

Mental Health in the Greater Toronto and Hamilton Area (GTHA) Workplace

Research Report
June 2016



**CANADIAN CENTRE FOR
ECONOMIC ANALYSIS**

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CANCEA serves governments, organizations, and industries that seek a best-of-breed understanding of the issues facing them using expertise combined with a realistic, multi-variable, computational socioeconomic policy evaluation platform.

About This Report

This report was prepared by CANCEA on behalf of CivicAction. In keeping with CANCEA's guidelines for funded research, the design and method of research, as well as the content of this study, were determined solely by CANCEA. The research was conducted by Paul Smetanin, David Stiff, and Charles Burger of CANCEA.

Statistics Canada data and relevant literature were used to inform the computer simulation models used to produce the results of this report. All quantitative methods used are documented herewith.

The interpretation and reporting of the results of the mathematical modelling contained within this report do not necessarily represent a policy position or the opinion of CivicAction.

Forecasts and research often involve numerous assumptions and data sources, and are subject to inherent risks and uncertainties. This information is not intended as specific investment, accounting, legal or tax advice.

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EXECUTIVE SUMMARY

The Greater Toronto and Hamilton Area (GTHA) represents 20% of Canada's economy and has a gross domestic product (GDP) per capita that is 19% greater than the rest of Ontario. As a major role player in bringing together regional leaders to address the most pressing urban challenges in the GTHA, CivicAction is launching its first health-related initiative by focusing on mental health in the GTHA workplace. By increasing awareness and action among the GTHA's employers and employees, CivicAction hopes to create a GTHA where residents' mental well-being and productivity are fully realized. As part of the initiative, CANCEA was asked to model the scope of mental health issues in the GTHA labour force using its cutting-edge agent-based modelling platform, *Prosperity at Risk (PaR)*.

MENTAL HEALTH ISSUES IN THE GTHA LABOUR FORCE

Of the 3.2 million people currently in the GTHA labour force, it is estimated that over 1.5 million people (approximately 1 in 2) have experienced a mental health issue in their lifetime. Of those, 680,000 people (or 21% of the GTHA labour force) are estimated to currently have a mental health issue; while the remaining 995,000 (or 31% of the GTHA labour force) are people who previously experienced one.

- 🌿 **Spectrum of Mental Health Issues:** The prevalence of mental health issues in the GTHA labour force varies by condition. Furthermore, each mental health issue's symptoms and prevalence can vary considerably depending on an individual's age, sex, and risk factor exposure. In the current GTHA labour force, the prevalence of anxiety, mood disorders, substance use disorders, and schizophrenic disorders are estimated to be 10%, 5%, 8%, and 1%, respectively.
- 🌿 **Mental Health Issue Projections:** It is estimated that the number of people in the GTHA labour force with a mental health issue will grow from 680,000 in 2016 to just over 860,000 in 2046, a 27% increase.
- 🌿 **Economic Impact of Mental Health Issues in the GTHA:** The economic impact of mental health issues in the GTHA labour force is significant. Over the next 10 years, mental health issues in the GTHA labour force could result in an average annual loss of productivity of **\$1.7 billion**, or approximately **0.5%** of the GDP of the GTHA.

GTHA MENTAL HEALTH RISK FACTORS

Part of the driving factors of mental health issues in the GTHA labour force are the challenges that individuals face living and working every day. For example:

- 🌿 **Shelter Affordability:** Access to adequate and affordable housing and mental health issues are intrinsically linked. With shelter affordability pressures at an all-time high, this has created

stressors that can have a negative impact on families. Our preliminary analysis looking into housing affordability estimates that at least **1.2 million households in Ontario** (approximately one quarter) are under significant affordability pressure, spending just over 60% of their discretionary income on shelter costs on average.

- ✿ **Informal Care:** The unpaid support provided by family and friends to people with mental health issues (e.g., dementia) not only makes those caregivers more susceptible to mental health issues themselves, but it has indirect impacts on their productivity. It is estimated that in the GTHA over the next 10 years, labour force participants will provide **444 million hours** of informal caregiving to individuals with dementia alone, amounting to a total economic cost to the GTHA of **\$30.4 billion** (inflation adjusted) over the next 10 years, or about **2%** of the GDP output of the GTHA.
- ✿ **Child Care:** The price of child care for one child in the GTHA is estimated to be \$20,000 per year on average, higher than any other region of the country. This financial burden creates an environment in which low-income families are forced to pay unaffordable fees, or find (limited) alternatives.

CONCLUSIONS

Mental health issues in the GTHA labour force are a growing concern with an estimated 1 in 5 employees in the GTHA currently living with a mental health issue, resulting in an estimated average annual loss of productivity of \$1.7 billion (inflation-adjusted) over the next 10 years, or approximately 0.5% of the GDP of the GTHA. Moreover, daily challenges facing GTHA households such as shelter affordability, informal care, and child care, could be contributing to the problem.

