Canada is experiencing a rapidly aging population (Kinsell and Wan, 2009). By 2031, it is predicted that 20% of Canadians will be over the age of 65 (Statistics Canada, 2007). Canada also faces elderly poverty. In 2000 over half a million seniors lived below the Low Income Cut-Off, with the majority living in urban areas (Canadian Council on Social Development, 2007). High levels of mental illness occurs in both those living in low-income situations (Statistics Canada, 2010) and in the elderly (McEwan et al., 1991). However, there is a dearth of information on the mental health of Canada’s low-income elderly population. Our study objective was to determine the correlates of mental health in community-dwelling individuals aged 65+ living in an immigrant-dense, low SES urban area in Toronto, Canada.

INTRODUCTION

Aging population

Canada is experiencing a rapidly aging population (Kinsell and Wan, 2009). Out of industrialized countries facing an aging population, Canada is projected to have one of the highest increases in the proportion of the population over 65 (second only to Japan) (United Nations, 1998). By 2031, it is predicted that 20% of Canadians will be over the age of 65 (Statistics Canada, 2007) and within the two decade span between 2000 and 2020, there will be a 43% increase in the population of Canadians over 65 (United Nations, 1998). There are a couple of factors influencing the aging of the population in industrialized nations. Life expectancy has increased
and fertility rates have dropped below the population replacement rate (United Nations, 1998). High immigration rates like those found in Canada and Australia are also cited as another factor contributing to the aging population (United Nations, 1998).

**Healthcare costs**

In 1986 the Canadian Minister of Health identified aging as one of the principal challenges to the Canadian healthcare system (MacDonald, 1986). In 1994 Canada spent 40% of its health budget on the elderly (placing it third behind the UK and Japan) (Organization for Economic Cooperation and Development, 1998).

**Elderly poverty**

Canada also faces elderly poverty. In 2000, over half a million seniors lived below the Low Income Cut-Off, with the majority living in urban areas (Canadian Council on Social Development, 2007). One in ten elderly Canadians lives in relative poverty with single elderly women being hit the hardest (Organization for Economic Cooperation and Development, 1998). On average in 1990, an elderly woman made $15,150, while elderly men had an income almost 65% greater of $25,060 (About Canada, 2004). In 1997, 42% of unattached women over the age of 65 in Canada lived in poverty in comparison to 27.2% of unattached elderly men (National Council of Welfare, 1999). In Canada, most elderly people reside in medium-large urban areas in one or two-person families. Across the ten provinces in 2002 the incidence of low income was 5.6% for elderly Canadians, and on average, the elderly lived in families where the disposable income was 20.2% below the Low-Income Cut-Off (LICO) (Human Resources and Skills Development Canada, 2006).
Jane-Finch community

The Jane-Finch community in northwest Toronto (also known as Black Creek) is home to people from over 70 countries, speaking 100 different languages (Canadian Broadcasting Corporation, 2007). The Jane-Finch area has been described as having more immigrants, more single-parent households, higher rates of unemployment, a higher percentage of the population without a highschool diploma, and higher rates of low-income families than the rest of Toronto (Canadian Broadcasting Corporation, 2007). The mayor of Toronto has targeted the Jane-Finch area as an “at-risk Toronto community” in terms of youth gun violence, and the Ontario government has identified it as a “priority community” in need of youth employment programs (United Way, 2004).

The Jane-Finch community experienced a huge newcomer influx after World War II, welcoming immigrants from the Caribbean, East Asia, South Asia, Africa, and South America (Canadian Broadcasting Corporation, 2007). To cope with the new wave of immigration, extensive low-income housing projects were erected starting in the 1970’s (Canadian Broadcasting Corporation, 2007). Today, the Jane-Finch poverty rate has been estimated at a staggering 49% (United Way, 2004). In regards to the elderly residing in the Jane-Finch community, elderly isolation has been identified as an issue. Community centres and more volunteer involvement have been proposed as potential solutions, and although money has been promised from the city, it has not materialized (Green, 2006).

