen et al., 2023). Indeed, the World Health Organization (WHO) Healthy Workplace Framework identifies workplace discrimination as a psychological stressor (Burton, 2010; Heymann et al., 2023). Conceptualizing workplace racial discrimination as a social determinant of health and a chronic stressor provides a critical framework for understanding health disparities among racialized populations.

Rooted in the work conditions (e.g., employment status, task, and schedule), psychosocial and social conditions of the workplace (e.g., organizational culture and practices, and employee relations), racial discrimination at work goes over mistreatment by keeping racialized people in a precarity situation and perpetuating long-term socioeconomic, personal and health consequences and raising equity concerns (Cénat, 2023; Cénat et al., 2022; Shippee et al., 2012; Williams et al., 2019). Workplace racial discrimination can also be interpersonal, in forms of racial harassment, consisting of verbal (e.g., racist jokes, incivility or dismissive language), nonverbal (e.g., exclusion from work activities, less support, ignorance, avoidance or any type of relationship) and paraverbal behaviours (e.g., tone of voice) (Cénat, 2023; Kaida et al., 2022; Light et al., 2011; Ruggs et al., 2011). The interpersonal form also includes incivility, mistreatment and racial microaggressions in workplace interactions (Beagan et al., 2023; Ruggs et al., 2011).

Furthermore, racial discrimination can occur at the intrapersonal level, manifested through the internalization of racist ideologies (David et al., 2019; Sosoo et al., 2020). The internalized form of racial discrimination refers to behaviours whereby racialized individuals adopt and enact negative beliefs and stereotypes about their own racial groups (David et al., 2019; Jones, 2000). In the workplace, internalized racism may lead racialized individuals to lower their aspirations, refrain from applying for specific positions or promotions, and withdraw socially from colleagues and social

activities. When racism is internalized, racialized people also perpetuate racist practices among other racialized people. Workplace racial discrimination, either structural, interpersonal or intrapersonal, reinforces marginalization and occupational inequities (Sosoo et al., 2020; Speight, 2007).

Workplace racial discrimination is embedded in Canadian workplaces, disproportionately affecting the racialized population, with a higher proportion of Black workers reporting such experiences (Godley, 2018). A national Canadian survey found that 38% of racialized individuals experienced workplace racial discrimination. Statistics Canada data further show that Black workers are disproportionately more likely to report experiencing racial discrimination in the workplace (Cotter, 2022; Foster et al., 2023; KPMG, 2024). A recent study conducted among Black public servant Black found that Black executives reported different type of racial discriminatory experience at work including promotion denial (51%), career stagnation (48%), lack of support for career advancement and professional accomplishment (47%) lack of language training (42% Anglophone), lower performance assessment, excessive workload (30%), and excessive tasks control and monitoring (Zellars, 2024). According to the Canadian Social Survey, 41% of racialized respondents reported experiencing racial discrimination during job applications or promotions (Statistics Canada, 2024). In the Black Canadian National Survey, 47% of Black respondents reported discrimination in hiring, promotion, and pay, compared to 23% of Indigenous and 24% of Asian respondents (Foster et al., 2023). Additionally, racialized employees are twice as likely as their white peers to perceive their racial background as a barrier to career advancement (CILAR, 2023). For instance, recent studies have also reported high rates of harassment and intimidation (62%), unequal punishment and disrespect (27%), unfounded allegations (100%), racial microaggressions, and unfounded complaints (CILAR, 2023; Zellars, 2024).

7.2.1 Workplace Racial Discrimination's Association with Blood Pressure

Previous studies have found workplace racial discrimination associated with higher systolic and diastolic blood pressure (Dolezsar et al., 2014; Lawrence et al., 2023). Indeed, mean arterial pressure (MAP) was found to be significantly higher among people who have experienced racial discrimination in settings (e.g., work, hospital, bank) in comparison to those who have experienced such experiences in other contexts (e.g., day-to-day racism) (Krieger & Sidney, 1996a; Lawrence et al., 2023). Other studies have also observed a positive association between racial discrimination and higher blood pressure, higher risk of hypertension, and cardiovascular disease (Camelo et al., 2022; Dolezsar et al., 2014; Moody et al., 2016), specifically related to racial discrimination experienced in settings (work, school, housing, etc.) (Dolezsar et al., 2014; Lawrence et al., 2023).

Increased interest in the contribution of racial discrimination as a predictor for hypertension has been shown in the literature. Between 2016 and 2019, one in four Canadian adults aged 20 to 79 had been diagnosed with hypertension (Leung et al., 2019). Greater prevalence of hypertension and higher systolic BP has been found among Black compared to White individuals (Gasevic et al., 2015). Data have also demonstrated racial disparities in hypertension diseases and illnesses related to high blood pressure, such as cardiovascular diseases, heart diseases, stroke and mortality (Goupil et al., 2025; Statistics Canada, 2021; Yao et al., 2022). Despite that, no Canadian study has yet associated workplace racial discrimination with blood pressure increase or as a hypertension risk factor, particularly among the Canadian population of workers. Furthermore, existing studies on racial discrimination in the Canadian workplace have reported a few types of racial discrimination among those that may occur in the workplace.

7.2.2 Study objectives

The study aims to underline types and levels of workplace racial discrimination experienced by Black workers in Canadian workplaces and investigate how these experiences are interconnected and impact blood pressure variation. The research questions are as follows:

- 1- What type of racial discrimination do Black employees experience in the workplace?
- 2- To what extent does the experience of workplace racial discrimination impact blood pressure?
- 3- How does reporting and acting towards workplace racial discrimination potentially impact blood pressure?

7.2.3 Study Framework: Social Ecological Model

The Social Ecological Model (SEM) emphasizes how individual (e.g., age, gender, race, behaviours) and environmental factors across multiple social levels interact to shape health outcomes. This study analyses racial discrimination across personal relationships (an individual's direct relationships/social networks with coworkers) and organizational contexts (workplace practices and culture). Applying SEM helps to identify workplace racial discrimination at the organizational and interpersonal levels through workplace practices and social climate. The socioecological perspective helps explore how these levels are interconnected and affect health outcomes (Foster et al., 2023).

7.3 Methods

7.3.1 Study Design

The methods used in this study employed a triangulation design integrating qualitative data from in-depth semi-structured interviews and quantitative health indicator data involving blood pressure. This study protocol was approved by the University of Ottawa's research ethics board (#

H-04-24-10107). The study follows the Standards for Reporting Qualitative Research reporting guidelines.

7.3.2 Data collection

Participant recruitment involved multiple methods. Participants were primarily recruited through the online survey of Study 2 presented in Chapter 6. At the end of the survey, a question was added asking eligible participants whether they would like to participate in a follow-up qualitative study. Only those who identified as Black and reported such experiences were invited to answer this question, based on their province and city of work. Eligibility criteria included: aged 25–65, identifying as Black, living in the National Capital Region, and currently or previously experiencing workplace racial discrimination. Interested participants provided their email for follow-up. Recruitment also included invitations and posters sent to unions, anti-racism organizations, and churches, as well as outreach via social media (Facebook, Instagram, LinkedIn). Once interest was confirmed, participants received the study details and a scheduling link.

Participants were free to choose a schedule that suited them and were allowed to take a break if their emotions became too high. Using a three-part guide, the interview covered experiences of workplace racial discrimination, related health impacts, and knowledge and use of existing support resources. Follow-up questions deepened responses. Interviews lasted 35–90 minutes, were audio-recorded, and transcribed for analysis. Participants received a \$20 gift card and \$15 cash for travel. Interviews took place from September 2024 to April 2025. Interview topics and focus questions are presented in Table 1; key themes are described further in this article.

7.3.3 Measures, Materials and Procedure

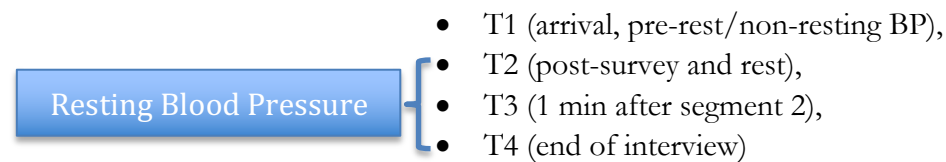
After participants agreed to join the study, they received a Qualtrics link containing the consent form and a sociodemographic questionnaire (e.g., date of birth, gender). If not completed beforehand, time was provided before the interview.

7.3.3.1 Sociodemographic questionnaire

Sociodemographic characteristics included gender, age, relationship status, disability status, place of birth, origin, religion, legal status, and annual salary.

7.3.3.2 Blood Pressure Device, Procedure

Blood pressure (BP) was measured on the left arm using the Omron BP-7455 (10 series), a validated electronic device used in multiple studies among adults that employs the Oscillometric method (Peprah et al., 2023). A small or wide cuff was used, depending on the participant's upper-arm circumference. The device synced with the free OMRON Connect app on a tablet for health tracking. The device was installed into the participant's upper left arm upon arrival. Participants sat quietly with arm/back support, feet flat, and legs uncrossed. The interview was divided into 3 segments, and blood pressure measurement was taken in a sequential phase:

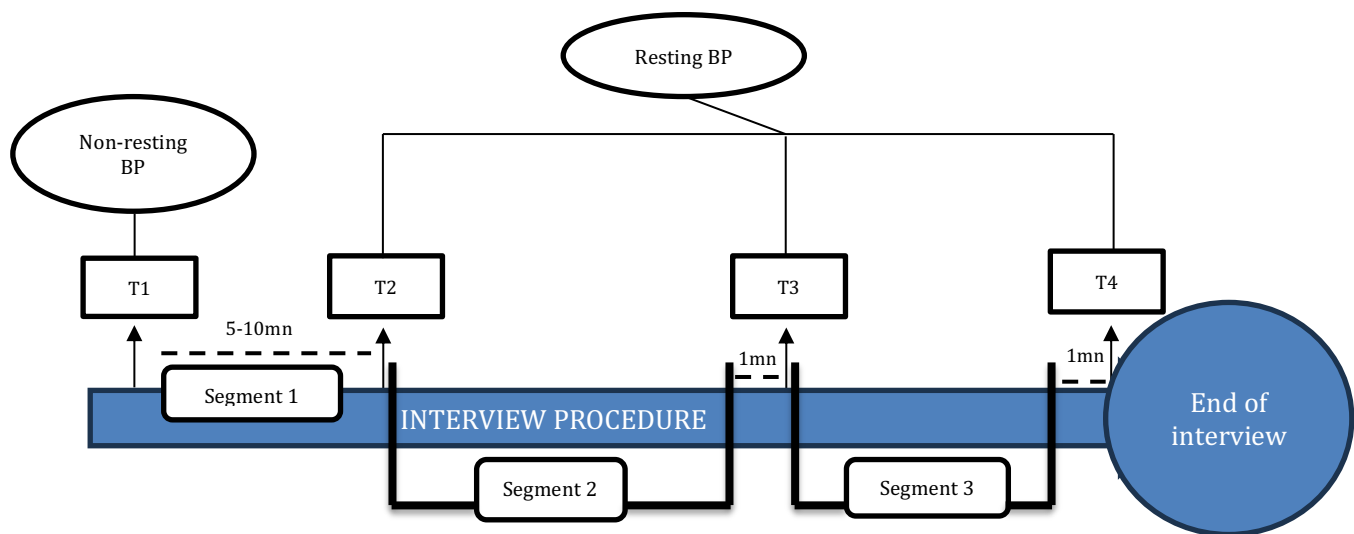


T1 is considered non-resting blood pressure because it was measured immediately after physical activity (walking to the meeting room). If the survey was completed before the session, participants rested 5 minutes before T2; otherwise, they had 10 minutes to complete a short survey, followed by the second measurement (T2); A 1-minute pause preceded T3 and T4. T2–T4 were considered Resting Blood Pressure (RBP). The interviewer noted start times for each segment to keep records and facilitate data interpretation and analysis. The procedure (device utilization, automatic data recording, time recording between segments) was piloted with two volunteers. A visual process map is shown in [Figure 7.1](#). Multiple measurements have been found to have greater predictive power for determining blood pressure in previous studies (Wingfield et al., 2002).

7.4 Data management

Audio recordings of interviews were transcribed using paid automated software (TurboScribe), then manually reviewed, corrected and translated from French to English by Rose Darly Dalexis. A volunteer verified transcription and translation accuracy. Blood pressure data, including date and time, were automatically synced to the OMRON Connect app, exported as CSV files, and transferred to analysis software. All data was securely stored in an encrypted space (multicode_3).

Figure 7.1: Blood Pressure Measurement Process Outline



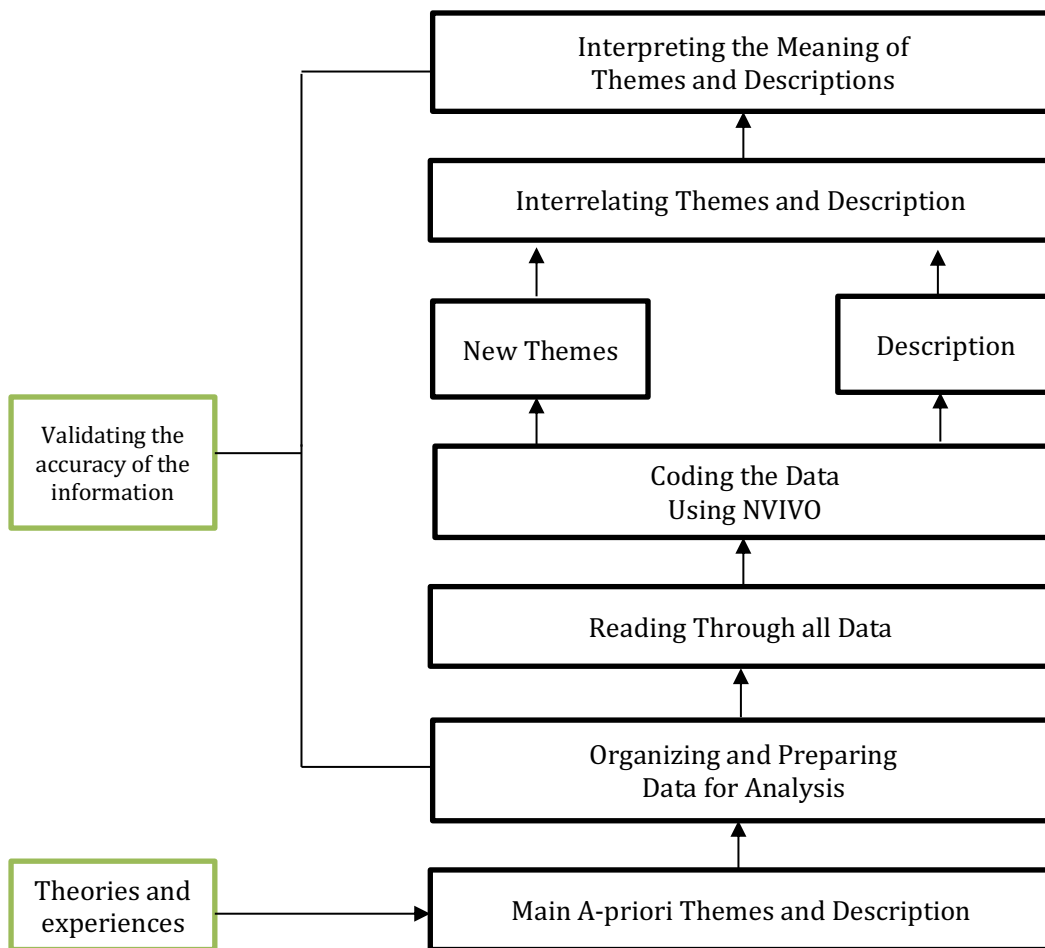
7.5 Sample and participants

A total of 13 participants (7 women, 5 men, 1 identifying as another gender) took part in the study. The sample varied in job level, work sector, and age (ranging from 25 to 65 years, with a mean age of 48 and a median age of 49). None had a hypertension diagnosis. Most participants were Canadian citizens born abroad (69.23%). The majority were Francophone (84.62%). Detailed sociodemographic information is presented in [Table 7-7-2](#).

7.6 Data analyses

Qualitative data analysis was guided by Creswell's approach (Creswell & Plano Clark, 2007), beginning with themes derived from existing theories and the experiences of Black workers in Canada with workplace racial discrimination. A deductive framework with predefined themes was used, while allowing new themes to emerge. NVivo was used to organize both pre-coded and emerging codes into themes. [Figure 7.2](#) outlines the analysis process.

Figure 7.2: Qualitative Data Analysis Process



SPSS was used for quantitative analysis. Descriptive statistics were used to summarize systolic and diastolic blood pressure by age and gender, following the American College of Cardiology (ACC) thresholds (Jones et al., 2025):

- **Normal:** SBP <120 mm Hg and DBP <80 mm Hg
- **Elevated:** SBP 120–129 mm Hg and DBP <80 mm Hg
- **Stage 1 Hypertension:** SBP 130–139 mm Hg or DBP 80–89 mm Hg
- **Stage 2 Hypertension:** SBP ≥140 mm Hg or DBP ≥90 mm Hg

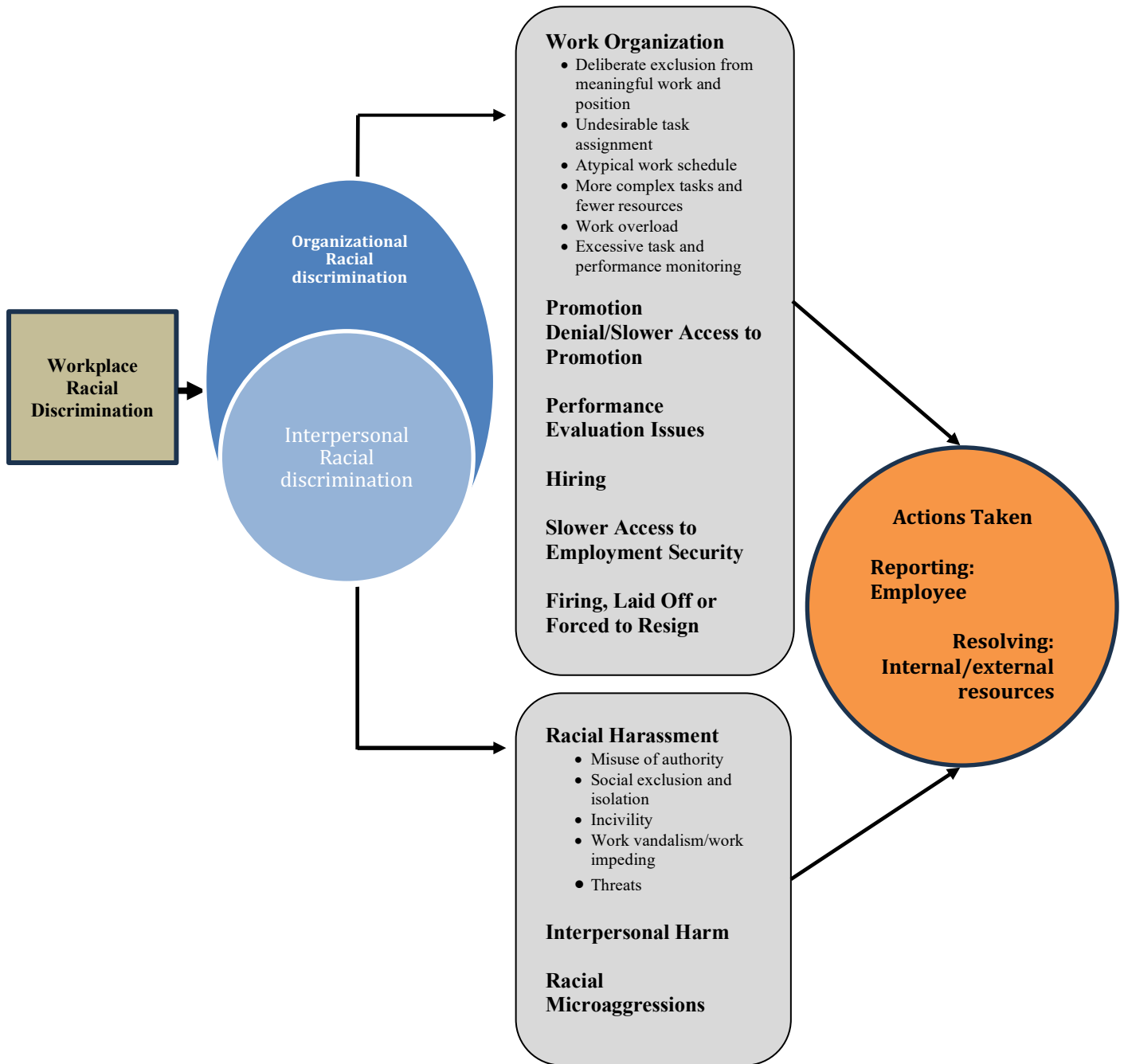
Mean comparisons were also conducted across measurement phases. Differences between non-resting BP (T1) and resting BP (T2–T4) were analyzed.

Triangulation analysis integrated qualitative and quantitative findings to address physiological health-related research questions (see Table 7-7-5). This analysis considered only organizational racial discrimination experiences and actions taken, as well as mean arterial pressure (MAP) data. Themes emerged are included in columns 1 and 2 of Table 7-7-5. Mean Arterial Pressure (MAP) was calculated using the formula: **MAP = DBP + 1/3(SBP – DBP)** (DeMers & Wachs, 2025). Resting mean arterial pressure (RMAP) was calculated using the standard MAP formula, with systolic and diastolic blood pressure values obtained at rest (T1, T2, and T4). Both MAP and RMAP thresholds were aligned with ACC categories (Jones et al., 2025):

- **<90 mm Hg:** Normotension
- **90–<92 mm Hg:** Elevated
- **92–<96 mm Hg:** Stage 1 Hypertension
- **≥96 mm Hg:** Stage 2/Severe Hypertension

Throughout the methodology described above, we aimed to ensure rigor by acknowledging the researchers' social positions and the ways our subjective understandings might influence the interpretation of the findings. Primary coding was conducted by RDD and reviewed by JMC, both of whom identify as Black. To minimize researcher bias and remain faithful to participants' narratives, we employed reflexive journaling and memo writing throughout the analysis. RDD, the principal investigator, is a Black researcher specializing in workers' health. JMC is a Black clinical psychologist and researcher with expertise in racial and ethnic health disparities. IB is a Black professor of nursing, and ILB, who identifies as White, specializes in gender, diversity, and the health workforce.

