

Title: The effect of racism on mental health in the immigrant and refugee population in North America: a scoping review

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ABSTRACT:

In the current literature, it is unclear as to how racism directly impacts the mental health of North American immigrants and refugees. Relevant electronic academic databases for primary articles were systematically searched. Original articles were selected based on predefined criteria. Relevant information from the articles was extracted and reported in the review. After a comprehensive search, screening, and full-text evaluation, 48 articles were selected for the synthesis of this scoping review. 23 articles discussed racism leading to depression and depressive symptoms. The literature suggested that immigrants and refugees faced with racial discrimination were predisposed to higher rates of mental health outcomes.

Titre : L'effet du racisme sur la santé mentale des immigrants et des réfugiés en Amérique du Nord : un examen de la portée

Dans la littérature actuelle, l'influence du racisme sur la santé mentale des immigrants et des réfugiés nord-américains est irrésolue. Les bases de données académiques électroniques pertinentes aux articles primaires ont été recherchées. Les articles originaux étaient sélectionnés sur la base de critères prédéfinis. Les informations pertinentes ont été extraites et déduites. Après une recherche entière, un dépistage et une évaluation en texte intégral, 48 articles ont été sélectionnés. 23 des articles, à propos du racisme, conduisant à la dépression et à des symptômes dépressifs. La littérature suggère que les immigrants et les réfugiés confrontés à la discrimination raciale étaient prédisposés à des taux plus élevés de problèmes de santé mentale.

Introduction

Over 1 in 5 Canadians is a foreign-born immigrant (Statistics Canada, 2018). In the year 2016 alone, nearly 1.2 million immigrants to the United States received their permanent residency (“Persons Obtaining Lawful Permanent Resident Status”, 2017), and nearly 85 thousand people were accepted as refugees (“Refugee Arrivals”, 2018). Canada and the United States are unique examples of countries that have depended on immigration since conception (Bloemraad, 2006). Whether it be through the metaphor of a ‘multicultural mosaic’ that is often used to describe Canadian social identity or the vision of an American cultural ‘melting pot’ (Peach, 2005), it is important to assess the role that this diversity plays in relation to social cohesiveness and health outcomes.

Immigrants by definition are people who have migrated or moved from the country of their birth to become the permanent citizen of another country (“Refugees and Immigrants”, 2010). Whereas refugees are people who leave their homeland and move to another country in order to escape war, persecution or some type of life-threatening disaster (“Refugees and Immigrants”, 2010). Once displaced, immigrants and refugees experience many challenges due to language barriers, lack of employment opportunities and difficulties securing housing (Hilario, 2018). Often times, the experiences of many newcomers can become further strained by incidents of discrimination and racism.

Discrimination refers to the unfair and unjust intentional acts directed against people based on their race, country of origin, age, gender, sexual orientation, religion, social and disability status (“What is Discrimination”, n.d). Statistics from 2015-2016 show that race and/or ethnicity have been the prime motivators in police-reported hate crimes in Canada, followed by crimes based on religion (Gaudet, 2018). In the United States, according to the Federal Bureau of

Investigation's 2016 Hate Crime Statistics, not only are race and ethnicity-based incidents quite common, they are also on the rise, with an overall 5% increase in the number of hate crimes committed between 2015 and 2016 ("Hate Crime by Jurisdiction", 2017).

This type of discrimination holds many implications when examined in the context of immigration, especially with regards to its effects on immigrant mental health. Current research and literature have shown that discrimination can lead to a large range of mental health issues, ranging from low self-esteem and low well-being to severe mental stress, PTSD, anxiety and depression (Williams, Neighbors & Jackson, 2003). This effect is further intensified in instances where perceived discrimination also prevents individuals from seeking mental health support (Hilario, 2018).

Mental health issues impact not just the individual but have the power to decelerate community development and overall social cohesion (Bromley et al, 2013). Furthermore, mental health problems have a large detrimental impact on the North American economy. The Mental Health Commission of Canada predicts that within the next 30 years, the total economic cost of mental health issues will be over 2.5 trillion CAD, due to social services, disability and lost productivity (Mental Health Commission of Canada, 2013). Depression alone is estimated to cost American society 210 billion USD per year (Greenberg, 2015).

Whether it be due to the human, community or economic impact, it is important to understand the true nature of the relationship between discrimination and mental health outcomes. This scoping review provides a comprehensive analysis of this relationship, specifically looking at mental health among immigrant and refugee populations in Canada and the United States.

Methods

Our approach to this scoping review followed a 5 stage framework consisting of : (1) identifying research question, (2) identifying relevant studies, (3) selecting studies, (4) charting data and (5) reporting results .

Stage I: Identifying the research question

In order for a scoping review to be effective, a very specific research question must be formulated. However, the search must be extensive such that potentially useful literature is not excluded. For this scoping review we formulated the question: What are the effects of racism on the mental health of immigrants and refugees living in North America?

Stage II: Identifying relevant studies

A systematic search with the use of applicable keywords was completed in order to find relevant studies for our scoping review. Academic literature was both considered as important source for retrieving information for this scoping review. Electronic databases were searched using all possible keywords

Stage III: Study Selection

Searching electronic databases tend to yield large amounts of literature. In order our articles relevant to our research question, an inclusion and exclusion criteria were formed. Studies focusing on discrimination and mental health were included. Moreover, while screening full articles, we filtered for racism as a specific type of discrimination. We initially searched with all terms related to discrimination (see table 1) such that no relevant articles are missed. Our screening consisted of two parts. The former part included screening based on the title and abstract of the articles. This stage of the screening was conducted independently by two reviewers (MK and AH). The latter consisted of an exhaustive full-text screen done by three reviewers independently (NF, SA and HN). Any disagreements amongst the reviewers were

solved by discussion. This screening process allowed us to pick the most relevant studies for our research question and scoping review.