Mental health: aging, immigration, and socioeconomic status

Aging
Seniors with a mental illness suffer a double-stigma, enduring the negative impact of both “ageism” and the stigma against the mentally ill (Bartels, 2003). In Canada, it is estimated that 3% of community-dwelling seniors and 40% of institutionalized seniors suffer from depression (National Advisory Council on Aging, 1999). The relative risk of mortality for depressed seniors in long-term care is 1.5-3 greater than non-depressed seniors (Borson & Fletcher, 1996). Moreover, estimates report that 10-15% of seniors display depressive symptoms (Conn, 2002). An Edmonton study of community-dwelling seniors found that 11.2% of the elderly reported some form of depression (males: 7.3%, females: 14.1%) (Newman, Bland, & Orn, 1998). 19.7% of seniors 65 and older reported an anxiety disorder (Blazer, George, & Hughes, 1991). In the US it is estimated that 20% of the elderly have a mental illness (U.S. Department of Health and Human Services, 1999). If the current trend of the aging population continues, incidence of depression and dementia are expected to increase in the elderly population (LeClair & Sadavoy, 1998). It is estimated that 2% of North Americans aged 65 and older suffer from severe mental illness (severe anxiety disorders, chronic depression, schizophrenia and personality disorders), and it is projected that this percentage will double over the next 30 years (Bartels, Levine, & Shea, 1999). A similar increase is expected for the prevalence of schizophrenia in those aged 55 and older by 2030 (Cohen et al., 2000). In the US, white men aged 85 and older have twice the suicide rate of all other age groups, while elderly Asian women have the highest female suicide rates (U.S. Department of Health and Human Services, 1999).
Aging can further exacerbate an existing severe mental disorder because the elderly are a vulnerable population (Bartels, Levine, & Shea, 1999; Bernstein & Hensley, 1993; Florio & Raschko, 1998), often socially isolated (Florio & Raschko, 1998), have inadequate social abilities (Bartels et al., 2004), and may be limited in their capacity to adapt and problem-solve (Cohen, 2001). The compounding of all these factors can lead to premature institutionalization of the elderly (Bartels et al., 2004; Fogel, Furino, & Gottleib, 1990). Loss of health, diminishment of role in society, living alone, living in an institution, being female, unmarried or widowed, and comorbidities are all risk factors associated with developing depression in old age (Conn, 2002).

Lack of mobility and access to transportation, physical disability, and reluctance to seek help are factors that contribute to underutilization of mental healthcare services by the elderly (National Advisory Council on Aging, 1999; Waxman, 1986; (Solway, Estes, Goldberg, & Berry, 2010; Van Citters & Bartels, 2004). Depression in seniors often goes undiagnosed because the elderly are unlikely to call attention to the difficulties they are experiencing, and so clinicians have to be proactive in rooting out symptoms (Conn, 2002). When the elderly do seek help mental health problems can go undiagnosed or misdiagnosed by erroneously attributing problems as a "part of aging" (Mackenzie, Gekoski, & Knox, 1999; Waxman, 1986), psychotropic medication can be prescribed inappropriately for situational depression (Krauss, 2005; Voyer, McCubbin, Préville, & Boyer, 2003), and psychotropic medication can often be overprescribed in institutional settings (Bronskill et al., 2004). Moreover, there is a lack of specialized mental healthcare services to meet the specific needs of the elderly (Cohen, 2001; Kaskie & Estes, 2001).
Immigration

The proportion of foreign-born Canadians is the highest it has been in the past 75 years. About 1 in 5 of Canadians is an immigrant (19.8% of the total population) (Statistics Canada Census, 2006). The US is experiencing a “‘browning’ of the graying of America,” where the greatest growth in the 65 and older population is among visible minorities (Hayes-Bautista Hsu, Perez, and Gamboa, 2002). Initially, the “healthy immigrant effect” is also evident in mental health. Immigrants have been shown to have lower rates of alcohol dependence and depression; however, after about 30 years of living in Canada, immigrant levels of mental illness begin to converge with national-born levels (Ali, 2002).

In addition to external pressures, the immigrant experience of mental illness is aggravated by internal community barriers such as the stigma surrounding the diagnosis and seeking of help for mental health-related issues (Tiwari and Wang, 2008; Nadeem et al., 2007). The ‘double discrimination’ that immigrants face from both the external society and their internal community makes the seeking of help for mental health issues especially difficult (Cinnirella and Loewenthal, 1999). Moreover, resettlement in a new country, leaving one’s family and home, learning a new language, poverty, and isolation all pose obstacles to a new immigrant’s mental health. In addition, minority communities may even vary in their manifestation of the symptoms of mental illness, posing an even greater challenge to Canadian mental healthcare professionals (Louie, 1996, p. 571; Townsend, 1993, p. 432; Health Canada, 2003). Considering mental health problems as a “part of aging,” differences in how cultures view seeking help, lack of culturally-competent mental healthcare services, and community stigma are all identified as
potential barriers to mental healthcare services access for racial minorities (Solway, Estes, Goldberg, & Berry, 2010). Lack of trained multilingual staff is also cited as a barrier (Solway, Estes, Goldberg, & Berry, 2010).