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1.0 SCOPE OF THE ANALYSIS

CivicAction is an independent, Toronto-based organization that focuses on creating solutions to unresolved societal challenges in the Greater Toronto and Hamilton Area (GTHA). Starting in 2016, one of CivicAction's initiatives involves the development of a mental health support system for the region's workplace. This analysis evaluates the impact of mental health issues on the working age population (15-65 years of age) in the GTHA.

The evaluation of mental health issues in the GTHA labour force was carried out using CANCEA's *Prosperity at Risk* (PAR) agent-based modelling platform (**section 2.0**). Using the health module of PaR, the following mental health issues were simulated from 2016 to 2046:

- 🍁 **Mood Disorders:** major depressive disorder, bipolar disorder, and dysthymia;
- 🍁 **Anxiety Disorders:** generalized anxiety disorder, panic disorder, simple phobia, agoraphobia and social phobia;
- 🍁 **Psychotic Disorders:** schizophrenia;
- 🍁 **Cognitive impairment including dementia:** cognitive impairment, vascular dementia, Alzheimer's disease, organic psychotic conditions; and
- 🍁 **Substance Use Disorder:** alcohol abuse and/or dependence, and drug abuse and/or dependence.

Prevalence and incidence projections are provided for the aforementioned conditions in the GTHA labour force with demographic breakdowns (**section 3.0**). These estimates are then used to estimate the economic impact of mental health issues in the GTHA labour force (**section 3.6**).

To offer a systems-based analysis of mental health issues in the workplace, the evaluation incorporates an initial literature review (**section 4.0**) of a variety of GTHA factors that could contribute to mental health issues. These factors are challenges that workers and their families face on a day-to-day basis as part of their economic struggle and include:

- 🍁 Transportation
- 🍁 Housing affordability
- 🍁 Precarious work
- 🍁 Child care
- 🍁 Informal caregiving

2.0 PROSPERITY AT RISK MODELLING PLATFORM

Prosperity at Risk (PaR) is a cutting-edge and powerful agent-based simulation platform for geo-spatial socioeconomic analysis. It is a complex “big data” computer system that simulates the interactions of more than 36 million virtual agents (individuals, corporations, governments, and non-profit organizations) that are encoded with behavioural rules that enable them to make decisions, act based on a set of rules, and be influenced by the actions of others. Each agent has over 850 traits across 235 industries and 440 commodities within 5,000+ census areas across Canada. Per step in time, this equates to over 19 billion interaction measurements, including the buying and selling of goods or an individual paying taxes. It does so by scrubbing, linking, and testing masses of data and focusing precisely on the key drivers of behaviour. Further, agents’ behavioural traits, such as their confidence in achieving outcomes or their tolerance towards risk (under normal and near-ruin circumstances) may change or evolve due to local circumstances or external stimuli, allowing unanticipated behaviors to emerge. These are only identified by way of experimental simulation.

This allows PaR to capture rare but significant events that result from unlikely synergies between risk factors. Such low-frequency, high-impact events constitute the so-called “long tail” of the risk distribution. Traditional methods to estimate risk fail to capture the real statistics of long tails. Estimates are inaccurate because of the law of small numbers, that is, the tendency to draw broad conclusions from a tiny number of events. PaR, with its ability to run millions of scenarios enables the long tail to be not only quantified, but distilled from either a single cause or from interconnected risk factors and cascading failures (e.g., herding or panic).

Embedded within the socioeconomic analysis of PaR is the *Life at Risk* health module. The *Life at Risk* module provides health analytics using the same concept of agents being assigned traits and behaviours and evolving based upon changing external stimuli. Agents feature changing disease states (such as going from not having a mental health issue to having a mental health issue or vice versa), and develop risk factors (such as smoking) which increases an agent’s risk developing certain diseases, which lead them to interact with the healthcare system at different rates. This module is able to track over 40 different diseases and eight different risk factors (including smoking, second hand smoke, obesity, alcohol consumption, and comorbid conditions).

By taking such a comprehensive, integrated, and dynamic approach, PaR can measure the above while simultaneously allowing for connections to be made among seemingly unrelated factors. In this way, PaR is able to show how mental health issues in the GTHA labour force impact the region’s economy in a holistic way.

