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Mental Health of Newcomer Refugee and Immigrant Youth During COVID-19

Abstract

In this paper, we examine how the degree of newcomer youth assimilation and acculturation, food insecurity, resilience, and social connections affect the mental health of recent refugee and immigrant youth in a mid-sized city during the COVID-19 pandemic. The data for this study are based on a sample of newcomers, mostly refugees, surveyed between July and November 2020. Indicators of mental health problems include the frequency in which respondents felt sad, stressed, confused, isolated, helpless, nervous, hopeless, or depressed during the COVID-19 pandemic. Multivariate analysis points to the importance of resiliency and family density (i.e., number of siblings) for decreasing mental health problems, while food insecurity and length of residency in Canada increased them. Among these, food insecurity followed by resiliency were the strongest predictors of refugee and immigrant youth's mental health.

Keywords: Immigration, refugees, youth, mental health, COVID-19.

Résumé

Dans cet article, nous examinons comment le degré d'assimilation et d'acculturation des jeunes réfugiés, l'insécurité alimentaire, la resilience, et les liens sociaux affectent la santé mentale des jeunes réfugiés et immigrants récents dans une ville de taille moyenne pendant la pandémie de COVID-19. Les données de cette étude sont basées sur un échantillon de nouveaux arrivants, principalement des réfugiés, interrogés entre juillet et novembre 2020. Les indicateurs de mauvaise santé mentale incluent la fréquence à laquelle les répondants se sont sentis tristes, stressés, confus, isolés, impuissants, nerveux, désespérés ou déprimé pendant la pandémie de COVID-19. L'analyse multivariée souligne l'importance de la résilience et de la densité familiale (le nombre de frères et sœurs) pour la diminution des problèmes de santé mentale, cependant que l'insécurité alimentaire et la durée de résidence au Canada ont accru la mauvaise santé mentale. Parmi ces facteurs, l'insécurité alimentaire suivie par la résilience étaient les prédicteurs les plus forts de la santé mentale des jeunes réfugiés et immigrants.

Mots-clés : Immigration, réfugiés, jeunesse, santé mentale, COVID-19.

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INTRODUCTION

Patients in Wuhan, China, were the first to report symptoms of the coronavirus 2019 microbial pathogen which later became known as COVID-19 or SARS-CoV-2. An outbreak was announced by the World Health Organization at the end of January, 2020 and the organization declared it a global pandemic on March 11. About twenty-two months later, some 260 million people were infected with COVID-19, and close to 5.2 million died. For Canada, these figures were just under 1.8 million and 29,600, respectively (Johns Hopkins 2021). During the early stages of the Covid-19 pandemic in 2020, governments around the world were largely unprepared and they instituted a series of extraordinary restrictions that included self-isolation, social distancing, and quarantines as measures to limit the spread of the disease.

These interventions resulted in disruptions to daily life, avoidance of social contact, isolation, uncertainty, and fears of over-regulation (Brooks et al. 2020). A lack of social contact and uncertainty about the future contribute to a range of mental health problems, including: confusion, fear, anxiety, stress, depression, trauma, and suicide (Durkheim 2006 [1897]; Holt-Lunstad et al. 2015; Leenaars and Lester 1999; López et al. 2020; Nakhaie and Datta 2018; Wray et al. 2011). Such stressors likewise have far-reaching effects on youth's social and emotional development because of their decreased connection with peers (Magson et al. 2021; McIntyre and Lee 2020), and that factor minimizes youth participation in adolescent rites of passage (Gonzales, Suarez-Orozco, and Dedios-Sanguineti 2013) which only exacerbates poor mental health. This is only compounded for newcomer youth, who not only navigate the trials and tribulations of being a young person, but also acculturation to a new community and country.

Some research on the first stages of the pandemic shows that negative health behaviours and outcomes increased and were linked to age, nativity and being financially impacted by COVID-19 (see Zajacova et al. 2020a, 2020b). We are just beginning to learn about the prevalence of and factors responsible for mental health outcomes during the pandemic. And we are at an even earlier stage of learning about the experiences of immigrant and refugee youth during COVID-19 (see Magson et al. 2021).

This paper presents survey results on the mental health of newcomer refugee and newcomer youth in Windsor, Ontario, which is a medium-sized city in Canada, and focuses on the importance of factors that potentially can shape mental health outcomes, including the degree of assimilation, acculturation, food insecurity, resilience and family cohesiveness. Although previous research has addressed the

importance of these factors for mental health among the general population, there is little research on youth and even less on young newcomer refugees and immigrants or on the relative influence of these factors.[1] To our knowledge, there is also no research on the role of food insecurity and resilience for mental health in this population group.

LITERATURE REVIEW

Research on natural disasters shows that critical and traumatic events tend to influence mental health (North and Pfefferbaum 2013), and early evidence suggests that the COVID-19 pandemic has had profound psychological and mental health effects (Wang et al. 2020). There is also mixed evidence on whether the pandemic is associated with an increase in suicide rates (McIntyre and Lee 2020; Sher 2020, but see Pirkis et al. 2021). For newcomers to the country, the effects of the pandemic on mental health have been pronounced, with higher rates of anxiety and poor mental health than established immigrants and those born in Canada. Moderate and severe generalized anxiety was over twice as high among those who feared losing their job due to COVID-19 compared to those who did not fear losing their job (Evra and Mongrain 2020). The uncertainty of the pandemic and lockdowns have, at the same time, been triggering for refugees who fled turbulent and repressive regimes (UNHCR 2020). Those who migrate from their home countries as refugees tend to have experienced the ravages of war and poverty, thereby potentially bringing in pre-existing mental health issues which may become compounded by their experiences in their host country (Pedersen et al. 2016). Such mental health experiences may increase further under the COVID-19 pandemic.

The psychological and mental health effects of the COVID-19 pandemic include anxiety, distress, isolation, fear, sadness, depression, sleep disorders, and other difficulties that could increase substance use and abuse (Ornell et al. 2020). A study of 1,508 Canadians, taken between March 27 and 29, 2020, showed that 49 percent reported anxiety and nervousness, 44 percent reported sadness, and 36 percent reported having difficulty sleeping during the early stages of the pandemic (Jedwab 2020). Another study of 1,210 respondents in China, showed that 53.8 percent reported experiencing stress during the pandemic, 28.8 percent suffered anxiety, and 16.1 percent suffered depression (Wang et al. 2020). Yet another study of 584 youth in China during COVID-19 found that 40.4 percent were prone to psychological problems (Liang et al. 2020). A global study on mental health impacts during the COVID-19 pandemic showed that 41.6 percent of respondents reported moderate, severe, or extremely severe anxiety. This figure was 42.6 percent for depression and 25.2 percent for stress (Ali Shah et al. 2021). It is clear that the pandemic has taken its toll on people's mental health.

This is also the case for young people. A comparison of results from the *Canadian Community Health Survey* (CCHS), 2018, and the *Canadian Perspective Survey Series* (CPSS), 2020, showed that young Canadians aged 15 to 24 were less likely to report excellent or very good mental health during COVID-19 (Findlay 2017; also see Hawke et al. 2020) Similarly, Findlay and Arim's (2020) analysis of a Web Panel Survey of more than 4,600 individuals between March 29 and April 3, 2020, and data from the Canadian *CHS* in 2018, revealed that 62 percent of those aged 15 to 24 reported excellent or very good mental health in 2018. This figure decreased to 42 percent during the COVID-19 pandemic, which was a lower level of mental health than that of older Canadians even during the pandemic. Such findings are also in line with results from Statistics Canada (2020c) that showed that youth between 15 and 24 had the greatest declines in mental health among all Canadians – a 20 percentage point reduction from 60% (pre-COVID) to 40% (July 2020).

Not only is such evidence consistent with our understanding that youth are at higher risk of mental health problems (ACS 2020; Hawke et al. 2020; Kar and Bastia 2006), but also that they are more susceptible to mental health problems during pandemics, particularly if their social engagement is curtailed. In fact, research suggests that the effect of pandemics on mental health problems such as anxiety, stress, and depression tend to increase the longer young people are in quarantine (Ali Shah et al. 2021). Prolonged exposure to COVID-19 has far reaching effects, in that the consequent stress tends to produce structural changes in adolescents' emotion reactive system, including a higher level of stress hormones and vulnerability to stress and a lower flexibility of stimulus and information processing (Stortelder and Ploegmakers-Burg 2010).

What accounts for mental health in general and that of newcomer refugee and immigrant youth in particular? Historically, newcomers were expected to become assimilated into the North American societies. This involved the acquisition of cultural standards matching the patterns of the white Protestant Anglo-Saxon middle class (Gordon 1964). Both the assimilation (Gordon 1964) and the straight-line (Warner and Srole 1945) perspectives suggested that with increased length of residency, a gradual shift occurs from the ethnic cultural origin to host-cultural orientation. In response to criticism including that of the social distance felt by newcomers (Shibutani and Kwan 1965) and the segmented assimilation model (Portes and Zhou 1993), Alba and Nee (2003) proposed the new assimilation model, arguing that assimilation is not uni-directional Anglo-conformity, but that changes in both mainstream and minority immigrant culture takes place and groups converge as the mainstream expands to accommodate cultural alternatives.

The assimilation model no longer seems to be relevant in Canada, where multiculturalism has become institutionalized, and more recently, the focus has shifted

towards diversity, inclusion and integration. The country's integration model can now be conceptualized as a more "flexible" dimension of the new assimilation model proposed by Alba and Nee. It is a multidimensional concept with two key elements: structural integration (acquisition of similar rights and statuses as that of native-born Canadians) and socio-cultural integration (cognitive, behavioural, and attitudinal adaptation). Related to the latter, Berry (1997, 1999) has suggested that options of cultural maintenance or change are two fundamental avenues of acculturation, resulting in four possibilities of assimilation, integration, separation and marginalization. Berry and Hou (2016) used the *General Social Survey* (GSS 2013) and showed that those who are assimilated (i.e., have a higher sense of belonging to Canada and a low sense of belonging to their country of origin) reported lower mental health than those who were integrated (i.e., have a higher sense of belonging to Canada and a high sense of belonging to their country of origin). Beiser, Puente-Duran and Hou's (2015) study entitled *New Canadian Child and Youth Study* further showed that integration, assimilation and separation are all negatively related to emotional problems among refugee and immigrant children who have been in Canada for 10 years or less, though only the effect of integration when compared to marginalization was statistically significant.

What is often ignored in both assimilation and acculturation models are structural issues including the power differentials between the dominant host culture and that of the refugee and immigrant newcomers (Sakamoto 2007). Structural forces, including socio-economic inequities, social exclusion and/or discrimination tend to prevent immigrants' cultural maintenance, cultural integrity, or formation of dual identity. This means that immigrants and refugees' patterns of assimilation and acculturation are not selective or freely chosen. They are subject to newcomers' experiences shaped by the cultural, social and structural forces in the host society. For example, newcomers who experience discrimination or can't find employment and are unable to meet basic needs may seek protection in their own community and identify with their own ethnic culture rather than "choosing" or strategizing to be isolated or marginalized (see McCoy, Kirova and Knight 2016; Nakhaie 2018a). Moreover, the integration approach, similar to old and new assimilation models, tends to take for granted the problematic notion that acculturation to a Canadian way of life is desirable (see Li 2003). Research, however, suggests that as new immigrants increase their residency in the host country and have higher exposure to the new environment, they tend to develop less healthy habits, and their health deteriorates. As the time of exposure to a new country and culture increases, the chances of immigrants and refugees, particularly if racialized, encountering racism and discrimination in their host country increases, limiting individuals' ability to identify with the culture of their host country. This tendency, augmented with unrealized

aspirations in the "land of opportunity," tend to contribute to broad feelings of marginalization, alienation and personal suppression (Jasinskaja-Lahti, Liebkind, and Solheim 2009). Some refer to this tendency as the healthy immigrant effect hypothesis (Luther et al. 2011; McDonald and Kennedy 2004; Rivera, Casal, and Currais 2016).

Another issue with the assimilation and acculturation explanations has to do with a tendency to place the responsibility on the individual newcomers. Individuals need to choose or strategize to acculturate and make an effort to assimilate and to at least partly identify with the host culture. These explanations tend to convey the neoliberal emphasis on individualism, deregulation and privatization and to reduce government's involvement in public affairs while making individuals responsible for social problems (see Nakhaie, Smylie, and Arnold 2007). In a neoliberal framework, individual responsibility is seen as a solution to problems emerging, for example, because of COVID-19, which is, in fact, a social or structural problem. Individual, focused approaches aim to undermine how economic vulnerabilities, particularly among refugees and immigrants, are important predictors of health problems.

Previous research has shown that refugees and immigrants to Canada, particularly if they are racialized, tend to experience a) high unemployment, financial difficulties, and downward occupational mobility (Bevelander and Pendakur 2014; Krahn et al. 2000; Nakhaie and Kazemipur 2013), b) inadequate housing and homelessness (Preston et al. 2009), c) barriers in accessing social services (Bowes and Wilkinson 2003; Nakhaie 2018b), and d) discrimination and racism (Oreopoulos 2011; Schroeter and James 2015). These experiences are related to a higher than average experience of food insecurity among the newcomers.

According to the *CCHS* (2017-18), 7.6 percent of those born in Canada and 7.8 of native-born white Canadians experienced moderate or severe food insecurity when compared to 10.8 percent of visible minority immigrants. Tarasuk and Mitchel's (2020) analysis of the *CCHS* revealed that the prevalence of food insecurity in 2017-18 was 11.1 percent among whites, 28.9 percent among blacks, 28.2 percent among Indigenous people, 20.4 percent among Arabs and West Asians, and 15.2 percent among South Asians. The only group with about a similar level of food insecurity as whites were East and Southeast Asians at 11.3 percent. Similarly, a review of research in Canada, Australia, the US and UK pointed to a high rate of food insecurity among immigrants (Maynard et al. 2019) and refugees (Vatanparast et al. 2020) compared to non-immigrants. There are also indications that food insecurity has increased during COVID-19. According to a survey of Canadians by the *Community Food Centres,* food insecurity in Canada increased by 39 percent during the first 2 months of COVID-19 (Community Food 2020)

Food insecurity is closely related to low income (Carson 2014; Hatsu, Hade and Campa 2017; Tevie and Shaya 2018), and refugees and recent immigrants, particularly

racialized people, are more likely to experience low income. According to the 2016 Census, 17.8 percent of immigrants and refugees, compared to 10.7 percent of non-immigrants, fell into the low-income cut-offs. These figures are 25.1 and 13.5 percent, respectively, for youth aged 15 to 24. Among visible minorities newcomers who have been in Canada for up to five years, 29 percent of immigrants and 59.7 percent of refugees fall in the low-income cut-offs category. These figures were 34.3 and 53.6 percent for immigrants and refugee visible minority youth aged 15 to 24, respectively (Statistics Canada 2016). Overall, refugee and immigrant youth are more likely than their Canadian-born counterparts to live in households where families are unable to pay rent and/or afford food (LaRochelle-Cote and Uppal 2020) and thus are more vulnerable to health or other types of crises.

Food insecurity tends to impact mental health due to poor diet, feelings of deprivation, lack of social support and regular family and community interactions during meals, many of which tend to have increased during COVID-19. American research shows that food insecurity is related to anxiety and depression (Whitaker, Phillips and Orzol 2006) and poor mental health among persons with HIV (Hatsu et al. 2017). The relationship between food insecurity and mental health is also substantiated among households with children (Parker et al. 2010) and among adolescents (Tavie and Shaya 2018). Men et al.'s (2021) study of youth (12-24 years old), using the *CCHS*, showed that food insecurity increases self-rated mental health problems and mood and anxiety disorders. Similarly, Polsky and Gilmour's (2020) study of *Canadian Perspective Survey Series 2* showed that higher food insecurity is related to higher odds of both fair and poor self-perceived mental health and moderate to severe anxiety symptoms. Zajacova et al.'s (2020a) nationally representative Canadian study, moreover, showed that food insecurity was correlated with "bad' mental health during Covid-19.

However, structural forces do not act in a vacuum. The literature on resiliency focuses on "assets" and strength of refugees and immigrants (Castro 2014; Harper 2010), and these, too, must be accounted for in order to understand their outcomes. Because of their assets and resources, resilient individuals are better able to manage challenging environments and deal with whatever comes along, including a pandemic. They are able to adapt better when encountering adverse experiences (Liebenberg and Ungar 2009). Even when things look hopeless, resilient individuals are not discouraged and will not give up. They believe that they can succeed in any challenging situation and rise above disadvantages. Resilience research has shown the importance of hope (Seligman 1990), positive emotions (Ong et al. 2006), personal strength such as gratitude (López et al. 2020), and appraisal style (Lazarus and Folkman 1984) for successful adjustment to the host society. Ungar (2011), for example, has argued that such skills and traits are not static; rather, resiliency is a

dynamic process, shaped by cultural climate and social relations. In one study, resilience is shown to have a stronger effect on mental health than assimilation measured by length of time in the US. In fact, Bernstein et al.'s (2017) study of Korean Americans showed that length of residency in the US was a significant predictor for depressive symptoms. However, the significant effect of length of residency disappeared when resilience was included in a regression model.

Social connections can also be an asset in newcomers' struggle to adjust and flourish in a new environment. Social relatedness is both theorized and shown to be related to health and well-being. According to Bourdieu (1985) and Bourdieu and Wacquant (1992, 119), social capital is "the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutional relationships of mutual acquaintance and recognition." Putnam argued that "social capital appears to be a complement if not a substitute for Prozac, sleeping pills, anti-acids, vitamin C and other drugs we buy at the corner pharmacy" (Putnam 2000, 288). Social networks are incubators of social relations that affect health (Veenstra 2000, 2005). For example, family relations as a bonding measure of social capital are related to mental health (Nakhaie and Arnold 2010; Rothon, Goodwin, and Stansfeld 2012). Single and separated individuals reported more stress and depression than married individuals in a sample of 678 people from Canada, the United States, the United Kingdom, Pakistan, and other countries (Ali Shah et al. 2021). A study of 584 Chinese youth showed that divorced and widowed respondents reported higher mental health problems than married and cohabitating participants (Liang et al. 2020). Hilario et al.'s (2014) study of youth in British Columbia showed that an 11-item scale of family connectedness decreased the odds of extreme stress and despair. Others have shown the importance of family and caring adults for mental health (Gonzales, Suarez-Orozco, and Dedios-Sanguneti 2013; also see Veenstra 2000, and Veenstra 2005). The importance of social connections and family may be more paramount during COVID-19 because these relations provide valuable personal qualities that can be leveraged against challenging environments such as the social distance regulations instituted during the COVID-19 pandemic.

Overall, previous research has shown the importance of assimilation and acculturation, food insecurity, resiliency and family connections for health and well-being with some focusing on immigrants and refugees. What is unclear is the interrelationship between these factors in predicting mental health outcomes, particularly among refugees and immigrants. This paper will fill the gap by evaluating the simultaneous importance of these factors in explaining the mental health of refugee and immigrant youth during COVID-19.

METHODOLOGY

The data for this study is based on a sample of refugee and immigrant youth in Windsor, Ontario. Windsor is culturally diverse and is one of the original cities in Ontario that the federal government designated for the Resettlement Assistance Program (RAP). RAP assistance for Government Assisted Refugees includes up to one year of federal income assistance upon arrival and assistance in temporary and permanent accommodations, and basic orientation and referral to other settlement programs. Based on the 2016 Census, 23.1 percent of Windsor's population is composed of immigrants and refugees. This figure is slightly higher than the national average of 21.8 percent and has likely increased since then. The city also has a higher percentage of refugees, 5.1 percent, when compared to the national average of 2.4 percent. It also has a high number of newcomers landing from Middle Eastern countries and has accepted many refugees from large cohorts of countries from that sending region. Although this means the case is not generalizable, and some caution is needed because of that, it also makes the city an ideal case to study acculturation of newcomer youth. It is a unique case that offers particular insights that can be contrasted against larger centres receiving newcomers or other regions who built RAPs.

All refugees and some immigrants attend the Windsor YMCA for orientation and required settlement services. In the process, the YMCA collects clients' biographic and needs information, which also includes their telephone numbers. For this study, the YMCA provided valid telephone numbers of youths who were 14-25 years of age and who used the service provider organization from April 1, 2013, to April 1, 2020. Given that the overwhelming majority of recent clients of the YMCA are from Syria and Iraq or other Arabic speaking countries, the YMCA case workers proficient in Arabic translated the survey to this language.[2]

Youths on the YMCA list were surveyed by telephone, mostly in Arabic, between July 22, 2020 and November 26, 2020, which resulted in 244 completed surveys. The response rate was 36.2 percent.

The majority of participants in the sample were under the age of 19 (60.2 percent). Among these, 64.3 percent were government-assisted refugees (GAR), 11.1 percent were privately sponsored refugees, 3.7 percent family immigrants, 6.1 percent economic immigrants, and 14.8 percent another type of refugees. Most were born in Syria (50.8 percent) or Iraq (15.7 percent). Other source regions included Africa (12.7 percent), Asia (17.1 percent), and Latin America (3.7 percent). The majority had been in Canada for less than four years (77 percent), with an average length of residency of 3.3 years. Most stated that they spoke English slightly well or not well at all (66.4 percent). There were slightly more female than male respondents (56.2 percent vs. 43.8 percent).

Measurement

Keeping in mind the length of the survey, interviewing refugee youth and cultural sensitivity, we used limited and modified versions of the existing indices of mental health, food insecurity, resilience, and family connections. Mental health is measured by eight questions asking respondents how often they felt sad, stressed, confused, isolated, helpless, nervous, hopeless, or depressed during the COVID-19 pandemic. These questions each ranged from 1 = "does not describe me" to 5 = "describes me extremely well." Factor analysis of these nine indicators revealed that they all load on one factor, with the first accounting for 51 percent of variance. The Cronbach's Alpha for these nine measures of mental health was .875 (see Appendix 1). These measures are summed into an index of mental health ranging from 8 to 40, with a mean of 22.4.

Berry and his colleagues use two measures of cultural identity and then divide them into high and low in order to develop four acculturation strategies: assimilation, integration, separation and marginalization (Berry 1997; Berry and Hou 2016; Bhui et al. 2006). We also used two Likert-scale questions: "I feel at home in Canada" and "I have a lot of pride to be a member of my ethnic groups." Although these questions are not exactly similar to those used by previous researchers which specifically measured a sense of belonging to either community, nevertheless they point to attachment to either culture at "the level of soul" (Kazemipur 2014, 32). These two measures are dichotomized and four acculturation strategies are constructed. Those who felt pride in their own ethnic groups and felt at home in Canada are identified as integrationist. Those who did not feel pride in their own ethnic group but felt at home in Canada are identified as assimilationist (reference group). Those who felt pride in their own ethnic group but did not feel at home in Canada are identified as separationist. Finally, those who did not feel pride in their own ethnic group and did not feel at home in Canada are identified as marginalized. We also included length of residency as a traditional measure or facilitator of assimilation and acculturation (see Wong and Tezli 2013). In the sample, it ranges from 1 to 8 years.

Food insecurity is a proxy of economic vulnerability. Such a proxy is useful for two reasons. The first is that in most Canadian surveys, approximately one third of participants refuse to provide information on income. Second, most youth do not have a full understanding of their family's economic well-being. For these reasons, we use food insecurity and measure it by three questions asking respondents if they worried that their family would run out of food, would not get a balanced meal, or would not have enough food for everyone (see Nakhaie and Arnold 2010). Factor analysis of these three measures of food insecurity revealed that they all loaded on one factor, accounting for 67.3 percent of variance. The Cronbach's Alpha for these three measures was .748 (see Appendix 1).

Resilience is measured by eight Likert-scale statements about respondents' ability to adapt to change, deal with whatever comes, cope in a stressful situation, achieve goals, not give up when things look hopeless, focus clearly when under pressure, lead in problem solving, and not be discouraged by failure (Connor and Davidson 2003). These questions each ranged from 1 = "strongly disagree" to 5 = "strongly agree." Factor analysis of these eight indicators revealed that they all load on one factor, accounting for 34.5 percent of variance. The Cronbach's reliability score for these eight measures of resilience was .729 (see Appendix 1).

Family social connectedness is measured by four variables. First, three statements measured family cohesiveness: "Family members help and support one another," "There is a feeling of togetherness in the family," and "Family members really get along." Factor analysis of these three measures of family cohesiveness revealed that they all load on one factor, accounting for 69 percent of variance. The Cronbach's Alpha for these three measures was .768 (see Appendix 1). The other three variables included were whether respondents and/or their parents were married (coded 1, else 0) and their number of siblings, which tends to signify the availability of supportive relationships.

We also included several control variables. These include English proficiency (Nakhaie 2020), trauma (Larson et al. 2017), refugee status (Amin et al. 2021), being of Syrian origin (Graham 2020), gender (Furr et al. 2010; but see Liang et al. 2020), and age (Rivera, Casal, and Currais 2016). English proficiency is measured by a question asking respondents how well they spoke English, ranging from 1 = not well enough to 5 = extremely well. Experience of trauma, refugee status and Syrian origin, are each coded 1 if the question applied and 0 if it did not apply.[3] Females are coded 1, and males were coded 0. Age is measured in 12 categories, from 14 to 25.

ANALYSIS

Our analysis uses basic descriptive statistics and multivariate analysis. Models regress mental health on measures of acculturation and assimilation, social connectedness, resilience and food insecurity. We also compare our descriptive statistics from our survey to measures from the *CCHS* (2017-18) as well as national polling conducted by the Association of Canadian Studies to gauge their similarity to patterns in a larger national sample.

Preliminary analysis showed that English proficiency, experience of a traumatic life-threatening event, immigrant status (family-sponsored immigrants, economic immigrants, government-assisted refugees, community-sponsored refugees and asylum seekers), country and continent of origin (Syria, Iraq, Asia, Africa and Latin America), and parent's or respondent's marital status were not related to mental

health, with and without controls. Therefore, they are excluded from analysis. One reason for the non-significance of these variables is because of the YMCA population frame and the consequent overwhelming majority of the sample being refugees, almost all of whom are visible minorities and with little language proficiency. Their relative level of homogeneity may have minimized discovery of mental health variations. Length of time in Canada, acculturation strategies, number of siblings, family cohesiveness, resilience, food insecurity, gender, and age were associated with mental health in bivariate analysis and are therefore included in the multivariate analysis.

TABLE 1. Descriptive Statistics

	Min.	Max.	Mean	St.D.
Mental Health Problems	8	40	22.414	7.866
Resiliency	22	40	31.821	4.567
Food Insecurity	3	15	4.393	2.481
Family Cohesiveness	3	15	13.840	1.999
Number of Siblings	1	7	4.635	1.880
Length in Canada	0	8	3.324	2.084
Integration	0	1	0.512	0.500
Assimilation	0	1	0.123	0.329
Separation	0	1	0.299	0.459
Marginalization	0	1	0.066	0.248
Female	0	1	0.562	0.497
Age	1	12	5.734	3.478
N	244			

Table 1 provides descriptive statistics for key variables used in the multivariate analysis. The average level of mental health problems for this sample was 22.4, and the average resiliency score was 31.8. The average level of worries about food shortage was lower than the mid-point of the index. It stood at 4.4 out of a maximum of 15. An overwhelming majority of youth perceived that their family was supportive and got along well. The average level of family cohesiveness was 13.8, which is very close to the highest end of the index. The average number of siblings was 4.6, pointing to a larger family size compared to the overall household size of 3.2 for Canada as a whole (Statistics Canada 2016), particularly if we include parents of the youth. The average length of residency was 3.3 years and just over half of the respondents were integrationist.

Table 2 provides frequency distribution of indicators of mental health problems during the COVID-19 pandemic. It shows that between 21 to 47 percent of the youth in this study stated that these types of distress apply to them "very well" or

"extremely well." These figures were higher for feeling sad, confused, isolated, stressed, and being nervous during the COVID-19 pandemic, but relatively lower for being hopeless, helpless, or depressed.

TABLE 2. Frequency of Mental Health Problems Among Immigrant and Refugee Youth

	Sadness	Stressed	Confused	Isolated	Helpless	Nervous	Hopeless	Depressed
Does not describe me	7.8	15.6	19.3	25.8	36.9	25.0	37.3	42.6
Describes me somewhat well	12.3	17.2	14.3	14.8	14.3	18.0	18.4	14.5
Describes me moderately well	33.2	30.3	27.9	20.9	26.2	22.5	20.9	21.9
Describes me very well	23.4	20.9	19.7	19.7	11.9	19.3	13.1	8.7
Describes me extremely well	23.4	16.0	18.9	18.9	10.7	15.2	10.2	12.4

In order to compare these results with the national population, we relied on the *CCHS* 2017-18 which included three indicators of mental health somewhat comparable to the indicators used here. The *CCHS* included questions on feeling helpless, nervous, and sad/depressed measured by a five-category scale ranging from "none of the time" to "all of the time." The scale is similar to the one used in our study, which also relies on a five-category scale, but the response items range from "does not describe me" to "describes me extremely well." The results from the *CCHS* revealed that only 12.8, 4, and 5.7 percent of youth (age 15-24) felt nervous, helpless and sad/depressed, respectively, "most" or "all of the time" during the "past month" before the survey. None of the immigrants in this age group identified being nervous, helpless, and sad/depressed most or all of the time. In comparison, 34.5, 23.3, and 21.1 percent of the youth in our study stated that being nervous, helpless and/or depressed, respectively, applied to them "well" or "extremely" well during COVID-19. This comparison tends to support the expected increase in the level of mental distress during the COVID-19 pandemic among newcomers.

Further, in a comparison with a survey conducted by the Association of Canadian Studies (ACS 2020) in collaboration with Douglas Foundation and *Leger polling* for Week 44 since the COVID-19 pandemic began, the level of nervousness among the youth in our study seems to be slightly higher than the national rate for all young Canadians during COVID-19. While the question response options were

TABLE 3. Correlation Coefficients Among Key Variables

	2	3	4	5	6	7	8	9	10	11
1 Mental Health Problems	-0.269 a	0.363 a	-0.142 c	-0.129 c	0.216 a	-0.143 c	0.066	0.142 c	0.136 c	0.176 b
2 Resiliency		-0.089	0.322 a	0.089	-0.06	0.092	-0.01	-0.102	-0.180 b	-0.036
3 Food Insecurity			-0.204 a	0.094	0.110	-0.136 c	-0.006	0.125 c	-0.036	0.086
4 Family Cohesiveness				0.029	-0.154 c	0.152 c	-0.064	-0.161 c	-0.125	-0.114
5 Number of Sibling					-0.065	-0.094	0.146 c	-0.160 c	-0.071	-0.003
6 Length of Residency						0.034	-0.136 c	-0.017	0.030	0.133 c
7 Integration							-0.670 a	-0.272 a	-0.069	0.008
8 Separation								-0.173 b	0.036	-0.056
9 Marginalization									-0.033	-0.013
10 Female										0.161 c
11 Age										
N	244									

c P <.05, b P < .01, a P < .001

again somewhat different from those in our study, the ACS study showed that 33.4 percent of youth (ages 17-24) born outside Canada stated that they felt more nervous since the COVID-19 crisis started, 62.5 percent stated that they felt about the same, and 4.2 percent felt less often nervous.

Table 3 shows the correlation coefficients among the key variables. It shows that mental health problems during the COVID-19 pandemic, as expected, are negatively associated with resiliency, family cohesiveness, number of siblings and those who are identified as integrationist. Such problems are positively associated with food insecurity, length of residency in Canada, age, gender (female) and those who are marginalized when compared to those who are assimilated. The strength of the relationship is higher with food insecurity, followed by resiliency. Family cohesiveness is positively associated with resilience, while females report lower levels of resiliency than males. Perhaps understandably, the experience of food insecurity appears to have a negative effect on family cohesiveness, as does length of time in Canada. As food insecurity increases in a family, tensions over scarce resources within the family member may increase, and as length of residency increases, young newcomers' values and attitudes tend to diverge from their parents due to the formers' higher acculturation into Canadian society. Food insecurity appears to be lower among integrationists and higher among the marginalized group. Family cohesiveness is higher among the integrationists. Those with higher number of siblings and more cohesive families are less likely to be marginalized. Finally, those who have been in Canada longer are less likely to be separationist.

Table 4 provides multivariate analysis of mental health problems regressed on relevant factors across four models. Model 1 shows that gender, age, and length of residency are positively related to mental health problems, although the gender effect just missed the .05 significance level. Marginalized groups reported significantly higher mental health problems but its statistical effect disappeared in model 2. Model 2 includes family cohesiveness and the number of siblings. They are not significantly related to mental health problems, although their effects are in the expected direction. Lack of a significant relationship between family cohesiveness and mental health is, in part, because most youth scored very high in family cohesiveness. Just under 60 percent scored 5 in each of three indicators of family cohesiveness, and 88 percent scored 4 or higher in these indicators. Inclusion of family cohesiveness and number of siblings resulted in a decrease in the effect of length of residency by about 10 percent, most of which was due to family cohesiveness, as shown by the statistically significant relations between the two in Table 3. As length of residency increases, family cohesiveness among immigrants and refugees tends to decrease. This may be, in part, due to a higher assimilation and integration rate among the first-generation refugee and immigrant children compared to their parents (see Burgos, Al-Adeimi and Brown 2017; Shakya et al. 2012).

TABLE 4. Unstandardized and Standardized Regression Coefficients of Mental Health Problems and Predictors

	Model 1		Model 2		Model 3		Model 4		
	B	Sig.	B	Sig.	B	Sig.	B	Beta	Sig.
(Constant)	16.305	a	21.417	a	29.819	a	21.927		a
Female	1.690		1.463		0.973		1.365	0.086	
Age	0.314	c	0.310	c	0.321	c	0.273	0.121	c
Length in Canada	0.803	a	0.751	b	0.746	b	0.655	0.173	b
Integration	-0.412		-0.620		-0.376		0.608	0.039	
Separation	1.874		1.822		2.003		2.781	0.162	
Marginalization	5.167	c	4.237		4.086		3.672	0.116	
Family Cohesiveness			-0.185		0.072		0.285	0.072	
Number of Siblings			-0.441		-0.379		-0.533	-0.127	c
Resiliency					-0.383	a	-0.363	-0.211	a
Food Insecurity							1.066	0.336	a
F	5.339	a	4.450	a	5.495	a	8.924		a
R2	0.119		0.132		0.174		0.277		
N	244		244		244		244		

c P <.05, b P < .01, a P < .001

Model 3 adds resiliency to previous predictors of mental health. Higher resiliency lowers mental health problems. This variable ranges from 22 to 40; therefore, at its highest end of 40, the level of mental health problems of these youth during COVID-19 tended to decrease by just under 15, very close to the lower end of mental health problems.

Finally, Model 4 adds food insecurity to the variables in Model 3. It significantly increases mental health problems. Every unit increase in food insecurity increases mental health problems by 1.07 units. Since this variable has up to 15 categories, its effect is substantial at its highest end. Those who said that in the past month they were always worried about the family running out of food, about not having balanced meals, and about not having enough food for everyone would score 37.9 out of 40 in the level of mental health problems during the COVID-19 pandemic. Further, number of siblings which was not significant in previous models became significant when the effect of food insecurity is taken into account.

Similar to Table 2, food insecurity followed by resiliency had the strongest relationship with mental health. Other independent predictors of mental health were number of siblings and length of residency in Canada (see beta coefficients). Further analysis did not reveal any interactions between food insecurity and other predictors, included or excluded from the multivariate analysis. However, although trauma was in itself not statistically related to mental health, it just missed the .05 significant level interaction with resiliency (b= -.069, P <.051). This may suggest that the effect of resiliency in decreasing mental health problems was higher among those who had experienced a life-threatening event compared to those who did not. In other words, resiliency may buffer the negative effect of trauma.

CONCLUSION AND DISCUSSION

Results from our study showed that food insecurity had by far the greatest effect on mental health of newcomer refugee and immigrant youth during the pandemic. This is perhaps not surprising, because recent immigrants and refugees to Canada are more likely than those born in Canada and old timer immigrants to experience negative stressors, which, as discussed before, include poverty, unemployment, occupational segregation, downward occupational mobility, inadequate housing and homelessness, barriers in accessing social services, discrimination and racism. These problems tend to impact refugees and recent racialized minority immigrants more than those who immigrated prior to the 1980s (see Beiser and Hou 2001, 2006; Bhui et al. 2006; Lacroix, Baffoe, and Liguori 2015; Lamba and Krahn 2003; Makwarimba et al. 2013), and they have been exacerbated during the COVID-19 pandemic (Findlay and Arim 2020; Evra and Mongrain 2020; Magson et al. 2021; McIntyre and Lee 2020; Sher 2020; Zajacova et al. 2020b). Social distancing and lockdown during the COVID-19 pandemic has increased experiences of food insecurity (World Bank 2021). They have negatively impacted job and finances of Canadians, particularly the young (Statistics Canada 2020a), and the impact on immigrants and racialized peoples tends to be higher (Rizvic 2020; Statistics Canada 2020b, 2020d).

In this regard, our study supports previous research that food insecurity increases both health and mental health problems. Research has been consistent in showing that people are healthier if they have adequate income and/or enough food to eat (Hatsu, Hade, and Campa 2017; Nakhaie et al. 2007; Nakhaie and Arnold 2010; Parker et al. 2010; Tavie and Shaya 2018; Whitaker, Philips, and Orzel 2006), particularly during Covid-19 (Men et al. 2021; Polsky and Gilmour 2020; Turcotte and Hango 2020; Zajacova et al. 2020a).

The fact that food insecurity is by far the best predictor of mental health among this population group questions a neoliberal approach to health. The neoliberal

approach tends to produce more inequality and social disorganization (Coburn 2000). It views health as an individual problem which does not require state intervention. In contrast, the importance of food insecurity in this study suggests that the state must intervene in minimizing structural inequalities.

It is unacceptable that about 9 percent of Canadians and close to 11 percent of racialized immigrants experience moderate to severe food insecurity in one of the richest countries in the world. Although Canada is signatory to the International Covenant on Economic, Social and Cultural Rights, it has not instituted adequate social assistance levels and living wage policies that ensure everyone is food secure. Such policies will help alleviate the suffering of 9 percent of Canadians, equivalent to over 3.2 million people, including a disproportionately large portion of newcomer refugees and immigrants. The Canadian government has taken steps in recognizing its international obligations for right to food, but it has also simultaneously divested many of its responsibilities in this regard to provincial and private sectors. One specific consequence of such policies is that food banks have become responsible for taking care of hungry Canadians. This short-term solution results in hunger being seen as the limited availability of foods in the food banks which could be solved if only Canadians would donate more. This view legitimizes individual responsibility and abdicates the Canadian government of its responsibility (see Carson 2014).

The second most important predictor of mental health in this study was resiliency. This finding is consistent with the research that does not pathologize refugees and immigrants because of their traumatic experiences. Instead of a deficit perspective, researchers have pointed to the refugees' adaptive skills, hope, and resiliency, which enable newcomers to deal effectively with stress and pressure (see Pickren 2014; Simich and Andermann 2014; Suarez-Orozco, Carhill, and Chuang 2011; Ungar 2008). We showed that resiliency significantly impacts the mental health of these youth who are mostly refugees. Despite facing adversities, these newcomer youth tend to rebound successfully, develop the personality trait of hardiness (Walsh 2003; Werner 1997), adapt in the face of adversities, struggle over time, and establish positive outlooks for a better future (Carlson, Cacciatore, and Klimek 2012; Este and Ngo 2011; Walsh 2003). These traits seem to be useful antidotes against the isolation, loneliness, powerlessness, and feelings of depression that emerge because of COVID-19 anxieties and social distancing directives.