Past research has shown that immigrants utilize health services at comparable rates to the Canadian-born population, and this trend has remained constant from 1985 to 1991 (Laroche, 2000). However, Newbold (2005) reports that immigrants actually utilize healthcare services more than their Canadian-born counterparts, but both immigrants and the Canadian-born population are at a similar risk of hospital use. In the US, although immigrants have comparable rates of mental illness than the US-born population, the rates of mental healthcare service utilization are much lower (Chelminsky, 1991; Jimenez et al., 1997; Neighbors et al., 1992). In the US, elderly members of the Black, Latino, and Asian minority communities underutilize mental healthcare services in comparison to their white counterparts (Solway, Estes, Goldberg, & Berry, 2010). Undocumented workers are reluctant to seek mental healthcare for the fear of deportation (Solway, Estes, Goldberg, & Berry, 2010).

Socioeconomic status

Poverty is associated with poorer health status, limited activity, and shorter life expectancy, and low-income seniors (especially women living alone) face the greatest risk of problems (Pushkar & Arbuckle, 2002). Analysis of Toronto community resident data from 1990-1991 revealed that depression is distributed along a socioeconomic status gradient, which may be explained by the association of low SES with acute and chronic stressors, lack of social support,
and low perception of mastery, self-esteem, and autonomy in life (Turner, 1999). Low income magnifies perceived barriers to mental healthcare service access, especially because of the common belief that mental healthcare is unaffordable (Solway, Estes, Goldberg, & Berry, 2010). A US policy maker identified low income elderly people as those experiencing the greatest difficulty in obtaining adequate mental healthcare (Solway, Estes, Goldberg, & Berry, 2010).

METHODS

Our research study:

Our research lab at York University surveyed 63 seniors (14 males, 49 females) living in the Jane-Finch area regarding their mental health. We surveyed Jane-Finch seniors on three different mental health measures:

1. emotional health (Short Form (36) Health Survey (SF-36) emotional health component)

2. stress (Perceived Stress Scale (PSS))

3. happiness (Subjective Happiness Scale (SHS))

Sociodemographic, behavior, and health variables acted as potential correlates. Following bivariate level analysis, three separate step-wise multivariate linear regression models were created for the mental health outcome measures.

RESULTS

Our findings:
We sampled from a very diverse senior population. 52% of our participants identified themselves as Guyanese, 19% as South American/Spanish, 15% as Black/Caribbean, 13% as South Asian, and 1% as Canadian.

![Pie chart showing the percentage of participants from different ethnic backgrounds.]

- **Guyanese**: 52%
- **Black/Caribbean**: 13%
- **South American/Spanish**: 19%
- **South Asian**: 15%
- **Canadian**: 1%

The multivariate analysis revealed that older seniors had poorer levels of emotional health, seniors with poorer general physical health had more stress in their lives, and lastly, seniors who were married and had poorer general physical health reported lower levels of happiness.

The results of the bivariate and step-wise multivariate linear regression analysis are summarized below. Only significant covariates at the p < 0.05 level are displayed.
In comparison to other community-dwelling senior populations, Jane-Finch seniors had better levels of emotional health and comparable levels of happiness. However, Jane-Finch seniors reported significantly higher levels of stress.

<table>
<thead>
<tr>
<th></th>
<th>Our Study mean(SD)</th>
<th>Previous studies mean(SD)</th>
<th>Populations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Form-36 Emotional Health Component</td>
<td>73.7(18)</td>
<td>51.12(12.35)</td>
<td>Seniors in assisted-living facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52.0(10.5)</td>
<td>Seniors in assisted-living facilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>41.5 (12.5)</td>
<td>Community-dwelling seniors</td>
</tr>
<tr>
<td>Perceived Stress Scale (PSS)</td>
<td>29.6(5)</td>
<td>17.67(6.05)</td>
<td>Community-dwelling seniors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.6(6.9)</td>
<td>Chinese American immigrant senior population</td>
</tr>
<tr>
<td>Subjective Happiness Scale (SHS)</td>
<td>5.3(1.3)</td>
<td>5.6(0.96)</td>
<td>Retired American senior population</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.7(1.4)</td>
<td>Community-dwelling senior population</td>
</tr>
</tbody>
</table>

