

Racial discrimination, cultural processes, and mental health among Asian university students in Canada during COVID-19: a study protocol

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ABSTRACT

Introduction: Since the outbreak of the coronavirus disease 2019 (COVID-19) pandemic, an increase in racial discrimination and xenophobia directed towards Asian individuals has been documented in several Western countries. The consequences of the COVID-19 pandemic have also led to increases in mental health problems among people worldwide. Individuals from Asian backgrounds are at high risk for experiencing a dual-threat, due to the added risk for racial discrimination, in addition to general life and COVID-19-specific stressors. In Canada, the largest population of first and second-generation immigrants are from Asian origins, while 74.9% of international students in Canadian universities come from Asian countries.

Aims: The goals of this study are to investigate the associations between in-person and online racial discrimination and mental health among university students from Asian backgrounds in Canada, the extent to which general coping strategies (e.g., problem-focused, emotion-focused) contribute to better mental health outcomes, and the extent to which cultural processes (i.e., acculturation, cultural identity) affect the associations between racial discrimination and mental health.

Methods and Analyses: University students from East Asian backgrounds in Canada will be asked to complete an online survey examining in-person and online racial discrimination, coping strategies, and cultural processes (i.e., acculturation, cultural identity), and mental health. Hierarchical multiple regressions will be conducted to examine the associations between racial discrimination and mental health and the moderating role of coping strategies and cultural processes.

The coronavirus disease 2019 (COVID-19) pandemic has resulted in significant declines in the physical and mental health of people worldwide, disproportionately affecting the well-being of individuals from disadvantaged backgrounds, children and youth, and university students who experienced extended school closures.¹⁻⁹ An emerging social problem that has affected individuals belonging to cultural minority groups, specifically those from Asian backgrounds, has been increased reports of racial discrimination.¹⁰⁻¹⁵ Accordingly, this protocol outlines a study that will investigate the extent to which experiences of racial discrimination are associated with mental health problems among university students from East Asian backgrounds, and whether individual and cultural processes moderate their association (i.e., coping strategies, cultural identity).

The impact of actual and anticipated racial discrimination on individuals' mental health is well-documented in the literature.¹⁶⁻¹⁹ Racial discrimination during the COVID-19 pandemic may represent a high-risk context for individuals from Asian backgrounds that may increase the risk for negative mental health outcomes.²⁰ Although evidence on this topic is still emerging, some findings support that individuals from East, South, and Southeast Asian origins experience higher rates of COVID-19-related racial discrimination compared to White and other ethnically diverse groups due to the origins of the coronavirus.²¹ Moreover, other studies show that individuals experiencing COVID-19-related racial discrimination reported an increase in mental health problems.^{2,22}

During the COVID-19 pandemic, people have used various strategies to cope with stressors (e.g., school closures, working from home) related to pandemic uncertainty and restrictions.^{1,6} Broadly, coping can be categorized into engagement and disengagement strategies, referring to actions taken to confront or avoid stressors, respectively.²³ Within these two categories, coping goals are identified as either: problem-focused, which helps manage stressors by targeting their cause to consequently reduce the stress, or emotion-focused goals, which helps manage the emotional response to stressors.^{23,24} Commonly reported coping strategies include problem-focused physical activity and emotion-focused social network connections.^{1,6} Coping orientation can be specifically beneficial for dealing with experiences of racial discrimination and can therefore help mitigate their impact from inflating mental health

problems.^{21,25,26}

Considering the heterogeneity in the demographic and immigration characteristics among Asian student groups in Canada, it is important to address cultural factors that may affect the associations between racial discrimination, coping, and well-being. Asian Canadians who are more acculturated (i.e., socially and culturally integrated) to Canadian culture experience better mental health compared to Asian Canadians less acculturated.²⁷ Individuals from immigrant backgrounds who are more acculturated to Canadian society can access a wider variety of resources from both their heritage and mainstream cultures.²⁸⁻³⁵ Additionally, a strong heritage cultural identity plays a protective role against negative outcomes (e.g., depression) in the face of racial discrimination.³⁶⁻⁴³ Therefore, cultural processes, length of residence in Canada, and immigration status may differentially affect the associations between racial discrimination and mental health among Asian Canadians in our study.

In addition to normative university-related stressors, students from Asian backgrounds may cope with COVID-19-related stressors, such as fear of experiencing racial discrimination. As such, the purpose of the current cross-sectional study is to examine the extent to which: (1) incidents of in-person and online racial discrimination are associated with mental health problems (depression, anxiety) among East Asian university students; (2) coping strategies used by students during COVID-19 and (3) cultural processes relevant to immigration, such as acculturation orientation and cultural identity, moderate the association between racial discrimination and mental health.

We hypothesize that racial discrimination will have a negative impact on the mental health of university students from Asian backgrounds (specifically East Asian; i.e., Chinese, Japanese, and Korean backgrounds) due to media portrayals of the origin of COVID-19. We also hypothesize that students who use beneficial coping strategies, such as positive reframing, will report lower levels of depression and anxiety. We expect those who report high levels of acculturation to Canadian culture and strong heritage cultural identity to experience less racial discrimination and lower levels of depression and anxiety compared to those who are less acculturated to Canadian culture or who do not identify strongly with their heritage culture.

METHODS

Design and Setting

This study is a cross-sectional survey investigating the experiences of in-person and online racial discrimination and mental health among university students from Asian backgrounds. The survey will be implemented through Qualtrics and accessible to students through a link and/or QR code. Participants will be recruited starting September 2021 from university classes, student associations, and the participant pool. Poster advertisements will also be posted by the Culture, Diversity and Youth Development (CDYD) lab on social medias. All participants will complete the same questionnaires and provided with a list of free and low-cost psychological services and resources in case they experience emotional discomfort.

Participants will be presented with a consent form before completing the survey. Upon completion, participants may provide their email to enter a draw to win one of 20 \$50 Visa gift card. We aim to reach our target sample calculated via power analysis (see below).

Participants

The survey is part of a larger study open to university students between the ages of 17-24 years old. Data for this study will be analyzed from participants who meet these requirements and who self-identify as East Asian.

Measures

Demographics

Respondents will be asked to fill out a demographic questionnaire which will include questions about age, gender, ethnic background, and living situation.^{44,45} They will also be asked to provide information regarding whether they are an international student, country of birth, years lived in Canada, and household income.

Predictors

In-person racial discrimination will be evaluated with the Everyday Discrimination Scale (9 items).⁴⁶ The 9 items are rated on a 4-point Likert-type scale (0 = never, 1 = rarely, 2 = sometimes, 3 = often). A maximum score of 27 indicates

a high level of everyday discrimination and, a minimum score of 0 indicates no discrimination.

Online racism will be measured with the Perceived Online Racism Scale – Very Brief (PORS-VB) (6 items).⁴⁷ Participants will rate how often they have experienced online racism in the past six months by answering six items rated on a 5-point Likert-type scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). A maximum score of 30 indicates persistent online racism experienced and, a minimum score of 6 indicates no online racism experienced.

Outcomes

Levels of anxiety will be assessed with the Generalized Anxiety Disorder (GAD-7) scale. The seven items are scored on a 4-point Likert-type scale (0 = not at all, 1 = several days, 2 = more than half of days, 3 = nearly every day). A maximum score of 21 indicates very high anxiety symptoms and, a minimum score of 0 indicates very low/no anxiety symptoms.

Levels of depression will be assessed with the Centre for Epidemiological Studies Depression Scale (CES-D).⁴⁹ This measure asks how participants have felt in the past week with 10 items rated on a 4-point Likert-type scale (0 = rarely or none of the time (less than 1 day), 1 = some or a little of the time (1-2 days), 2 = occasionally or a moderate amount of time (3-4 days), 3 = most or all of the time (5-7 days)). A maximum score of 30 indicates very high depression symptoms and, a minimum score of 0 indicates very low or no depression symptoms.

Moderators

Three components of ethnic identity (exploration, resolution, affirmation) will be assessed using the Ethnic Identity Scale-Brief (EIS-B) (9 items).⁵⁰ This scale is composed of 9 items rated on a 4-point Likert-type scale (1 = does not describe me at all, 2 = describes me a little, 3 = describes me well, 4 = describes me very well), with 3 items assessing each component. Subscale scores range from 3 to 12, indicating lower to higher exploration, resolution, or affirmation.

The independent dimensions of heritage and mainstream culture identity will be examined to measure acculturation

using the Vancouver Index of Acculturation (VIA).⁵¹ The VIA contains 20 items rated on a 5-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = neutral/depends, 4 = agree, 5 = strongly agree) with 10 items assessing each subscale. A subscore with a mean of 5 for a subscale indicates strong heritage or mainstream culture identification.

The Coping Strategies Inventory Short Form (CSI-SF) (16 items)²³ will be used to examine 4 types of coping strategies used to handle a stressful event: problem-focused engagement, problem-focused disengagement, emotion-focused engagement, and emotion-focused disengagement. The scale has 4 items assessing each subscale. Each item is rated on a 5-point Likert-type scale (1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = almost always). Subscale scores range from 4 to 20, indicating from never to often when using that coping strategy.

Biases

Non-response bias

Non-response bias represents researchers' expected error in examining a population based on a sample study, which, due to non-response, there will be certain types of respondents who are under-represented in the results.⁵² The incentive to enter a draw to win a Visa gift card or to obtain ISPR points after survey completion is provided to reduce non-response.⁵³ Questions in our survey will be randomized and the scales used are well-validated, including reverse-scored items and an equal balance of positive and negative items.⁵⁴ We have included attention check items, such as "This is an attention check question. Please select (Very true) if you are paying attention to identify careless responses and encourage motivated responses.⁵⁵ Participants may actively skip questions which indicates that they are refusing to answer. During data cleaning, if we identify participants who skipped all the questions, we will eliminate their data.

Social desirability bias

People tend to show this bias when they would like to be viewed positively and disguise their true feelings. In survey research, this translates into managing their responses

and maximizing favourability.⁵⁶ This social desirability is related to individualistic and collectivistic cultural dimensions. For example, participants from collectivistic societies, such as East Asian groups, are likely to deliver socially desirable information to avoid stigma.^{56,57} We will attempt to reduce this bias with the self-administered survey format while maintaining the anonymity and confidentiality of responses outlined in the consent form.⁵⁸

Acquiescence bias

This bias outlines the tendency to agree with questionnaire items regardless of the respondents' views.⁵⁹ Individuals from collectivistic cultures, where "saving face" and maintaining group harmony is important, and individuals from low socioeconomic backgrounds tend to show this bias.⁶⁰ We will provide participants with reverse-scored items and positive and negative items to counterbalance the questions and reduce this bias.^{61,62}

Convenient and selective sample

Our sample will not be representative of the Canadian population due to sampling from the University of Ottawa alone; however, we focus on an urban-centred university and are pursuing a large sample size to reduce this bias.

Study sample size

A G*Power a priori power analysis was conducted for multiple regression analysis and revealed that, for a small effect size of .02, 80% power, and an alpha level of .05, the minimum sample size would be 111 participants.⁶³

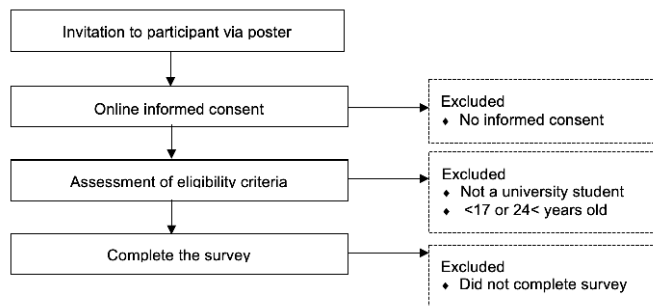
Statistical methods

Upon completion of the study, all data will be screened to ensure quality while invalid responses (e.g., failing to correctly answer attention check questions, incompleteness of survey) will be excluded (Fig 1). Data will be analyzed using SPSS v.28.

Upon data cleaning, we will examine data for missingness and conduct appropriate analyses depending on observed patterns of missing data. Univariate analyses will be conducted to provide descriptive statistics for the

sample. For example, proportions and chi-squared tests will be used to describe the demographic characteristics of the sample (e.g., gender, income, immigrant status). Means and standard deviations (e.g., one-sample t-tests) will be used for all continuous variables (e.g., acculturation, mental health scales). Pearson’s correlations will be calculated for continuous variables to examine the associations between acculturation, coping, racial discrimination, and mental health scales. Spearman’s Rho will be calculated to examine correlations between categorical and continuous variables (e.g., gender, mental health). Hierarchical multiple regressions will be conducted to examine Objectives 2 and 3 (as outlined in the Introduction section). Categorical predictors will be dummy coded (e.g., age, sex, international student status, born in Canada), and continuous predictors will be mean-centered before conducting the multiple regressions. Step 1 will include demographic characteristics, Step 2 will include in-person and online racial discrimination, Step 3 will include coping strategies and cultural processes.

Fig 1: Flow of Participants.



DISCUSSION

Key results

This study aims to investigate racial discrimination experienced by university students from East Asian backgrounds during the COVID-19 pandemic, as well as the extent to which coping strategies and cultural processes moderate the association between experienced racial discrimination and mental health. Findings from this study will help elucidate how this population has managed during the pandemic and their mental health in the Canadian context.

Limitations

Some of the limitations of the study pertain to the design and limited sample pool. Specifically, we will recruit a convenience sample of university students, therefore, the results may not be generalizable to students from Asian backgrounds across the country. Students will volunteer for this study therefore, there may be valuable information missing from students who do not choose to participate. Participants may choose to not respond to certain questions, therefore missing data may fluctuate results; however, we have taken measures to address non-response bias as explained above.

Finally, the study design is cross-sectional, which does not allow us to examine rates of racial discrimination and mental health from before the pandemic or the changes in these associations over time.

Interpretation

This study will provide insight into the experiences and the mental health of students from Asian backgrounds during the COVID-19 pandemic. Evidence from this study will examine how varying levels of acculturation to Canadian culture and coping strategies may impact participants’ relationship between mental health and racial discrimination.

Generalizability

Participants attending the University of Ottawa primarily reside in the Ottawa-Gatineau area. According to the 2016 Statistics Canada census, the Ottawa-Gatineau region is the sixth largest immigrant-receiving region in Canada.⁶⁴ Although there is substantial ethnic and immigrant diversity in the population, results may not be generalizable or comparable to the largest metropolitan cities with immigrant communities, such as Toronto, Montreal, or Vancouver.⁶⁵ The results may also not be generalizable due to potential municipal- or federal-level differences in multiculturalism policies and social norms regarding immigrants.

ETHICS AND DISSEMINATION

This project has received ethics approval from the University of Ottawa Research Ethics Board (#: H-06-21-7101). Results of the study will be published in the

University of Ottawa Journal of Medicine (UOJM), and it may be submitted later for internal or external conference presentations or other journals, recognizing UOJM as the primary publisher.

CONFLICTS OF INTEREST

There are no conflicts of interest for this study.

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