Stage IV: Data-Charting

We collected the following information for each article: author(s), study population, year of publication, location, and mental health outcomes mentioned. This information was later charted on Microsoft Word and Excel.

Stage V: Reporting Results

The purpose of a scoping review is not to analyze in-depth with articles, instead to acquire a larger scope and description of what kind of research has been done about the topic (Arksey & O'Malley, 2005). With the aid of our charts in Stage IV we were further able to thematically categorize our articles into different groups based on the mental health outcomes mentioned in each study. The mental health outcomes identified from the studies include Depression, Psychological well-being and others. These themes are presented in tables 3,4,5 and 6. Moreover, the category regarding depression as a mental health outcome were further divided into three different study themes (presented in table 4). Thematic categories of Racism leading to depression, Racism increasing depressive symptoms and coping with depression were synthesized. In the results section are our findings based on the literature selected.

Results

Literature Search Overview

A total of 1963 articles were found through our electronic database searching. After screening and removal of duplicates, 1573 articles were selected for title and abstract screening. During the first phase of screening (title and abstract), 1354 articles were excluded, leaving 217 articles for full-text screening (Kappa .90). Regarding the second phase of screening (full text), 169 articles were excluded leaving a total of 48 articles for synthesis.

Overview of Demographics and Study Type

In regard to study location, 36/48 (75%) of the studies were conducted in the United States. The remaining 12/48 (25%) of the studies were done in Canada. There was a large range of the population size of the various studies. The smallest population size was 9 which was the qualitative study by Hagey et al. (2001) on the discrimination of immigrant nurses of color. The largest population size was 17, 249 which was the quantitative study by Herald et al. (2015) which looked at discrimination due to one's racial and ethnic minority status. There were 23/49 (46.9%) studies which had population sizes under 500. There were 24/48 (50%) studies which had population sizes that were over 500. 2/48 (4.2%) of studies did not indicate a population size. The age of the populations in the studies was also diverse. The study by Oxman-Martinez et al. (2012) that looked at ethnic discrimination and social exclusion of immigrants had the youngest mean age of 11. The study by Bonnie lee et al. (2018) which looked at the mental effects of racism on immigrants had the highest mean population age of 54. The study by Henning-Smith et al. (2013) which looked at discrimination in the healthcare setting due to race, skin color, ethnicity, or nationality had the highest range of population ages in one study which was 18-89. 4/48 (8.3%) of the studies did not indicate the age of the population. Many ethnicities and races were represented.

19/48 (39.5%) of the study samples looked at immigrants and refugees. These immigrant and refugee groups came from first generation, second generation, non-white, Arab, Hispanic, Asian, or Afghan origins. 11/48 (22.9%) of the studies had multiple or mixed racial or ethnic groups. 8/48 (16.6%) of the study samples were Latinos. 5/48 (10.4%) of the study samples were Asian Americans. 4/48 (8.3%) of the study samples were African Americans or foreign-born black people. 2/48 (4.2%) of the study samples looked at Arab Americans exclusively.

Regarding the type of study, our scoping review found that out of the 48 studies, 26 (54%) were quantitative in nature. Eleven out of the 48 articles (23%) were qualitative studies. A further 11 studies (24%) utilized mixed-method research. The majority of papers were done on Depression as a mental health outcome of racism. Moreover articles were categorized based on the mental health outcomes experienced by the immigrants and refugees.

Thematic Categories of Depression as a Mental Health Outcome

Theme I: Racism leading to depression

Immigrants and refugees are susceptible to nearly every type of discrimination, and can quite easily become a marginalized group in society (Godley, 2018). This discrimination can elicit various other issues into the human psyche, most notably depression. Individuals who perceive that they are being discriminated against based on socioeconomic status, race, religion and language proficiency are subject to higher rates of depression (Anglin et al., 2014; Beiser et al., 2006; K.S. et al., 2011; Cook et al., 2009; Garcia, Lindgren, & C., 2009; Lo, Hopson, Simpson, & Cheng, 2017; N.G. et al., 2010; R. et al., 2001; Noh et al., 1999)

Out of 48 articles, 10 (21%) discuss the relationship between racism and levels of depression; all of which conclude that racism negatively affects one's mental health and can lead

to various forms of depression. 2 out of 10 articles (20%) address the south asian refugee population, 3 out of 10 articles (30%) study the latino population (one of which specifically discuss gay and bisexual latino men), 2 out of 10 articles (20%) address African Americans/people of African descent (one article only includes immigrant women nurses of colour), 1 out of 10 articles (10%) studies Korean immigrants. 2 out of 10 articles (20%) do not target a specific ethnicity; 1 out of these two articles discusses the homeless minority, while the second article discusses child immigrants.

Increased racial discrimination was found to have an increased number of attenuated positive psychotic symptoms (APPS) and distressing APPS when controlled for race, gender, immigrant status and income level (Anglin et al., 2014). Individuals with high levels of self-identity had greater depression rates when compared to participants who did not face racism with similar levels of self-identity (Beiser et al., 2006). Discrimination and language proficiency were considered predictors of depression (Bernstein et al., 2011). Latino immigrants that perceived they were discriminated against based on ethnicity were positively correlated for depression. (Cook et al., 2009) [Garcia 2008]. Stressors on Latino adolescence including racial discrimination have also been seen to negatively influence mental health (Garcia et al., 2009). In a qualitative study concerning immigrant nurses who faced perceived (Hagey et al., 2001). Another study analyzed the emotional health of Asian, Hispanic, and White individuals with respect to discrimination, immigration status and English-language proficiency. This study showed a substantially higher risk for depression in Asian-American immigrants when compared to Latinos and Whites (Lo et al., 2017). A more localized study also indicated that perceived racism in Southeast Asian Refugees in Canada was positively correlated to depression (S Noh et al., 1999).