(Horowitz & Vanner, 2010; Harrison et al., 2010; Potter, Hartman & Ward, 2009; Taylor-Pillae, Haskell & Waters, 2006; Lyubomirsky & Lepper, 1999; Angner, Ray, Saag & Allison 2009)
DISCUSSION

Our study results are summarized below:

Our study findings:

- Older participants had poorer average emotional health
- Participants with poorer general health perceived more stress in their lives.
- Participants who were married and had poorer general health reported lower levels of happiness.

Jane-Finch seniors in comparison to other community-dwelling senior populations:

- Jane-Finch seniors had better emotional health
- Jane-Finch seniors experienced more stress
- Jane-Finch seniors had comparable levels of happiness

Summary & Conclusions

When confounding variables were controlled for: 1) age 2) general health and 3) marital status were significant predictors of elderly mental health in a low SES, ethnically diverse, urban community-dwelling elderly population.

We measured the mental health of a very diverse sample of low-income community-dwelling seniors using three different mental health outcomes, controlling for key variables. Our study highlights the importance of using a multiplicity of outcome measures to assess mental health. Our findings corroborate past research correlating declining general health (Kahn, Hessling, & Russell, 2003; Penninx et al., 1998) and older age (Havens & Hall, 2001) with poorer elderly
mental health. However, our results disagree with past research on the protective effect of being married on elderly mental health (Pushkar & Arbuckle, 2002).

Elderly mental healthcare services should offer psychosocial interventions based on the principles of recovery (as opposed to “cure” and “treatment”), empowerment, and social inclusion (Dallaire, McCubbin, Carpentier, & Clement, 2009). Special outreach programs such as offering family counseling services should be pursued to encourage seniors from racial minorities to seek mental healthcare counterparts (Solway, Estes, Goldberg, & Berry, 2010). Publically funded community clinics open to those without medical insurance can greatly facilitate mental healthcare access to low-income elderly people (Solway, Estes, Goldberg, & Berry, 2010). Services should be offered in non-clinical environments such as older adult day centres (Solway, Estes, Goldberg, & Berry, 2010). Telepsychiatry and in-home services could also be implemented to address issues of transportation and mental health stigma (Buckwalter, Davids, Wakefield, Kienzle, & Murray, 2002; President’s New Freedom Commission on Mental Health, 2003). Underrepresentation on ethnic minorities in the mental healthcare profession, multilingual staff, training in culturally-sensitive care, and specializing in working with the elderly are all issues that need attention (Solway, Estes, Goldberg, & Berry, 2010). Support for caregivers is needed to make elderly mental healthcare services more effective (Shulman, 1991). Better coordination is needed between community-based mental health services and hospital services (Conn, 2002). Mental healthcare professionals need to make more visits to long-term care facilities. 88% of nursing homes involved in an Ontario study reported receiving five hours or less/month of psychiatric consultation for their facility (Conn, 1992).
We recommend further research, especially qualitative in nature, looking into the effect of marital status in ethnically diverse, urban community-dwelling senior populations like the one found in Jane-Finch.

*Strengths & Limitations*

We measured the mental health of a very diverse sample of low-income community-dwelling seniors using three different mental health outcomes and controlled for key variables. We found no consistent pattern of predictors for elderly mental health. This may be due to small sample size (n=63). All mental health outcomes were self-report inventories and so self-report bias may have been an issue. The seniors in this study were recruited as part of a larger study looking at health effects of Tai Chi. This sample of seniors may not be representative of the senior population since this elderly group was at a level of fitness and mobility that allowed them to participate in a Tai Chi program.

*Real world implications:*

Seniors who are older in age and those experiencing declining physical health could potentially be targeted for mental health outreach programs. Stress management programs could be specially tailored for this elderly population.

Please email Farah Islam with any comments or questions: fislam@yorku.ca

The findings from this study were summarized in scientific conference poster and powerpoint format and presented at the Baycrest Neuroscience of Emotion and Emotional-Related Disorders in March 2011 in Toronto and York Institute for Health Research, York University in
April 2011. It will also be presented at the upcoming 3rd North American Congress of Epidemiology in June 2011 in Montreal.

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References:


