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## Health is Wealth: The Correlation of Wellness Programs & Productivity in Canada and the U.S.

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# Health is Wealth: the correlation of wellness programs & productivity in Canada and the US

AN ANALYSIS OF WORKPLACE WELLNESS PROGRAMS AND  
PRODUCTIVITY INDICATORS IN CANADA AND THE US  
WERT, MADELINE

## **Abstract**

Does health impact the productivity of workers? Are there differences between the US and Canada? Firms both in Canada and the US deal with issues of presenteeism and absenteeism. Presenteeism is when an employee shows up to work but they are distracted by their own or a family member's health issue. Presenteeism accounts for \$150 billion in losses per year in the United States alone (Stewart, 2003). One response to reduce presenteeism and absenteeism are workplace wellness programs. Workplace wellness programs are facilitated programs by a firm to promote the health and wellbeing of their employees, which benefits the employer and the employees. There are additional incentives for US employers to implement workplace wellness programs as employers are the foundation of private insurance in the US while Canada operates on a one payer healthcare system. However, Canadian employers are responsible for pharmaceutical, physical therapy, and mental health insurance costs (Jacobs, 2017). Most studies examine their country and found that workplace wellness programs provide 300-400% return on investment in Canada and the US, making wellness programs effective and smart investments for firms to make. This study will do data analysis that will compare the effectiveness of workplace wellness programs on productivity in Canada and the US.

## **Introduction**

Are healthy people more productive? Some of the most successful people on earth such as Elon Musk and Karl Lagerfeld were addicted to Diet Coke, never slept, and worked impossibly long hours. It is difficult to differentiate what healthy means as the word healthy is thrown around a lot within the wellness industry leaching into all aspects of life. Health is a state of physical, mental, and social well-being and not merely being without disease (medical news today). The idea of healthy people being more productive was investigated by Banjee and Duflo, the authors of Poor Economics and winner of the Nobel Peace Prize, they found workers living in an insalubrious environment often miss many work days. However, this study was completed in the least developed nations such as villages in Indonesia and India as well as Cote d'Ivoire and Zambia which lead me to this research project looking at the correlation between health and productivity in most developed nations such as the United States and Canada. Does the poor economies correlation between health and wealth translate to rich economies? There is a common notion that Canadians are healthier than Americans and Americans are more productive than Canadians. Since those two ideas work against one another for the purpose of this project my hypothesis stands as: since Canadians are assumed to be healthier than Americans then they are more productive.

There are three parts to this research project the health and wellness of employees, wellness programs provided by the employers for the employees, and productivity provided by the wellness of employees. It is in the best interest of the employee and the employer to be healthy. Healthy employees are more productive, less absent from work, and more focused on tasks (Goetzel et al., 2002). Many costs are incurred when an employee is unhealthy, such as the direct costs and the disability costs but there are also indirect costs. The indirect costs because of

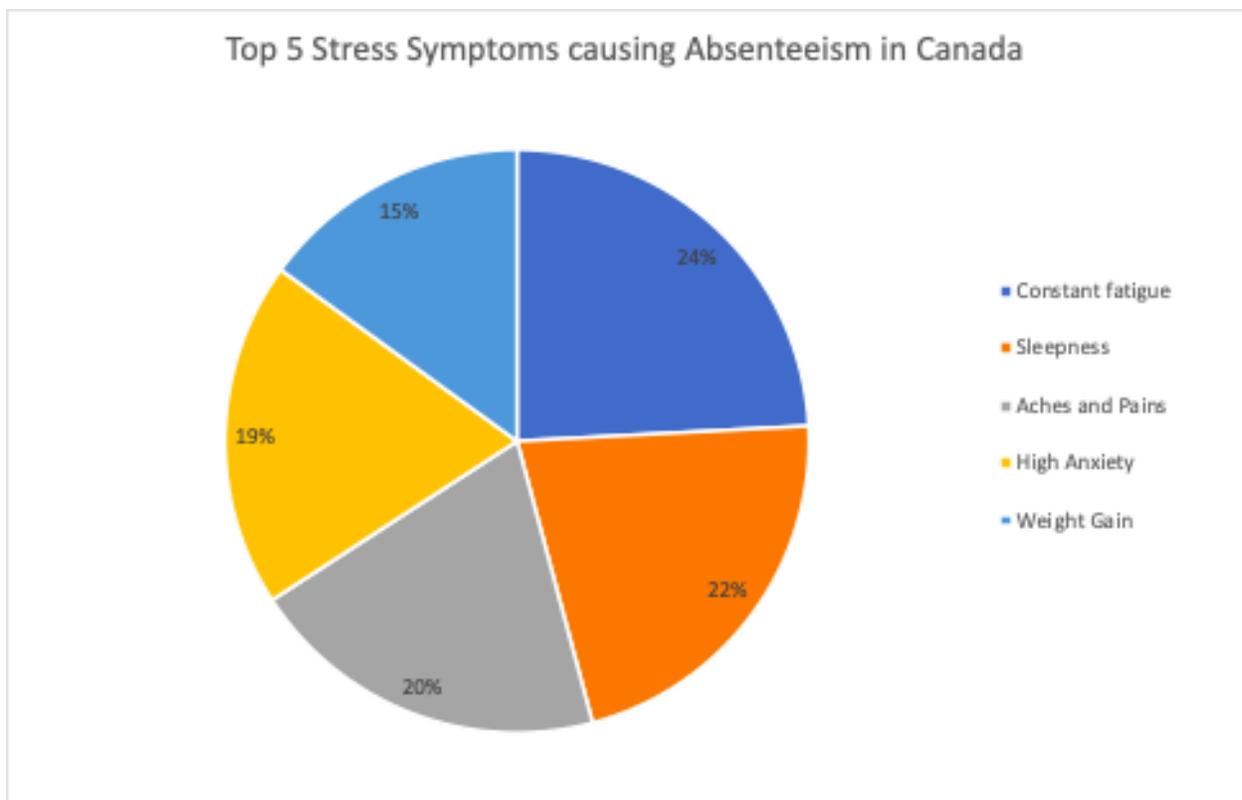
illness are recruiting replacement workers, productivity loss, and compensation for reduced productivity. Indirect costs can be two to four times the direct medical costs (Makrides, et al., 2011). Both US and Canadian employers are victims of indirect medical costs of their employees. On the contrary, businesses in America are laden with these direct costs as employers are the main providers of health insurance in the US, but I will get more into that topic later in the paper.