Theme II: Racism leading to depressive symptoms

While Depression is diagnosed based on symptomatology, the presence of symptoms alone may not always meet the diagnostic criteria for Depressive Disorder. Individuals may present with symptoms of depression, either in conjunction or isolation. Both the DSM–IV-TR (APA, 2000c) and ICD–10 (WHO, 1992) are two classification systems that are often used to assess whether patients meet the criteria for Depression. Within these systems, individuals are grouped based on a threshold of symptoms and severity. However, many individuals may present with symptoms at a sub-threshold level. These individuals therefore still experience depressive symptoms, regardless of whether or not they meet the diagnostic criteria for Depressive Disorder.

Of the 48 articles included in the study, 12 addressed the relationship between perceived racism and depressive symptoms. Regarding different types of depressive symptoms 7 out of 11 articles (54%) mentioned sadness, feeling down or depressive mood. Anhedonia, somatic symptoms and discouragement or hopelessness were each addressed in 2 articles. Poor appetite, sleep disturbances and social withdrawal were each mentioned in one article.

Theme III: Coping

Out of 48 articles, only 1 addressed the effect of coping in managing the discrimination-depression relation. The research identifies that even though perceived racial discrimination affects the mental health of immigrants and refugees but responding through culturally congruent coping, reduces the psychological consequences of discrimination.

Psychological well-being

Out of the total 48 articles in the study, 12 (26%) reported on the effect of racism on the Psychological well-being. All the articles provide a correlation between racism and the

deterioration of psychological well-being. Individuals who identify as an ethnic minority, specifically Asian-Americans and Latinos, are found to have a decreased mental well-being compared to individuals with European ancestry (Huynh, Devos, & Smalarz, 2011). While racial discrimination is positively correlated with psychological distress, ethnic identity was discovered to have a negative correlation to distress (Yip, Gee & Takeuchi, 2008). A reason for the decline in psychological health, along with discrimination and acculturative stress, is the conflict between the national identity and ethnic identity (Huynh et al., 2011; Leong, Park, & Kalibatseva, 2013). Additionally, perceived discrimination resulted in higher levels of psychological concern in the Haitian, Arab-Muslim, and non-Muslim Arab groups (Rousseau et al., 2011). Discrimination, due to race and religion, also resulted in psychological distress, and psychological symptoms for Arab Americans (Abdulrahim et al., 2012; Assari, 2017). The interaction between racism and diminished mental health can also be found in the foreign born African and the African American communities, as both reported on high levels of racial discrimination and mental health concerns (Krieger, Kosheleva, Waterman, Chen, & Koenen, 2011). Furthermore, it is determined that immigrants and refugees with HIV and Aids were having poor mental health due to the fear of stigma in addition to the discrimination for being an immigrant (Chen, Li, Fung, & Wong, 2015). For Caribbean African, anger is a more profound reaction to discrimination in comparison to African Americans, and have less psychological distress (Head & Thompson, 2017). However, the African Americans who disclosed accounts of racial discrimination without displaying anger have lower levels of distress compared to African Americans who reacted with anger (Head & Thompson, 2017).

The analyzed articles mentioned an increased need for more services for individuals who struggle with mental health well-being as a result of racial discrimination (Lee, Kellett, Seghal,

& den Berg, 2018). Additionally, there is also a growing demand for more consideration for diversity in services for mental health (White, 2008). Assimilation and integration are shown to have a profound effect on increasing life satisfaction along with mental health (Berry & Hou, 2017).

Other Mental Health Outcomes

Out of the 48 studies included in this review, 12 (26%) did not fall under the previously discussed categories. These studies focused on areas in which limited literature is available but are relevant to this study. They discuss the relationship between racial discrimination and symptoms of mental illness apart from depression including panic attacks, anxiety, substance abuse, stress, and internal conflicts.

Herald et al. (2015) found that the chance of getting a panic attack was heavily impacted by health lifestyle choices and exposure to racial discrimination. This symptom of poor mental health was more prevalent in American-born individuals and those with excessive substance use (Herald, Budhwani, & Chavez-Yenter, 2015). A study revealed that racial factors such as racial discrimination and teasing had a positive correlation with self-objectification in Asian American Women (Cheng, Tran, Miyake, & Kim, 2017). This correlation mediated the link between racial factors and symptoms of eating disorders (Cheng et al., 2017). Perceived racism also predicted the desire of Asian American men to have an ideal body type (Cheng et al., 2016). Perceived discrimination based on race and ethnicity was also found to be a predictor for substance abuse, with the number of discriminatory situations being related to the number of drinking days for participants of varying backgrounds (Tran, Lee, & Burgess, 2010). Drug abuse among Latinos was found to be significantly associated with racial discrimination (Verissimo, Gee, Ford, & Iguchi, 2014).

Higher perceived discrimination and lower acculturation levels were correlated with higher levels of social anxiety amongst Chinese immigrants, while enculturation played no role in anxiety levels (Fang, Friedlander, & Pieterse, 2016). Dawson (2010) established that discrimination and major racist events as indicators of acculturative stress in Dominican immigrants. Dawson (2009) also found that Dominican American women who experienced major racist events and everyday discrimination had higher stress levels. Bekteshi & van Hook (2015) found that perceived discrimination (based on race, ethnicity, etc.) was positively correlated with acculturative stress. Acculturative stress was found to lead to psychological distress in some cases but was not a predictor in other cases based on contextual factors (Bekteshi & van Hook, 2015). Miller (2011) determined that racism-related stress had a significantly negative impact on mental health of foreign-born Asian immigrants, although it was an insignificant predictor of mental health in US-born individuals.

Discrimination based on race and ethnicity in the wider homosexual community along with rejection by the family had an impact on the mental health of the Latino homosexual males (Guarnero, 2007). Participants experienced marginalization, internal conflicts, a poor sense of self, and an identity crisis, making them vulnerable to depression and suicide (Guarnero, 2007). In a study involving Caribbean and Filipino immigrant families, perceived racism was found to correlate positively with family conflict (Rousseau et al., 2009). On the other hand, perceived racism had a negative correlation with family cohesion, which is a predictor of positive collective self-esteem (Rousseau et al., 2009). The mental health of Asian immigrant children was negatively impacted by perceived discrimination and racism (Oxman-Martinez et al., 2012). These experiences impacted the academic standing, social competence, and self-esteem of the participants (Oxman-Martinez et al., 2012).