Figure 7.3: Themes Emerged in the Interviews



7.7 In-Depth Interview Results

The analysis of in-dept interviews revealed three main categories that encompassed 11 themes: (1) *major racial discrimination* (encompassing seven themes; discrimination in: hiring, firing, promotion issue, access to employment security, lack of training, work organization and work performance evaluation); (2) *interpersonal racism* (encompassing three themes: incivility, racial harassment, and racial microaggression); and (3) *action taken to fight* and resolved workplace racial discrimination (encompassing various resources). [Figure 7.3](#) represent a visualization of the themes within the key categories.

7.7.1 Workplace Major Racial Discrimination

Through the interviews, racial discrimination practices were often experienced by workers in both overt and subtle organizational practices, affecting multiple dimensions of employment. The participants highlighted being commonly subjected to an inequitable work organization. They also face barriers to advancement, such as denial or delay of promotions, limited access to professional training, and biased, non-professional performance evaluations. Discriminatory practices further impact career stability, with racialized employees encountering unequal opportunities in hiring, slower attainment of job security, and increased likelihood of being fired, laid off, or pressured to resign. These systemic inequities perpetuate exclusion and hinder career development. The term organizational racial discrimination refers to all types of racial discrimination linked to the job itself (e.g., tasks, schedules, promotions, employment, etc.) and excludes interpersonal discrimination.

7.7.2 Work organization

The work organization dimension of workplace racial discrimination was expressed in the ways that tasks, responsibilities, workload, schedules and work monitoring are organized that systematically disadvantage Black employees.

7.7.2.1 Deliberate Exclusion from Meaningful Work and Position

Participants have reported experiencing withdrawals from interesting projects or tasks, without giving reasons or for unfounded ones. Participants were deliberately sidelined and undervalued their professional abilities, “I got dumped on all the files, and they changed my files, the DG did” (Women, 55-65, Anglophone). These discriminatory practices may reflect a sense of injustice and disempowerment, keeping them in a lower position within the organization. During the investigation into false accusations against me, for which I was found not guilty, they took away my team and my budget. Despite the end of the process, I didn't return to my initial position” (Women, 35-44, Francophone).

7.7.2.2 Undesirable tasks assignment

Being Black is also a marker of being repeatedly assigned to the least interesting tasks or projects. They were discriminated against over White and racialized, non-Black employees, “I got the least desirable tasks. All the better files would go to the non-black, when I say non-black, it's not just the White people, it's also the other racialized people” (Men, 55-65, Anglophone). Undesirable tasks assignment would also be being too low-grade Black employees and keeping them in the background, “She would remove these quote unquote sexy files and give me the not so much. That's right. So, I get to be in the background. You, see?” (Transgender man, 55-65, Anglophone)

7.7.2.3 Atypical work schedule

Workers from healthcare services acknowledge the overrepresentation of Black employees on night and evening shifts. This unequal distribution of work reflects not only a lack of fairness but also a lack of choice.

There are many Black workers in the healthcare system, but most are assigned to the evening and night shifts.

They're always going to favour the White to give him the day shift. And then, we have no choice, we're in need, we take what's left for us. White people have a choice, not us. (Women, 45-54, Francophone)

7.7.2.4 More complex tasks and fewer resources

Participants also highlight systemic biases in resource allocation with different standards for Black and White employees. Black employees are regularly assigned to the most challenging tasks with no support or resources needed to succeed:

Black employees will be assigned to the most challenging sector or series with no additional resources, even if they've asked for them. But the white employee in the same series will receive the requested resources as soon as they file a complaint. (Women, 45-54, Francophone)

7.7.2.5 Work overload

Participants describe the distribution of work as unequal between Black and White employees. They qualified it as exploitation, “Actually, at my level, most employees are responsible for only one or two portfolios. Yeah. Yeah... And mine were always over four and five” (Transgender man, 55-65, Anglophone). They also expressed the feeling of being targeted as Black, and understood they are discriminated against, “Our workload is much higher. [...], I questioned my White colleagues; they had between 110 and 120 cases, whereas I had 180, the same ratio as my Black colleagues. So, no need to ask why we are targeted?” (Women, 45-54, Francophone). The participants describe overtime allocation as systematically targeting Black employees first, “Overtime and replacements

for the absence of colleagues are always offered to Black employees first, despite our higher workload” (Women, 45-54, Francophone).

Work overload, as described by the participants, also highlights dehumanizing working conditions: “Black employees of my team are working like slaves, like, it's unbelievable. I think it's inhumane because they can't expect us to do that much” (Women, 35-44, Francophone). More than a self-feeling of being overloaded, non-racialized employees also notify their workload as unmanageable, without being able to act, “Even the new White coordinator mentions that the work expectation is too high for the Black members of my team, but nothing was done” (Women, 35-44, Francophone). The workload imbalance between Black and White is also noticed and expressed by non-racialized co-workers:

A colleague came up to me, a very warm White lady. She was like, “Why are you three stressed all the time? referring to the team of 3 Black employees. “We don't even see you anymore, you've got a lot of work to do, while the others seem like they're chilling out” (Women, 45-54, Francophone)

And, this kind of observation, when expressed by a non-racial individual, confirmed the perpetuation of workplace racial discrimination:

A White employee from another project came one day and said: “You're pitiful, you work a lot comparatively to the employees from other projects.” And how can someone tell you that you are victims of racism without telling you? They don't have to say the word. (Women, 35-44, Francophone)

7.7.2.6 Excessive task and performance monitoring

Daily work of Black participants was also impregnated with constant hyper-surveillance in their action, “[...], the employees were watching me like when I was in kindergarten, I've been watched everywhere and in everything (Men, 45-54, Francophone). “You come home to work and feel like you're being watched by White people who make you feel like it's a privilege that you're there” (Women, 35-44, Francophone). Black employees also face lack of trust about their

professional abilities, “They would watch you closely and sends you messages of all type to judge your work and your performance” (Women, 35-44, Francophone). They also mention being constantly monitored on their tasks and work performance and were accountable for other race group workers’ mistake as they are “the incompetent”:

For the weekly file reviews, only my files are mentioned in the emails sent to everyone. I'm like, why do I feel targeted? Once, she dared to send me reviews on a report that I worked on with another White employee. When I told her that it was not me working on this report section, that was my colleague, she tried to convince me that it was mine. This has happened to me several times: even when my White colleagues take responsibility for their mistakes, my supervisor refuses to. Then she tries to justify why she said it was me. (Women, 35-44, Francophone)

7.7.3 Promotion denial or slower access to promotion

Eight participants have experienced promotion issues, including slower promotion compared to their white counterparts, promotion barriers and promotion denial when applying for higher positions. Promotion barriers were expressed through restricted access to specific training that would lead to career growth, “I've been requesting French classes for years, and it was never approved while White colleagues got the French classes they needed”, (Men, 55-65, Anglophone). or general support to professional advancement, “For no reason my supervisor countersigned my scholarship approval, which had already been planned and approved by the other departments” (Men, 45-54, Francophone). Promotion barrier was also expressed as a systemic discrimination in promotion skills evaluation:

I have tried to move into higher-level positions for years, but I keep failing my French oral exam. After my third try, I decided to look at the oral exam structure and asked for feedback, and... what went wrong was my accent. (Women, 55-65, Anglophone)

Participants also mentioned promotion denial based on unfounded negative performance evaluation:

I went to one of my White woman bosses, and I said: "Hey, I'm just wondering why you gave this acting position to this junior colleague who's only been here for three months, without even offering it to me, who's been here for 10 years". And she looked me in the face and said: "Oh! that's because your work doesn't meet expectations". However, nothing like this comes up in my multiple performance reviews. (Men, 55-65, Anglophone)

A participant mentioned career advancement barriers based on nonexistent recruitment criteria or rules that give privilege to White counterparts:

I had applied for a higher position and had all the required qualifications. I didn't get it, and the person recruited for the position (a White colleague) didn't have all the required qualifications. When I complained, they justified their hiring decision by citing seniority taking precedence over qualifications, even though neither was mentioned in the collective agreement or the job posting. (Women, 45-54, Francophone)

Lack of support of the management for career growth was one of the concerns of many participants, "[...] My career is blocked. I've been in the same job for 7 years. No one would sponsor my application for a higher position since I denounce the racist perpetrators by any means necessary. I'm stuck within the organization" (Women, 35-44, Francophone). Some participants were firmly convinced that their promotions were denied due to their race, rather than a lack of competence, and that is evident:

I have trained many White employees with less experience than I, who became my boss a few months later. The higher vacant positions are always offered to them, even if I apply for it too. "I feel like I did not have it, not because I am incompetent, but because I am Black." I'd apply for things, whatever it is, a promotion, acting position and not get them, right? The white colleagues would. (Men, 55-65, Anglophone)

Promotion was also granted based on race preferences rather than qualifications, by overcoming standard procedure and norms rather than following them:

A Caucasian employee with fewer qualifications and education than I had applied for the same position as I. She was offered the position to the point that, by the time I was in the staffing process, she'd already made the rounds on the floor as the new manager and then been officially introduced as the future manager. (Women, 35-44, Francophone)

7.7.4 Performance evaluation issues

Participants have reported work performance evaluation issues impregnated with stereotypes on Black people's experiences and personal life-centred evaluation rather than their work evaluation, “I felt that performance evaluation focused on my personal life rather than the work itself”. “I was questioned about my family and love relationship, my country situation, instead of my work performance” (Women, 45-54, Francophone). A participant also raised concerns about the disparity of performance evaluation, mentioning that their performance evaluations were done on an irregular basis and in an informal way compared to non-racialized employees:

I've been employed for 8 years and have had only 2 performance appraisals, unlike my White colleagues, who had annual formal appraisals. When I requested a formal assessment, they told me it's not mandatory. On the other hand, my skills are called into question with every false allegation made against me. (Men, 45-54, Francophone)

7.7.5 Not being hired

Throughout most of the interviews, racial discrimination in the hiring process was more difficult to notice from the practices. The participants highlighted managers' behaviours and preferences for other races than Black. One participant mentioned restricting information about job postings as a kind of discouragement of application, “I've been a replacement for 5 months. First,

they didn't tell me that the job was posted. I nonetheless applied... "But it was given to someone else, even though my supervisor's reactions were positive for the past 5 months" (Women, 35-44, Francophone). Racial preferences manifested subtly, often through the perception that White applicants were more deserving of priority. "It's as if you, a Black and a white person, apply for a job, it's more likely to go to the white candidate. They'll give priority to the white candidate over qualification requirements met." (Women, Francophone)

Priority for a position extended beyond qualifications, competencies and skills. Participants reported being rejected for equivalent-level openings within their organization, not because they lack qualifications or abilities, but due to managers' racial preferences:

Although I had responsibilities beyond those of an intern within the organization, trained employees internally, and heard from my supervisor that he couldn't tell the difference between me and someone who works in the company, the vacant position was offered to a white external candidate with no experience. Intrigued, I asked why I didn't get the job, and then I was told, "I can't tell you anything; I don't know what went wrong."
(Women, 45-54, Francophone)

While most of the racial preferences were subtle, one participant had reported an overt form, less direct but expressed with physical discomfort, facial expression, followed by excessive decision:

I went through the whole selection process over the phone. Everything was perfect, and I got the job. I flew to Ottawa, where I was expected, as the position had been vacant for some time and I was to start on Monday. On Friday, I met the manager... I must tell you, it was the first time I witnessed someone undergo such a transformation. He sank into his chair, as though seeing me Black had made him shrink; he had changed color. It was as if there'd been a blackout. It was as if he was saying no, no, no, not a Black. You could see it in his expression. He hadn't spoken for minutes, then he said, "I'll call you tomorrow." And since then, no call-back. I was put on hold, and the retired person (a Caucasian) who held the position was called back for a temporary contract until they could hire someone else. (Men, 45-54, Francophone)

7.7.6 Slower access to employment security

Some participants have reported restricted access to employment security in comparison to their White counterparts, raising racial prejudice as automatic assignment to atypical work status (temporary position, on-call position, etc.). The manager told me: “Go back to HR, tell them you've been released from a replacement, and they need to find me another one. As if I couldn't get a permanent position” (Women, 45-54, Francophone). Racial background was often described as a barrier to access permanent position and a way to keep Black people in precarious situation, “Because we're immigrants and Black, they want you to stay in a precarious situation, in a position with no entitled benefits. That's what I understand” (Women, 45-54, Francophone). Also, access time to regular positions within the organization was way longer for Black employees compared to White ones:

There was no shortage of positions and needs, but “hiring a person of color in a permanent position was really very difficult. It took me 10 years to get a regular position, whereas my white colleagues went into permanent employment within their first year. (Men, 45-54, Francophone)

7.7.7 Being fired, laid off or forced to resign

Results have shown that firing was not the most common racial discrimination practice. A few participants got fired for non-valid reasons:

I worked in the position for 5 months as a replacement, then became permanent. Throughout that time and during the first two weeks in the permanent position, I received positive feedback. In the third week, I was unexpectedly dismissed for not meeting position expectations, a concern that had never raised before. (Women, 35-45, Francophone)

Participants who have lost their jobs have been either forced to quit or laid off, and most of them feel like “they had it”. The cumulated experience of racial discrimination in the workplace led to early retirement, “On top of all, this last experience made me feel treated less than in public, which

pushed me to retire two years after. It was not the only reason but, was definitely one of them.” (Transgender man, 55-65, Anglophone). Other participants felt being deliberately pushed out of the organization through discriminatory treatment, “*My supervisor made a racist remark about Black people, after which, my work hours were reduced. A few days later, I was informed of a sudden transfer to a distant facility. It was too far, so I quit*” (Women, 25-34, Francophone). Resigning was a form of self-preservation against racial discriminatory treatment. While the decision to quit was often painful and uncertain economically, it also a refusal to continue enduring a hostile work environment where dignity, identity and worth were consistently undermined, “*After everything I'd been through, I didn't care that I'd lost my job, I had my diploma, I could work anywhere. I knew I wasn't going back, that was clear. I resigned*” (Men, 45-54, Francophone). Discrimination is often endured in silence and indignity, but leads to growing impatience and, ultimately, resignation, “*After spending two years on a waiting list for a position, I obtained and was subsequently refused because I was black. I thought this was unfair, I felt indignant, so I resigned.*” (Men, 45-54, Francophone)

Several participants raised colorism as one of the stumbling barriers faced by racialized people in the workplace. It influenced the level and frequency of workplace racial discrimination. One participant has stated: “*The darker you are, the more you're put down and the more you're less likely to climb the ladder or succeed*” (Women, 45-54, Francophone).

In sum, the experience of major forms of racial discrimination in the workplace varied between participants but resulted in the same outcomes. They highlighted how both overt and subtle racial discrimination practices hinder career development, create a stressful and dehumanizing workplace environment and affect the socioeconomic status of Black people. Through the interviews, racial discrimination practices were often experienced by workers who experienced marginalization through both overt and subtle organizational practices, affecting multiple dimensions of employment. The participants highlighted being commonly subjected to an

inequitable work organization. They also face barriers to advancement, such as denial or delay of promotions, limited access to professional training, and biased, non-professional performance evaluations. Discriminatory practices further impact career stability, with racialized employees encountering unequal opportunities in hiring, slower attainment of job security, and increased likelihood of being fired, laid off, or pressured to resign. These systemic inequities perpetuate exclusion and hinder career development.

7.8 Interpersonal workplace racial discrimination

The category of interpersonal workplace discrimination is divided into two subcategories: racial harassment that encompasses behaviours, incivility and mistreatments in forms of sexual insinuation, rumors, and gossip, threats, work impeding, work vandalism, social exclusion, drastic isolation measures, misusing authority and micro racial aggressions that include racial comments, racial jokes, and racial stereotypes.

7.8.1 Racial Harassment

All participants have reported experiencing more than one type of racial harassment. The most common were oppressive conduct, social exclusion and isolation, and incivility.

7.8.1.1 Misuse of authority

Participants describe being denied requests that were easily granted to their non-Black colleagues.

These unequal treatments were noticeable in the most basic request: “Other employees in similar positions were allowed to telework, but I was not. When I requested remote work, she responded: If it doesn't suit you, just quit.” So, I came into the office every day” (Women, 35-44, Francophone).

Or in entitled benefits, “I asked for two days off, but they refused and asked me to take the entire week instead. However, a non-racialized employee made the same request, and it was granted” (Women, 45-54, Francophone).

Almost all participants also experienced stricter disciplinary measures for similar mistakes made by White employees, “Black employees are not treated the same as their White employees. I can attest to this. For example, when an error occurs, disciplinary actions are harsher for Black employees than the Whites ones. I’ve both witnessed and experienced it” (Women, 45-54, Francophone).

Misuse of authority was also expressed as imposition upon tasks, position or work-related changes that other racial group employees refused, “I was imposed a position that other White colleagues had refused. They were allowed to say no, but when it came to me as Black, the law applies strictly”. (Men, 45-54, Francophone).

More than an isolated action, differential treatment can be implemented in the organizational structure, bypassing standard procedures to favorize other non-racialized employees. “I witnessed the assistant manager requesting that replacement hours no longer be assigned through the system, but by her directly, so they must benefit employees of her own race” (Men, 45-54, Francophone).

7.8.1.2 Social exclusion and isolation

Exclusion and isolation occurred during work-related activities. Many were deliberately excluded from team interactions. A participant has stated:

I was part of a team working on a special project. The other members met several times without inviting me, even though I had emailed to request to join the meetings. As time passed, I brought the issue to the manager’s attention. Instead of addressing the exclusion, I was reassigned to another project. (Men, 45-54, Francophone)

Another participant has reported being sidelined at work upon the manager’s request, “I was under investigation for false accusations made by a White colleague, of which I was found not guilty.

Therefore, everyone was warned not to invite me to any work or social meetings to protect white

women because she's a victim, not me. They put me in a corner and made fun of me on top of all” (Women, 35-44, Francophone). The participants have also expressed loneliness because of racial discrimination. Many described their work social situations, including tasks and activities, as isolating, carried out in complete separation from others. “So, I'm always alone here. I eat alone; I do everything alone” (Men, 45-54, Francophone). They also identified racial segregation as a significant workplace issue, evident in social interactions, whether subtly or overtly expressed, “When you walk into the dining room, employees are always grouped by race. Recently, I sat beside a Caucasian employee who was alone, minutes after, she moves to join others who looked like her” (Women, 45-54, Francophone).

Two participants have described isolation practices more drastic than the other experiences, resulting from complete exclusion from the working environment. These treatments have occurred as a continuous practice of racism not only from White individuals, but also from racialized individuals as an internalized racism practice. One participant stated:

Complaints repeatedly target me as the only Black member of a predominantly Arab team. One weekend, I received a vague notice to appear. On Monday, I was barred from entering the workplace and escorted to a meeting room. Since then, I haven't been able to return to work. (Men, 45-54, Francophone)

The other one mentioned being more targeted after challenging racism experienced:

When I spoke out about years of racism and its effect on my depression, my supervisor sent me home for a medical exam because she was concerned about my own safety and that of my colleagues. While I was away, I was banned from all departmental buildings. (Men, 55-65, Anglophone)

7.8.1.3 Incivility

Incivility was described as non-verbal and verbal abuse, and double standards toward Black employees' acts. Most experiences were characterized by public invisibility and ignorance. A participant shared the experience of being dismissed in a high-level meeting:

At a debriefing of about 20 people in the room, I was the only Black person. I wore my hand and asked a question regarding the last subject presented. She didn't look at me; she totally ignored my question and immediately moved on to the following subject. (Women, 55-65, Francophone)

Others have felt discriminated against in day-to-day interactions and submit to emotional manipulation. Stated that socially typical attitudes should often come from them, as such an inferior race group looking for acceptance and gratitude:

She often arrived and greeted everyone except me, deliberately ignoring my presence in the workplace. I pretended not to notice, but days later, I was summoned and asked to greet everyone because the mentioned employee had complained that I had ignored her. (Women, 35-44, Francophone)

Participants also stated that their voices and contributions are often ignored and considered meaningless. Ideas brought forth by a Black employee are more impactful when they are from a White employee, “[...], they'll not prioritize you speaking in meetings. And, when you spoke, they won't take your words but will consider someone else's spreading the same ideas” (Women, Francophone). One participant has experienced the use of sexual insinuation from White colleagues to undermine her professionalism, integrity and accomplishment:

During a meeting where I defended a Black race director against false allegations, someone asked me, “Are you sleeping with him?” A similar comment resurfaced when I was granted paid study during a financially difficult time, and people insinuated I might be sleeping with the upper-level managers. (Women, 35-44, Francophone)

7.8.1.4 Work vandalism and work impeding

In several interviews, participants reported dominance of other non-racialized and racialized employees over Black employees as impacting their professional authority and autonomy:

My Caucasian assistant sought primacy over all my tasks because she felt she had the right vision and a better understanding, and suggested that I work under her supervision, despite my 10 years of field experience. With

the supervisor's backing, all my professional power was taken away, and I lost all autonomy in my job. (Men, 45-54, Francophone)

Work sabotage was also a workplace practice that undermined Black employees' contributions to collaborative tasks:

I submitted my project to the shared drive like everyone else, but on the day of the consultation, it had vanished. The assistant manager confirmed seeing it earlier, yet it was later found strikethrough without explanation. [...], after that incident, every time I uploaded work documents, they would be invisible to everyone but me. An investigation later revealed that the perpetrator was a non-Black colleague. (Men, 45-54, Francophone)

Racial discrimination was also expressed as the appropriation of Black employees' work by the dominant race. One participant explained how her hard work has been erased with no expression of gratitude:

She laid out my strategy. She even said... when I was doing this, I thought... She explains how she thought the idea came together. If you talk about my strategy, the one developed with my team, at least tell it was a teamwork, not only yours. I was shocked. (Women, 35-44, Francophone)

7.8.1.5 Threats

Participants described the working environment as riddled with frequent implicit threats of termination or resignation in forms of psychological harassment, “[...], I know you're going to resign.” When I asked: Why? She answered: “Based on the changes I know are coming, you won't be able to stay” (Men, 45-54, Francophone). Others have reported job insecurity threats in the form of performance-based intimidation combined with a type of power abuse, which devalued employee autonomy:

After multiple unwanted position changes for no reason, I denied a proposed change, and the supervisor told me, “You either accept the position change, or you won't have a job.” On top of that, I am constantly

threatened with being asked to do this or reach this level of performance, or I won't have a job anymore.