Firms in Canada and the US both deal with the productivity problem of absenteeism and presenteeism. Absenteeism is when people are absent from work most likely due to the illness of themselves or a family member they care for, possibly a chronic disability, overcome by stress or have issues balancing work and life (Goetzel & Ozminkowski, 2000). Absenteeism costs Canadian employers approximately \$2.7 billion and an additional \$425.8 million in physician visits (Morrison and Mackinnon, 2008). Employers and researchers are finding that employees are bringing their disease to work with them causing a phenomenon called presenteeism. Presenteeism is a relatively new concept and encompasses coming to work but mentally “not being there.” The employee can be distracted with their own illness or someone they care for. Employees in the US may be suffering from depression, lower back pain, allergies, emotional stress, or any number of other physical or emotional conditions (Goetzel and Ozminkowski, 2000). Presenteeism accounts for \$150 billion in losses per year in the United States alone (Stewart, 2003). There are many differences between the US and Canada but what the two countries have in common are the health issues that employees suffer from.

### **Wellness of Employees**

Employers are beginning to recognize that their employees spend most of their waking hours at work but some of them are not necessarily in good health. A meta-analysis completed at

Harvard by Baicker, Cutler, & Song found that employees suffer from obesity, smoking, stress, back pain, alcohol consumption, and high blood pressure. Smoking and obesity are the top two causes of preventable death in the US. Whereas a study completed in Canada found that about 80% of Canadians aged 20-59 years have one or more of five major modifiable health risks such as hypertension, tobacco use, overweight, diabetes, and inactivity (Makrides, et al., 2011). One in ten Canadians have three or more risks mentioned (Makrides, et al., 2011). US and Canadian employers share the burden of employees suffering from obesity, smoking, and hypertension. Mental health issues are also becoming the main concern for many employers including stress and depression. People who report that they are highly stressed and are unable to manage their stress are 46% more costly than non-stressed employees (Goetzel & Ozminkowski, 2000). As seen in Figure 1 stress has many side effects on the body and can cause high rates of absenteeism.



**Figure 1.** The Top 5 Stress Symptoms that cause Canadian employees to miss days of work. They include but are not limited to: Constant fatigue, sleepiness, aches and pains, high anxiety, and weight gain.  
Source: Rise HR

Another study completed by Goetzel et al. found that depression was a huge risk factor for most employers in the US. Employees who reported being depressed were 70% more expensive than their non-depressed counterparts (Goetzel et al, 2002). Mental illness is on par with heart disease and cancer as a key cause of disability in the US (W.H.O., 2000). One in five Americans will be affected by depression in their lifetimes (Goetzel et al, 2002). While in Canada 12.3% or 3.2 million Canadians both males and females above the age of 15 have suffered from depression in their lifetime (Statistics Canada, Table 13-10). Additionally, Ammendolia et al. 2016 found that the impact of mental health conditions and especially depression in the workplace was highlighted as a main challenge and high priority for employers. Either in the US or in Canada employees are negatively affected by depression. Workers lose as much as 20% of their productivity when depressed because of poor concentration, memory lapses, indecisiveness, fatigue, apathy, and lack of self-confidence (Goetzel et al, 2002). Both countries are dealing with a health crisis that is wearing on the productivity of varying industries leaving many to question what employers are doing to help their employees.

The response to the rising number of health problems leading to expensive direct and indirect costs for employers are Workplace Wellness Programs. Workplace Wellness Programs (WPP) are programs that are provided by employers to educate, raise awareness, and promote healthy habits. These programs appear to be an effective means of controlling health costs. Medical costs fall by about \$3.27 for every dollar spent on wellness programs and that absenteeism costs fall by about \$2.73 for every dollar spent (Baicker, Cutler & Song). WPP have proven to be a smart investment but not every employee in the US nor Canada has access to them.

## **Workplace Wellness Programs**

Through this project, I found that although academia likes to compare Canada and the US, possibly due to the close proximity, the two countries are very different, so different that it makes it difficult to compare the two. According to Lowensteyn et al., 2018, Canada remains one of the least developed markets despite the close proximity to the US. Furthermore, a comparison can be made but it is not easy due to the varying differences in culture and government. As for the purpose of this project, the main differences lie in their healthcare systems.