DISCUSSION

Mental health has been a significant issue in Canada as most people are unable to express themselves due to social stigmatizations regarding the topic (Otto, 1999). However, the literature screened suggests that racial discrimination is a strong determinant for mental health outcomes. This scoping review highlighted the research landscape regarding the effects of racism on the mental health outcomes of immigrants and refugees in North America. The scoping review indicates all different forms of mental health issues present in immigrants. Moreover, studies of depression were thematically categorized into themes of racism leading to depression, depressive symptoms and coping mechanisms.

As seen in table 4, of all the different mental health outcomes, depression was the most prevalent outcome of racial discrimination. However, this study also revealed some other factors that lead to depression, such as low language proficiency, and perceived racism. (K.S. et al., 2011; Noh et al., 1999). Commonly associated with depression are other physical health symptoms that arise, including; Impaired concentration, weakness, agitation, headaches, dizziness, blurred vision, slurred speech, chest pain, weight gain, and impotence were all significantly increased in patients with depression (Gaudet, 2018). This emphasizes the importance of looking at ways to reduce depression rates within a society.

This can include but is not limited to language enhancement programs for immigrants and refugees.

Interventions

Further research to investigate mental health outcomes is needed to inform professionals and policies (Cook et al., 2009; Dawson, 2009; Dawson & Panchanadeswaran, 2010; Yip et al., 2008). Future studies should focus on a larger selection of ethnic groups including understudied

populations such as homosexual Latino men and assess the impact of both lifestyle choices and discrimination on mental health (Guarnero, 2007; Hearld et al., 2015; Steffen, Bowden, & P.R., 2006; Stein, Kiang, Supple, & Gonzalez, 2014; Verissimo et al., 2014). Longitudinal research is also needed to better assess the casualty of racial discrimination and psychological well-being considering racial, ethnic, social, and cultural contexts (Samuel Noh et al., 2007; Verissimo et al., 2014; Seaton, 2009). Further studies targeting whether mental health services are appropriate and relevant to immigrant's needs are also needed (White, 2008). Further research is needed to discover potential interventions such as ethnic identity, social support, and social network (Huynh et al., 2011).

Healthcare providers need to be aware of the impact of discrimination on mental health and address it in the treatment of their patients (Tran et al., 2010; Cheng et al., 2017; K.S. et al., 2011; Kim & Noh, 2014; Lee et al., 2018; Ornelas, 2011). This treatment should be customized based on racial, ethnic, and cultural groups and patient experiences to better understand the factors that hinder or promote mental health (Cheng, McDermott, Wong, & La, 2016; Fang et al., 2016; Henning-Smith et al., 2013; Leong et al., 2013; Lo et al., 2017; Ornelas, 2011). There is a need for better mental health services with resources allocated towards reducing racism-related stress and the elimination of systemic and institutional racism by mental health professionals (Assari, 2017; Chen et al., 2015; Miller et al., 2011).

Language training, an increase in English as a second (ESL) programs, and language considerations in health campaigns may help in reducing negative mental health outcomes for immigrants (Tran et al., 2010; Beiser et al., 2006; Lipson & Omidian, 1997). Insurance status and mental health coverage is often a barrier for mental health services and needs attention for vulnerable populations (Henning-Smith et al., 2013; Ornelas, 2011). Job training, equal access to

the job market, and internal support and assistance within the workplace is essential in reducing discrimination (Beiser et al., 2006; Hagey et al., 2001; Rousseau et al., 2009). Programs to educate immigrants and refugees about cultures, customs, and laws are essential to promote better integration (Lipson & Omidian, 1997; Miller et al., 2011). Education on diversity and discrimination practices and promoting a policy of multiculturalism should be enforced through disciplinary measures and accountability standards (Berry & Hou, 2017; Hagey et al., 2001). Public service providers should also be educated about different cultures and social stressors (Lipson & Omidian, 1997). Early intervention could help prevent the development of depressive symptoms and promote child development (Ornelas, 2011). More focus needs to be placed at school as there is a need for more support for minority students and college counselling centers should consider sociocultural identity in their services (Cheng et al., 2016; Garcia et al., 2009; Thibeault & Stein, 2018).

Effective interventions that target contexts that are likely to impact mental health outcomes are needed to promote integration through family-based interventions and designing programs for high risk minorities to build on racial and ethnic identification and pride (Beiser et al., 2006; Garcia et al., 2009; Milburn et al., 2010; Ornelas, 2011; Bekteshi & van Hook, 2015). Family cohesion, positive family relations, and broader social networks are essential to support the mental health of immigrants by providing emotional support and programs need to focus on promoting and understanding these relations (Zapata-Roblyer et al., 2016; Ornelas, 2011; Rousseau et al., 2009). Policies that improve the legal and socioeconomic status of Latino and other immigrants are essential in promoting integration and reducing barriers that may also impact mental health (Beiser et al., 2006; Zapata-Roblyer et al., 2016).

This scoping review covered an exhaustive list of literature that included a broad search to capture gaps in the research. Although this review was extensive and complete it does have limitations, in that we were unable to target studies written in the recognized second languages of Canada and the United States, French and Spanish, which could have had valuable information which we would have missed.

As evident there are multiple mental health outcomes that can arise when faced with racial discrimination in the North American refugee and immigrant populations. We hope that this scoping review and our synthesized knowledge can be applied to future policy makers.