(Women, 35-44, Francophone)

7.8.2 Interpersonal Harms

In the workplace context, interpersonal harm was frequently described as denigrating comments or acts delegitimizing Black employee presence or belonging at work. Participants have mentioned feeling excluded from national identity because of their accent: “learn to speak French, we don't even understand what you're saying, we don't even know what language you're speaking. Go back to your country” (Women, 45-54, Francophone). Others have experienced cultural devaluation, denigrating their personal values and culture, suggesting that their cultural traits are with Western professionalism or norms, “One of my trainers at work said to me: your African values are misinterpreted here. You must change the way you are” (Men, 45-54, Francophone). Interpersonal harm was also done by expressing racial envy and nationalist resentment using characteristic traits such as skin color, revealing white privilege over the Black race. While I was serving a customer, she looked at me and said, “Wait, you work here?” She seemed surprised, as if it were unfair that I had the job. She added, “I’m white and in my own country, and I can’t even find a job” (Woman, 45–54, Francophone). More than comments and verbal behaviours, one participant reported dehumanization through racist symbolic harassment experienced associating Black people with animals and menial labor:

A colleague once came into my office with a red-lipped fluffy monkey. I usually wear red lipstick. She began pretending to babysit the monkey, then she asked me if she could borrow some significant markers. She started drawing the monkey on my notepad and eventually made it clear that the drawing was supposed to represent me, implying that I looked like the monkey and that I should be cleaning the toilets. I still have the drawing, in fact. (Women, 35-44, Francophone)

7.9 Racial microaggressions

Although less frequent, some participants also reported experiencing racial microaggressions. These included derogatory remarks, jokes, and attitudes aimed at their skin color or origin, which reflect stereotypical beliefs about Black individuals: “You’re beautiful for a black woman” (Women, 35-44, Francophone). Another participant reported: “*You’re right on time, which is impressive for a Black*” (Women, 25-34, Francophone). Participants also raised cultural discomfort, “My supervisors said that the team was complaining about food smells and asked me not to bring this ‘stinky food’ to work. But I never bring lunch, I don’t eat at work. Why was I targeted?” (Women, 35-44, Francophone)

7.10 Reporting Racial discrimination and Action Taken

In terms of actions taken, we analyzed the utilization of available resources to report workplace racial discrimination. In total, six participants have filed complaints with their unions; three have referred their complaints to their managers (written and oral); two have filed complaints with both their union and the human rights commission; and three have not filed complaints. All the complaints filed with managers/supervisors have received follow-up or support from these resources. A similar trend has been reported for complaints filed with the unions. Most of them remained with no follow-up or were non-conclusive for racial discrimination practices or behaviours. Only one participant has full union support, and the direction falsified the investigator's internal investigation, leaving it inconclusive. Both complaints brought to the Human Rights Commission after being initially denied by the unions were received and transferred to the Human Rights Tribunal of Ontario. One is ongoing; the other has been dropped in exchange for financial compensation and a non-disclosure contract. Most participants have taken at least one action to challenge workplace racial discrimination, but only the complaints filed with the Human Rights

Commission have been received and recognized. The themes are summarized in [Table 7-7-5](#) by participants.

7.11 Quantitative Results

7.11.1 Impact of Workplace Racial Discrimination Experience on Blood Pressure

The recounting of experiences of workplace racial discrimination had fluctuated participants' blood pressure during the interview. Results in [Table 7-7-3](#) show that the mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) increased at each measurement, except for DBP at T4, which was almost identical to DBP at T3 and greater than DBP at T1 (non-resting BP). For all measurements, minimum values of SBP ranged from 98 to 106 mm Hg, and the maximum values ranged from 149 to 166 mm Hg. The minimum values of DBP ranged from 62 to 69 mm Hg, and the maximum values ranged from 101 to 108 mm Hg.

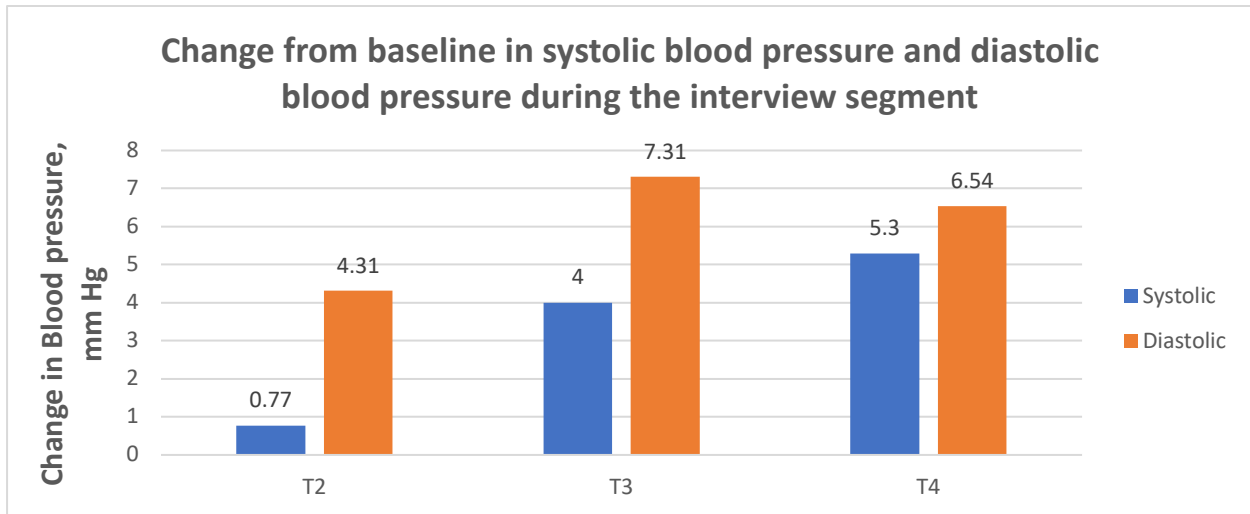
The results also showed that participants experienced greater increases in resting diastolic blood pressure (RDBP) and resting systolic blood pressure (RSBP) at each measurement compared to baseline T1 (Figure 7.4). Changes in mean of RDBP at T2, T3 and T4 were 4.31, 7.31, and 6.54 mm Hg higher respectively than the non-resting BP at T1. Similarly, the mean of RSBP at T2, T3 and T4 was respectively 0.77, 4.00 and 5.31 mmHg higher than the non-resting BP at T1. Higher pic was observed at T3 for RDBP and at T4 for RSBP.

7.11.2 Age and Sex Differences in Systolic, Diastolic BP and BP Indicator

[Table 7-7-4](#) presents the BP changes by age and Sex. Older participants showed a higher stage related to both SBP and DBP at the hypertension threshold. Isolated diastolic elevated BP or hypertension were more frequent among females aged 25 to 54 than systolic elevated BP or hypertension. Most BP readings in females aged 25 to 44 were normal, and a few indicated elevated BP or hypertension. Isolated systolic and diastolic hypertension was more common in participants

aged 45 to 54. Females and males aged from 45 to 65 showed more elevated blood pressure and hypertension stage than normal BP in all measurements.

Figure 7.4: Mean Differences of Non-resting and Resting Systolic and Diastolic Blood Pressure, mm Hg



7.12 Results of Triangulation Analysis

7.12.1 Mean Arterial Pressure, Workplace Racial Discrimination Experience, and Action Taken.

Table 7-7-5 presents the themes that emerged from workplace racial discrimination experiences in the interviews, along with the trend in participants' mean arterial pressure. The different types of workplace racial discrimination experienced by the participants are presented in column 2 of Table 5. Most of the participants have a resting mean arterial pressure (RMAP) higher than the baseline mean arterial pressure MAP (T1). Among participants who either did not file racial discrimination complaints (P2, P6, P9) or whose complaints received no follow-up, no response, or were dismissed (P3, P5, P7, P8, P10, P11, P12, P13), most exhibited elevated or hypertensive blood pressure levels in at least one resting mean arterial pressure (RMAP) measurement, except for P11.

Participants who have filed complaints with adequate follow-up and recognition showed a decrease in MAP (P1) or abnormal variation compared to the initial MAP at T1 (P4) throughout the interview. For P1, RMAP remains at a normal stage for T2, T3, and T4 compared with T1. More variation was found for the RMAP of participant P4, with an increased RMAP (T2 and T3), indicating a hypertension stage 2 and a decrease at T4, indicating an elevated blood pressure as per T1.

When comparing non-resting MAP and RMAP, the highest increase was found at T3 for most participants, and the increase level differs depending on the type of major racial discrimination experienced. For participants who experienced major workplace racial discrimination in firing, hiring or promotion denial or barriers (P1, P3, P4, P5, P7, P9, P10, and P11), RMAP increased between 4.67 and 21.00 mm Hg compared to the non-resting MAP (T1). Blood pressure status indicated hypertension stage 1 or stage 2 for all participants, except for P1 and P11.

Participants who got fired, delayed or forced to quit due to workplace racial discrimination experiences (P4, P5, P9, P10, P11, and P12) had a higher increase in RMAP at T3 (8.00 to 21 mm Hg), in comparison to those who had experienced other types of major racial discrimination but not such experiences. Hypertension blood pressure status was more frequent among these participants at this measurement time (T3).

Participants who experienced racial discrimination in access to employment security with no experience of discrimination in hiring, firing or promotion (P6 and 12) showed an RMAP increase between 3.67 and 4.67 mm Hg at T3 in comparison to T1, indicating an elevated or normal blood pressure state at this measurement time (T3).

Those who had not experienced racial discrimination in firing, hiring, or promotion (P2 and P13) showed no increase or a decrease of 5.67 mm Hg to 2.00 mm Hg in RMAP at T3 compared with the non-resting MAP at T1. No change in P2 blood pressure status has been

observed from T1 to T3. The blood pressure status of participant P13 changed from hypertension stage 1 to normal blood pressure at T3.

7.13 Discussion

Using a Social Ecological Framework, this study identified ways in which Black Canadian workers experience workplace racial discrimination at the interpersonal and organizational levels. It also examined the relationship between workplace racial discrimination experience and blood pressure, a key health measure used to assess potential health impacts. Participants' experiences were categorized into three primary themes reflecting distinct forms of workplace racial discrimination: (1) organizational racial discrimination, (2) interpersonal racial discrimination, and (3) Reporting and action taken toward these experiences. Results from the interviews indicate the occurrence of racial discrimination in the Canadian workplace and the different forms in which it might be experienced. They also highlight that the perpetrator can be from the dominant race group (White). Still, they can also be part of another racialized group, other than Black, indicating the race representation dominance. Limited research has focused on the in-depth exploration of workplace racial discrimination in Canada. Most of the existing studies are focused on general reports of racial discrimination experiences, demonstrating a higher rate of racial discrimination among racialized workers, specifically among the Black population (Foster et al., 2023; KPMG, 2024; Lam et al., 2023; Turcotte, 2020). However, similar findings emerged in recent research investigating these issues among federal Black Canadian employees (Zellars, 2024). More than half of these participants reported being denied a promotion, over two-thirds reported slower access to promotion, and 1.5 out of 5 employees felt overloaded compared to their White counterparts (Zellars, 2024).

This study also reports that all the participants experienced unfounded allegations, more than three of five experienced harassment or intimidation and racial microaggressions (Zellars,

2024). Another Canadian study identified the occurrence of workplace racial harassment, such as verbal aggression (Boateng & Brown, 2022), stereotyping, exclusion, and experiences of being ignored, unwelcome, or judged based on racial traits such as skin color or accent (Sadiq et al., 2025). Additionally, studies conducted in the U.S have shown that participants have experienced verbal harassment and social exclusion in the workplace (Low et al., 2007).

Although interconnected, organizational racial discrimination is more likely to engender interpersonal racial discrimination in the workplace. Throughout the interviews, I understand that the occurrence and normalization of racial discrimination in workplace practices or norms increases the risk of harmful behaviours in interpersonal interactions. Organizational racial discrimination can trigger interpersonal forms of racial discrimination, both directly and indirectly. Results show that Black participants who experienced organizational racial discrimination are more likely to express a sense of exclusion in the workplace, whether in work-related activities (meetings) or in social interactions. They also tend to report more racial harassment. Indeed, when racial discrimination is embedded in organizational practices or an organization ignores or fails to address racial discrimination complaints, racial discrimination becomes indirectly normalized (Björklund et al., 2012; Kunz & Ludwig, 2022). These situations put perpetrators in a position to engage in discriminatory behaviours and ensure the continuity of their actions through organizational culture. Likewise, overwatching tasks or promoting White employees trained by Black employees, for example, increases stereotypes and bias on Black employees' abilities and professional capacities (Björklund et al., 2012; Dickens & Kane, 1999).

On the other hand, interpersonal racial discrimination influences structural racial discrimination in an indirect and less obvious way. Results show that racial bias influences performance evaluation, career advancement, unemployment and the desire to stay in an organization. Black workers are often considered less competent for promotion, even when this is

not reflected in formal assessments. They are also more likely to have no or an informal performance evaluation. Also, stereotypes and biased attitudes (e.g., second-guessing or ignoring Black workers' ideas) reinforced the undermining of Black employees' capacity to occupy higher positions within the organization. Furthermore, exclusion from work meetings and from project or social interactions impacts Black employees' networking capacity, which often plays a key role in promotions, project assignments, and access to information.

For instance, both organizational and interpersonal racial discrimination impacted Black employees at a personal level, leading them to accept such practices and behaviours, although considered abnormal (David et al., 2019; Speight, 2007). The inaction and ignorance of the organization toward such experiences also impact Black employees' willingness to report racial discrimination (Benbow et al., 2025), discourage them to apply for promotion (Corbett et al., 2024; Nag et al., 2022), diminish their sense of belonging, unable social relations and supports (Cénat et al., 2024), increased self-judgement and internalized racism (D. James et al., 2024; Willis et al., 2021), normalize and reinforce workplace racial discrimination and racial inequalities (Hirsh, 2008; Newman et al., 2025). Workplace racial discrimination is more than an isolated experience, inflicting emotions and feelings. In either form, it influences the socioeconomic position of racialized workers (Pendakur & Woodcock, 2010; Picot & Hou, 2003), impacting their income and growth, access to benefits and job stability, influence sick leaves and retirement decisions, as well as unemployment (Block et al., 2019; Hudson et al., 2012; Rubin & Alteri, 2019; Statistics Canada, 2023). It also increases the existing gap in their social relations, reducing their social ties with other employees, either racialized or not, and limiting their social support or support at work (Deitch et al., 2003; Triana et al., 2015).

7.13.1 Systolic and Diastolic Blood Pressure Change in Response to Mental Stress

The unique contribution of this research is the interaction between workplace racial discrimination and blood pressure, which revealed an overall increase in mean systolic, diastolic, and mean arterial pressure (MAP) during the interview recounting these experiences. The findings also highlight differences in blood pressure variation by the type of discrimination experienced and the actions taken. Although not the most impactful finding, resting blood pressure measurements were overall higher than the initial non-resting measurements taken upon arrival following physical activity. Previous studies have similarly found that exposure to racial discrimination in institutional settings, including the workplace, is associated with elevated systolic and diastolic blood pressure (D. James et al., 2024; Willis et al., 2021). Among Black individuals, repeated exposure to racial discrimination in various domains, including at work, has been linked to a greater increase in blood pressure and a higher risk of hypertension (Cayo & Colbert, 2025; Krieger & Sidney, 1996b). Findings indicate a greater increase in resting diastolic pressure than in resting systolic pressure. This finding is consistent with previous studies suggesting a more rapid increase in systolic blood pressure at the onset of mental stressors.

In contrast, physical stressors were more strongly associated with a rise in systolic blood pressure (El Sayed et al., 2016). Similarly, diastolic blood pressure increase was found to be associated with anxiety, whereas systolic blood pressure was inversely associated with happiness (G. D. James et al., 1986). While stress is associated with increased blood pressure (Chida & Steptoe, 2009), the source of stress and emotional state determine whether systolic or diastolic blood pressure rises (Carter & Ray, 2009).

7.13.2 Resting Mean Arterial Pressure Differences Based on Organizational Racial Discrimination, and Whether Action was Taken

Results indicated variations in RMAP (Resting Mean Arterial Pressure) at T3 (right after participants described their racial discrimination experiences and health impacts) compared to non-resting MAP at T1. Participants who reported organizational racial discrimination (ORD) in hiring, firing, or promotion showed a greater increase in RMAP at T3 than those who did not report such experiences. In contrast, participants who experienced other forms of racial discrimination (e.g., in performance evaluation, training, or workload) but not in hiring, firing, or promotion showed a more minor increase in RMAP from T1 to T3. Indeed, those who did not experience racial discrimination in hiring, firing, or promotion generally showed minimal or decreased RMAP at T3. Notably, participants who lost their jobs, either through firing or being forced to quit, had the highest increases in RMAP at T3, compared to those who experienced organizational racial discrimination but retained their jobs. To date, no study has directly examined the relationship between specific types of workplace racial discrimination and blood pressure. However, existing research indicates that discrimination in firing, but not in hiring or promotion, significantly predicts biological dysregulation, including systolic and diastolic blood pressure (Jang et al., 2019). More broadly, perceived workplace racial discrimination has been consistently associated with adverse health outcomes (Jang et al., 2019), including increased blood pressure, hypertension, and cardiovascular disease. Experimental studies in controlled settings have also demonstrated that exposure to racism can trigger cardiovascular reactivity, a known risk factor for heart disease and cardiovascular diseases (Williams & Neighbors, 2001).

Our findings are not surprising. Racial discrimination, as a workplace stressor, is associated with chronic stress and an increased risk of hypertension (Brondolo et al., 2011; Din-Dzietham et al., 2004). Major forms of workplace racial discrimination (e.g., not being hired, getting fired, promotion issues) are particularly associated with greater psychosocial stress and more severe mental

and physical health outcomes (Chida & Steptoe, 2009; Gee & Ford, 2011; Hudson et al., 2012). Indeed, it is expected that job loss due to workplace racial discrimination, particularly in firing, hiring and promotion, has a greater impact on RMAP compared to other forms of workplace racial discrimination or no such experiences. Experiencing major racial discrimination impacted not only the immediate states of emotion, feeling or health, but also contributed to long-term health disparities by reinforcing these lower social and economic status and limiting access to employment or career advancement opportunities (Block et al., 2019; Pascoe & Richman, 2009; Williams et al., 2009). These experiences create a compounding effect on multiple social determinants of health, deteriorating the health status of racialized individuals, including blood pressure as a health indicator.

Triangulation analysis revealed that participants who reported workplace racial discrimination exhibited greater increases in MAP throughout the interview, reaching hypertensive levels in at least one resting blood pressure measurement. In contrast, those who filed complaints, regardless of the adequacy of follow-up, generally showed lower RMAP values (Krieger, 1990; Krieger & Sidney, 1996b). Notably, participants who received acknowledgment or resolution after filing complaints show a MAP status within the normal range. However, greater MAP variability, ranging from elevated to hypertensive levels, was observed among those whose complaints were acknowledged but subsequently withdrawn.

These results are consistent with previous studies indicating that individuals who take no action in response to racial discrimination are more likely to exhibit elevated blood pressure or report hypertension compared to those who actively confront such experiences (Krieger, 1990; Krieger & Sidney, 1996b). These findings indicate that reporting workplace racial discrimination, especially when validated or corrective action is taken, may mitigate physiological stress response,

such as elevated blood pressure. Conversely, inaction or non-corrective responses may exacerbate the negative health impact.

Moreover, increasing the variation of MAP while sharing workplace racial discrimination experience could be a trigger to the health of Black individuals exposed to such practices at work regularly. A study has found increased risk of cardiovascular disease with MAP indicating elevated, hypertension stage 1 and hypertension stage 2 in comparison to normotension stage participants (Melgarejo et al., 2021). A longitudinal study has found a significant association of increased systolic blood pressure and risk of developing hypertension in participants under 50 years old; for older participants, the effect was similar for DBP and SBP (Kanegae et al., 2017). Other studies have found a strong association of DBP variation and stroke and cardiovascular diseases/mortality (Parati et al., 2015; Stevens et al., 2016).

Our findings underscore the persistent nature of racial harassment in Canadian workplaces. It also expands our understanding by identifying a broad range of discriminatory behaviours and practices affecting Black workers, many of which remain underexplored in existing literature. More than an isolated practice, the experience of racial discrimination induces stress and impacts physiological response.

7.14 Implications for Research and Intervention

This study is the first to investigate a broad range of workplace racial discrimination among Black individuals in Canada and its impact on blood pressure. Furthermore, it is among a few studies to show the heightened effect of workplace racial discrimination on the response of stress and emotion while recounting these experiences. Chronic diseases surveillance data identified cardiovascular disease as one of the four primary chronic diseases in Canada and the second leading cause of death (PHAC, 2022), with 8 of 10 related to coronary artery disease, stroke, hypertension, and heart failure (Ruel, 2022). Indeed, death rates tend to be higher in men compared to women.

Previous studies have found that racialized individuals, particularly Black individuals, are more at risk of cardiovascular diseases and cardiovascular death (Javed et al., 2022). If Black individuals show a stress response reaction, resulting in blood pressure variation while sharing actual and/or past racial discrimination experiences, even in the absence of prejudice and outside of the target environment and perpetrator, that is alarming. This brings us to question the impact over time and constant exposure to racial discrimination in several domains (settings, daily life, etc.) experienced by racialized individuals. Knowing that continuous exposure to chronic stress has negative impacts on allostatic load, predisposing individuals to several mental and physical health problems (McEwen, 2003). More research should focus on workplace racial discrimination as a social determinant of health. This study has important implications for Black and racialized individuals' health, as elevated blood pressure is known as a risk factor for various health outcomes.

7.15 Limitations

While this study deepens our understanding of how racial discrimination manifests in Canadian workplaces and its impact on blood pressure and health among Black individuals, it has limitations. First, the small sample size restricted more robust statistical analyses. Additionally, participants were mostly aged 45–54, especially among men. Although participants held diverse jobs, all were well educated and held mid- to high-level positions. Including individuals across a broader range of ages, education levels, and job types would improve generalizability and provide a fuller picture of workplace discrimination and its effects on health outcomes.

Second, the study focused on Black individuals in a single region, limiting its applicability to other racialized groups and geographic areas. Also, since all racialized groups are exposed to race-based discrimination, more studies should be conducted among different racial groups, particularly Indigenous and Black people who report experiencing more racial discrimination in the Canadian workplace. Including participants from diverse racial backgrounds would enable comparisons in

experiences and physiological stress responses, supporting more targeted and culturally informed workplace interventions.

Third, this study measures one health indicator (BP). Future studies should examine additional physiological indicators to assess stress responses to workplace racial discrimination better. Longitudinal experimental studies should be conducted to determine the causal effect of experiencing racial discrimination and the risk of developing hypertension and chronic diseases. Indeed, multi-level intervention should be undertaken to target determinant factors impacting the population's health, including workplace racial discrimination.

7.16 Conclusions

Racial discrimination in the Canadian workplace encompasses a broad spectrum of practices and behaviours involving differential treatment based on race. Such experiences can elicit chronic psychosocial stress, leading to physiological dysregulation (e.g., elevated blood pressure). The outcomes resulting from discriminatory encounters determine stress level and cardiovascular reactivity, indicating job loss from workplace racial discrimination as a higher risk factor for blood pressure rise. Although reporting workplace racial discrimination, specifically when corrective actions are taken, leads to a lower increase or decrease in blood pressure, which might mitigate health risks associated with such experiences. Conceptualizing workplace racial discrimination at different levels and as a chronic stressor provides a critical framework for understanding health disparities among racialized populations. This perspective also supports the development of targeted interventions addressing the structural and psychosocial contributors to health inequities.

7.17 References

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7.18 Supplemental Material - STUDY 3

Table 7-7-1: Interview Segments, Blood Pressure Measurement and Questions Asked

Segments	Key Topics	Focus of questions
Segment 1	<ul style="list-style-type: none"> - Questionnaire completion and consent form verification - Outline the research purpose and procedure - Upper left arm measurement - Device installation (BP monitor) 	<p>Ice-break questions (e.g., Was it easy to get here?) Can you tell me a little bit about your job?</p>
Segment 2	<ul style="list-style-type: none"> - Workplace Racial discrimination experiences (Type, perpetrator, support) - Immediate and long-term physical and mental health outcomes - Economic impacts - Work performance impacts 	<p>You reported experiencing workplace racial discrimination in the survey. Could you please tell me more about your experience? When did you realize that you were facing workplace racial discrimination? Can you explain to me how you felt when this happened? Did you have any physical symptoms? Did you have any mental health discomfort? Have you missed work due to workplace discrimination? Was there any loss of earnings? Do you believe that this experience prevents you from performing at work or focusing on day-to-day activities?</p>
Segment 3	<ul style="list-style-type: none"> - Knowledge about available resources and their utilization - Coping strategy 	<p>Does your workplace have resources and a straightforward procedure on how to report and manage workplace racial discrimination? Are you aware of resources outside of your workplace to report workplace racial discrimination? Have you ever reported workplace racial discrimination? If so, could you please explain the process? Did that help? If not, can you tell me why? Have you ever been afraid to report such practices? If yes, can you tell me why? What are your coping strategies? What do you do in such situations? Have you ever consulted a mental health professional or other health professional regarding the symptoms described earlier? If so, what health professional? When? Has this helped? If not, why?</p>

Table 7-7-2: Socio-demographic Information of the Sample (N = 13)

Variables	N (%)
Age (M; SD)	48(11.12)
Gender	
Women	5(38.46)
Men	5(38.46)
Transgender man	1(7.69)
Prefer not to answer	2 (15.38)
Sex	
Female	8 (61.54)
Male	5(38.46)
Sexual orientation	
Heterosexual	11(84.62)
Lesbian/Gay	1(7.69)
Prefer not to answer	1 (7.69)
Relationship status	
Single, never married	1(7.69)
Married	9(69.23)
Divorced	1(7.69)
Prefer not to answer	2(15.38)
Disability Status	
Yes	1(7.69)
No	11(83.62)
Prefer not to answer	1(7.69)
Place of birth	
Born in Canada	3(23.08)
Born Aboard	9(69.23)
Prefer not to answer	1 (7.69)
Origin	
African	3(23.08)
Caribbean	8(61.54)
Mixed	2(15.38)
Religion	
Christian	8(61.54)
Atheist	2(15.38)
Prefer not to answer	3(23.08)
Legal Status	
Canadian citizen	9(69.23)
Permanent Resident	1(7.69)
Non-permanent resident	1(7.69)
Prefer not to answer	2(15.38)
Language of the interview	
English	2 (15.38)
French	11 (84.62)
Employment Status	
Employed	13(100)
Annual salary	
\$30,000-\$39,999	1(7.69)
\$50,000-\$74,999	5(38.46)
\$75,000-\$99,999	4(30.77)
\$100,000 and more	2(15.38)
Prefer not to answer	1(7.69)

Table 7-7-3: Mean Comparison of Non-Resting and Resting Systolic and Diastolic Blood Pressure, mm Hg

Variable	T1			T2			T3			T4		
	Min	Max	Mean (SD)	Min	Max	Mean (SD)	Min	Max	Mean (SD)	Min	Max	Mean (SD)
Systolic blood pressure, mm Hg	98.00	149.00	122.77 (15.24)	98.00	155.00	123.54 (20.06)	101.00	171.00	126.77 (19.77)	106.00	166.00	128.08 (20.88)
Diastolic blood pressure, mm Hg	62.00	101.00	77.46 (10.88)	68.00	105.00	81.77 (11.48)	69.00	97.00	84.77 (9.36)	69.00	108.00	84.00 (11.39)

Table 7-7-4: Systolic, Diastolic Blood Pressure and Blood Pressure Indicator by Age and Sex

ID	Sex	Age range	T1			T3			T3			T4		
			SBP Mm Hg	DBP Mm Hg	Blood pressure indicator	SBP Mm Hg	DBP Mm Hg	Blood pressure indicator	SBP Mm Hg	DBP Mm Hg	Blood pressure indicator	SBP Mm Hg	DBP Mm Hg	Blood pressure indicator
P13	Female	25-34	114	81	Hypertension Stage 1	102	69	Normal	101	79	Normal	113	92	Hypertension stage 2
P1	Female	35-44	123	74	Elevated	112	71	Normal	111	69	Normal	110	69	Normal
P6	Female	35-44	103	75	Normal	103	75	Normal	111	78	Normal	108	81	Hypertension Stage 1
P11	Female	35-44	98	64	Normal	100	70	Normal	104	73	Normal	108	74	Normal
P5	Female	45-54	106	78	Normal	98	74	Normal	115	86	Hypertension Stage 1	106	83	Hypertension Stage 1
P3	Female	45-54	149	85	Hypertension Stage 2	155	86	Hypertension Stage 2	133	90	Hypertension Stage 2	153	86	Hypertension Stage 2
P7	Female	55-65	134	101	Hypertension Stage 2	155	105	Hypertension Stage 2	171	97	Hypertension Stage 2	166	100	Hypertension Stage 2
P2	Female	-	130	89	Hypertension Stage 1	129	88	Hypertension Stage 1	132	88	Hypertension Stage 1	125	90	Hypertension Stage 2
P8	Male	45-54	126	78	Elevated	135	85	Hypertension Stage 1	127	83	Hypertension Stage 1	140	78	Hypertension Stage 2
P9	Male	45-54	127	63	Elevated	133	94	Hypertension Stage 2	130	93	Hypertension Stage 2	130	85	Hypertension Stage 1
P10	Male	45-54	145	81	Hypertension Stage 2	138	91	Hypertension Stage 2	149	95	Hypertension Stage 2	161	108	Hypertension Stage 2
P12	Male	45-54	117	62	Normal	114	68	Normal	120	75	Elevated	119	71	Normal
P4	Male	55-65	124	76	Elevated	132	87	Hypertension Stage 1	144	96	Hypertension Stage 2	126	75	Elevated

T1, T2, T3, T4: BP measurements; SBP: systolic blood pressure; DBP: diastolic blood pressure

Normal SBP <120 mm Hg and DBP <80 mm Hg; Elevated SBP 120–129 mm Hg and DBP <80 mm Hg Hypertension Stage 1: SBP = 130–139 mm Hg or DBP= 80–89 mm Hg Hypertension Stage 2: SBP = 140 mm Hg or DBP =90 mm Hg

Legend:

Color code Value in mm Hg

Normal



Elevate



Hypertension stage 1



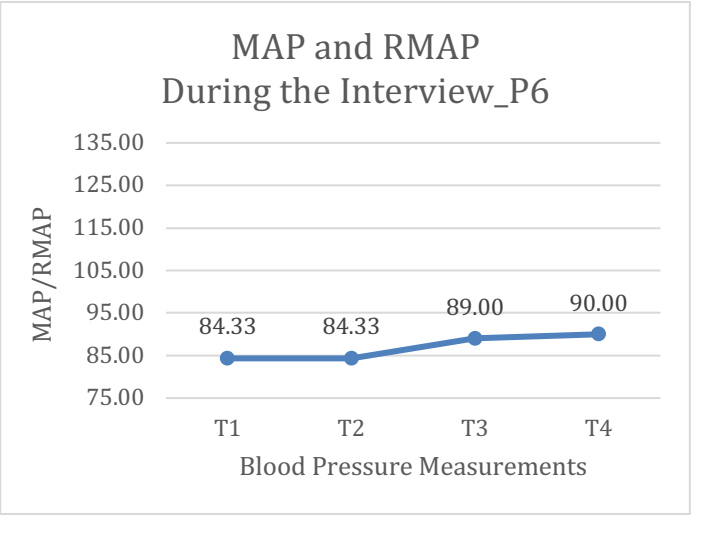
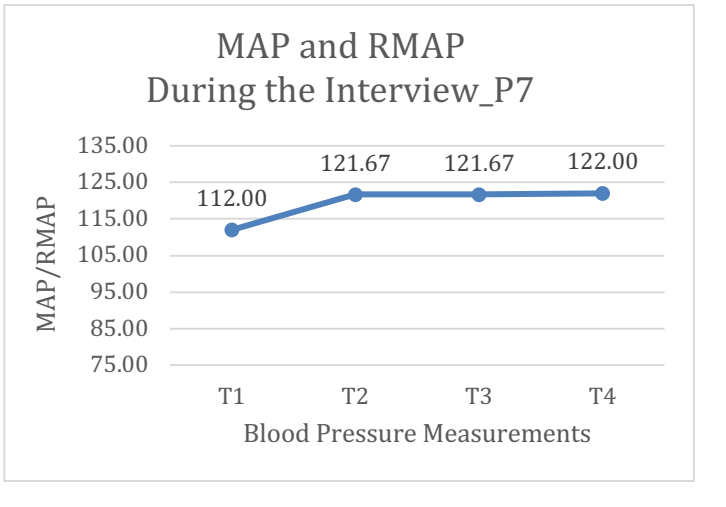
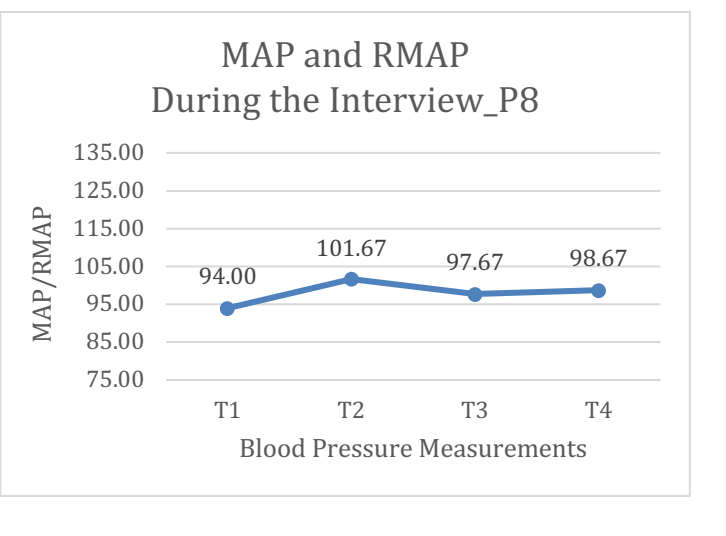
Hypertension stage 2

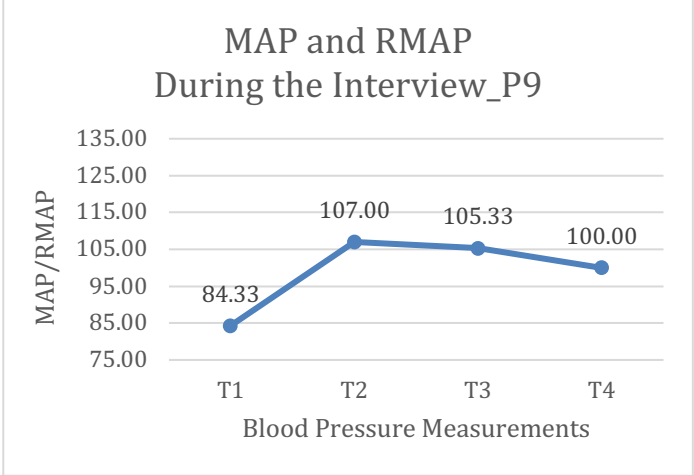
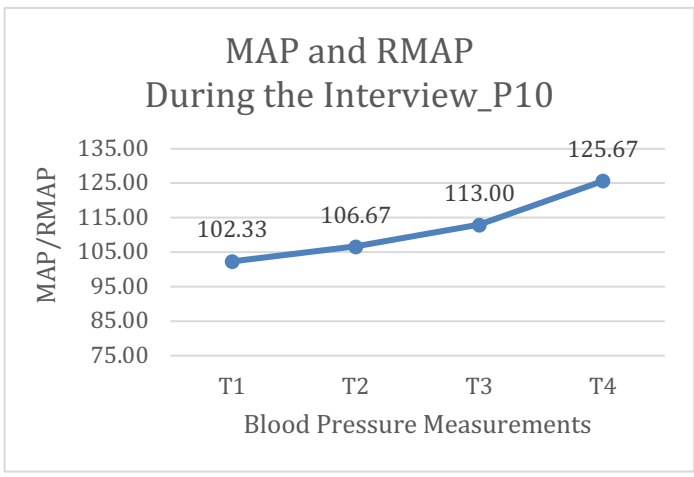


Table 7-7-5: Type of Workplace Racial Discrimination experienced, resources used, complaints status and Mean Arterial Pressure Variation

ID	Type of workplace racial discrimination	Resources used and complaints status	MAP Variation										
P1	<p>ORD Interesting project withdrawals Promotion denial Promotion barriers</p> <p>IRD Trumped-up accusations Isolation Racial microaggression</p>	<p>Internal Resources (Union and Informal Conflict Resolution Office) Status: Non-recognized</p> <p>Status: Non-recognized</p> <p>External Resource Human Rights Commission Status: accepted and transferred to the Human Rights Tribunal (case ongoing)</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P1</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Interview_P1 MAP and RMAP</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>90.33</td> </tr> <tr> <td>T2</td> <td>84.67</td> </tr> <tr> <td>T3</td> <td>83.00</td> </tr> <tr> <td>T4</td> <td>82.67</td> </tr> </tbody> </table>	Time Point	MAP/RMAP Value	T1	90.33	T2	84.67	T3	83.00	T4	82.67
Time Point	MAP/RMAP Value												
T1	90.33												
T2	84.67												
T3	83.00												
T4	82.67												
P2	<p>ORD S/O</p> <p>IRD Excessive scolding Talking behind someone's back Unfounded complaints Ignorance Excessive tasks and work performance monitoring</p>	<p>None</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P2</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <caption>Data for Interview_P2 MAP and RMAP</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>102.67</td> </tr> <tr> <td>T2</td> <td>101.67</td> </tr> <tr> <td>T3</td> <td>102.67</td> </tr> <tr> <td>T4</td> <td>101.67</td> </tr> </tbody> </table>	Time Point	MAP/RMAP Value	T1	102.67	T2	101.67	T3	102.67	T4	101.67
Time Point	MAP/RMAP Value												
T1	102.67												
T2	101.67												
T3	102.67												
T4	101.67												

<p>P3</p>	<p>ORD Work Overload Hiring Promotion denial</p> <p>IRD Isolation Dismissal Ignorance</p>	<p>Internal Resource (Union) Status: No follow-up</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P3</p> <table border="1"> <caption>MAP and RMAP Data for Interview_P3</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>106.33</td> </tr> <tr> <td>T2</td> <td>109.00</td> </tr> <tr> <td>T3</td> <td>104.33</td> </tr> <tr> <td>T4</td> <td>108.33</td> </tr> </tbody> </table>	Time Point	MAP/RMAP Value	T1	106.33	T2	109.00	T3	104.33	T4	108.33
Time Point	MAP/RMAP Value												
T1	106.33												
T2	109.00												
T3	104.33												
T4	108.33												
<p>P4</p>	<p>ORD Sudden task change Interesting task and project withdrawals Undesirable tasks assignment Promotion denial Acting position denial Constant performance and skills questioned Lack of internal training</p> <p>IRD Unfounded complaints and investigations Rejection and Exclusion Workplace access banned</p>	<p>Internal Resource (Union) Status: No follow-up</p> <p>Canadian Human Right Commission Right Status: Complaint received Commission Right Tribunal The case was dropped in exchange for financial compensation</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P4</p> <table border="1"> <caption>MAP and RMAP Data for Interview_P4</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>92.00</td> </tr> <tr> <td>T2</td> <td>102.00</td> </tr> <tr> <td>T3</td> <td>112.00</td> </tr> <tr> <td>T4</td> <td>92.00</td> </tr> </tbody> </table>	Time Point	MAP/RMAP Value	T1	92.00	T2	102.00	T3	112.00	T4	92.00
Time Point	MAP/RMAP Value												
T1	92.00												
T2	102.00												
T3	112.00												
T4	92.00												
<p>P5</p>	<p>ORD Promotion barrier Work overload Harder tasks assignment Undesirable tasks assignment Atypical shift and schedule assignment</p> <p>IRD Restricting information No progressive disciplinary measures Lack of support</p>	<p>Internal Resource (Managers_Written and verbal complaints) Status: No follow-up</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P5</p> <table border="1"> <caption>MAP and RMAP Data for Interview_P5</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>87.33</td> </tr> <tr> <td>T2</td> <td>82.00</td> </tr> <tr> <td>T3</td> <td>95.67</td> </tr> <tr> <td>T4</td> <td>90.67</td> </tr> </tbody> </table>	Time Point	MAP/RMAP Value	T1	87.33	T2	82.00	T3	95.67	T4	90.67
Time Point	MAP/RMAP Value												
T1	87.33												
T2	82.00												
T3	95.67												
T4	90.67												