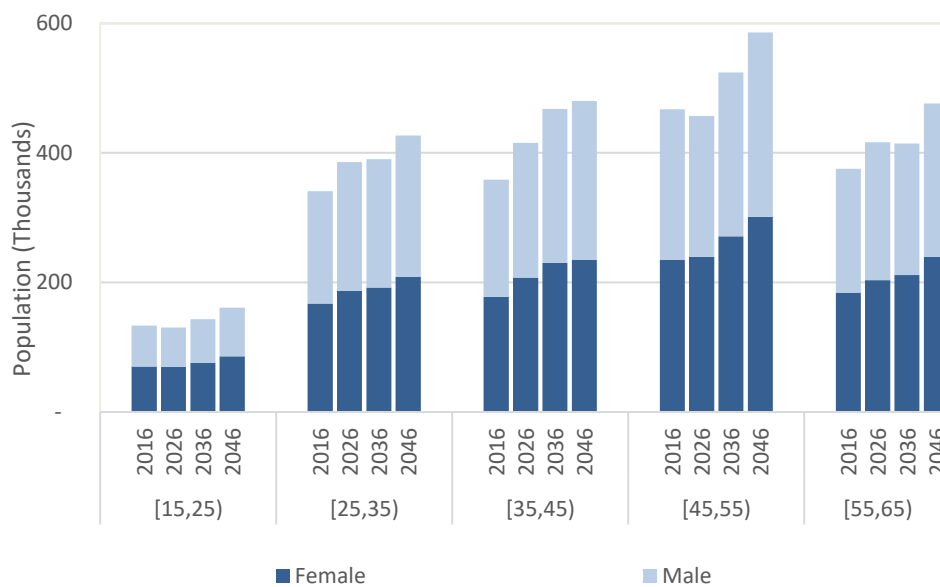
For more information on the mental health methodology used in PaR’s *Life at Risk* module, please refer to the research done using the same platform for the Mental Health Commission of Canada’s national analysis on mental health, conducted in 2011 (Smetanin, et al., 2011).

3.0 MENTAL HEALTH ISSUES IN THE GTHA WORKPLACE

3.1 OVERVIEW

In 2016, of the 3.2 million employees in the GTHA labour force, it is estimated that over 1.5 million have experienced a mental health issue, approximately 1 in 2. This is composed of both individuals who are currently experiencing a mental health issue and those who have experienced one in the past. Figure 1 illustrates the active or former cases of mental health issues in the GTHA labour force broken down by age.

Figure 1 Estimated Number of GTHA Employees Who Have Experienced a Mental Health Issues¹



Of the 1.5 million GTHA workers who have experienced a mental illness:

- 🍁 680,000 currently have a mental health issue (21% of the GTHA labour force); and
- 🍁 995,000 have previously had a mental health issue (31% of the GTHA labour force).

The following subsections break down these statistics by disorder type.

¹ Estimated number of people who have experienced a mental health issue in the GTHA labour force include those who currently have a mental health issue and those who previously had one.

3.2 ANXIETY

In the GTHA labour force, it is estimated that just under 326,000 people (or approximately 10%) are working with anxiety in 2016. By 2046, the number of people working with anxiety in the GTHA is expected to grow by 27% to just over 415,000. Moreover, the number of new cases of anxiety in the GTHA labour force in 2016 is estimated to be 37,000. Over half (54%) of these new cases of anxiety in the entire GTHA population in 2016 could occur in the labour force.