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Table 1: Keywords

Immigrants and Refugees:

Ethnic minority* OR Alien* OR Non Permanent Resident* OR foreigner* OR Immigrant* OR Emigrant* OR Undocumented Immigrant* OR undocumented emigrant* OR Non-citizen* OR newcomer* OR refugee* OR Minority group* OR Visible minority*

Mental Health:

exp Mental Health OR depress*.mp. OR adolescen*.mp. OR exp mental disorders OR psych:.mp. OR "use disorder:".tw. OR behav:.mp. OR exp psychotropic drugs OR exp psychology, social OR neuro:.mp. OR dt.fs. OR exp brain diseases OR cognitive:.mp. OR exp neurotransmitter agents OR exp psychotherapy OR exp social problems OR anxiety.mp. OR attention:.mp. OR exp emotions OR exp neurobehavioral manifestations OR chronic.tw. OR mental health.mp. OR stress.mp. OR alcohol.mp. OR abus:.mp. OR prevent:.mp. OR stress, psychological.sh. OR exp adaptation, psychological OR outcome measure:.tw. OR exp mental health services OR PTSD

Discrimination:

Prejudice OR Ageism OR Homophobia OR Racism OR Sexism OR Xenophobia OR Discrimination OR Islamophobia OR Anti-semitism

North America:

exp Canada OR exp United States

Table 2: List of electronic databases searched

Academic Databases:

MEDLINE (Ovid)	CINAHL
EMBASE	MEDLINE (Ebsco)
EBM Reviews	Web of Science
PubMed	PsychINFO

Table 3

Author/Year	Publication Type	Discrimination Type	Mental Health Outcome	Study Type	Data Collection	Location of Study	Population size	Age	Sample
Bonnie lee et al 2018	Research Paper	Racism	Depression, PTSD, Loss of identity	Qualitative	survey	Canada	24	Mean 54yrs	Immigrants
Head and Thompson, 2017	Research Article	Ethnic, race, age and gender based discrimination with and without anger	psychological distress	Mixed-Methods	Interview and Survey	US, nationally	4874	42 (African Americans), 43 (First generation), 35 (Later generations)	African Americans and Caribbean Black Americans
Berry and Hou, 2017	Research Article	Discrimination due to ethnicity or culture, race or skin colour, religion, language, age, sex, physical appearance.	Life Satisfaction and Mental Health	Quantitative	Data from Statistics Canada's 2013 General Social Survey	Canada	3163	15-44 (all were either born in Canada or moved to Canada before the age of 12)	Second generation Immigrants
Cheng et al., 2017	Research Article	Racism	Eating disorders, self-objectification, and body shaming	Qualitative	Survey	Midwestern university in USA	516	18-46 (M = 21.83 and SD = 4.04)	Asian American college women
Assari S. and Lankarani M. / 2017	Research Article	Racial Discrimination	Psychological Distress	Quantitative	Kessler Psychological Distress Scale (K10) and Self Rated Health	USA (Michigan)	1004	43.63	Arab Immigrants

M . alexander Thibeault, Gabriela L. Stein, Rosemary O.Nelson Gray ,2017	Research Article	Ethnic discrimination	Increase the risk of depression,	Quantitative	Self-reported questionnaire	Southeast United States	290	Age 18-25	Non – white immigrants Mixed cultural back ground
Fang et al, 2016	Research Article	Racial discrimination, Neuroticism	Social Anxiety	Quantitative	Questionnaires and email	United States	140	18-71	First generation Chinese Immigrants: 55 male 82 female
Cheng et al, 2016	Research Article	Racism	Body Image	Quantitative	Online survey	United States	338	Mean age 21.6 years	Chinese, Indian, Korean, Taiwanese, Bangladeshi, Cambodian, Filipino, Hmong, Japanese, Malaysian and Pakistani
Celia C. lo et al 2016	research paper	Racial/ethnic differences	Low self-esteem and depression	Qualitative	Data extracted from Children of Immigrants Longitudinal study (CLIS)	Miami/Ft lauderdale, USA and San Diego, california	2185	8th and 9th graders	white, asian and hispanics
Herald et al, 2015	Research Article	Discrimination due to one’s racial and ethnic minority status	Panic attacks	Quantitative	Survey	US, nationally	17,249	18+	Racial and ethnic minority Americans
Huq et al, 2015	Research Article	peer racial and ethnic discrimination	depressive symptoms	Quantitative	Survey	North Carolina	172	mean of 14.01	Latino youth

Cano et al., 2015	Research Article	Perceived ethnic discrimination, Perceived negative context of reception, and bicultural stress	Depressive Symptoms, externalizing behaviours (smoking and binge drinking), aggression, and rule breaking	Mixed method	Assessment interviews	Los Angeles (N = 150) and Miami (N = 152)	302	14-17 (M = 14.51 and SD = 0.88)	Hispanic immigrant adolescents
Chen et al., 2015	Research Article	Racism	Self-rated physical and mental health	Qualitative	Focus groups	Toronto, Ontario	47	14+	Immigrants, refugees, or international migrants without legal status in Canada living with AIDS
Roblyer et al, 2014	Research Article	Perceived racial/ethnic discrimination	Depression	Quantitative	Interviewer-administered Questionnaire, Ninos Sanos Research Project	North Carolina, USA	248	>/= 18	Latino Farmworker families
Bekteshi and Van Hook, 2014	Research Article	Acculturation and Perceived Racism	Psychological Distress	Quantitative	Sampling from the National Latino Asian American Surve	United States	639	18+ (M = 45.15; SD = 16.61)	Latina refugees
Anglin D., et al. /2014	Research Article	Racial Discrimination	Psychosis Symptoms	Quantitative	Attenuated Positive Psychotic	USA	644	19.9	Ethnic Minorities

					Symptoms and Prodromal Questionnaire				
Gabriela L. Stein, Lisa Kiang, Andrew J. Supple, Laura M. Gonzalez 2014	Research Article	Ethnic identity, stressor (i.e perceived racial /ethnic discrimination , economic stress)	Increased depressive symptoms and high-level self-esteem.	Quantitative	Questionnaire Study	U.S	176	Age 14-15	Asian American adolescence 50 % 9 th grader and 50% 10 th grader.
Verissimo et al, 2014	Research Article	Racial Discrimination	Substance Abuse	Quantitative	NLAAS survey	United States	2554	-	Latino community
Henning-Smith et al, 2013	Research Article	discrimination in the healthcare setting due to race, skin color, ethnicity, or nationality	self-reported emotional health	Quantitative	Survey	Minnesota	938	18-89, US-born black mean of 42.1, Somali born black mean of 40.11	US-born and Somalia-born black Americans
Frederick Leong et al 2013	Research article	Racial and acculturative stress	Depression, anxiety and Substance abuse	Qualitative	Data analysis of NLAAS and interviews	USA	2554	-	immigrants and US-born Latinos and Asians
Il-Ho Kim, Samuel Noh 2013	Research paper	ethnic and gender discrimination	Depression	Mixed	Toronto Study of Settlement and health	Canada	900	18-80yrs	Vietnamese , Ethiopian, Koreans, Iranian and Irish first generation immigrants
Oxman-Martinez et al, 2012	Research Article	Ethnic Discrimination/Social Exclusion	Psychological Isolation, Social Isolation	Quantitative	NCCYS Survey	Six Canadian Cities	1053	11-13	Children from the People's Republic of China, Hong

									Kong, and the Philippines
Abdulrahim S., James A., Yamout R., and Baker W./2012	Research Article	Racial/ethnic discrimination	Psychological Distress	Quantitative	Kessler Psychological Distress Scale	USA	1016	N/A	Arab-Americans
A. Donovan et al, 2012	Research Article	ethnic discrimination, perceived discrimination	depressive symptoms	Mixed – Methods study	Cross-sectional data were gathered through a confidential online survey.	United States	9665	Mean age 20.31	college students Undergraduate students from 30 colleges and universities. Asian American (n = 1061), Black/African American (n = 896), Hispanic/Latino(a) (n = 1527), and White/European American (n=6181)
Ornelas and Pererria, 2011	Research Article	Racial/Ethnic	increased depressive symptoms	Mixed-Method	Surveys and Interviews	North Carolina	281	Mean age:40	Latino Youth and Caregivers
Huynh et al, 2011	Research Article	Perceived discrimination due to ethnicity	Psychological adjustment, depression	Quantitative	Survey	San Diego State University	Study 1: 836, Study 2: 151 Study 3: 221	Study 1: 17-42 (mean of 19.15) Study 2: 18-45 (mean of 19.62) Study 3: Latino 18-32	Study 1: Asian Americans, Latino Americans, European Americans Study 2: African Americans and

								(mean of 19.47), Asian-American 18-24 (mean of 19.64)	European Americans Study 3: Latino and Asian Americans
Mathew J. Miller et al 2011	Research article	Racial and acculturative stress	Psychological Disorder	Qualitative	web based questionnaire	Columbia	367	18 and above	Asian, Asian americans and Pacific Islanders
Nancy Krieger et al 2011	Research article	Racial discrimination	Psychological distress	Mixed	Survey and interview	USA	1776	25-64	US-born and immigrants black
Rousseae et al, 2011	Research Article	Perceived (racial) Discrimination	Psychological distress (anxiety + depression)	Quantitative	QCCS health survey (1988-1997) Survey (2007)	Montreal, Canada	Two populations: N=784 ('98) N= 432 ('07)	15+ ('98) 18-65 ('07)	Haitian + Arab Immigrants before 9/11 ('98) + after 9/11 ('07)
Norweeta G. Milburn et al 2010	Research article	Perceived discrimination and racial/ethnic identification	depression	Qualitative	questionnaire	Los Angeles	254	12-20 yrs	Young homeless minority
Tran A., Lee R., and Burgess D./2010	Research Article	Perceived Discrimination (race, color, ethnicity, age, gender, sexual orientation, or religion)	Substance Abuse	Quantitative	SHAPE questionnaire	USA	1387	Median 32	Ethnic Immigrant Groups (Hispanic/latino, African-born Black, southeast Asian)
Araújo Dawson and Panchanadeswaran, 2010	Research Article	acculturative stress,daily racial discrimination	stress	Quantitative?	Survey	United States New York	283	More than 18	Dominican US Immigrants first generation

Seaton, 2009	Research Article	Perceived racial (collective/institutional) discrimination	Depression, Lower Self-esteem	Quantitative	Questionnaire	USA	322	13-18 Mean age: 16	Urban African American Adolescents
Bernstein et al., 2009	Research Article	Discrimination due to race, ethnicity, or height	Depression	Quantitative	Survey	New York City	304	M age of immigration = 31.8 M years in US = 14.8	Korean Immigrants
Cook et al, 2009	Research Article	Racial and Ethnic and family cultural conflict	Depression and Anxiety	Mixed Methods	NLAAS survey and WMH-CIDI interview	United States	2457	18 Y/O or older	Latino immigrants
Beverly Araújo Dawson , 2009	Research Article	Racist events,acculturation	Stress	Quantitative?	Survey	United States New York	246	More than 18	Dominican Immigrant Women Adult come to USA after 18 Y/O
Rousseau et al, 2008	Research Article	Racism	Self Esteem	Mixed-Method	Survey + Focus Groups	Montreal, Canada	254	12-19	Caribbean + Filipino Adolescents
Garcia, Lindgren, 2008	Research Article	family acculturation, racism	depression and suicidal ideation	Mixed – Methods	Question, observe behavior, discriptive	United States	53	12- 21y/o and parents of adolescents 12 to 21	Latino Adolescents and Parents
Tiffany Yip, Gilbert C. GEE, and David Takeuchi, 2008	Research Article	Racial discrimination, Ethnic Identity and age of immigrant	Psychological distress	Quantitative	NLAAS	U.S	2047	Age 18-75 yrs	Immigrants VS U.S born

Noh et al, 2007	Research Article	Perceived discrimination Subtle Racism	Depression Self doubt Sadness	Qualitative	Survey data collected from interviews	Toronto, Ontario	180	-	Adult Korean Immigrants
Guarnero, 2007	Research Article	racism, homophobia	depression, suicide ideation	Qualitative	Focus groups	Northern California	27	18+	Gay latino men
Judy White, 2007	Research Article	Racism, cultural shock, language barrier, losses, trauma	Increased incidence of depression, stress, anxiety, low self esteem	Quantitative	Survey	Saskatchewan			Refugee and immigrant women
Patrick R Steffen 2006	Research Article	Racism	Racism related to increased sleep disturbance and high level of depressive symptoms.	Quantitative	Cross- sectional Questionnaire study, (CES-D scale – depression)	United states	168	Mean age 33 years	168 Hispanic-American immigrants. (45% females)
Beiser and Hou, 2006	Research Article	Racism	Depression	Quantitative	Survey, Interview (only data from Final survey was used in results)	Vancouver BC	637	26-88 (M=41)	Southeast Asian refugees (43.4% Chinese, 56.6% Vietnamese and Laotian)
M.Diaz, et al, 2001	Research Article	Social discrimination (Homophobia, Racism , poverty)	Anxiety, Depression, Suicidal ideation	Mixed - Method	Sampling and interview	United States New York, Losangeles, Miami	912	20- 40 , mean age 31.2	Gay and Bisexual Latino men in US.

Hagey et al, 2001	Research Article	harassment, racism	physical stress, emotional pain, depression, marriage breakdown	Qualitative	Face to face interviews and focus groups	Ontario	9	18+	Immigrant nurses of color
Noh et al,1999	Research Article	Perceived Racial Discrimination	Depression	Mixed Method	Survey from Refugee Resettlement Project and Interviews	British Columbia	647	-	South Asian Immigrants
Juliene G.Lipson and Patricia A. Omidian, 1997	Research article	Ethnic Bias and social discrimination	depression and PTSD	Qualitative	Observation and formal and informal interviews	California, USA	92	21-73 yrs	Afghan refugees

Table 4:

Study Theme	Year	Author	Major Findings
Impact of Racism on Depression	2016	Celia C.Lo et al	Discrimination has a negative impact on emotional health measured by self esteem and depression. The intensity of depression due to perceived discrimination in adolescent immigrants varies based on their ethnicity, family size, parent's education and family financial status
	2014	Anglin et al.	No significant differences in number of attenuated positive psychotic symptoms (APPS) and distressing APPS (APPS-distress) was found when accounting for race, gender, immigrant status or income levels. Increased experiences with racial discrimination had a significant influence on number of APPS and APPS-distress, with greater levels of racial discrimination being related to greater number of APPS and APPS-distress. APPS and APPS-distress were positively correlated to anxiety and depressive symptoms. Self reported racial discrimination experiences were significantly related to anxiety and depressive symptoms.
	2010	Norweeta G. Milburn	Perceived discrimination is associated with increased emotional distress. Young homeless visible minorities reported higher level of perceived discrimination in respect to young Caucasians. However strong racial/ethnic identification lowers the emotional distress.
	2009	Cook et al	Perceived ethnic discrimination positively correlated for psychiatric disorders such as depression
	2009	Bernstein et al	Discrimination due to race and language proficiency were strongly associated with depression levels of Korean Americans.
	2008	Garcia and Lindgren	Immigration, fear of deportation, racism, and discrimination are identified to cause stress and, in some cases, depression to the participants.

2006	Beiser M. and Hou F.	Participants with high levels of self identity had greater depression rates when faced with racism when compared to participants who didn't face racism with comparable levels of self identity.
2001	Diaz et al	Social discrimination such as racism was strongly correlated with psychological disorders such as depression, anxiety and suicide ideation
2001	Hagey et al	Discrimination of the participants through marginalization and racism in the workplace resulted in symptoms that include depression, marriage breakdown, financial difficulties (alongside the physical symptoms of cardiovascular disease.
1999	Samuel Noh et al	Perceived racial discrimination affected the mental health of Southeast Asian refugees but reacting through culturally compatible coping attitudes like tolerance can decrease the psychological effects of discrimination

Impact of Racism on Depressive Symptoms

2017	Thibeault et al.	It was found that more affirmation/belonging there was, the less depressive symptoms there were. This was even more significant for women. There was also a protective effect for those who had more affirmation/belonging when they were paired with high other-group orientation. Women who did not have strong affirmation/belonging had more depressive symptoms compared to men who did not have strong affirmation/belonging.
2015	Huq et al	Peer Discrimination and Acculturation conflict are related to depressive symptoms and individual identity issues such as identifying with a culture)
2015	Cano et al	Cultural stressors such as ethnic discrimination predicted greater symptoms of depression

2014	Roblyer et al	depressive symptoms were positively associated with family conflict, perceived racial or ethnic discrimination, and economic insecurity. family conflict, perceived discrimination, and economic insecurity associated with threshold level of depressive symptom
2014	Steffen and Bowden	Sleep disturbance mediates the relationship between perceived racism and depressive symptoms
2014	Stein et al	Ethnic identity did not buffer or worsen the relationship between discrimination and economic stress and mental health outcomes. But, for youth that a lot of economic stress, ethnic identity buffered in predicating mental health outcomes.
2013	Donovan et al	Mediation analysis showed that identity confusion suppressed the relationship between perceived discrimination and depressive symptoms among Black/African American immigrants.
2013	Il-Ho Kim and Samuel Noh	Discrimination is positively correlated with risk of depressive symptoms, women are less probable to report acts of discrimination, and Ethiopians are found to
2011	Ornelas and Perreira	Results indicated that high poverty levels prior to migration, stressful experiences during migration, as well as racial problems in the neighborhood and racial/ethnic discrimination upon settlement in the US most strongly contribute to the development of depressive symptoms.
2009	Seaton	The higher collective/ institutional racism, the lower the resulting self-esteem and depressive symptoms were for African American youth. The greater the amount of individual racism, the more depressive symptoms for Alienated youth. There was no relation between depressive symptoms for Buffering/Defensive and Idealized youth. Middle income students had more self-esteem than poorer students, and teen females had more depressive symptoms than teen males.