The evidence on the importance of resilience suggest that structural changes cannot take place in a vacuum. An individual's ability to change, deal with stressful events, perseverance, goal orientation, etc., are important traits that enable individuals to take advantage of even limited opportunities, and not to be discouraged by failure. This means that development of adaptive and motivational skills, for example, in school and by teachers, will not only prepare youth newcomers to succeed in

a neoliberal environment but also ensure that they can take advantage of the opportunities for meaningful involvement in school and/or their new home. This requires a welcoming society that is free from systemic and individual discrimination and that helps minimize newcomers' isolation and marginalization. For example, one consequence of post-1990's immigration policies was to minimize family unification with possible increase in social isolation of newcomers. In 1993, 42.6 percent of newcomers were economic immigrants and 39.5 were family class immigrants. By 2014 the gap significantly increased to 63.9 and 22.5 percent respectively (Citizenship and Immigration Canada 2015). This means that not only do many refugees and immigrants experience loss of social support due to migration with negative mental health outcomes, but also many children and youth were prevented from benefiting from the social and psychological support of their larger family and relatives which could have been instrumental in inculcating resilience. Accordingly, it can be suggested that immigration policies that help remove barriers for family unification can be instrumental in helping build resilience, maximize social support and minimize isolation with a consequent improvement of mental health.

This study also showed that length of residency in Canada increased mental health problems among this group of newcomer youths. This finding challenges the assimilation perspective that takes for granted the desirability of the host society's way of life and is in line with research on the healthy immigrant effect. Research has shown that as newcomers have higher exposure to the host's environment, they tend to develop less healthy habits and becomes more similar to those born in the host country. The acculturation stress (see Luther et al. 2011) hypothesis suggests that acquisition of the cultural norms of the host is associated with increased unhealthy and risky outcomes. The finding of this study tends to support this hypothesis, in that over time, newcomers' levels of mental health problems increase.

In this study, acculturation strategies were not statistically significant in their relation to mental health problems, though integration decreased it and marginalization increased it in bivariate relationships (but see Beiser, Putente-Duran and Hou 2015; Berry and Hou 2016). This could be due to the small sample size, uniqueness of the population which were mostly refugees and/or measurement of cultural identity which is somewhat different in this study compared to those cited above. Further, Table 4 showed that the significant relationship between marginalization and mental health disappeared when family relations were included in the model. This suggests that to the extent that marginalization impacts the mental health of refugees and immigrants, it is due, in part, to a lack of supportive relationships that these groups may experience in home and or elsewhere (see Stewart et al. 2008; Stewart 2014).

Studies have shown that although immigrant children and youth struggle with social and cultural integration (Pastoor 2015), experience rejection (Gonzales,

Suárez-Orozco, and Dedios-Sanguineti 2013), and are subject to significant stress and mental health problems (Hamilton 2013; Kouider, Koglin, and Petermann 2014; Makarova and Briman 2016; Margari et al. 2013), these problems may be overcome by social support and social connections (Folkman 2008). In this study, number of siblings, as an indicator of household density and social connectedness, is shown to be associated with mental health problems. This is consistent with previous research that, independent of other variables, larger household size is a negative predictor of suicide (see Trovato 1992). In contrast, family cohesiveness, which was associated with mental health in bivariate relationships, became statistically insignificant, although acting in the expected direction, in multivariate analysis. In part, this has to do with the negative correlation between food insecurity and family cohesiveness. Another explanation may have to do with the fact that most youth scored high in family cohesiveness, decreasing its effect due to low variation. It is possible that these newcomers scored high in family cohesiveness because of a strong cultural emphasis on family and/or because their main source of social support is their family due to both recency of their migration and COVID-19 social distancing.

Overall, our study points to the importance of food insecurity and length of residency in increasing mental health problems, and resiliency and family density (i.e., number of siblings) for decreasing them. The study also showed that although refugees are at risk of mental health problems due to their experiences at home and during resettlement, some may be able to weather these problems due to their resilience. This suggests that a deficit approach to refugees and immigrants tends to ignore both the fact that not all newcomers experience mental health problems and that those who do can overcome them through their hardiness and resilience (see Mawani 2014).

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Appendix 1

Factor Loadings, Eigenvalues, and Cronbach's Alpha for Scale Variables

Mental Health Problems During COVID-19	Factor Loading
How often did you feel sadness?	0.682
How often did you feel stressed?	0.761
How often did you feel confused?	0.742
How often did you feel isolated?	0.588
How often did you feel helpless?	0.700
How often did you feel nervous?	0.805
How often did you feel hopeless?	0.671
How often did you feel depressed?	0.855
% variance	53.2
Cronbach's Alpha	0.871

Resilience	
I am able to adapt to change	0.433
I can deal with whatever comes	0.613
I can cope in stressful situations	0.579
I believe that I can achieve my goals	0.524
When things look hopeless, I don't give up	0.621
Under pressure, I can focus and think clearly	0.631
I am not easily discouraged by failure	0.665
I prefer to take the lead in problem solving	0.603
% variance	34.5
Cronbach's Alpha	0.729

Worries About Food Shortage	
Are you worried that your family will run out of food?	0.810
In the last month, have you worried that you wouldn't get balanced meals?	0.851
In the last month, was there a time that there was not enough food for everyone?	0.800
% variance	67.3
Cronbach's Alpha	0.748

Family Cohesiveness	
My family members really help and support one another	0.841
There is a feeling of togetherness in my family	0.859
My family really gets along well with each other	0.789
% variance	67.0
Cronbach's Alpha	0.768

Factor Loadings, Eigenvalues, and Cronbach's Alpha for Scale Variables (continued)

% variance	53.2
Cronbach's Alpha	0.871

Resilience

I am able to adapt to change	0.433
I can deal with whatever comes	0.613
I can cope in stressful situations	0.579
I believe that I can achieve my goals	0.524
When things look hopeless, I don't give up	0.621
Under pressure, I can focus and think clearly	0.631
I am not easily discouraged by failure	0.665
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Cronbach's Alpha	0.729

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Are you worried that your family will run out of food?	0.810
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Cronbach's Alpha	0.768

NOTES

1. Statistics Canada considers "newcomers" as those who have lived in Canada for less than five years. However, given that eighty-three percent of respondents in this study have lived in Canada for less than five years, we use terms such as newcomers and recent immigrants interchangeably.

2. Two clients requested a Mandarin speaking interviewer. They were not included in the survey.

3. No difference emerged when country and continent of origin was further divided into Syria, Iraq, Africa, Asia and Latin America.

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