<p>P6</p>	<p>ORD Slower access to employment security Career advancement discouragement Involuntary assignment to a less interesting project Work overload</p> <p>IRD Belittle abilities and experiences Entitle leave denial Exclusion from the group project Feeling targeted Threat of dismissal Excessive tasks and work monitoring Micro racial aggression</p>	<p>No action</p>	 <p>MAP and RMAP During the Interview_P6</p> <table border="1"> <thead> <tr> <th>Measurement</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>84.33</td> </tr> <tr> <td>T2</td> <td>84.33</td> </tr> <tr> <td>T3</td> <td>89.00</td> </tr> <tr> <td>T4</td> <td>90.00</td> </tr> </tbody> </table>	Measurement	Value	T1	84.33	T2	84.33	T3	89.00	T4	90.00
Measurement	Value												
T1	84.33												
T2	84.33												
T3	89.00												
T4	90.00												
<p>P7</p>	<p>ORD Promotion Barriere Evaluation denial Interesting tasks and projects withdrawals Undesirable tasks assignment Work overload</p> <p>IRD Public Dismissal Rejection</p>	<p>Internal Resource (Supervisor_written and verbal complaints) Status: No follow-up</p>	 <p>MAP and RMAP During the Interview_P7</p> <table border="1"> <thead> <tr> <th>Measurement</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>112.00</td> </tr> <tr> <td>T2</td> <td>121.67</td> </tr> <tr> <td>T3</td> <td>121.67</td> </tr> <tr> <td>T4</td> <td>122.00</td> </tr> </tbody> </table>	Measurement	Value	T1	112.00	T2	121.67	T3	121.67	T4	122.00
Measurement	Value												
T1	112.00												
T2	121.67												
T3	121.67												
T4	122.00												
<p>P8</p>	<p>ORD Slower access to employment security Sudden position assignments Constant questions about competencies and skills Lack of internal training</p> <p>IRD Social exclusion Unreasonable disciplinary measures with no progression Racial microaggression</p>	<p>Internal Resource (Union) Status: Follow-up unappropriated. Racial discrimination denied.</p>	 <p>MAP and RMAP During the Interview_P8</p> <table border="1"> <thead> <tr> <th>Measurement</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>94.00</td> </tr> <tr> <td>T2</td> <td>101.67</td> </tr> <tr> <td>T3</td> <td>97.67</td> </tr> <tr> <td>T4</td> <td>98.67</td> </tr> </tbody> </table>	Measurement	Value	T1	94.00	T2	101.67	T3	97.67	T4	98.67
Measurement	Value												
T1	94.00												
T2	101.67												
T3	97.67												
T4	98.67												

<p>P9</p>	<p>ORD Hiring Promotion denial Slower access to employment stability</p> <p>IRD Racial microaggressions Ignorance Social isolation</p>	<p>No action</p>	 <p>MAP and RMAP During the Interview_P9</p> <table border="1"> <thead> <tr> <th>Measurement</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>84.33</td> </tr> <tr> <td>T2</td> <td>107.00</td> </tr> <tr> <td>T3</td> <td>105.33</td> </tr> <tr> <td>T4</td> <td>100.00</td> </tr> </tbody> </table>	Measurement	Value	T1	84.33	T2	107.00	T3	105.33	T4	100.00
Measurement	Value												
T1	84.33												
T2	107.00												
T3	105.33												
T4	100.00												
<p>P10</p>	<p>ORD Firing Promotion Barriere Undesirable tasks assignment Sudden position changes Excessive tasks and work monitoring Unreasonable disciplinary measures with no progression</p> <p>IRD Ignorance Dismissed Unfounded complaints Group work exclusion Misusing authority Work impeding and work vandalism Lack of support Trumped-up accusations Threat of dismissal Workplace access banned</p>	<p>Internal Resource (Union and Managers)</p> <p>Status: No follow-up/ not considered</p>	 <p>MAP and RMAP During the Interview_P10</p> <table border="1"> <thead> <tr> <th>Measurement</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>102.33</td> </tr> <tr> <td>T2</td> <td>106.67</td> </tr> <tr> <td>T3</td> <td>113.00</td> </tr> <tr> <td>T4</td> <td>125.67</td> </tr> </tbody> </table>	Measurement	Value	T1	102.33	T2	106.67	T3	113.00	T4	125.67
Measurement	Value												
T1	102.33												
T2	106.67												
T3	113.00												
T4	125.67												

<p>P11</p>	<p>ORD Hiring Firing</p> <p>IRD Entitle leave denial Entitle hybrid work denial Isolation Excessive tasks and work performance monitoring Restricting information Racial microaggression</p>	<p>Internal resource (Union) Status: No follow-up</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P11</p> <table border="1"> <caption>MAP and RMAP Data for P11</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>75.33</td> </tr> <tr> <td>T2</td> <td>80.00</td> </tr> <tr> <td>T3</td> <td>83.33</td> </tr> <tr> <td>T4</td> <td>85.33</td> </tr> </tbody> </table> <p style="text-align: center;">Blood Pressure Measurements</p>	Time Point	MAP/RMAP Value	T1	75.33	T2	80.00	T3	83.33	T4	85.33
Time Point	MAP/RMAP Value												
T1	75.33												
T2	80.00												
T3	83.33												
T4	85.33												
<p>P12</p>	<p>ORD Constant performance and skills questioned Lack of internal training Excessive tasks and work performance monitoring Targeted by specific Organizational Standards</p> <p>IRD Social isolation Social exclusion Unfounded complaints Interpersonal conflict Trumped-up accusations Work impeding</p>	<p>Internal resource (Union) Status: Conclusive, but managers denied the facts.</p> <p>External Investigator Status: Workplace racial discrimination was recognized, but the managers did not officially recognize the report.</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P12</p> <table border="1"> <caption>MAP and RMAP Data for P12</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>80.33</td> </tr> <tr> <td>T2</td> <td>83.33</td> </tr> <tr> <td>T3</td> <td>90.00</td> </tr> <tr> <td>T4</td> <td>87.00</td> </tr> </tbody> </table> <p style="text-align: center;">Blood Pressure Measurements</p>	Time Point	MAP/RMAP Value	T1	80.33	T2	83.33	T3	90.00	T4	87.00
Time Point	MAP/RMAP Value												
T1	80.33												
T2	83.33												
T3	90.00												
T4	87.00												
<p>P13</p>	<p>ORD Least work hours attribution Unvoluntary workplace transfer</p> <p>IRD Racial microaggression Incivility Social exclusion and isolation</p>	<p>Internal Resource (Supervisor _Written complaints) Status: No answer/no follow-up</p>	<p style="text-align: center;">MAP and RMAP During the Interview_P13</p> <table border="1"> <caption>MAP and RMAP Data for P13</caption> <thead> <tr> <th>Time Point</th> <th>MAP/RMAP Value</th> </tr> </thead> <tbody> <tr> <td>T1</td> <td>92.00</td> </tr> <tr> <td>T2</td> <td>80.00</td> </tr> <tr> <td>T3</td> <td>86.33</td> </tr> <tr> <td>T4</td> <td>99.00</td> </tr> </tbody> </table> <p style="text-align: center;">Blood Pressure Measurements</p>	Time Point	MAP/RMAP Value	T1	92.00	T2	80.00	T3	86.33	T4	99.00
Time Point	MAP/RMAP Value												
T1	92.00												
T2	80.00												
T3	86.33												
T4	99.00												

CHAPTER 8 : Integrated Discussion

This thesis sought to fill significant gaps in the literature on workplace racial discrimination and its effects on health, focusing specifically on the Canadian context through a mixed-methods design. It aimed explicitly to 1) assess the extent, the risk and protective factors associated with workplace racial discrimination through an intersectional lens; 2) examine the association between workplace racial discrimination and both mental and physical health; 3) explore the experience of workplace racial discrimination among Black individuals in Canada. Applying complementary theoretical and conceptual frameworks: the Social Determinants of Health (SDH) framework, the Social Ecological Theory (SET), the Job-Demands-Resources (J-DR) model, and Intersectionality Theory. In this integrative discussion, I synthesize and interpret the main results from the three studies, discussing them with reference to the application of complementary theories and frameworks to understand the complex impact of workplace racial discrimination on population health and health disparities.

8.1.1 Overview of Complementary Workplace Racial Discrimination Findings

The studies' results reveal that racism is pervasive and perpetuated both at the organizational and interpersonal levels across Canadian workplaces. The results show that racial discrimination was reported as affecting more than two-thirds of racialized workers. The quantitative results of Study 1 indicate that workplace racial discrimination is not experienced uniformly across racial groups. Study 1 found that Black and Indigenous workers are disproportionately affected, but the prevalences differs. Black individuals are more likely to report discrimination in hiring, whereas Indigenous individuals show a higher likelihood of reporting racial discrimination in promotion denial or firing. No significant differences are found for Arab and mixed racial backgrounds' individual.

Complementing the findings from Study 1, the results of the Study 2 reveal that at the organizational level, racism take the form of major racial discrimination and is evident in workplace practices such as hiring, firing, promotion, work organization, training opportunities, evaluation assessment, and access to job security. The most common forms involve career advancement barriers such as slower promotion denial or pay raises, followed by racial discrimination in the hiring process and all the other forms.

From an intersectionality lens, age was found to differentially affect the vulnerability of racialized workers in Study 1 and Study 2. Older workers (particularly aged 45–65) in Study 2 report higher levels of major racial discrimination. Age disparities are most observed when assessing forms of workplace racial discrimination (e.g., hiring, firing) compared to the general experience, combining the five forms of discriminations. Complementing these findings, Study 1 found that individuals aged 35-54 reported experiencing more racial discrimination in hiring, and those aged 45-64 reported more racial discrimination in promotion denial or firing. No significant differences were found for gender in Study 1 and Study 2.

Disparities are also observed within the work environment in Study 2. The public sector appears to be a key environment where racialized individuals are especially exposed to workplace racial discrimination, with about half of public sector workers reporting major racial discrimination experience. These results illustrate how individual characteristics (racial background and age) and working sector shapes the type and context of discrimination experienced and reinforce the concept of intersectionality, indicating that multiple identities (e.g., race, age) intersect to intensify disadvantage.

These results reflect findings from previous research but add depth. While specific studies on workplace racial discrimination are lacking in Canada, existing research has shown that racial discrimination is widespread in the Canadian workplace even in presence of law and regulation against any type of discrimination in the Canadian society (Foster et al., 2023; KPMG, 2024; Zellars, 2024). Previous studies indicate that racialized groups are more likely to report race-based discrimination in the workplace (Statistics Canada, 2024b; Zou et al., 2022). In addition, recent study found that more than 8 of 10 Black individuals experience such type of discrimination in 2021 (KPMG, 2024). Studies indicate a higher proportion of workplace racial discrimination among Black, Indigenous and Asian population, evident in hiring biases, wage gaps, and limited career advancement (Lam et al., 2023; Masella & McIntosh, 2019; Pendakur & Woodcock, 2010; Turcotte, 2020; Yap & Konrad, 2009). In general, Black and Indigenous are more likely to report workplace racial discrimination in comparison to other race groups in Canada (Foster et al., 2023; Statistics Canada, 2024b). Similarly, a Canadian study has found that Black is less likely to be employed, hired or promoted with similar qualifications (Pendakur & Woodcock, 2010). An experimental study conducted in Toronto, Canada have also found that applicants with racialized sounds name are less likely to receive callbacks than traditional Anglo-Saxon names (Oreopoulos, 2011).

Other studies have also underlined the influence of intersectionality in workplace racial discrimination experience. Age-based differences were also found in previous studies. Although findings are equivocal, the risk of experiencing workplace racial discrimination remains in the age range of 33 to 50 (Han et al., 2023; Jones, 2000; Yip et al., 2008) and underscores that the relationship between age and perceive workplace racial discrimination is not straightforward. Age differences might be context-specific, noticing multiple factors influencing these experiences such as career stage (seeking for promotion or better position), cohort effects or a greater awareness in older adults leading by constant exposure to such experiences (Banerjee, 2008). While no significant

difference was found for gender in Study 1 and Study 2, studies has found that Women are more likely to perceive racial discrimination (Hirsh & Lyons, 2010; Triana et al., 2015).

Age and gender-based differences are also found in chronic diseases and blood pressure status. Older age is positively associated with chronic diseases in Study 2. In Study 3, older Black participants and those who identify as men show higher changes in systolic and diastolic blood pressure, resulting to elevate and hypertensive blood pressure status during the interview.

When it comes to work sector, Study 2 found that federal servants report more workplace racial discrimination. However, other studies have found that race-based discrimination is one of the most forms of discrimination reported in public administration (Boulet et al., 2023; ESDC, 2025). These results might be explaining the proportion of racialized employees followed a yearly increased trend from 2019 (16.7%) to 2023 (21.7%) (Treasury Board of Canada Secretariat, 2024) , thus a greater proportion of exposed workers to such practices. Indeed, while progress has been made fostering a federal workplace free of racial discrimination, racialized individuals remain reluctant to report such experiences, fearing the loss of job security offered by federal employers.

The key findings from the third study also demonstrate the perpetuation of workplace racial discrimination at the interpersonal level. For instance, Black workers experience behaviours and race-based mistreatment in forms of work-related vandalism, impeding, abuse of authority, social exclusion and isolation, threats, racial microaggression, incivility, gossips, rumors and sexually suggestive remarks. The results also demonstrate that almost Black individuals who experience interpersonal racial discrimination are also impacted with major racial discrimination, leading to firing, promotion denial, task and project withdrawals or other form of major racial discrimination. Similarly, experiencing major racial discrimination reinforces the experience of interpersonal racial discrimination (exclusion and isolation, threats, incivility, etc..) that serves to put Black workers in a particularly vulnerable position of experiencing more major racial discrimination. These results

emphasis the evidence of interconnectedness of the level at which racial discrimination occurs.

Overall, the studies underscore how workplace racial discrimination is shaped by intersecting factors such as race, age, and work environment, rather than being a uniform experience among all racialized workers.

Previous research on interpersonal racial discrimination in the workplace is notably limited. However, a recent Canadian study has identified different forms that workplace racial discrimination has existed among Black individual in the Canadian public sector for decades (Zellars, 2024). The findings are not different from what I found, noticing any change in the Canadian workplaces and similar trend in public and private sector. Studies have also highlighted symbolic compliance or resistance to change or lack of accountability with existing equity policies or programs

8.1.2 Overview of Workplace Racial Discrimination and Health Findings

The three studies also found that workplace racial discrimination is associated with mental health and physical health outcomes among racialized individuals in Canada. The first study reveals that racialized individuals who experience racial discrimination in hiring, firing or promotion denial reported significantly more symptoms of anxiety, depression, general stress, and PTSD. Moreover, Study 2 reinforces that workplace major racial discrimination contributes to chronic disease risks through work-related stress. This result indicates that workplace racial discrimination may act as a biological and psychosocial stressor leading to chronic disease emergence among racialized individuals.

In Study 2, although the adjusted regression was not significant for any type of major racial discrimination, the unadjusted model was. Furthermore, Study 3 reveals an interaction between workplace racial discrimination experience and increases in resting systolic and diastolic blood pressure, including resting mean arterial pressure throughout the interview. Among most

participants, resting blood pressure increases significantly in comparison to non-resting blood pressure upon arrival.

These combined results also demonstrate that workplace racial discrimination impacts health differently according to racial background and age. In Study 1, Black, Arab and Indigenous participants who experienced racial discrimination in hiring, firing or promotion denial report significantly elevated symptoms of anxiety, depression, PTSD and stress. While experiencing racial discrimination in hiring was not significant for mental health outcomes among Asian individuals, they exhibit significantly higher depression, stress and PTSD symptoms when experiencing racial discrimination in firing or promotion denial.

Disparities were also observed in chronic disease and physiological measures (e.g., blood pressure) according to the type of major racial discrimination experienced. In Study 2, most of the workplace racial discrimination types are associated with Type 2 diabetes. Stroke effect is associated with firing; cholesterol disease is associated with promotion denial, slower promotion, and pay raises; and back pain is associated with discrimination in hiring, slower promotion and pay raises, and discrimination in work organization. A similar pattern was found in the risk of chronic disease; Workers reporting slower promotion or pay raises had 6.69 times higher risk of Type 2 diabetes and 2.75 times higher risk of Back pain. Discrimination in firing is associated with a 9.62 times greater risk of stroke effects.

Notably, in Study 3, an increase in resting mean arterial pressure was observed among participants who experienced any form of workplace major racial discrimination (firing, hiring, promotion issues, work organization, performance evaluation, etc.). However, disparities are observed based on the type of major racial discrimination experienced. Participants who experienced WRD in hiring, firing, or promotion show significant changes in systolic and diastolic blood pressure, particularly after recalling their experiences, resulting in higher mean arterial

pressure (MAP). A minor increase is observed among those who experienced all other types of major racial discrimination, but not firing, hiring or promotion issues, and those who experienced job loss through firing or quitting due to workplace racial discrimination show the highest increase

Differences in the increase in mean arterial pressure are also observed depending on the response to these experiences. Participants who did not act against discrimination had greater MAP increases. Filing complaints, even when outcomes were inadequate, appeared to buffer physiological responses. Participants who received any, or even ineffective, follow-up on complaints showed lower MAP increases, whereas recognition of these experiences led to a significant decrease in MAP throughout the interview. These results suggest that the ability to act and be acknowledged plays a protective role against physiological stress responses.

Results across the three studies consistently show that workplace racial discrimination is a significant determinant of both mental and physical health among racialized individuals in Canada. However, studies are lacking in specific racism domains, such as workplace racial discrimination and health. Existing ones have found a strong association between workplace racial discrimination and depression, anxiety and stress (Buchanan & Fitzgerald, 2008; Foyne et al., 2015; Hammond et al., 2010; Jasinskaja-Lahti et al., 2007; Rospenda et al., 2008; Stone & Elbers-Carlisle, 2020). Indeed, racism has been established as a mental health risk factor for depression, anxiety, stress, and PTSD (Anderson, 2013; Chae et al., 2021; Harrell, 2000; Molina & James, 2016; Paradies et al., 2015; Pieterse et al., 2012; Rattani, 2021; Williams & Williams-Morris, 2000; Zhou et al., 2022). Furthermore, studies have found an increased risk of developing Type 2 diabetes among people who experience racial discrimination in settings, including in the workplace (Ewen, 2024; K. M. Whitaker et al., 2017). Similarly, these experiences are also associated with stroke and stroke-related death, cardiovascular diseases, heart failure, back pain and cholesterol diseases (Jackson et al., 2003; Jang et al., 2019; Kim et al., 2013; Lee et al., 2017; Polineni et al., 2025; Yang et al., 2022).

Study 2 found no significant association between workplace racial discrimination and blood pressure for the adjusted regression model; the unadjusted ones did. For instance, previous findings and Study 3 results are equivocal. In the literature, workplace racial discrimination is a leading risk factor for blood pressure (Coates et al., 2024; Li et al., 2023; Wells et al., 2025). Consistent with this, the results from Study 3 show an increased variation of both systolic and diastolic resting blood pressure among Black individuals with no hypertension diseases. In the long term, this pattern may lead to hypertension in younger (<50) and older age (Kanegae et al., 2017). Indeed, these results align with allostatic load theory, which posits that chronic stress exposure dysregulates the neuroendocrine, immune, and cardiovascular systems, leading to illness (Jang et al., 2019; von Thiele et al., 2006). Thus, workplace racial discrimination functions as a chronic stressor, contributing to the modification of racialized allostatic load leading to unequal burden of disease and death, primarily through a stress pathway.

The results of Study 1 show a strong association between the experience of workplace racial discrimination and stress. This association is confirmed in Study 2, where workplace racial discrimination shows an increase in work-related stress, which is found to be positively associated with chronic diseases. Furthermore, in Study 3, blood pressure shows an increasing pattern with tension and emotion generated by the experience of workplace racial discrimination. In fact, the more the experiences create stress, the higher the risk of chronic diseases, including cardiovascular diseases and stroke. The impacts are greater when experiencing racial discrimination affects the financial aspect through a lower position linked to lower pay, job loss, or unemployment (e.g., not being hired). This association indicates possible multiple life aspects, such as socioeconomic position, living and working conditions, or access to other life functions (e.g., food, health resources), that contribute to health inequity.

8.1.3 Theoretically Relevant Insights and Population Health Implications

Results from the three studies confirm the value of integrating the Social Ecological Theory, the Intersectional Theory, the Job-demands Resource theory and the Social Health Determinant framework to explain health and health disparities among racialized individuals, with the workplace identified as a major contributor. The use of these theories and frameworks guided the research design from data collection to analysis and interpretation, leading to knowledge that deepens our understanding of racial discrimination practices in the Canadian workplace. They also highlight the complex interaction of these experiences with sociodemographic factors (e.g., race, gender, age and disability) as well as social and environmental factors (e.g., social relations, working sector) that shape health outcomes and disparities.

Intersectional patterns emerged most clearly with respect to race and age in workplace racial discrimination experiences. In Study 1, such experiences disproportionately affected Black and Indigenous participants compared to other racial groups. Black participants were more likely to experience racial discrimination in hiring, whereas Indigenous participants reported a slightly higher level of discrimination in firing. In Study 2, participants with disabilities and older participants reported a higher rate of certain forms of workplace racial discrimination. Similarly, in Study 3, older participants were more likely to exhibit elevated systolic and diastolic blood pressure. Mental health outcomes were also varied by racial background for the same forms of workplace racial discrimination experience reported: Black and Asian participants reported lower work-related stress, but only Black participants showed significantly lower risk of chronic diseases in Study 2.

While gender differences were not significant in Studies 1 and 2 for workplace racial discrimination report, and chronic disease risk, Study 3 revealed that blood pressure increases were higher among men than among women.

The Social Ecological Theory further highlights the level at which workplace racial discrimination occurs. It also showed that the working sector interacts with the risk of experiencing racial discrimination, with public servants disproportionately affected by workplace racial discrimination compared to other working groups. Additionally, forms of workplace racial discrimination experienced were associated with different mental and physical health outcomes. For example, in Study 1, odds of anxiety were higher with experience of racial discrimination in hiring, while odds of stress were higher with experience of racial discrimination in firing. In Study 2, Type 2 diabetes, cholesterol and stroke effects were associated with the experience of racial discrimination in promotion.

Based on the Job-Demands Resource theory, in Study 2, participants who reported a high level of work-related stress also reported a higher mean of workplace racial discrimination. Workplace racial discrimination was positively associated with work-related stress perception, which in turn was positively associated with the presence of chronic diseases. Indeed, the introduction of work-related stress completely mediates the existing relationship between workplace racial discrimination and chronic disease. In Study 3, stress generated by recalling experiences of racial discrimination interplays with an increase in blood pressure. Indeed, forms of organizational racial discrimination interacted with different increases in blood pressure. However, the Job-Demands Resource Model demonstrated how workplace discrimination is a hindrance stress that affects health. This theory, which analyzes psychosocial stress, should be combined with the allostatic load theory to examine the cumulative effects of repeated and prolonged stress exposure on health.

In the light of the Social Determinants of Health (SDH) framework, these results show that workplace racial discrimination functions as a structural determinant, rooted in organizational practices and social contexts, that shapes differential exposure to it. This unbalanced exposure, in

turn, drives disparities in mental and physical health outcomes across sociodemographic characteristics (e.g., race, age, and disability) and socioeconomic factors (employment sectors).

Overall, these findings reinforce the intersection of race, age and gender, and confirm the Social Ecological Theory in explaining how structural workplace context (e.g., racism practices, working sector) and social context (e.g., interpersonal relations) in which an individual is involved shape exposure to racial discrimination and determine health status. The integration of the SDH, SET, JD-R model and Intersectionality theory was essential for capturing the complexity of these experiences and their health implications. This approach underscores the multilevel nature of workplace racial discrimination, the compounded effect of race, age and disability status, the differential health outcomes based on the form of racial discrimination experienced and the importance of population-based research and targeted interventions.

8.2 Strength and Limitations

This thesis offers several essential contributions through three studies. This study represents the first in Canada to document the prevalence of multiple forms of workplace racial discrimination, moving beyond general assessments to capture a more nuanced picture of these experiences. It is also the first to examine the health impact, specifically chronic disease risks associated with workplace racial discrimination. Third, while Black workers are more likely to report workplace racial discrimination, this study is the first to assess health indicators such as systolic and diastolic blood pressure variation, mean arterial pressure and overall blood pressure variation associated with these experiences. These indicators reflect the physiological impacts of stress and emotional strain stemming from discriminatory experiences among Black individuals. This thesis uniquely demonstrates that different types of racial discrimination have distinct effects on health, advancing our understanding of how specific discriminatory encounters contribute to health disparities among racialized populations.

All three studies conducted reveal a strong and consistent pattern of associations. The first study highlights a strong association between workplace racial discrimination and mental health outcomes, including depression, anxiety, PTSD, and stress. The subsequent studies build on this foundation, reinforcing one another by demonstrating significant associations between perceptions of work-related stress and physical health outcomes. Together, the findings underscore the compounding effects of workplace racial discrimination on both mental and physical health and well-being among racialized individuals in Canada.

While this thesis offers an original and integrative contribution to Canadian research by demonstrating the multidimensional experience of workplace racial discrimination with both mental and physical health outcomes, and documenting risk and protective factors associated with it, it also emphasizes the compounding and cumulative toll on racialized populations. However, the thesis has some limitations.

First, assessments of racial discrimination were inconsistent across studies. Study 1 examined only two forms of major workplace racial discrimination (hiring, firing, and promotion denial), providing a narrower scope in its association with mental health outcomes. Study 2 expanded the analysis by assessing five forms of major racial discrimination, thereby enabling a broader understanding of their association with physical health. Study 3 evaluated the same five forms as Study 2 and further incorporated interpersonal racial discrimination, offering the most comprehensive assessment. This variation in the assessment of racial discrimination across studies limits direct comparisons and undermines the consistency of findings. Future multi-method research should consider assessing the same variables in each study to enhance the strength and comparison. They should also consider evaluating mental health outcomes across all forms of workplace racial discrimination to determine differences and similarities.

Second, workplace racial discrimination was assessed at only two levels (interpersonal, organizational). The thesis did not include broader systemic or structural dimensions, such as organizational policies and culture, or leadership practices that may perpetuate racial inequities. Integrating a multilevel framework would provide deeper insight into the root causes of racial discrimination in the workplace and support the development of more effective, structurally and racially informed interventions.

A third limitation concerns participant recruitment, due to a lack of funding, particularly among some racialized groups. Due to lower response rates among certain racialized groups in Study 2, it was necessary to cluster multiple racialized groups for analysis. While this approach enabled statistical feasibility, it limits the ability to interpret results by specific racial or ethnic backgrounds. As a result, critical group-specific differences in both health outcomes and experiences of racial discrimination may be masked, reducing the race-based specificity of the findings. Since results have shown race-based differences in workplace racial discrimination experienced, future studies should opt for a non-cluster race group for a better understanding of the experiences and the health outcomes.

8.3 Implication for Research, Public and Population Health

Although this study presents certain limitations, its contributions remain noteworthy and warrant further consideration. The findings enhance our understanding of the social determinants of health by highlighting the impact of workplace racial discrimination. These insights contribute to the existing literature and underscore the importance of integrating an equity lens into health research. Moreover, the results have practical implications for developing evidence-informed population health policies and implementing targeted prevention and intervention strategies responsive to the specific needs of racialized populations in Canada.

8.3.1 Implications for Research

This study's findings highlight the urgent need for more in-depth, intersectional, and longitudinal research on workplace racial discrimination as a critical determinant of health among racialized populations in Canada, particularly within Black and Indigenous communities. The study demonstrates that these race groups are facing a significant crisis of racial discrimination in the Canadian workplace.

First, future research should further develop the interactionist and complementary theoretical frameworks employed in this study by integrating physiological, psychological, and social dimensions in analyzing health outcomes among racialized individuals. This includes the continued use of mixed methods approaches to capture both the statistical prevalence and the lived experiences of discrimination.

Second, longitudinal studies are particularly needed to assess long-term health trajectories influenced by chronic exposure to workplace racial discrimination, primarily through the lens of timescales of embodiment methods, combined with allostatic load theory. Future research should specifically investigate the links between prolonged exposure to discrimination and the development of conditions such as hypertension, type 2 diabetes, and musculoskeletal disorders. Similarly, longitudinal mental health studies are critical for understanding how prolonged exposure to racial discrimination-related stress contributes to the onset and persistence of conditions such as anxiety, depression, and post-traumatic stress disorder (PTSD). The results underscore the importance of exploring the cumulative effects of chronic stress caused by racial discrimination on both the body and the brain. This direction would offer further insight into how structural racism contributes directly to health inequities.

Another essential area for investigation is the biological impact of chronic stress due to workplace discrimination, using biomarkers, a field still underexplored in the Canadian context. For

example, cortisol levels measured via hair or saliva can provide valuable information about the hormonal burden of chronic stress. Advances in neuroimaging techniques, such as functional magnetic resonance imaging (fMRI), also present a critical opportunity to observe the effects of chronic stress on brain structure and function, particularly in regions responsible for emotional regulation, memory, decision-making, and neuronal cell survival. These biological data could help substantiate the long-term health consequences of racism on racialized individuals.

Furthermore, given disparities across age groups and employment sectors, it is crucial to conduct more targeted investigations into how career stage, employment industry (especially the public sector), and type of discrimination (e.g., hiring vs. promotion denial) differentially influence health outcomes. These studies must be grounded in participatory research frameworks that emphasize racialized communities and promote knowledge mobilization to inform public policy and foster organizational accountability.

8.3.2 Implications for Public and Population health

The results of this study carry significant implications for population health policy and planning in Canada. They confirm that workplace racial discrimination is both a structural and interpersonal determinant of health, warranting recognition and response as a population health emergency. Public health authorities must embrace a population health approach that embeds racial equity at all levels of health planning, monitoring, and intervention design. This includes establishing surveillance systems capable of systematically tracking workplace racial discrimination and its health impacts, particularly among racialized populations and vulnerable age groups. Greater investment is also needed in culturally appropriate and accessible mental and physical health services for racialized workers affected by such forms of discrimination. Health campaigns must highlight the health consequences of racism to destigmatize the reporting of discriminatory acts and encourage victims

to seek help. Moreover, these findings call into question the adequacy of symbolic equity statements and urge public health systems to take an active role in organizational accountability. This includes conducting workplace audits, implementing workplace assessments, and mandating anti-racism training supported by robust evaluation mechanisms. Structural changes such as legislative reforms mandating recognition of indirect systemic discrimination in the workplace (recruitment, promotion, etc.), toward accountability, strengthened equity policies, and enhanced transparency in equity performance reporting must also be advocated for and implemented across sectors, including by public health actors.

8.3.3 Implications for Prevention and Intervention

The consistent and significant associations between workplace racial discrimination and adverse health outcomes identified in this study call for comprehensive, multilevel prevention and intervention strategies.

At the institutional level, employers must implement proactive anti-discrimination policies embedded within organizational structures. These should include transparent hiring, promotion, and evaluation processes and be enforced by independent accountability mechanisms to address both major and interpersonal forms of discrimination. Interventions should be tailored to the intersectional vulnerabilities of racialized workers, especially older individuals or those employed in high-risk sectors such as the public service.

At the interpersonal level, mandatory and ongoing training on implicit bias, racial microaggressions, and anti-racist communication should be required. Organizational leadership must be held accountable for incidents of racial discrimination experienced by racialized individuals within their institutions.

At the individual level, access to mental health resources, legal support, and culturally competent services is essential. Findings from this study suggest that reporting discrimination and receiving acknowledgment attenuates physiological stress responses, indicating that institutional support serves a crucial protective function. Institutional support also plays a key role in fostering anti-racist environments by being both proactive in preventing racism and reactive in ensuring that such behaviours do not become embedded in organizational culture.

Community-based prevention strategies must also be strengthened to empower racialized groups, build support networks, and foster collective healing. These combined approaches are essential to dismantle the link between workplace racial discrimination and health inequities.

Finally, prevention and intervention strategies must explicitly recognize that specific workplaces, especially within the public sector, are characterized by high concentrations of racial discrimination, as demonstrated by this study and previous ones. In these settings, it is crucial to implement a structured network of mental health professionals trained in racial trauma and chronic stress intervention. These professionals should be accessible, culturally competent, and ideally racialized themselves or deeply sensitized to the experiences of racialized individuals. Their role would include providing individual or group psychological support to affected employees, contributing to prevention efforts, and serving as resources for mediation, conflict resolution, and organizational transformation. Such initiatives would not only mitigate the harmful health effects of discrimination but also foster safer and more equitable workplace environments.

8.4 Conclusion

This thesis intends to assess the extent, risk, and protective factors associated with various forms of workplace racial discrimination, examine its relationship with both mental and physical health outcomes, and explore the specific experiences of Black workers, with a particular focus on the impact of racial discrimination on blood pressure as a key health indicator. Across three

interrelated studies, the findings consistently demonstrate that racial discrimination is a pervasive and structural issue in the Canadian workplace. The results confirm a robust association between workplace racial discrimination and both mental health and physical health through work-related stress. Recalling these experiences also increased blood pressure and highlighted the importance of reporting and receiving acknowledgment when experiencing racial discrimination. In sum, the thesis fills a significant gap in Canadian research by demonstrating the persistence and various forms of racial discrimination in the workplace and its association with a broad range of health outcomes. The findings highlight the protective role of institutional support in addressing such experiences and underscore the urgent need for multilevel interventions to prevent and address workplace racial discrimination, particularly in the public sector, and reduce health disparities among racialized populations.

8.5 References

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ANNEXES

Annex a: Ethic Certificate

12/06/2024

Université d'Ottawa

Bureau d'éthique et d'intégrité de la recherche

University of Ottawa

Office of Research Ethics and Integrity

CERTIFICAT D'APPROBATION ÉTHIQUE | CERTIFICATE OF ETHICS APPROVAL

Numéro du dossier / Ethics File Number	H-04-24-10107
Titre du projet / Project Title	Direct and Indirect Effects of Workplace Racial Discrimination on Health: The Mediating Role of Work-related Factors.
Type de projet / Project Type	Thèse de doctorat / Doctoral thesis
Statut du projet / Project Status	Approuvé / Approved
Date d'approbation (jj/mm/aaaa) / Approval Date (dd/mm/yyyy)	12/06/2024
Date d'expiration (jj/mm/aaaa) / Expiry Date (dd/mm/yyyy)	11/06/2025

Équipe de recherche / Research Team

Chercheur / Researcher	Affiliation	Role
Rose DALEXIS	Université d'Ottawa	Chercheur Principal / Principal Investigator
Ivy BOURGEAULT	Département de sociologie et d'anthropologie / Department of Sociology and Anthropology	Superviseur / Supervisor

Conditions spéciales ou commentaires / Special conditions or comments

550, rue Cumberland, pièce 154 Ottawa (Ontario) K1N 6N5 Canada
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613-562-5387 • 613-562-5338 • ethique@uOttawa.ca / ethics@uOttawa.ca
www.recherche.uottawa.ca/deontologie | www.recherche.uottawa.ca/ethics

Annex b: Consent Form - Quantitative Study



uOttawa
Faculté des sciences de la santé
Faculty of Health Sciences

École interdisciplinaire
des sciences de la santé
Interdisciplinary School
of Health Sciences

Workplace Racial Discrimination and Health

Direct and indirect Effects of Workplace Racial Discrimination on Health: The
Mediating Role of Work-related Factors.

INFORMATION DOCUMENT AND CONSENT FORM

Principal Investigator:

Rose Darly Dalexis, BSc., MSc., Ph.D candidate,
Interdisciplinary School of Health Sciences,
University of Ottawa

Research Supervisor:

Ivy Lynn Bourgeault, PhD, FCAHS
Professor, Sociological & Anthropological Studies
University of Ottawa Research Chair Gender
Diversity and the Professions

If you are between 25 and 65 years old and working or have been recently unemployed for one year or less and reside in Canada and speak French or English, we are seeking your participation to complete an online questionnaire. We want to document workplace racial discrimination prevalence among the Canadian core working age population, its impact on health and work factors that can influence this relationship. The study is conducted independently of the organizations and agencies from which participants may be recruited and data will be treated in an anonymous manner.

WHAT DOES YOUR PARTICIPATION REQUIRE?

If you decide to participate, your collaboration will consist of filling in an online questionnaire that takes between 15 and 20 minutes. Subjects of the questionnaire include symptoms of depression and anxiety, burnout, physical health conditions, experiences of workplace racial discrimination, racial and ethnic harassment, working conditions, etc. The questionnaire will no longer be available online by August 31, 2024.

ADVANTAGES OF THE STUDY

By participating in this study, you will help us to advance the knowledge on the prevalence of workplace racial discrimination and health-related outcomes. This is a good occasion for you to express yourself on a subject that directly affects you and can help you share your needs and make your work situations known above. This will help in identifying areas of intervention and necessary adjustments in the Canadian workplaces.

INCONVENIENCES AND RISKS

One of the potential disadvantages of your participation could be that the questions asked remind you of unpleasant experiences that you've lived. However, if you feel the need to talk about a difficult experience, you can use the following bilingual resources:

- Good to talk / Allo J'écoute: 1-866-925-5454



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Faculté des sciences de la santé
Faculty of Health Sciences

École interdisciplinaire
des sciences de la santé

Interdisciplinary School
of Health Sciences

- Mental Health Helpline / Ligne d'assistance en santé mentale : 1-866-531-2600
- TAO-Tel-Aide : 613-741-6433 ou le 1-800-567-9699

CONFIDENTIALITY

The data will be collected and treated in an entirely confidential manner, which means you will not be asked to provide your name and personal information (e.g., birthdate). However, in order to recruit participant for the qualitative and experimental study, if you meet the criteria and agree to participate to the follow-up study, we will ask you for your email address. If you are selected for the interview, your main survey (long) responses will be linked (via your email address) to the short survey and interview data. After interview and compensation, data will be anonymized, and identifiers will be deleted. For participants who expressed their interest but not selected for the interview, their responses will be anonymized, and identifiers (e-mail) will be deleted.

During the timeframe of this study, only the principal investigator and the research supervisor will have access to the collected information. The principal investigator held accountable for the respect of confidentiality and consulted information.

USE OF THE COLLECTED DATA

The study results will be diffused, without confidential information (e-mail). The principal investigator will use the data collected for her doctoral thesis, publication of scientific articles, information pamphlet, etc. The data will be retained indefinitely and may be used by the PI and her supervisor for future projects, but subsequent ethics approval will be sought. Analyses of the data will be done in an anonymous and confidential manner. Once the survey is submitted, participants will be unable to withdraw their data from the study as the researchers will be unable to retrace individual datasets.

IS IT MANDATORY TO PARTICIPATE?

No. Participation to this study is on a voluntary basis and there will be no impact if you decide not to participate. You can refrain from participating at any time before the questionnaire is submitted. Your agreement to participate also implies that the data collected can be used for scientific articles, conferences, scientific communications and teaching reports, with the condition that no information will be able to identify you.

FINANCIAL SOURCE OF THIS PROJECT:

Social Sciences and Humanities Research Council

PEOPLE AVAILABLE TO ANSWER TO YOUR QUESTIONS:

If you have questions concerning your participation, or need help in completing the questionnaire do not hesitate to communicate with the PI or the research supervisor at the following contact:

Principal Investigator:

Rose Darly Dalexis, BSc., MSc., Ph.D. Candidate
Interdisciplinary School of Health Sciences

Research director:

Ivy Lynn Bourgeault, PhD, FCAHS



Professor, Sociological & Anthropological Studies
University of Ottawa Research Chair Gender Diversity and the Professions

CONSENT FORM

Please save a copy or take a photo or a screen shot of the consent form. This is important in order to allow you to retain the resources and the contact information.

By accepting to participate to this study, I certify that:

- I read the information document and consent form of the study;
- I understand the conditions, the risks and the advantages of my participation;
- I understand that the data can be used for secondary uses (e.g., scientific articles; anonymity respected);
- I understand that by accepting to participate to this study, I am not waiving my rights.

In order to minimize the risk of security breaches and to help ensure my confidentiality, it is recommended that I use standard safety measures, such as signing out of my account, closing my browser, and locking my device when I am no longer using it/when I have completed the survey

For all information on the ethical aspects of this study, I can contact the Office of Research Ethics and Integrity, University of Ottawa, Tabaret Hall, 550, Cumberland Street, room 154, (613) 562-5387 or ethics@uottawa.ca.

Consent: Yes No

Annex c: Consent Form - Qualitative Study



uOttawa
Faculté des sciences de la santé
Faculty of Health Sciences

École interdisciplinaire
des sciences de la santé
Interdisciplinary School
of Health Sciences

Workplace Racial Discrimination and Health

Black workers' Experiences of Racial Discrimination in the Canadian Workplace and health outcomes associated

INFORMATION DOCUMENT AND CONSENT FORM

Principal Investigator:

Rose Darly Dalexis, BSc., MSc., Ph.D candidate,
Interdisciplinary School of Health Sciences,
University of Ottawa

Research Supervisor:

Ivy Lynn Bourgeault, PhD, FCAHS
Professor, Sociological & Anthropological Studies
University of Ottawa Research Chair Gender
Diversity and the Professions

If you are between 25 and 65 years old and identify as Black and currently experiencing workplace racial discrimination and reside in Gatineau or Ottawa and speak French or English, we are seeking your participation to a study composed with an interview and collection of health indicator measurements (Blood pressure and Heart Rate Variability). We want to document your experience of workplace racial discrimination and your coping strategies. We will then analyze how this experience affects your health indicators, thus your depression symptoms and stress level. The study is conducted independently of the organizations and agencies from which participants may be recruited and data will be treated in an anonymous manner.

WHAT DOES YOUR PARTICIPATION REQUIRE?

If you decide to participate, your collaboration will consist of taking part in an in-person interview and health indicators measurement that will last about 60 minutes. The interview will be audio-recorded (not video recorded). You will be asked to complete a short questionnaire (5 minutes) to collect sociodemographic, depression and chronic diseases data. Specifically, the following themes will be addressed during the interview: the workplace racial discrimination experience, knowledge of existing resources, their accessibility and usage, perception of employers' attitudes toward the experience, and your coping strategy will be assessed. You will be asked to wear a watch and a blood pressure measurement device that will track your heart rate and blood pressure data during the interview. Rest times will be taken before the interview starts and prior each measurements.

COMPENSATION OR REWARD

Upon completion of the study, a 20\$ Amazon or Apple e-gift cards will be given to each participant and travel expense will be reimbursed up to \$50 (bills will be required), the same day they complete the study. The travel expense will be given to all participants regardless of whether or not they decide to withdraw from further participating in the research project if they show up at the meeting, but gift card will not be given. If the participant does not show up at the meeting, no compensation will be granted.



The email address or cell-phone number provided for the purposes of contacting you will be used to send your compensations. Contact information you have provided will be kept confidential and then destroyed once this process is completed.

BENEFITS OF THE STUDY

By participating in this study, you will help us to advance the knowledge on workplace racial discrimination among Black population and health-related outcomes of these experiences. This is a good occasion for you to express yourself on a subject that directly affects you and share your experience and thoughts concerning workplace racial discrimination. You will have the opportunity to reflect on health outcomes associated with this experience and evaluate your knowledge on existing resources and your coping strategies regarding workplace racial discrimination. This will help in identifying areas of intervention and necessary adjustments in the Canadian workplaces.

INCONVENIENCES AND RISKS

The discussion might remind you of unpleasant experiences you have had. However, if you feel the need to talk about a difficult experience, you can use the following bilingual resources:

- Good to talk / Allo J'écoute: 1-866-925-5454
- Mental Health Helpline / Ligne d'assistance en santé mentale : 1-866-531-2600
- TAO-Tel-Aide : 613-741-6433 ou le 1-800-567-9699

CONFIDENTIALITY

The data collected will be treated **completely confidentially**, which means that your name will not be included in our documents and any personal information (e.g., birthdate) will be disclosed. If you have participated in the survey and was selected for the interview, your main survey (long) responses will be linked (via their email address) to the short survey and qualitative/interview data. After interview and compensation, the data will be anonymized, and identifiers will be deleted.

Only the principal investigator and the research supervisor will have access to the recording of the interview and the transcription will be made anonymously. Pseudonym will be used for the scientific articles. The principal investigator and the research supervisor are bound to respect the confidentiality of the information collected and consulted. The transcript of the interview will not contain any information allowing you to be identified. In addition to what is written here, we will remind you of this at the beginning of the interview.

USE OF THE COLLECTED DATA

The study results will be diffused, without the names of the participants being marked or confidential information. The principal investigator will use the data collected for her doctoral thesis, publication of scientific articles, information pamphlet, etc. Data will be retained indefinitely and may be used by the PI and her supervisor for future projects, but subsequent ethics approval will be sought. The data will be stored on secure computers. The computer containing the recording of the interview is encrypted, as are the files that contain it. Analyses will then be carried out anonymously and confidentially.

IS IT MANDATORY TO PARTICIPATE?

No. The participation to this study is on a voluntary basis and there will be no impact if you decide not to participate. You can refrain from participating at any moment. You can leave the study whenever you want, you are not obliged to stay until the end and you are not obliged to give reasons



for your departure. There will be no consequences associated with not participating. If at any time you decide to end your participation in this study, all of your data will be erased and none of it will be retained or used.

Your agreement to participate also implies that the data collected can be used for scientific articles, conferences, scientific communications and teaching reports, with the condition that no personally identifiable information is disclosed.

FINANCIAL SOURCE OF THIS PROJECT:

Social Sciences and Humanities Research Council

PEOPLE AVAILABLE TO ANSWER TO YOUR QUESTIONS:

If you have questions concerning your participation, do not hesitate to communicate with the PI or the research supervisor at the following contact:

Rose Darly Dalexis, BSc., MSc., Ph.D. Candidate
Interdisciplinary School of Health Sciences

Ivy Lynn Bourgeault, PhD, FCAHS
Professor, Sociological & Anthropological Studies
University of Ottawa Research Chair Gender Diversity and the Professions

CONSENT FORM

Please save a copy or take a photo or a screen shot of the consent form. This is important in order to allow you to retain the resources and the contact information.

By accepting to participate to this study, I certify that:

- I read the information document and consent form of the study;
- I understand the conditions, the risks and the advantages of my participation;
- I understand that the data can be used for secondary uses (e.g., scientific articles; anonymity respected);
- I understand that by accepting to participate to this study, I am not waiving my rights.

For all information on the ethical aspects of this study, I can contact the Office of Research Ethics and Integrity, University of Ottawa, Tabaret Hall, 550, Cumberland Street, room 154, (613) 562-5387 or ethics@uottawa.ca.

Consent : Yes No

Annex d: Survey Questionnaire

Workplace Racial Discrimination and Health Direct and indirect Effects of Workplace Racial Discrimination on Health: The Mediating Role of Work-related Factors. ONLINE SURVEY

BLOC A - SOCIODEMOGRAPHIC QUESTIONNAIRE **IC4 to Q11**

Date of birth (AGE)

IC4_BIRTH_DATE:

What is your date of birth?

Year _____ (Year/Month/Day)

Min = 1959; Max = 1999

Sex and gender

The following questions are about sex at birth and gender.

Q1_SEX_BIRTH:

What was your sex at birth?

- 1: Male
- 2: Female
- 999: Missing data

Q2 to Q2_96_Gender:

Gender identity is the gender that people identify with or how they perceive themselves, which may be different from their sex assigned at birth. Which of the following best describes your current gender identity?

- 1: Cisgender woman
- 2: Cisgender man
- 3: Transgender woman
- 4: Transgender man
- 5: Gender non-binary [*including gender fluid, genderqueer, androgynous*]
- 6: Two-Spirit [*Individuals from Indigenous communities may identify with this term, which encompasses cultural, spiritual, sexual and/or gender identity*]
- 7: Not sure/questioning
- 8: More than one gender identity, please indicate all that apply: _____
- 96: Not listed, please describe: _____
- 99: Prefer not to answer
- 999: Missing

Sexual orientation

Q3 to Q3_96_SEX_ORIENT:

Sexual orientation describes a person's emotional, physical, romantic and/or sexual attraction to other people. Which of the following best describes your sexual orientation?

- 1: Heterosexual or Straight
- 2: Bisexual
- 3: Gay
- 4: Lesbian
- 5: Queer
- 6: Asexual
- 7: Two-Spirit [*Individuals from Indigenous communities may identify with this term, which encompasses cultural, spiritual, sexual and/or gender identity*]
- 8: Not sure/questioning
- 9: More than one sexual orientation, please indicate all that apply: _____
- 96: Not listed, please describe: _____
- 99: Prefer not to answer
- 999: missing data

Marital Status (MSNC)

Q4_MARIT_STAT:

What is your marital status? Are you...?

- 0: Single, never married
- 1: Married
- 2: Living common-law
- 3: Widowed
- 4: Separated
- 5: Divorced
- 97: Do not know
- 99: Prefer not to answer
- 999: missing data

Disability Status

Q5_DISAB:

Do you identify as a person with a disability?

- 1: Yes
- 2: No
- 999: missing data

Racial and Ethnic Identification _ From Nursing Advisory Committee

The following questions are about racial and ethnic identity.

Q6_RACE_IDENT: What racial/ethnicity group do you identify with? If you identify with more than one racial or ethnic group, please select all that apply (e.g., if your parents are Japanese and white, select both racial groups).

- 1: Arab
- 2: Black
- 3: Chinese
- 4: Filipino
- 5: Indigenous
- 6: Japanese
- 7: Korean
- 8: Latin American
- 9: South Asian (e.g., East Indian, Pakistani, Sri Lankan)
- 10: Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai)
- 11: West Asian (e.g., Iranian, Afghan)
- 12: White
- 13: Other, Optional - please specify
- 97: Do not know
- 99: Prefer not to answer

If the answer is 5: Indigenous, display Q6A. If the answer is 2: Black, display Q6B. Otherwise, GO TO Q7

Indigenous Identity

Q6A_INDI_IDENT:

Please specify your Indigenous ancestry.

- 1: First Nations
- 2 : Inuk/Inuit
- 3: Métis
- 97: Do not know
- 99: Prefer not to answer

Black Origine

Q6B_1 to Q6B_5_BLK_ORG:

Please specify your origin:

- African
- Caribbean
- Latin American
- North American
- Other, please specify
- 97: Do not know
- 99: Prefer not to answer

Religion

Q7 and Q7_6_text_RELIG:

Regarding religion, you identify as:

- 1 : Christian
- 2 : Muslim
- 3 : Buddhist
- 4 : Jewish
- 5 : Hindu
- 6: Other, please specify _____
- 7: Atheist (no religion)
- 99: I prefer not to answer

Place of birth, immigration and citizenship _CCHS

Place of birth

Q8_PL_BIRTH:

Where were you born?

- 0: Born in Canada
- 2: Born outside Canada

If the answer is 2: Born outside Canada, display Q9; otherwise, GO TO Q10

Immigration and citizenship _CCHS

Q9 and Q9_6_IMM_STAT:

What is your legal status in Canada?

- 0: I obtain Canadian citizenship
- 1: I obtained permanent resident status in Canada (landed immigrant) 5 years ago or more
- 2: I obtained permanent resident status in Canada (landed immigrant) less than 5 years ago
- 3: I am a non-permanent resident (e.g., holder of a temporary work or study permit)
- 4: I am an asylum seeker
- 5: Other, please specify

Education (ED) _CSS

Q10_EDU:

What is the highest certificate, diploma or degree that you have completed?

- 0: Less than a high school diploma or its equivalent
- 1: High school diploma or equivalency certificate
- 2: College, CEGEP or other non-university certificate or diploma
- 3: University certificate or diploma below the bachelor's level
- 4: Bachelor's degree (e.g., B.A., B.A. (Hons), B.Sc., B.Ed., LL.B.)
- 5: University certificate, diploma or degree above the bachelor's level

Total household income (INC)

Q11_HOUS_INCOM:

What was your total household income?

- 1: Less than \$10,000
- 2: \$10,000 to less than \$20,000
- 3: \$20,000 to less than \$40,000
- 4: \$40,000 to less than \$50,000
- 5: \$50,000 to less than \$75,000
- 6: \$75,000 to less than \$100,000
- 7: \$100,000 and more
- 99: Prefer not to answer

BLOC B - WORK FACTOR QUESTIONNAIRE

Work activity (GSS, 2016)

Q12_EMPL_STAT_4WKS:

Did you have a paid job in the past 4 Weeks?

- 1: Yes
- 0: No
- 999: Missing data

Q13_TIME_UNEMPL:

You have been unemployed for?

- 1: Less than 6 months
- 2: 6 to 8 months
- 3: 8 to 12 months
- 999: Missing data

Q14_1_W_HRS:

Excluding overtime, on average, how many hours do you usually work per week in your [current/last job]?

Paid hours/Week_____

Min = 1; Max = 40

Q15_REMOTE_WK:

Excluding overtime, [do/did] you usually work any of your scheduled hours at home?

- 1: Yes
- 2: No
- 3: Your job cannot be done at home
- 4: Your job can only be done at home
- 8: RF
- 9: DK

Q16_1_REMOTE_W_HRS: How many paid days per week do/did you usually work at home?

Min=1; Max=7

Q17_EMPL_TYPE: Which of the following best describes/described] your terms of employment in this job?

- 0: Regular employee
- 1: Seasonal employee
- 2: Term employee
- 3: Casual or on-call employee
- 97: Don't know
- 99: Prefer not to answer

Q18_PROV_W: In what province [are/were you working?

- 1: Newfoundland and Labrador
- 2: Prince Edward Island
- 3: Nova Scotia
- 4: New Brunswick
- 5: Quebec
- 6: Ontario
- 7: Manitoba
- 8: Saskatchewan
- 9: Alberta
- 10: British Columbia
- 11: Yukon
- 12: Northwest Territories
- 13: Nunavut
- 999: Missing data

Q19_YRS_EXP: How many years of experience [do/did] you [have/had] in this organization?

- 1: less than 1 year
- 2: 1 to 2 years
- 3: 3 to 5 years
- 4: 5 to 10 years
- 5: 10 years and over
- 999: Missing data

Q20_W_SECT: In which sector do you work or have you worked?

- 1: Federal public service
- 2: Provincial public service
- 3: Municipal public service
- 4: Parapublic Sector (Government-funded, e.g., university)

- 5: Private Sector
- 6: Non-profit organization
- 7: Don't know, please describe your job_____
- 8: Other, please specify:_____
-

Q21_EMPL_CATEG: **Your position [is/was] within which occupation category?**

- 1: Management occupation (legislators, senior management occupations and middle management occupations)
- 2: Business, finance and administration occupations (financial and business services, administrative and regulatory services and clerical supervision and support services)
- 3: Natural and applied sciences and related occupations (professional and technical occupations in the sciences, including physical and life sciences, engineering, architecture and information technology)
- 4: Health occupations (occupations concerned with providing health care services directly to patients and occupations that provide support to professional and technical staff)
- 5: Occupations in education, law and social, community and government services (range of occupations that are concerned with law, teaching, counselling, conducting social science research, developing government policy, and administering government and other programs)
- 6: Occupations in art, culture, recreation and sport (professional and technical occupations related to art and culture, including the performing arts, film and video, broadcasting, journalism, writing, creative design, libraries and museums)
- 7: Sales and service occupations (sales occupations, personal and protective service occupations and occupations related to the hospitality and tourism industries)
- 8: Trades, transport and equipment operators and related occupations (construction and mechanical trades, trades supervisors and contractors and operators of transportation and heavy equipment)
- 9: Natural resources, agriculture and related production occupations (supervisory and equipment operation occupations in the natural resource-based sectors of mining, oil and gas production, forestry and logging, agriculture, horticulture and fishing)
- 10: Occupations in manufacturing and utilities (supervisory and production occupations in manufacturing, processing and utilities)

Q22_JOB_SEARCH: **In the past 4 weeks, have you looked for another job?**

- 1: Yes
- 2: No

If the answer is Yes, display Q21 to Q24, otherwise, GO TO Q26

Q23_JOB_SEARCH_LOC: Where were you mainly looking ...?

- 1: With the same employer
- 2: With another employer
- 3: Looking for a position outside of Canada
- 4: No preference

Q24_JOB_SEARCH_REASON: What is the main reason for looking for another or a new Job?

- 1: Employment contract is terminated or will be terminated in 6 months or less
- 2: Laid off or will be laid off in 6 months or less
- 3: Pay is too low
- 4: Workload is too heavy
- 5: No or not enough benefits
- 6: You do not like the work environment
- 7: No opportunities for advancement
- 8: Victim of racial discrimination
- 9: Victim of other forms of discrimination (gender, disability, etc.)
- 96: Other, please specify_____

Q25_TYPE_DISCR_JOB_SEARCH: In what ways do you think you were unfairly treated or discriminated against?

- 0: You were not called for an interview
- 1: You were offered a lower salary than the position was posted for
- 2: You were tested differently compared to other applicants
- 3: You were not accommodated for your disability
- 4: Other – Specify
- 97 Don't know
- Prefer not to answer

Q26_NB_JOB_APPL: Approximately how many jobs have you applied for?

- 0: None
- 1: Less than 25
- 2: Between 25 and 49
- 3: Between 50 and 99
- 4: 100 and over
- 97: I don't know

If the answer is None, Skip Q27

Q27_CALLBACK: How many of these, if any, resulted in an interview or follow-up?

Min = 0; Max = 999

Q28_NO_JOB_SEARCH_REASON: Why have you not applied for any jobs?

- 1: You are satisfied with your current Job
- 2: You have not seen any jobs that fit your qualifications
- 3: You have not seen any jobs you are interested in applying for
- 4: You are discouraged from applying for jobs
- 5: You are waiting on a specific job
- 6: You have been networking
- 96: Other – Specify
- 97: Don't know

BLOC C – WORK-RELATED FACTORS QUESTIONNAIRE

1_ EMPLOYMENT SECURITY_ General Social Survey, 2016

To what extent do you agree or disagree with the following statements?

a) Job Security

Q29_WQUAL_JOBSEC: You might lose your job in the next 6 months. [You have lost your job at least 6 months ago]

- 1: Strongly agree
- 2: Agree
- 3: Neither agree nor disagree
- 4: Disagree
- 5: Strongly disagree

b) Career prospects

Q30_WQUAL_CARRPROS: Your job offers or offered good prospects for career advancement.

- 5: Strongly agree
- 4: Agree
- 3: Neither agree nor disagree
- 2: Disagree
- 1: Strongly disagree

2_ WORK ENVIRONMENT

The following questions are about workload and psychological demands.

a) Work intensity: Quantitative demands (QD) and Pace Determinants (PD)/GSS,2016

Q31_WQUAL: For the following questions, please indicate how often these situations happened at work (your most recent job)

	5 Always	4 Often	3 Sometimes	2 Rarely	1 Never
1.How often do[did] you consider your workload manageable? (WQUAL_QD)					
2. Does [did] your job have fixed deadlines you [have/had] to meet? (WQUAL_QD) (REVERSE)					

3. How often do[did] you have to quickly switch from one task to another at your work? (WQUAL_QD) (REVERSE)					
4. How often can [could] you choose the sequence of your tasks? (WQUAL_PD)					
5. How often can [could] you complete your assigned workload during your regular working hours? (WQUAL_PD)					

b) Physical Demands (PD) and Psychological Demands (Psy.D)/Job Content Questionnaire
Q32_WQUAL_PD AND PSY.D: For the following questions, please rate how much you agree with the following statements about your work demands.

	1 Strongly agree	2 Agree	3 Neither agree nor disagree	4 Disagree	5 Strongly disagree
1. Your job [involve/involved] a significant amount of physical exertion (WQUAL_PHYD)					
2. Your job is characterized by its high level of busyness (WQUAL_Psy.D)					
3. You are able to work without conflicting demands from others (WQUAL_Psy.D) (REVERSE)	5	4	3	2	1

3. Reverse coding

a) Support at Work:
Q33 WQUAL_SUPPORT: For the following questions, please indicate how often these situations happened at your most recent job

	1 Always	2 Often	3 Sometimes	4 Rarely	5 Never
1. How often do your colleagues help and support you? WQUAL_COLL_SUP					
2. How often does your manager or supervisor help and support you? WQUAL_SUPERV_SUP					

c) Working-time quality / GSS,2016

Q34_WQUAL_SCHEDULE_: Which of the following best describes your usual work schedule at your job [or your last job] ?

- 1: A regular daytime schedule or shift
- 2: A regular evening shift
- 3: A regular night shift
- 4: A rotating shift (Shift/schedule changes over time, from daytime, evening or night)
- 5: A split shift (e.g., work from 10 am to 1 pm and come back from 6 pm to 11 pm)
- 6: A compressed work week (e.g., your traditional 35-40-hour workweek is compressed in less than 5 days)
- 7: On call or casual
- 8: An irregular schedule (shift time and total weekly hours vary)
- 96: Other - Specify

Q35_WQUAL_SCHEDULE_PREF: Would you rather [work/have worked] a regular shift or schedule if you [could/could have]?

- 1: Yes
- 2: No

Q36_WQUAL_FEX_SCHEDULE: Do[did] you have a flexible schedule that allows you to choose the time you begin and end your work day?

- 1: Yes
- 2: No

Q37_WQUAL_TIMEOFF: How easy [is/was] it for you to take an hour or two off for personal or family matters during working hours?

- 4: Very easy
- 3: Easy
- 2: Difficult
- 1: Very difficult

d) Physical health risks

Q38_WQUAL_PHY_RISK: At your job, at what frequency [are/were] you exposed to the following situations?

Reverse	(1) Never	(2) Rarely	(3) Occasionally	(4) Sometime	(5) Frequently	(6) Usually	(7) Every time
1. Loud noise							
2. Extreme temperatures							
3. Smoke							
4. High vibration							
5. Radiation							
6. Electricity							
7. Tiring/painful positions							
8. Carrying heavy loads (more than 50 pounds)							

The following questions are about your job resources. Please indicate how often these situations happened at work (your most recent job)

a) Decision authority Reversed on Qualtrics

Q39_WQUAL_DEC_AUTH: Your job [allows/have allowed] you freedom to decide how you do your job?

- 1: Strongly agree
- 2: Agree
- 3: Neither agree nor disagree
- 4: Disagree
- 5: Strongly disagree

Q40_WQUAL_DEC_AUTH_: I have [have had] opportunities to provide input into decisions that affect my work. Reversed on Qualtrics

- 1: Strongly agree
- 2: Agree
- 3: Neither agree nor disagree
- 4: Disagree
- 5: Strongly disagree

b) Training opportunity

Q41_WQUAL_TRAIN_OPP: In the past 12 months [In your last job], have you had formal training paid for by your employer?

- 1: Yes
- 0: No

Q42_WQUAL_TRAIN_OPP: In the past 12 months [In your last job], have you had informal or on-the-job training from co-workers or supervisors?

- 1: Yes
- 0: No

c) Skill utilisation

Q43_WQUAL_SKILL_USE: For the following questions, please rate how much you agree with the following statements about skills requirements at your job.

	5 Strongly agree	4 Agree	3 Neither agree nor disagree	2 Disagree	1 Strongly disagree
1. Your job [requires/required] that you learn new things?					
2. Your job [requires/required] a high level of skills?					
3. Your job [requires/required] that you do things over and over?(REVERSE)	1	2	3	4	5

3. Reverse coding

d) Social environment (GSS, 2016)

Q44_WQUAL_SOCIAL_ENVI: In the past 12 months [In your last job], have you been subjected to: WORK HARASSMENT

	1(Yes)	0(No)
1. Verbal abuse while at work?		
2. Unwanted sexual attention or sexual harassment while at work?		
3. Threats to your person while at work?		
4. Humiliating behaviour while at work?		
5. Physical violence at work?		

Q45_WQUAL_SOC_SUPP: For the following questions, please rate how much you agree with the following statements about social support at your workplace.

	1 Strongly agree	2 Agree	3 Neither agree nor disagree	4 Disagree	5 Strongly disagree
1. You [are/were] exposed to hostility or conflict from people you work with					
2. Your supervisor [is/was] helpful in getting the job done (Reversed in qual)	5	4	3	2	1
3. The people you work with [are/were] helpful in getting the job done (Reversed in qual)	5	4	3	2	1

1. Reverse coding

Q46_WQUAL_UNION: [Are/Were] you a union member or covered by a union contract or collective agreement in this job? GSS 2016

- 1: Yes
- 2: No
- 99: Don't know

3_COMPENSATION QUALITY

Answer the following questions by referring to your most recent job.

a) Income

Q47_WQUAL_HOURLY_RATE: What [is/was?] your hourly rate?

Hourly rate: _____

Min = 0; Max = 999

b) Salary

Q48_WQUAL_ANN_SAL: What [is/was?] your annual salary before taxes?

Annual Salary: _____

c) Employment benefits (Multiple choice)

Q49_WQUAL_EMPL_BENEF: Which of the following employment benefits do [did] you have access to as part of your most recent employment?

- 1: Workplace pension plan
- 2: Paid sick leave
- 3: Paid vacation leave
- 4: Paid personal absence days (addition)
- 5: Disability insurance
- 6: Medical, drugs and dental care coverage (Modified)
- 7: Worker's compensation
- 8: Maternity, parental or layoff benefits
- 96: Other – Specify _____
- 97: None of these listed above

Q50_WQUAL_WFC: In reference to your most recent work, for the following questions, please rate how much you agree with the following statements about the conflict between your work and family lives. CCHS 2023

Question	1 Strongly agree	2 Agree	3 Neither agree nor disagree	4 Disagree	5 Strongly disagree
1. The demands of my work interfere [interfered] with my home and family life.					
2. The amount of time my job takes up makes [took up made] it challenging to fulfill family responsibilities.					
3. Things I want [wanted] to do at home do [did] not get done because of the demands my job puts [put] on me.					
4. Due to work-related duties, I have [had] to make changes to my plans for family activities.					
5. My job produces [produced] strain that makes [made] it difficult to fulfill family duties.					