The US runs on a private and public insurance system with the US employers supplying more than 60% of insurance for Americans (Baicker, Cutler & Song). Employment is the foundation of private insurance in the US. In 2010, private employers were responsible for approximately 20% of all health care expenditures in the US, totaling to approximately \$534.3 billion (Sears et al., 2013). US employers have more incentives to provide wellness programs due to the investment each employee represents. If employers are responsible for supplying 90% of persons under the age of 65 who are privately insured with health insurance then it is within their best interest to better their employees' health to lower insurance premiums, prescription costs, and reduce missed workdays (Curry, 2005). An unhealthy employee is a liability and can cause high turnover and have a negative ripple effect on employees. One analysis by Sears et al. of workplace wellness programs study looked at the difference between low wellbeing employee's vs high wellbeing employees:

“On average, those who started in the low wellbeing segment at baseline had approximately 2 more days of annual unscheduled absence and more than double the likelihood of short-term disability, reported over 3 times the level of presenteeism, and were rated almost half a point lower on performance on a 5-point scale by their

supervisors as compared to those in the high well-being segment at baseline” (Sears et al., 2013).

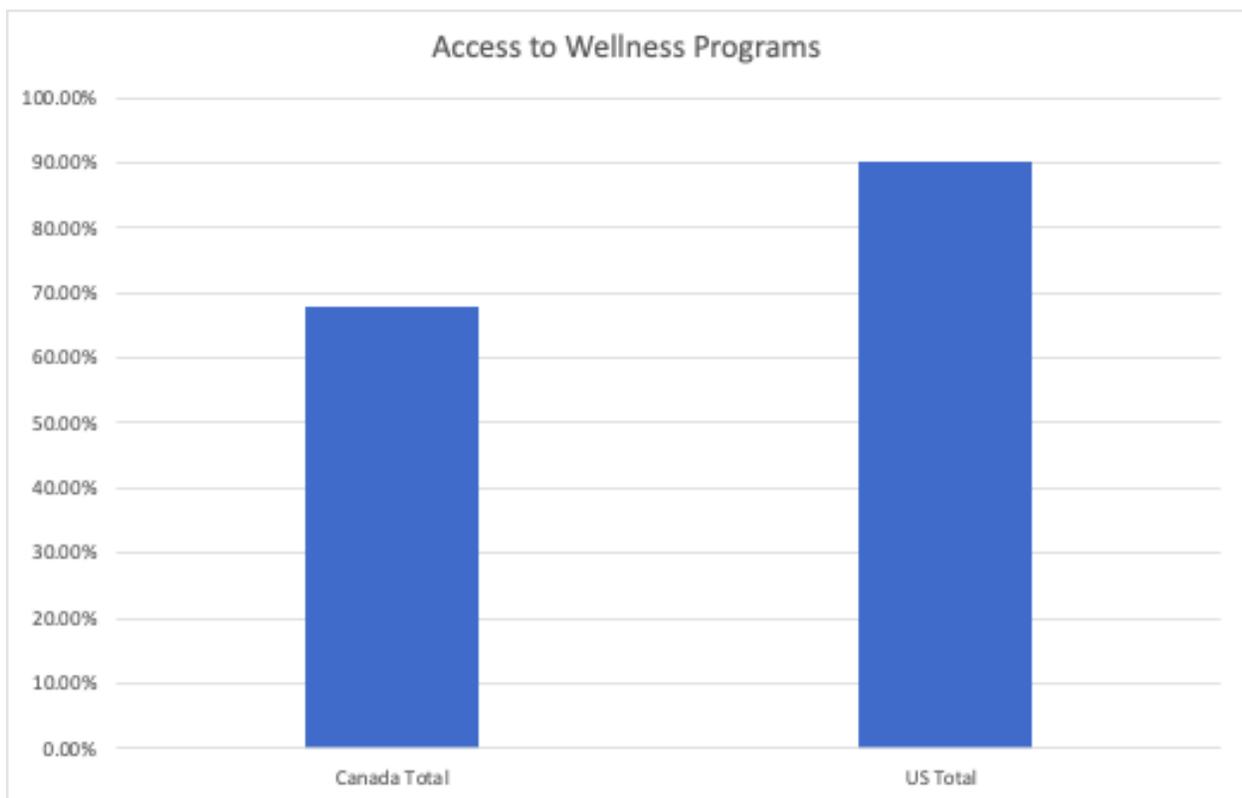
Low wellbeing employees and those with poor health are costly to US employers which causes US firms to possibly care more about the health of their employees than other countries with public healthcare systems. <sup>1</sup> All OECD countries except for the USA have health care that is provided by a public health care system (Jacobs et al., 2017).