Figure 2 Estimated Number of GTHA Employees with Anxiety²

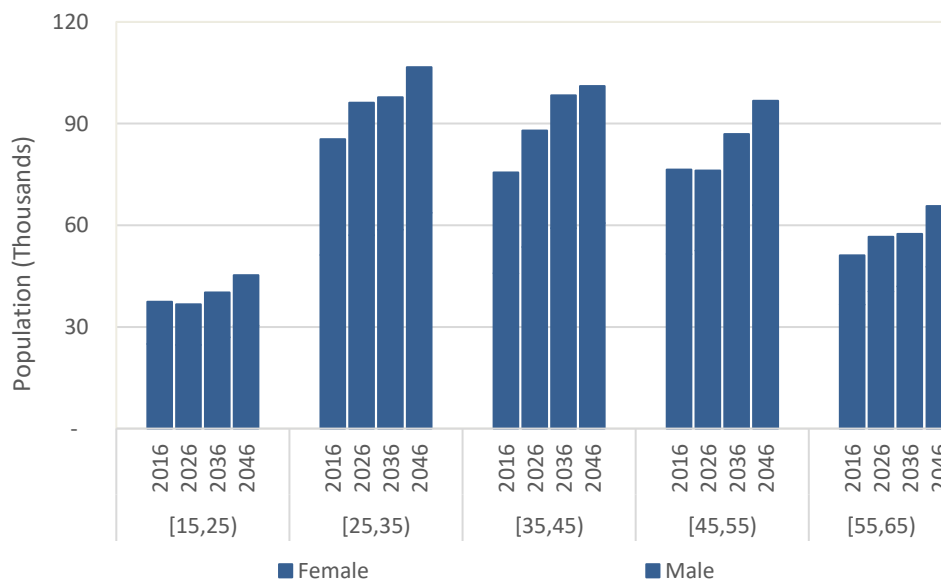


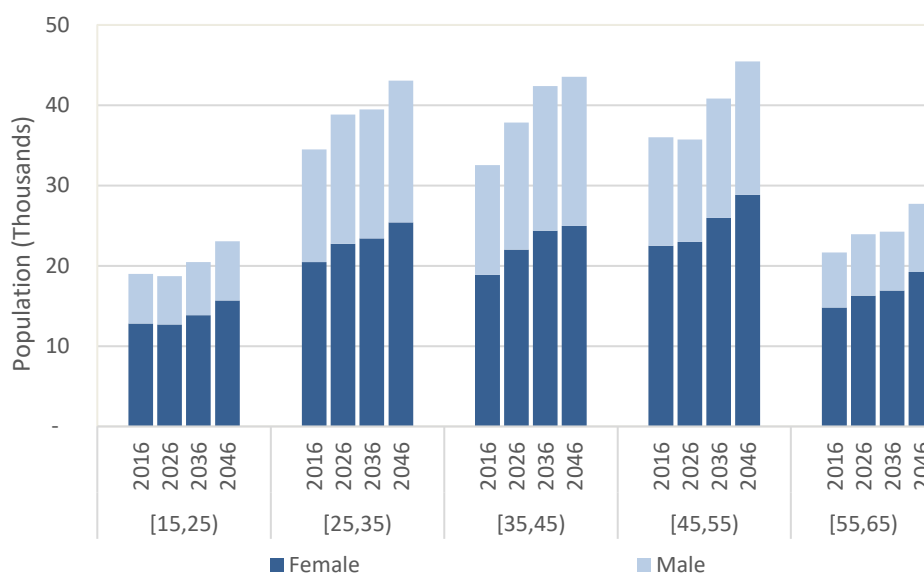
Figure 2 illustrates the 12-month prevalence of anxiety in the GTHA workforce broken down by age and sex. Approximately 26% of the anxiety cases in 2016 could be present in the demographic group between the ages of 25 and 35. Moreover, anxiety could be more prevalent among women than men, with women representing 64% of the anxiety cases in the GTHA labour force in 2016.

²Estimates are 12-month prevalence, which refer to the number of people estimated to experience anxiety during a given year (e.g. 2016).

3.3 MOOD DISORDERS

In 2016, it is estimated that there could be just under 144,000 people in the GTHA labour force (or approximately 5%) affected by mood disorders. Figure 3 shows the estimated number of people with mood disorders in the GTHA labour force broken down by age. By 2046, the number of cases of mood disorders could increase by 27% to just under 183,000. Moreover, there could be 18,000 new cases of mood disorders in the GTHA labour force in 2016, representing 53% of all new cases of mood disorders expected in the GTHA population overall.

Figure 3 Estimated Number of GTHA Employees with Mood Disorders³



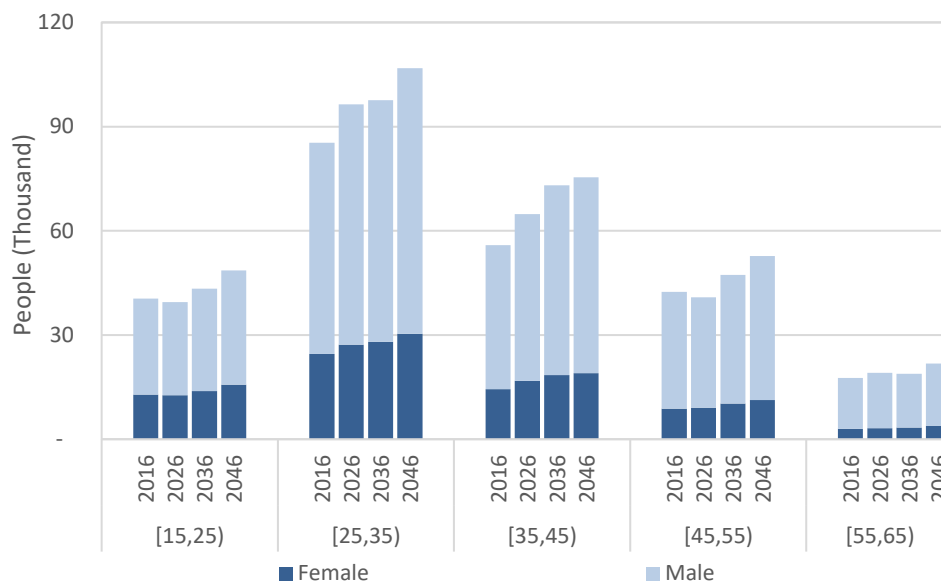
Mood disorders could be more prevalent among individuals between 45 and 55 years of age, followed very closely by those between 25 and 35 years of age. Similar to anxiety, mood disorders could be more prevalent among females, with 62% of the mood disorder cases in the GTHA labour force occurring in the female population.

³ Estimates are 12-month prevalence, which refer to the number of people estimated to experience mood disorders during a given year (e.g. 2016).

3.4 SUBSTANCE USE DISORDER

In 2016, it is estimated that there could be just under 242,000 cases of substance use disorder (SUD) in the GTHA labour force (or approximately 8%). Moreover, there could be 42,000 new cases of SUD in the GTHA labour force in 2016, representing approximately 56% of all new cases of SUD expected in the entire GTHA population. Figure 4 illustrates the estimated number of cases of SUD in the GTHA labour force broken down by age. By 2046, the number of people with SUD in the GTHA labour force could increase by 26% to 305,000.

Figure 4 Estimated Number of GTHA Employees with SUD⁴



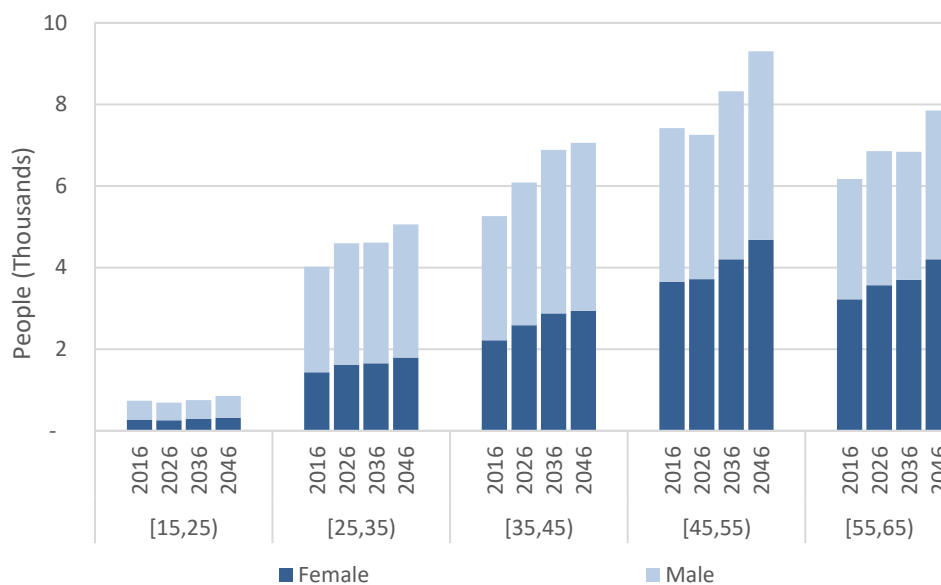
Unlike anxiety and mood disorders, SUD could be more prevalent among the male population. Of the total number of SUD cases in the GTHA labour force in 2016, 89% of them could occur among men. SUD may also be more prevalent among individuals between 25 and 35 years of age, with this demographic group accounting for 35% of all cases of SUD in the GTHA labour force in 2016.

⁴ Estimates are 12-month prevalence, which refer to the number of people estimated to experience SUD during a given year (e.g. 2016).

3.5 PSYCHOTIC DISORDERS

In 2016, it is estimated that there could be 24,000 cases of psychotic disorders in the GTHA labour force (or approximately 1%). It is also estimated that there could be just under 2,000 new cases of psychotic disorders in the GTHA labour force, approximately 57% of all new cases of psychotic disorders in the entire GTHA population. Figure 5 illustrates the number of cases of psychotic disorders in the GTHA labour force broken down by age. By 2046, the number of people with psychotic disorders could increase by 28% to just over 305,000 cases.

Figure 5 Estimated Number of GTHA Employees with Psychotic Disorders⁵



As evident in the figure above, the prevalence of psychotic disorders in the GTHA labour force starts very low in the younger age demographics and gradually peaks in individuals between 45 and 55 years of age.

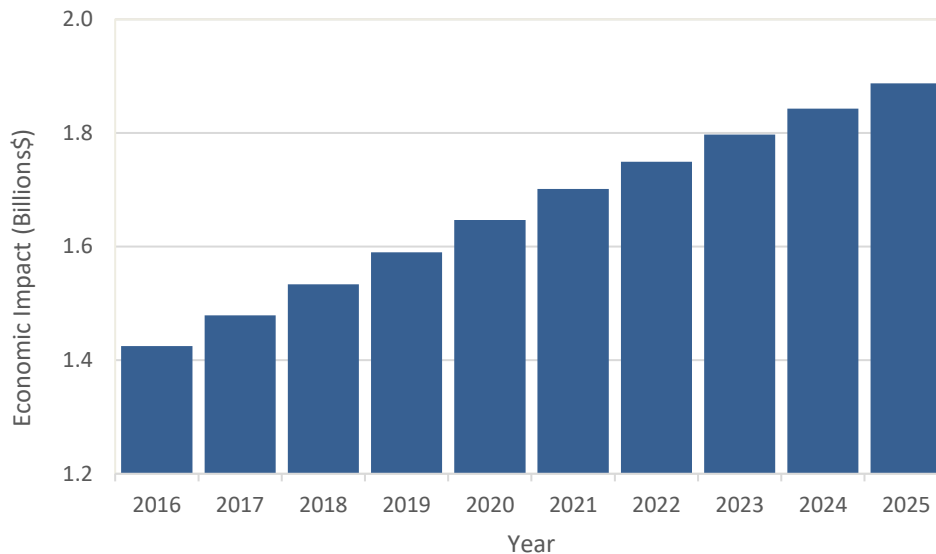
⁵ Estimates are 12-month prevalence, which refer to the number of people estimated to experience psychotic disorders during a given year (e.g. 2016).

3.6 ECONOMIC IMPACT OF MENTAL HEALTH ISSUES IN THE GTHA

The GTHA is a key driver of Ontario’s economy, with a GDP per capita 19% greater than the rest of Ontario. As such, the economic impact of mental health issues in the GTHA labour force could be significant. Figure 6 illustrates the economic impact of mental health issues in the GTHA labour force over the next 10 years. Mental health issues could result in an average of \$1.7 billion (2015 dollars) in lost productivity each year over the next 10 years, or 0.5% of the GDP of the GTHA. This is a cumulative total of \$17 billion (2015 dollars) over the 10-year period.

In other words, mental health issues in the GTHA labour force could cause an average annual productivity loss of \$2,500 per afflicted worker.

Figure 6 Economic Burden of Mental Health Issues in the GTHA Labour Force (2015 dollars)



4.0 SPECIFIC CHALLENGES IN THE GTHA

Part of the analysis of mental health issues in the GTHA workplace involved conducting a literature review to determine whether there are any specific challenges that could be contributing to the mental health issues of the individuals working and living in the GTHA. Below we present the possible connections between mental health issues and shelter affordability, informal care, precarious work, transportation, and child care, all of which are issue affecting many workers in the GTHA.

4.1 SHELTER AFFORDABILITY

Individuals who rely entirely on social assistance for income in Ontario, particularly Ontario Works (OW) or the Ontario Disability Support Program (ODSP), live below the poverty line⁶ (Poverty Free Ontario, 2014). In fact, those who work full-time for minimum wage also live below the poverty line. These individuals would be well-served by non-market housing, including social housing. However, waiting lists for access to social housing in Ontario have grown to over 168,000 households by 2014, leaving low-income and other disadvantaged households to wait for years before receiving access to housing that does not exacerbate their poverty (Ontario Non-Profit Housing Association, 2015). During this time, they are often forced to settle for housing options in disadvantaged neighbourhoods where they may be exposed to social problems such as violence and substance abuse.

Poverty, access to adequate and affordable housing, and mental health are intrinsically linked. Living in disadvantaged neighbourhoods increases the likelihood of various mental illnesses, and those who have a serious mental illness are more likely to live in poor housing or to become homeless (Nelson, Aubry, & Hutchison). The connection between adequate and affordable housing, particularly for individuals living in poverty or those already suffering from a serious mental illness, and positive social outcomes is so strong that many non-profit organizations in many countries, including Canada and the United States, endorse the “Housing First” model, which endorses the provision of homes immediately (and without readiness criteria) to homeless individuals, and in particular those who suffer from mental illness (Mental Health Commission of Canada, 2014). Participants throughout Canada in a “Housing First” project called “At Home/Chez Soi” showed decreased utilization of healthcare services for chronic and mental illnesses, as well as reduced use of social services and presence in the justice system⁷.

Moreover, in a climate of rising real estate prices, homeownership is not only difficult for households struggling with poverty, but also for an increasing number of middle-income families—particularly younger households (Smetanin, P.; Moca, I.; Yusuf, F., Kobak, P., 2015). Although rents have not increased as quickly as real estate prices, for the bottom 40% of income earners in the GTA, the average cost of rent makes up over half of household income (Burlington & Petramala, 2015). Middle-income demographics are

⁶ As measured by the 2011 Low-Income Measure, after taxes

⁷ Some of this improvement may have been due to residential psychiatric care; the Housing First model does not necessarily suggest that housing alone can rectify mental illness and improve life outcomes (Mental Health Commission of Canada, 2014).

also experiencing housing affordability-related stressors; even among those who are able to afford purchasing a home, stress can arise due to limitations on family budgets, increases in commute durations and costs in cases where households must make trade-offs between location and home price (Smetanin, P.; Moca, I.; Yusuf, F., Kobak, P., 2015), and worries over making mortgage payments (Robinson & Adams, 2008). Studies across the world have linked mortgages to stress, identifying that mortgage-related stress can induce psychological costs that are greater in magnitude than the costs associated with actually paying for the home, and in cases of mortgage repossession, the loss incurred is likened to the loss of a family member (Robinson & Adams, 2008). Preliminary analysis estimates that at least 1.2 million Ontario households are under significant shelter affordability pressures, spending just over 60 cents of every discretionary dollar (i.e., after other necessary items have been paid for such as health care, food, and child care) on shelter related costs (including transportation and utilities). Of those households, 480,000 of them are under the age of 45 (Smetanin, P.; Moca, I.; Yusuf, F., Kobak, P., 2015).

Housing insecurity and lack of secure tenure can have generational spillover effects as well. As housing insecurity is a leading source of stress, particularly for families earning lower incomes, this anxiety may exacerbate childhood neglect, leading to depression among children whose parents face challenges associated with housing affordability (Robinson & Adams, 2008).

4.2 INFORMAL CARE

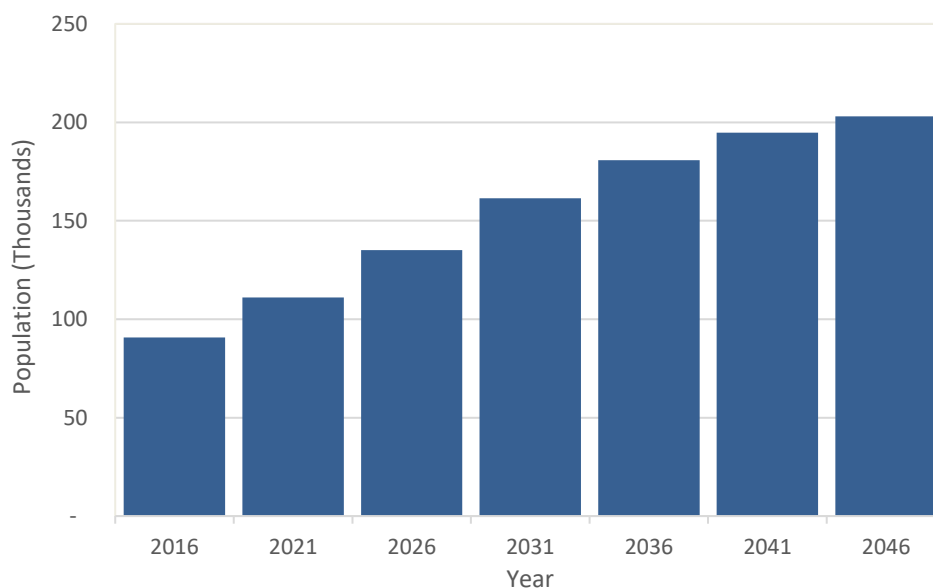
Informal caregivers are the family and friends who provide unpaid support to individuals with chronic illnesses, such as mental health issues (Cochrane, Goering, & Rogers, 1997). They provide transportation services, housework, maintenance, scheduling and coordinating appointments, managing finances, medical treatments, and personal care (Sinha, 2013). In Canada, almost 46% of individuals aged 15 and older will have provided informal care at some point in their lives (Sinha, 2013). In 2012, 29% of Ontarians provided informal care, one of the highest in the country (Sinha, 2013). Informal caregivers are often required to make adjustments to their paid work in order to provide the unpaid care, with 16.2% of caregivers having to reduce their hours, 20.4% having to change work patterns, and 8.9% having a reduction in income (Habtu & Popovic, 2013). Informal caregivers are also more susceptible to have their sleep and health affected due to their informal care (Habtu & Popovic, 2013).

All these added adjustments take a negative toll. The price of juggling responsibilities with work, sacrificing social activities, and providing the informal care can place additional stress and anxiety on the caregivers (CPHA, 2015/2016), both of which are considered risks to mental health (WHO, 2012). For example, between 14% and 47% of caregivers of individuals with dementia experience depressive symptoms, with 10% meeting the DSM assessment for clinical depression (Dura, Stukenber, & Kiecolt-Galser). Informal caregivers are also susceptible to anxiety, substance abuse, and increased likelihood of relapsing to a previous mental condition (Canadian Research Network for Care in Community).

Although dementia is not prevalent among the workforce population itself, it can indirectly impact the GTHA labour force participants who provide informal care to those suffering from it. Figure 7 shows the

estimated 12-month prevalence of dementia in the GTHA from 2016 to 2046. The number of prevalent cases is estimated to grow 123% over this time period from just over 90,000 in 2016 to just over 200,000 in 2046.

Figure 7 Estimated Number of People with Dementia in the GTHA⁸



It is estimated that in the GTHA over the next 10 years, there could be 444 million hours of informal caregiving of individuals with dementia. This could amount to a total economic cost to the GTHA of \$30.4 billion (inflation adjusted) over the next 10 years, just under 2% of the GDP output of the GTHA.

4.3 PRECARIOUS WORK

Precarious work is characterised by job insecurity. Though generally associated with part-time work, it also covers temporary or contract employment, self-employment, and multiple job-holding (Cranford, Vosko, & Zukewich, Precarious employment in the Canadian Labour Market: Statistical Portrait, 2003). These types of arrangements are prevalent with lower wage, less skilled work (Benach & Muntaner, 2007; Block, 2010; Cranford, Vosko, & Zukewich, Precarious employment in the Canadian Labour Market: Statistical Portrait, 2003). Terms of employment usually do not include health benefits or personal leave, and workers are not represented in a health and safety context (Benach & Muntaner, 2007; Cranford, Vosko, & Zukewich, Precarious Jobs: A new typology of employment, 2003).

⁸ Estimates are 12-month prevalence, which refer to the number of people estimated to have dementia during a given year (e.g. 2016).

In a study done by McMaster University and The United Way, it was found that precarious employment in the GTHA has increased by nearly 50% in the last 20 years with at least 20% of GTHA workers occupying precarious forms of employment (Lewchuk, et al., 2013). Moreover, another 20% are employed in jobs that share characteristics of precarious employment such as variable work hours, multiple employers, no benefits beyond their basic wage, and uncertainty in terms of continued employment with their current employer.

Precarious work and mental health are highly interconnected. The stresses of precarious employment: inflexible schedules, securing new work, and a lack of personal leave, can lead to “burn out” and depression in workers (Block, 2010; Lewchuk, De Wolff, King, & Polyani, 2003). That said, permanent, full-time workers with existing mental health issues enter into temporary employment at a higher rate than workers with no mental health issues (Dawson, Veliziotis, Pacheco, & Webber, 2015). It is unclear whether moving to temporary employment is a choice for these workers. Once in temporary employment, an absence of medical benefits makes it difficult for workers to purchase medication or to solicit medical help (Block, 2010), which can aggravate an existing condition.

4.4 TRANSPORTATION

Existing research suggests that transportation plays a major role in the mental health of modern society. Transportation can determine access to jobs, healthcare, education, and recreational activities (Allen, 2008; Litman, 2015). The inability to access these resources is a form of social exclusion and marginalization, which can contribute to mental health issues (Allen, 2008; WHO, 2000). Good public transit networks are associated with better commute times and lower stress levels, and when available, commuters find them less burdensome than driving (Wener & Evans, 2007).

The GTHA census divisions outside of the city of Toronto are growing at a pace outstripping that of Toronto itself (City of Toronto, 2011). In 2010, commute times in the GTHA were just over an hour to and from work and are higher than the average commute time in Ontario (Shum, 2014). Moreover, according to Statistics Canada data, 29% of Toronto workers were caught in a traffic jam every day in 2010 (Moore, 2014).

The added stress from elevated commute times and with vehicles expected to be the primary mode of transportation for a growing number of people, the impact of transportation challenges on mental health needs to be addressed. The expanded reliance on driving can aggravate stress and lead to aggression and nervousness (WHO, 2000), which can also manifest itself in “road rage” (Frumkin, 2002). There is added stress associated with traffic congestion on top of the fear of missing appointments or being late to work (Moore, 2014). Longer-term mental health implications like post-traumatic stress can be experienced by accident survivors. These disorders are generally overlooked and untreated (WHO, 2000). Multiple studies in the US and Canada show that “physically active” modes of transport reduce symptoms of anxiety and depression (Wener & Evans, 2007; WHO, 2000). Vehicular transport does not receive these benefits.

4.5 CHILD CARE

Raising children requires a time commitment that, when coupled with other obligations can create elevated levels of stress and risk of mental health issues. Evidence suggests that social relationships between groups of parents can significantly reduce the level of stress associated with raising children (Rullo & Musatti, 2005). Providing access to programs such as prenatal classes, joint family activities, and other social interaction between parents can be utilized to build social support networks between individuals that share similar challenges. Three main ways such support systems alleviate parental stress is through the exchange of physical and emotional assistance, the provision of child-rearing controls, and the availability of other parental role models present in the child's early life (Cochran & BRassard, 1979).

The common feature of these interactions is that they decrease the periods of isolation that are common when caring for a young child or elderly parent. Due to the time commitment that young children require, many parents become socially isolated from previous social networks. Feelings of loneliness have been linked to increased risk of mental illness (with a more robust correlation in women) (Rohde, D'Ambrosio, Tang, & Rao, 2015) . The risks are also likely exacerbated if the individual is a single parent.

Depression and anxiety are two of the most common mental health problems associated with parenting (Acri & Hoagwood, 2015). Illnesses such as these are linked to higher levels of parental guilt and fear, which can have an adverse effect on parenting methods (Canadian Mental Health Association).

Moreover, the price of child care for one child in the GTHA is estimated to be \$20,000 per year, which is higher than any other region of the country. This financial burden creates an environment in which low-income families are forced to pay unaffordable fees, or find limited alternatives. Despite the upward pricing pressure on adequate child care, there is still a shortage of spots in licensed facilities. As of May 2015, there were 64,700 licensed child care spots for 350,000 children in the GTA (Toronto Star, 2015). These constraints are a contributing factor in the level of isolation, financial stress, and mental illness risk facing lower income families.

5.0 CONCLUSIONS

Mental health issues in the GTHA labour force are a growing concern with an estimated 1 in 5 employees in the GTHA currently living with a mental health issue, resulting in an estimated average annual loss of productivity of \$1.7 billion (inflation-adjusted) over the next 10 years, or approximately 0.5% of the GDP of the GTHA. The prevalence of mental health issues in the GTHA labour force can vary by condition with each mental health issue's symptoms and prevalence changing considerably depending on an individual's age, sex, and risk factor exposure. In the current GTHA labour force, the prevalence of anxiety, mood disorders, substance use disorders, and schizophrenic disorders are estimated to be 10%, 5%, 8%, and 1%, respectively. Moreover, daily challenges facing GTHA households such as shelter affordability, informal care, and child care, could be contributing to the problem.

6.0 BIBLIOGRAPHY

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