BLOC D – WORKPLACE DISCRIMINATION QUESTIONNAIRE

The following questions are about workplace racial discriminations

a) Workplace Major Racial discrimination

We are interested in your beliefs about how others have treated you. In this section, I am going to ask you about your experiences of being treated unfairly in employment because of your race/ethnicity. *Racial discrimination refers to the unfair or prejudicial treatment, based on race or skin colour, of a person or group that deprives them of or limits their access to opportunities and advantages available to other members of society.*

This sentence and the follow-up questions were modified to focus solely on race/ethnicity discrimination, as aligned with the study's purpose.

Q51_WPRD: Please check the box with the answer that best represents how often the following things happened to you in the past year or in your last employment because of your skin colour, your race, or your ethnicity:

	(1) Yes	(2) No
1. Have you ever been UNFAIRLY fired?		
2. For UNFAIR reasons, do you think you have ever not been hired for a job?		
3. Have you ever felt that others at your place of employment UNFAIRLY got promotions or pay raises faster than you did?		
4. Have you ever been UNFAIRLY denied a promotion?		
5. In addition to what we have mentioned, is there any other way you have been treated UNFAIRLY AT WORK, for example, prevented from doing something or been hassled or made to feel inferior?		

Follow-up questions will appear for each question with Yes as the answer. If the answer is no for all questions, go to question Q51

Q51A_ WPRD_FREQUENCY: How many times has this happened in your entire life?

- 1: Once
- 2: More than once

Q51B_ WPRD_FEELING: How did this experience make you feel? (check all that apply).

- 1: Angry
- 2: Frustrated
- 3: Sad
- 4: Powerless
- 5: Hopeless
- 6: Scared
- 7: Vulnerable
- 8: Humiliated
- 9: Vengeful
- 10: Inferior
- 11: Not surprised/resigned
- 12: Not listed above, please specify_____ -

Q51C_ WPRD_STRESS: How stressful was this experience for you? Would you say it was:

- 1: Very stressful
- 2: Quite stressful
- 3: Somewhat stressful
- 4: Not at all stressful

Q51D_ WPRD_ACTION: What action(s) did you take to address the discrimination you experienced? (Select all that apply.)

- 1. I discussed the matter with my supervisor or a senior manager.
- 2. I discussed the matter with the person(s) from whom I experienced the discrimination.
- 3. I contacted a human resources advisor in my department or agency.
- 4. I contacted my union representative.
- 5. I used an informal conflict resolution process.
- 6. I filed a grievance or formal complaint. (Go to question 69)
- 7. I resolved the matter informally on my own.
- 8. Other, please specify
- 9. I took no action.

If the answer is 9, go to question 53; otherwise, go to question 52 only.

Q52_ WPRD_RESOLVE_SATIS: I am satisfied with how matters related to racial discrimination have been resolved, or I am satisfied with the progress of the process, if the problem has not been resolved.

- 1. Strongly agree
- 2. Somewhat agree
- 3. Neither agree nor disagree

- 4. Somewhat disagree
- 5. Strongly disagree

Q53_ WPRD_REASON_NOACTION: Why did you not take any action about the racial discrimination you experienced? (Select all that apply.)

1. The issue was resolved.
2. I did not think the incident was serious enough.
3. The behaviour stopped.
4. The individual apologized.
5. Management intervened.
6. The individual left or changed jobs.
7. I changed jobs.
8. I did not know what to do, where to go or whom to ask.
9. I was too distraught.
10. I had concerns about the formal complaint process (e.g., confidentiality, how long it would take).
11. I was advised against filing a complaint.
12. I was afraid of reprisal (e.g., having limited career advancement, being labelled a troublemaker).
13. Someone threatened me.
14. I did not believe it would make a difference.
15. The time limit to file a grievance or a formal complaint had passed.
16. Other

b) Type of discrimination (CCHS)

Q54_ WPD_TYPE: Remember, think about unfair treatment or discrimination that happened while at work.

In which of the following ways were you discriminated against?

- 1. Ignored by others
- 2. Made to feel uncomfortable
- 3. People talked behind your back
- 4. Promotion or training was denied
- 5. Were given too much work
- 6. Were given less challenging or interesting work
- Aggressive Behaviours
- Excessive control
- Being excluded or being ignored
- Interference with work or withholding of resources
- Offensive remark
- Personal attack
- Physical violence
- Sexual comment or gesture
- Yelling or shouting
- Threat
- 96. Other – Specify_____
- 99. Not applicable

If the answer is None, go to question Q55

Q55_WPRD_PERPETUATOR: From whom did you experience unfair treatment or discrimination? (CCHS 2023 modified) Multiple choice

- 1: Supervisor or manager
- 2: Colleague or peer
- 3: Client or customer
- 4: Board member or shareholder
- 96: Other – Specify

Race/Ethnic harassment at work

Q56_WPRD_REHARSS: For the following questions, please indicate how often these situations happen to you at work. *The ethnic and harassment questionnaire was adjusted to include race-based harassment*

	(1) Never	(2) Rarely	(3) Sometime	(4) Very often	(5) Always
1. Someone at work makes [has made] derogatory comments about your race/ethnicity.					
2. Someone at work uses [has used] race/ethnic slurs to describe you					
3. Someone at work makes [has made] racist comments (for example, says people of your race/ethnicity aren't very smart or can't do the job).					
4. Someone at work fails [has failed] to give you the information you need to do your job because of your race/ethnicity.					
5. Someone at work tells [has told] jokes about your race/ethnic group.					
6. Someone at work excludes [has excluded] you from social interactions during or after work because of your race/ethnicity.					

Coping with Discrimination – NSAL Study (Abbreviated)

Q57_WPRD_REHARSS_COPING: How did you respond to this/these experience(s)? Please tell me if you did each of the following things. Select all that apply

- 1: Tried to do something about it.
- 2: Accepted it as a fact of life.
- 3: Worked harder to prove them wrong.
- 4: Realized that you brought it on yourself.
- 5: Talked to someone about how you were feeling.
- 6: Expressed anger or got mad.
- 7: Prayed about the situation.
- 96: Other, please specify _____ (added to be open to other coping strategy)

Chronic Workplace Discrimination

Q58_WPRD_CHRONIC: Here are some more situations that can arise at work. Please tell me how often you have experienced them during the past 12 months or [at your last job]

	(4) Once a week or more	(3) A few times a month	(2) A few times a year	(1) Never
Workplace discrimination				

1. How often do [did] you feel that you had to work twice as hard as others to get the same treatment or evaluation?				
2. How often are [were] you watched more closely than other workers?				
3. How often are [were] you unfairly humiliated in front of others at work?				
Harassment _WPH_CHRONIC				
1. How often do [did] your supervisor or coworkers make slurs or jokes about racial or ethnic groups?				
2. How often do [did] your supervisor or coworkers make slurs or jokes about women?				
3. How often do [did] your supervisor or co-workers make slurs or jokes about gays or lesbians?				

Coping with Discrimination – NSAL Study (Abbreviated)

Q59_ WPH_WPRD_COPING: How did you respond to this/these experience(s)? Please tell me if you did each of the following things. **Select all that apply**

- 1: Tried to do something about it.
- 2: Accepted it as a fact of life.
- 3: Worked harder to prove them wrong.
- 4: Realized that you brought it on yourself.
- 5: Talked to someone about how you were feeling.
- 6: Expressed anger or got mad.
- 7: Prayed about the situation.
- 96: Other, please specify _____ (added to be open to other coping strategy)

60_ WPH_WPRD_SATISFACTION

Instruction: Please indicate to what extent you agree with the following statement.

I am satisfied with how I respond to matters related to workplace racial discrimination or harassment .

- Strongly agree
- Somewhat agree
- Neither agree nor disagree
- Somewhat disagree
- Strongly disagree

Internalized Racism Short Scale

Q61_IR: Indicate to what extent you agree with the following statements:

	0 Very untrue	1 Somewhat untrue	2 Neutral	3 Somewhat true	4 Very true
1 Racial/ethnic people are intelligent.					
2. Racial/ethnic people are lazy.					
3. Racial/ethnic people work hard.					
4. Racial/ethnic people give up easily.					
5. Racial/ethnic people are violent.					
6. Racial/ethnic people have no written history.					
7. I wish my skin were lighter than it is now.					
8. Lighter skin is more attractive.					
9. Straight hair is better than my natural hair texture.					
10. Racial/ethnic women are controlling.					
11. Most criminals are from a racial/ethnic group.					
12. Most racial/ethnic people are on welfare					

BLOC E – MENTAL HEALTH QUESTIONNAIRE

The following questions are about mental health conditions

a) Burnout Measure Short version

Q62_BURNOUT: When you think about your work overall, how often do [did] you feel the following?

Items	(1) Never	(2) Almost never	(3) Rarely	(4) Sometime	(5) Often	(6) Very often	(7) Always
1. Tired							
2. Disappointed with people							
3. Hopeless							
4. Trapped							
5. Helpless							
6. Depressed							
7. Physically weak/Sickly							
8. Worthless/Like a failure							
9. Difficulties sleeping							
10. "I've had it."							

b) Short Depression Scale (CESD-10)

Q63_CESD: Below is a list of the ways you might have felt or behaved.

Please tell me how often you have felt this way during the past week.

During the past week (put an answer for each line):

	Rarely or none of the time (less than 1 day)	Some or a little of the time (1-2 days)	Occasionally or for a moderate amount of time (3-4 days)	All of the time (5-7 days)
1. I was bothered by things that usually don't bother me.				
2. I had trouble keeping my mind on what I was doing.				
3. I felt depressed.				
4. I felt that everything I did was an effort.				
5. I felt hopeful about the future.**				
6. I felt fearful.				
7. My sleep was restless.				
8. I was happy.**				
9. I felt lonely.				
10. I could not "get going."				

** Reverse Score

c)Kessler Psychological Distress Scale _6 item

Q64_K6: During the past month, about how often did you feel:

	All the time	Most of the time	Some of the time	A little of the time	None of the time
1. Nervous?					
2. Hopeless?					
3. Restless or fidgety?					
4. So depressed that nothing could cheer you up?					
5. That everything was an effort?					
6. Worthless?					

BLOC F – PHYSICAL HEALTH QUESTIONNAIRE

a)Chronic Conditions

Q65_CHRONIC_COND: The following questions are about long-term health conditions. These are conditions expected to last 6 months or more, or that have already lasted 6 months or more, and have been diagnosed by a health professional.

	Yes	No
1. Do you have type 1 diabetes (insulin-dependent diabetes)?		
2. Do you have type 2 diabetes (non-insulin-dependent diabetes)?		
3. Do you have prediabetes?		
4. Do you have gestational diabetes (during pregnancy)?		
5. Do you have any other form of diabetes than those mentioned above?		
6. Have you ever been diagnosed with cancer?		
7. Do you have heart disease?		
8. Do you have high blood pressure?		
9. Have you ever been told by a health professional that your blood cholesterol was high?		
10. Do you suffer from the effects of a stroke?		
11. Do you have back problems?		
12. Do you have fibromyalgia?		
13. Do you have arthritis?		
14. Do you have a mood disorder?		
15. Do you have an anxiety disorder?		
16. Do you have post-traumatic stress disorder (PTSD)?		
17. Do you have chronic fatigue syndrome (CFS)?		

b) Somatic Symptom Scale _8 items (SSS-8)

The next questions are about somatic and physical health symptoms

Q66_SSS_8: During the past 7 days, how much have you been bothered by any of the following problems?

	Not at all (0)	A little bit (1)	Somewhat (2)	Quite a bit (3)	Very much (4)
1. Stomach or bowel problems					
2. Back pain					
3. Pain in your arms, legs, or joints					
4. Headaches					
5. Chest pain or shortness of breath					
6. Dizziness					
7. Feeling tired or having low energy					
8. Trouble sleeping					

c) Presenteeism and absenteeism

Q67_PRESENT: Answer the following questions on a scale from “not once” to “5 times or more”.

The questions were modified to put focus on the past 12 months that participants were employed

	0 Not once	1 Once	2 Twice	3 Three times	4 Four times	5 Five times or more
Q67_ABSENTEEISM_1. In the past twelve months you were employed, how many times did you stay at home due to illness or an accident? (Parental leave is not considered an illness)."						

Q67_PRESENTEEISM_2. In the past twelve months you were employed, how many times did you go to work when you should have stayed home for health reasons?						
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d)Work-related health

Q68_WRH: In the past 12 months, have you suffered an illness, injury or assault as a result of being at your workplace or performing workplace duties?

- 1: Yes
- 2: No

BLOC G – GENERAL HEALTH QUESTIONNAIRE

General Health _CCHS

The following question is about health. By health, we mean not only the absence of disease or injury but also physical, mental and social well-being.

Q69_GEN_PHYS_HEALTH: In general, how is your health?

- 1: Excellent
- 2: Very good
- 3: Good
- 4: Fair
- 5: Poor

Q70_GEN_MENTAL_H: In general, how is your mental health?

- 1: Excellent
- 2: Very good
- 3: Good
- 4: Fair
- 5: Poor

Q71_STRESS_LIFE: Thinking about the amount of stress in your life, how would you describe most of your days?

- 1: Not at all stressful
- 2: Not very stressful
- 3: A bit stressful
- 4: Quite a bit stressful
- 5: Extremely stressful

The next question is about your [job/last job) in the past 12 months.

Q72_WORK_STRESS: How would you describe most days at work?

- 1: Not at all stressful
- 2: Not very stressful
- 3: A bit stressful
- 4: Quite a bit stressful
- 5: Extremely stressful

Q73_RESILIENCE_COMM: How would you describe your sense of belonging to your local community?

- 1: Very strong
- 2: Somewhat strong
- 3: Somewhat weak
- 4: Very weak

BLOC H-RECRUITMENT FOR QUALITATIVE/EXPERIMENTAL STUDY

Q71 will display if the participant identifies as Black or mixed, including Black race in Q7.

Q71: Would you like to participate in an interview on workplace racial discrimination? *Please be informed that not all participants who express their interest will be contacted.*

- 1: Yes
- 2: No

If the answer to Q70 is yes, Q71-Q73 will display to collect contact information for follow-up. Otherwise, end the survey

Q72: Are you living in Gatineau or Ottawa?

- 1: Yes
- 2: No

Q73: Are you currently experiencing workplace racial discrimination or having experienced workplace racial discrimination in the past few years? *Racial discrimination refers to the unfair or prejudicial treatment, based on race or skin colour, of a person or group that deprives them of or limits their access to opportunities and advantages available to other members of society.*

- 1: Yes
- 2: No

If the answer is yes, go to the next question. Otherwise, end the survey

Q74: Could you please provide your email address so we can send you the invitation to the next study?

E-MAIL _____

Q75: Please confirm your e-mail address. E-MAIL _____

END OF SURVEY

End survey message for those who would like to participate in the qualitative part.

Thank you for participating in the survey. You have expressed your interest in participating in the qualitative survey. Please be informed that not all participants who express their interest will be contacted.

If you feel the need to talk about a difficult experience, you can use the following bilingual resources:

- Good to talk / Allo J'écoute: 1-866-925-5454
- Mental Health Helpline / Ligne d'assistance en santé mentale : 1-866-531-2600
- TAO-Tel-Aide : 613-741-6433 ou le 1-800-567-9699

You have questions? Please contact us:

Rose Darly Dalexis, BSc., MSc., Ph.D candidate,
Interdisciplinary School of Health Sciences,
University of Ottawa

End survey message for those who wouldn't like to participate in the qualitative part.

Thank you for participating in the survey.

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You have questions? Please contact us:

Rose Darly Dalexis, BSc., MSc., Ph.D candidate,
Interdisciplinary School of Health Sciences,
University of Ottawa

Workplace Racial Discrimination and Health

Black workers' Experiences of Racial Discrimination in the Canadian Workplace and health outcomes associated

INTERVIEW GUIDE

Principal Investigator: Rose Daryl Dalexis, BSc., MSc., Ph.D. candidate, Interdisciplinary School of Health Sciences, University of Ottawa

Participant arrival: ____H__MN

Instructions to be followed before the interview begins

Explain the purpose of the research.

Explain how the meeting and measurements will take place and how long they will last.

Specify the confidential nature of the information collected

START OF THE PROCESS

- Upper left arm measurement _____CM
- Devices installation (Apple Watch and Withing wireless BP device)
- **First measurements: Blood Pressure (BP)**
Systolic Blood Pressure (SBP) _____; Diastolic Blood Pressure (DBP) _____
- **Start of Heart Rate Variability (HRV) measurement track:**
Time _____Hour; _____Minutes
- Break time 10 minutes
- Participant set up for the next steps

INTRODUCTION

Thank you for agreeing to do this interview with me. To better understand the Factors that influence a higher proportion of Black people tend to report more workplace racial discrimination and how their mental health and physical health are affected. This meeting will last between 45 and 60 minutes, and we want to hear your views on:

- 1) Your perception of workplace racial discrimination
- 2) How did you feel when you experienced workplace racial discrimination
- 3) Your knowledge regarding existing resources

Our interview will be recorded; this will avoid me having to write down the whole conversation and will allow me to listen to what you are saying more clearly. The recording will be transcribed. **Do you have any questions?**

1-minute break before the next measures

- **Second measurements: Blood Pressure (BP)**
Systolic Blood Pressure (SBP) _____; Diastolic Blood Pressure (DBP) _____
- **Second Heart Rate Variability (HRV) measurement track:**

Time _____ Hour; _____ Minutes

ICE-BREAKING QUESTIONS : _____ H _____ MN

- a) How are you doing today?
- b) Was it easy to get here?
- c) Can you tell me a little bit about your job?
 - o Where do you work, what position, what kind of organization? Are you Unionized?
 - o If the participant is not working, since when have you not been working? Where did you work for the last time? What was your position? Were you unionized? Can I know why you stopped working there?

YOUR PERCEPTION OF WORKPLACE RACIAL DISCRIMINATION: _____ H _____ MN

A lot of people from the Black communities experienced racial discrimination in the workplace. I would like to know your opinion on aspects related to that.

- a) I know you have experienced workplace racial discrimination; could you tell me more about it?
 - o What kind of workplace racial discrimination have you experienced? Interpersonal? Organizational? Internalized?
 - o In what context? Hiring process, including job referral? Promotion? Firing? Wages? Etc.
 - o Who is/was the perpetrator? Multiple perpetrators? Supervisor? Colleague?
 - o Workplace racial discrimination from a client/patient you served?
 - o How often does this happen to you?
- b) When did you realize that you were facing workplace racial discrimination? On the spot or afterwards? How do/did you react?
- c) Have you spoken about your workplace racial discrimination experience to someone?
 - o Who? Supervisor? Colleague? Union representative? Friends or Family? Etc.
- d) When you experienced (mention each type of workplace discrimination if there are multiple experiences), how did your employer react?
- e) When you experienced (mention each type of workplace discrimination if there are multiple experiences), how did your union or union representatives react?
- f) When you experienced (mention each type of workplace discrimination if there are multiple experiences), did you experience or witness it? How did they react? Were they able to identify it?
- g) What do you think are the causes of workplace racial discrimination among Black people in Canada?
- h) (Optional) Do you have friends, colleagues, or relatives who have experienced workplace racial discrimination?
 - o If so, in what context? Are they Black or part of another racial group? How did their employer react? Can you please tell me more?
- i) Do you think Black people are reluctant to report workplace racial discrimination in Canada?
 - o If so, why?

DISCUSSION ABOUT HEALTH AFFECTATION: _____ H _____ MN

The next questions will focus on your physical and mental reactions when you have experienced or are facing workplace racial discrimination.

I would like you to think about your experiences of racial discrimination

- a) Can you explain to me how you felt when this happened? Did you have any physical symptoms? Did you have any mental health discomfort? Can you tell me more?
If needed, specifications: Did your body react in any specific way that is not usually normal?
- b) Do you ever feel bad when you think about what you experienced as workplace racial discrimination?
- c) While we are talking about this experience, do you feel the same way? Do you have the same symptoms? Can you please tell me more?
- d) Have you missed days of work due to workplace discrimination? How many days?
- e) Did you get paid during this absence? If no, how did you not compensate this earning for the lost earnings that this experience prevents you from being performant at work or focus on day-to-day activities? Can you tell me more?

1-minute break before the next measures

- **Third measurements: Blood Pressure (BP)**
Systolic Blood Pressure (SBP) _____; Diastolic Blood Pressure (DBP) _____
- **Third Heart Rate Variability (HRV) measurement track:**
Time _____ Hour; _____ Minutes

AVAILABLE RESSOURCES _ KNOWLEDGE AND UTILIZATION: ____H__MN

- a) Does your workplace have resources and a clear procedure on how to report and manage workplace racial discrimination?
If so, have you used them?
- b) Are you aware of resources outside of your workplace to report workplace racial discrimination?
If so, have you used them?
- c) Have you ever reported workplace racial discrimination? If so, please can you explain the process to me? Did that help?
If not, can you tell me why? Have you ever been afraid to report such practices? If so, can you tell me why?
- d) What are your coping strategies? What do you do in such situations?
- e) Have you ever consulted a mental health professional or other health professional regarding the symptoms described earlier? If so, what health professional? When? Has this helped?
If not, why?

Conclusion

Are there other points which you would like to add that can help us understand the Black people situation when it comes to workplace racial discrimination?

The interview is now complete. Thank you for responding to the questions and for having shared your perspective with us. We will take the last measures after 1 minute break.

1-minute break before the next measures

- **Last measurements: Blood Pressure (BP)**
Systolic Blood Pressure (SBP) _____; Diastolic Blood Pressure (DBP) _____
- **Last Heart Rate Variability (HRV) measurement track:**
Time _____ Hour; _____ Minutes