Canada is one of those countries that runs a one-payer system. A one payer system consists of the government providing health insurance for the public. Nonetheless, Canadian employers are responsible for pharmaceutical, physical therapy and mental health costs (Jacobs et al., 2017). The responsibility of Canadian employers although less than the responsibility of US employers is reason enough to sponsor workplace wellness programs. Ammendolia et al., 2016 completed an analysis of a voluntary survey sent out to 565 Canadian employers to take The Work Productivity and Activity Impairment Questionnaire. The WPAIQ is a verified measure of health-related productivity loss in the workplace. The researchers recognized the five top reported factors (nutrition, sleep, stress, physical exercise and weight) for bad health which they defined as moderate to high risk (Ammendolia et al., 2016). The WPAIQ scores suggest that depression and stress accounts for the productivity loss of participants with moderate risk productivity loss at 41% and those with high risk productivity loss at 54% (Ammendolia et al., 2016). Depression and stress are both within the framework of mental health. Additionally, depression is treated with pharmaceuticals which accounts for another responsibility sustained by

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<sup>1</sup> How care is defined is precarious because care could be determined as they care more because of the economic savings and gains made on healthier individuals. The savings comes from the lower healthcare costs that US employers are responsible for while the gains are made from people being healthier and having more able bodies to work and be more productive. Employers in public healthcare systems would need to realize and actualize the gains being lost due to unhealthy workers because the only firm realizing the losses in PHS are the government.

Canadian employers. The problem is not the availability of programs (See Figure 2 on access to programs), but it may have more to do with the participation rate of employees. In the US wellness program participation is anywhere between 25-40% with stress management programming exceeding 50% participation (Mattake et al., 2015). Yet, in Canada wellness program participation rates are extremely low, with only 11% of employees saying they definitely participate on a regular basis and another 23% participating only occasionally (Lowensteyn et al., 2018). The low participation rate could be due to lack of incentives for the employee.



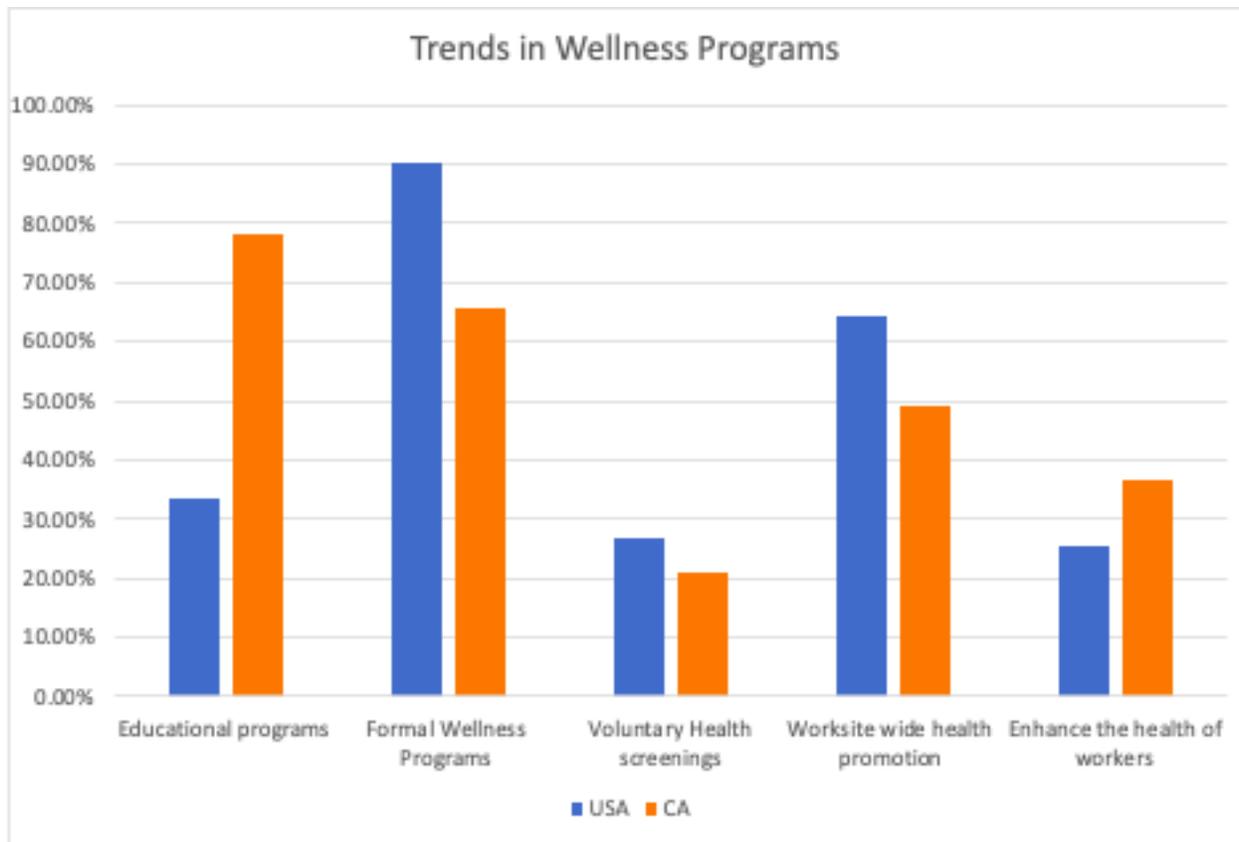
**Figure 2.** Access to Wellness Programs in Canada and the US respectively. Access for Canadian employees is 67.8% whereas access for US employees hovers around 90%.

Source USA: Sears et al., 2013

Source CA: Csiernik & Csiernik.