2007	Noh et al	Overt discrimination was associated with the erosion of positive affect, and subtle discrimination resulted in greater complexity of emotional and cognitive appraisal of the experiences and associated with depressive symptoms.
Coping with Depression 1999	Samuel Noh et al	Perceived racial discrimination affected the mental health of Southeast Asian refugees but reacting through culturally compatible coping attitudes like tolerance can decrease the psychological effects of discrimination

Table 5:

Year	Author	Major Findings
2018	Bonnie Lee, et al.	Psychological, social, and intergenerational injuries due to racism are an overlooked issue that have a severe lack of services and trained professionals to help intervene.
2017	Assari S. and Lankarani M.M	Discrimination is associated to mental health but a stronger link between discrimination and psychological symptoms are seen in male Arab Americans compared to female.
2017	Head R.N and Thompson M.N.	Discrimination related anger is associated with less distress for Caribbean black Americans than African Americans. African Americans reporting discrimination without a display of anger showed lower levels of psychological distress than those who displayed anger
2017	Berry J.W. and Hou F.	Acculturation (integration) strategies have a major effect on life satisfaction and mental health. Individuals who integrated or assimilated have greater scores of life satisfaction and mental health as compared to those who are separated or marginalized. Perceived discrimination was found to have a negative impact on life satisfaction and mental health regardless of acculturation strategy; however, perceived discrimination had greater negative impacts on the life satisfaction and mental health of populations who were marginalized as compared to those who were integrated.
2015	Chen et al.	45.7% of individuals who tested HIV positive reported having fair or poor mental health, with a major reasoning being the fear of stigma and discrimination during social interactions.
2013	Frederick Leong	Compared to US born citizens, Asian and Latino/a immigrants experience a greater amount of ethnic identity, family cohesion, native language proficiency, and English language struggles. For mental health, the protective factor was found to be social networking and the risk factors were found to be discrimination, acculturative stress, and family conflict.
2012	Abdulrahim et al	Discrimination due to racial identification, religion, skin color, ethnic centrality and residence was associated with psychological distress in Arab Americans.

2011	Que-Lam Huynh	Asian-Americans and Latino/as experienced a greater amount of perceived discrimination than European Americans and were more aware of the perpetual foreigner stereotype, furthermore, these ethnic minorities were found to experience an increased disagreement between their national and ethnic identities and the perpetual foreigner stereotype was found to predict psychological well being.
2011	Krieger et al.	The correlation between self-reported racial discrimination and psychological distress was present amongst both foreign-born and US-born Black Americans, with majority from both parties reporting high exposure of racial discrimination at highest percent as compared to no exposure and moderate exposure, and foreign-born participants experiencing high exposure slightly more than US-born participants.
2011	Rousseau et al.	From 1998 to 2007 perceived discrimination increased among the Arab Muslim and non-Muslim, and Haitian groups, along with experiencing high levels of psychological concern because of discrimination.
2008	Yip et al.	The correlation between racial discrimination and psychological health.
2007	Judy White	Mental health needs of immigrant women in Saskatchewan are overlooked due to the small population size in the province. There is also a lack of diversity in the system to accommodate the now more diverse population.

Table 6:

Year	Author	Major Findings
2017	Cheng et al.	Perceived ethnic discrimination, ethnic teasing and racism positively correlated with self-objectification and symptoms of eating disorders in Asian American Women.
2016	Fang et al.	Higher levels of social anxiety were reported with more perceived discrimination. In addition, lower levels of acculturation caused higher levels of anxiety when interacting with European American counterparts. Levels of enculturation did not play a role in determining anxiety levels amongst Chinese immigrants in America.
2016	Cheng et al.	Foreign perceived racism predicted the drive for a more ideal body type by Asian American men.
2015	Herald et al.	Personal lifestyle choices and exposure to discrimination impact the presentation of panic attacks. Participants who used substances excessively had increased likelihood of having a panic attack along with those being affected by discrimination. Nativity increased your likelihood of developing a panic attack in comparison to foreign born individuals.
2014	Bekteshi V. Van H.	Acculturative Stress did not always lead to psychological distress, but in some contexts (U.S Climate – Years in the U.S. and happiness with move, Perceived discrimination) U.S. Years in the U.S. and happiness with the move were negatively correlated with acculturative stress. Perceived discrimination and difficulty visiting family were positively associated with acculturative stress.
2014	Verissimo et al.	Discrimination was significantly associated with increased risk of alcohol abuse for Latina women and drug abuse for Latino men.
2013	Henning-Smith et al	Somalian immigrants reported better Self Rated Mental Health when compared to White and Black Americans.
2012	Oxman-Martinez et al.	Perceived discrimination had a negative impact on the social skills, academic standing, and self-esteem of immigrant children.
2011	Miller et al.	Racism-related stress was found to have a negative effect on an individual's mental health leading to mental health difficulties. Racism-related stress on immigrant Asian individuals was a major predictor of mental health, whereas it was insignificant in predicting mental health of US.-born individuals.

2010	Beverly Araújo Dawson and Panchanadeswaran	For participants (Dominican immigrants) racial discrimination and major racist events were found to be predictors/indicators of acculturative stress
2010	Tran A. et al.	For participants (Hispanic/Latino, African-Born Black, South Asian), there was a positive relationship between perceived discrimination and substance abuse. This was measured as discrimination being linked to binge drinking and number of discriminatory situations being related to the number of drinking days.

Figure 1:



PRISMA 2009 Flow Diagram