For those that do participate in workplace wellness programs there have been impressive results. There have been improvements in the mental health of participants in Canada, including

a reduction in stress of 12% and an improvement in sleep quality of 12% (Lowensteyn et al., 2018). In either the US or Canada there is a handsome return on investment between 300-400% for the money invested into workplace wellness programming. A meta-analysis completed at Harvard found that among 20 studies with random control groups or matched comparison groups, the average number of absentee days saved was 1.7-1.9 per employee per year, estimated to cost between \$274-\$309 per employee per year. They also found that there are many different types of programming as healthy and wellness provides a broad range of definitions. More than 60 percent of the programs explicitly focused on weight loss and fitness (Baicker, Cutler & Song, 2010). Below Figure 3 illustrates the makeup of wellness programs in the US and Canada. Canada has quite comprehensive programs by providing educational programs and enhancing the health of workers, both outpacing US wellness programming. The Canadian program analysis is based on 142 worksites whereas the US analysis is based on thousands. Therefore, even though their programming is substantial where it is concentrated, it is not widespread or at least the data is not. The US outpaces Canada when it comes to the availability of general wellness programming with nearly all large firms providing some kind of programming for employers.



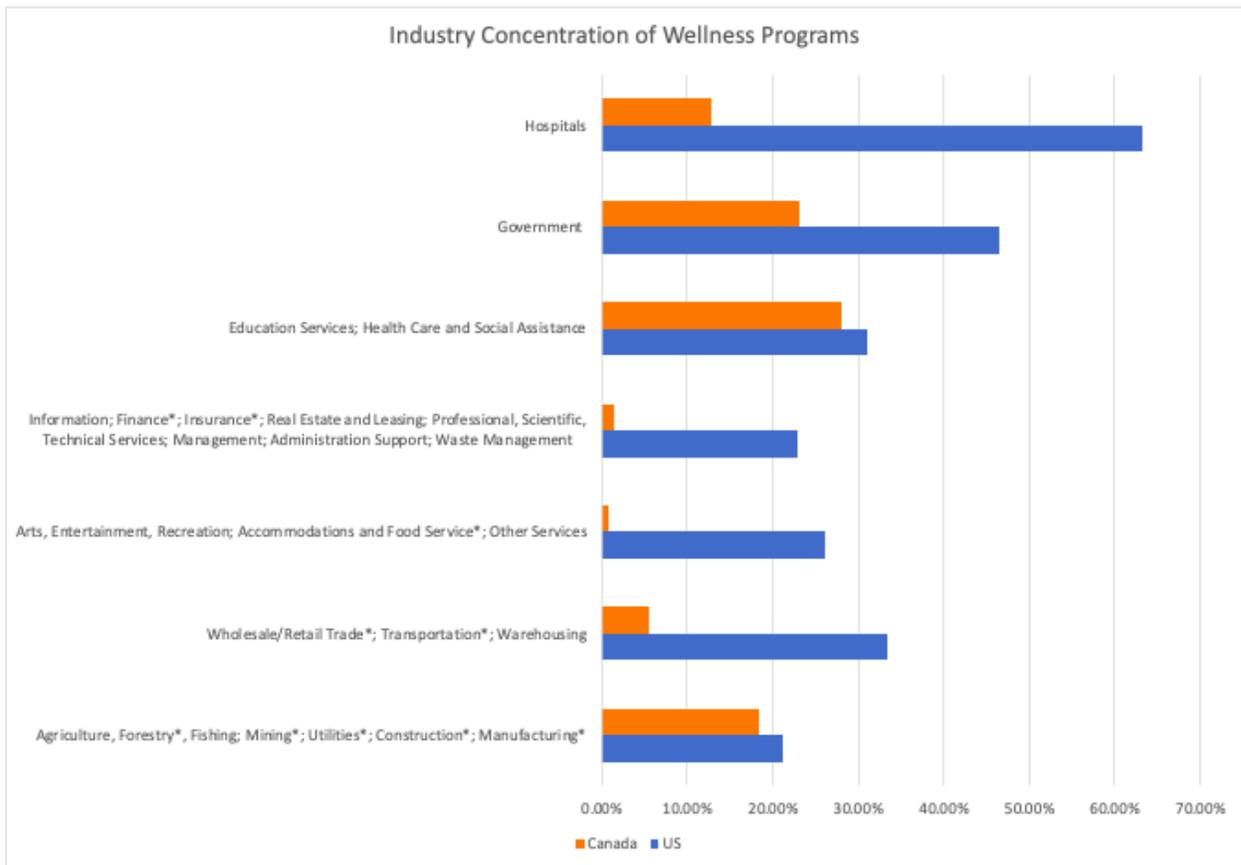
**Figure 3.** Programs that are available within workplace wellness programs provided by employers to employees for the benefit of both parties.

Source: For US data, the CDC. For CA data, Csiernik & Csiernik.<sup>2</sup>

The data visualization of industry WWP concentration can be visualized via Figure 4. Some highlights from Figure 4 include hospitals having the most wellness programming in the US at 63%. This could be due to the high stress environment of a hospital and the overall understanding of wellness healthcare admin may have. Whereas in Canada the industries with the most wellness programming are public industries such as government agencies (23%) and education and social services (28%). Governmental firms in Canada having access to more

<sup>2</sup> It should be noted that all of the types of programming such as educational programs and voluntary health screenings fall under the overall statistic of access to wellness programming. Another note is the definition of formal wellness programming and how it differs from worksite wide health promotion. Formal wellness programming is exactly how it sounds where a firm provides wellness programming. Whereas worksite wide health promotion is the awareness of critical incidents and related wellness educational programming with a focus on prevention.

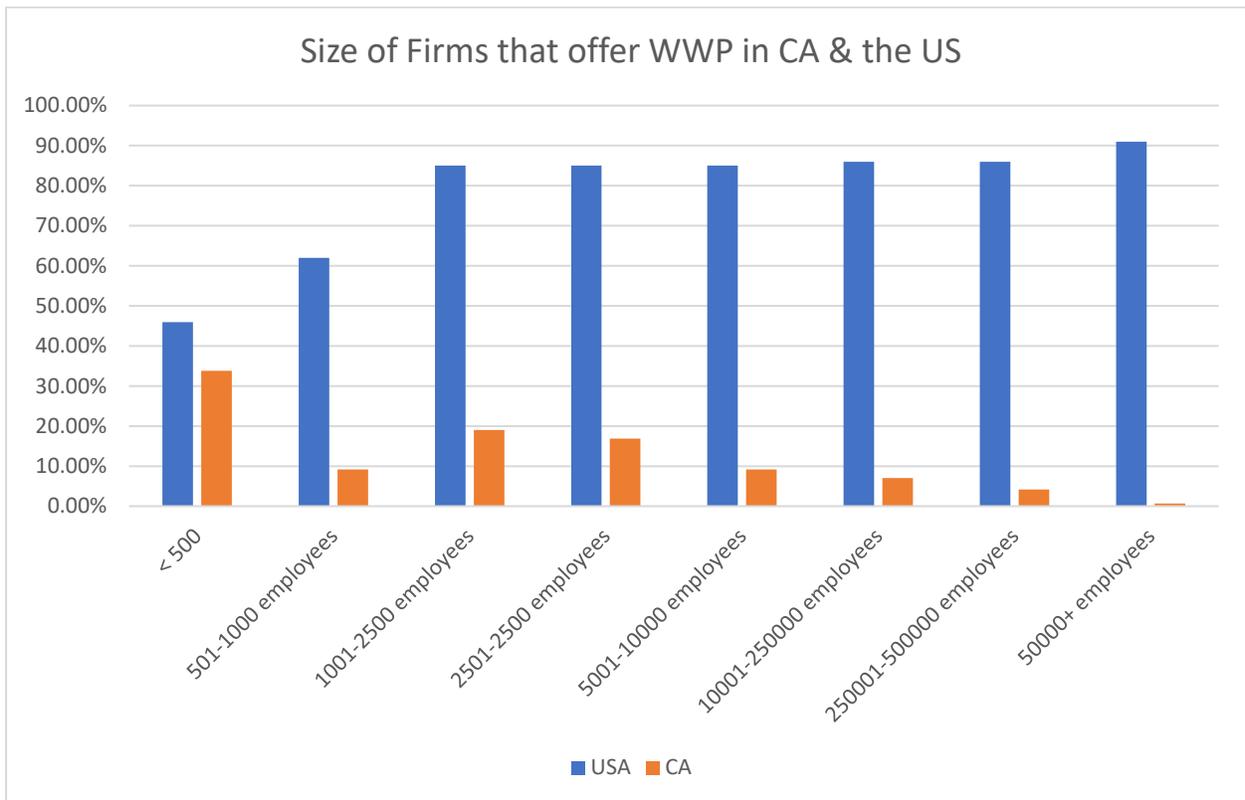
workplace wellness programs makes sense as their employer, the government, provides their workers with healthcare.<sup>3</sup> The US leads in every kind of workplace wellness program provided either by the public or private sector. This aligns with the hypothesis of a healthier community being a more productive community as the US is more productive when looking at GDP and GDP per capita. I would surmise it has something to do with the widespread workplace wellness programs available in the private and public sector of the US.



**Figure 4.** Where Workplace Wellness Programs can be found within 7 different industries. The 7 industries are hospitals, governments, educational services along with health care and social assistance, STEM+Finance+Money+Waste Management, Arts+Entertainments+Hospitality, Retail+Transportation+Warehousing, and Agriculture+Forestry+Fishing+Mining+Utilities+Construction and Manufacturing. The \* denotes that out of that subcategory those were included in the Canadian data collection, if no \* is present then there is no data on that industry. Source: For US data, the CDC. For CA data, Csiernik & Csiernik.

<sup>3</sup> It may be noted that there are some vast differences between industries in Canada and the US, I would like to make an assertion that this is due to the difference in sample size. The US CDC sample size was significantly larger than the Canadian sample size and could account for the large differences.

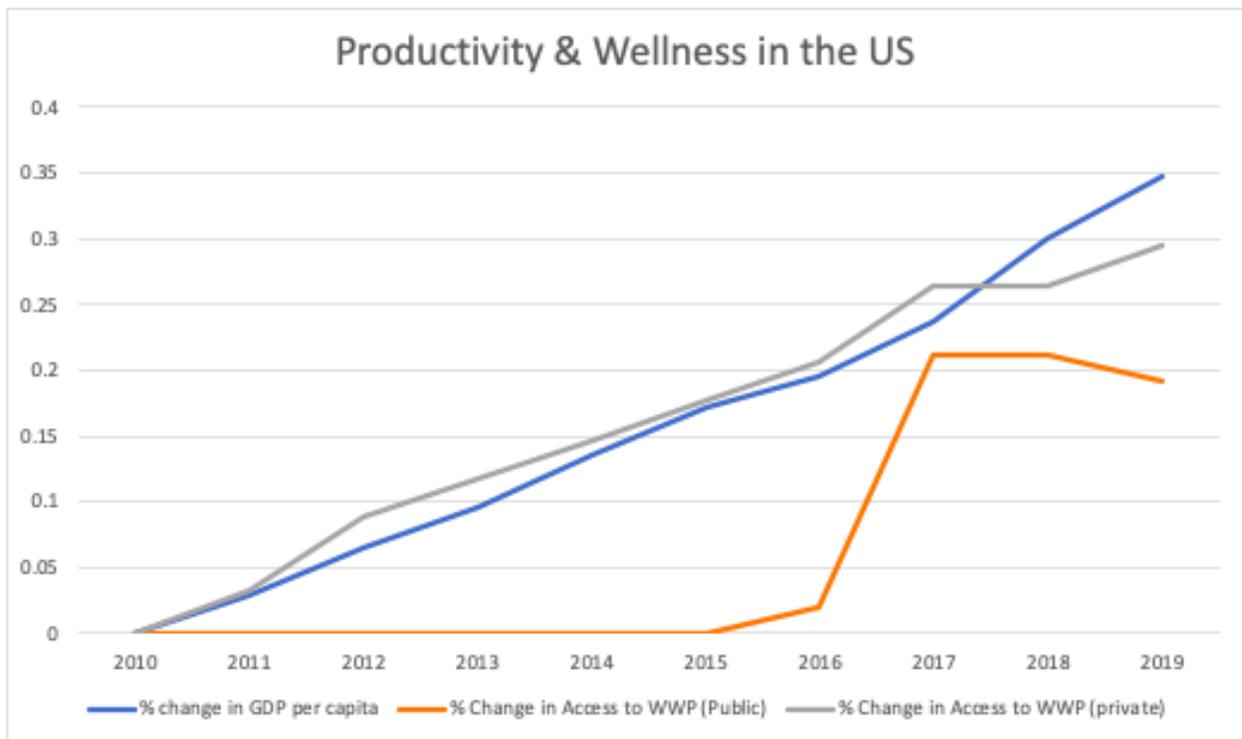
Next, we have the firm size distribution of wellness programs. It is interesting that when looking at Figure 5 there is an inverse relationship between the US and Canada. Nearly all large US firms have workplace wellness programs whereas in Canada the concentration lies in smaller firms of 500 or less employees at 33.8%. The availability of programming goes down as the size of firm expands. This is concerning as companies with over 200 employees produce approximately 50% of Canada’s domestic production (Lowensteyn et al., 2018). Considering the largest Canadian firms of 50,000 or more employees, only 0.7% offer workplace wellness programming. This again affirms that the US may actually be healthier than the general population perceives. Larger firms in the US likely provide wellness programming due to the need of lowering healthcare costs.



**Figure 5.** The size of firms in Canada and the United States that offer workplace wellness programs. Source for US data: RAND & CDC (Only for firms smaller than 500) Source for CA data: Csiernik & Csiernik.

## Productivity

Finally, we have arrived at the intersection of productivity, wellness and health. There is a wealth of data individually in each of these fields, but the intersection of this data is more difficult to obtain. It is crucial that firms understand how to make themselves more productive because more productive firms mean greater output which means more prosperity for workers and by proxy the community. The health of a community is strongly tied to economic growth and wellbeing as a person who is more able to go to work and perform the job efficiently and effectively is able to advance. Below is Figure 6 illustrating how closely health and the dollar are tied to one another.<sup>4</sup>



**Figure 6.** Productivity is measured in cumulative growth in GDP per capita since 2010-2019. Wellness is measured in access to Workplace Wellness Programs (WWP) in the private and public sector. 2010 is the base year for all 10-year cumulative growth calculations completed.

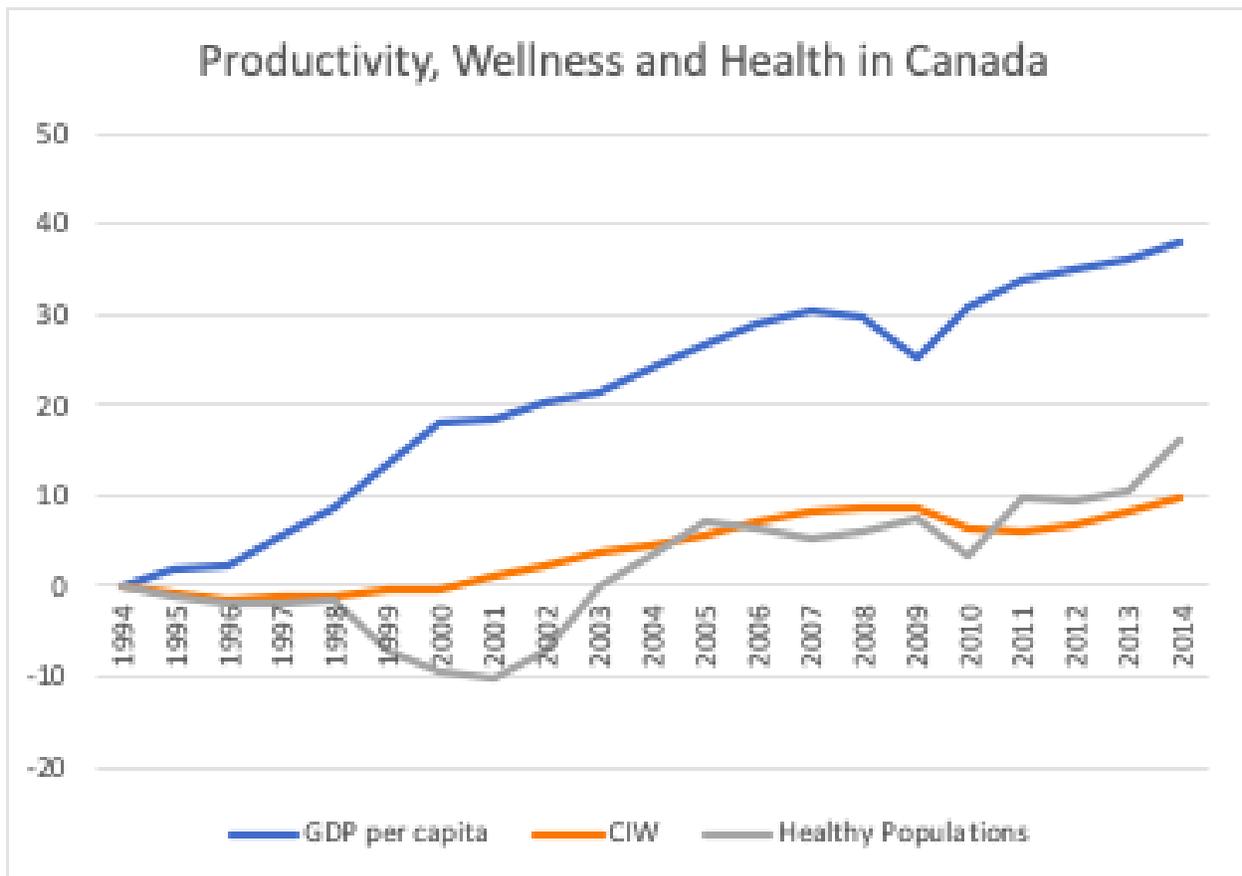
Source: BLS for Access to WWP and Google for GDP per capita

<sup>4</sup> Individual firm/industry productivity measurements would be ideal, but they are unavailable to the researcher.

It is interesting to look at how closely related the wealth and wellness of the US are related when looking at the private sector as most individuals that are privately insured are insured through their employers. The public sector had no growth for 5 years which is not to say that there were no wellness programs, 52% of public employees had access to workplace wellness programs. The lack of growth could be due to the 2008 recession and lack of funding. It could also be due to the absence of incentives for the public sector to provide such services. It is impressive that the private sector grew robustly from 2010-2019, a 10% climb shows that employers understand the value and effectiveness of workplace wellness programs. The steady increase in the private sector could also be due to rising poor health outcomes and low productivity. This trendline is promising as it could indicate that the US is weighing health and productivity equally.

The story looks a bit different for Canada when looking at Figure 7. It should be noted that the Canadian Index of Wellbeing is not exactly like the access to workplace wellness programs. The Canadian Index of Wellbeing measures education, the health of the population, community involvement, democratic engagement, living standards, time use, environment and leisure and culture. I acknowledge that this index is not ideal. However, the relationship between the blue and orange line does highlight how the country has thrived economically with a 38% cumulative change in GDP per capita but has left the wellbeing of the people as a secondary issue only totally increasing 9% since 1994. Meanwhile, the grey line indicates Canadian healthy population. The definition of healthy populations: the physical, mental, and social wellbeing of the population. The Healthy Populations domain considers life expectancy, lifestyle and behaviors, and the circumstances that influence health such as access to health care. I prefer the healthy populations index to any of the indexes provided in America because it encompasses

what it means to be healthy. The grey and orange trendline also highlights how the health of Canada is intertwined with the uptick in wellbeing after 2004-2014. The two dips taken in 2009 in the economy and 2010 in health is likely due to the 2008 recession as it also negatively affected Canadians economy.



**Figure 7.** Productivity is measured in the cumulative growth of GDP per capita, the Canadian Index of Wellbeing and Healthy Population Index from the period of 1994-2014 with 1994 as the base year for cumulative growth calculations.

Source: University of Waterloo in Canada

Based on the comparison of Canada and the US, I would argue that the US is not only more productive but also healthier. I reject my hypothesis that Canadians are healthier and more productive than Americans. Due to the increased incentives for US employers over Canadian employers it is what makes the difference in health. The amount of data available surrounding the topic of wellness programs also indicated that the US takes wellness seriously. I would also

argue that even though the US healthcare system is often criticized that this could be a silver lining for the American people. Employers care about the health of their employees now more than ever and this can have positive outcomes for the entire community. However, Canada does provide programming that is comprehensive and heavily based in education and prevention. What Canadian wellness programming lacks is possibly the marketing and incentives to get employees to attend wellness programming. Another source of low attendance of wellness programming in Canada could be due to 15% of Canadians having no family doctor as well as long wait times (Fraser Institute, 2016). Long wait times to see a doctor or to see a specialist has had irreversible effects on the Canadian population creating chronic, irreversible conditions or permanent disabilities from potentially reversible illnesses (Fraser Institute, 2019). The long wait times and absence of access to a family doctor is another deterrent for Canadian peoples to better their health. Due to the nature of US healthcare and the delivery of high-quality care this could be another silver lining, where insured individuals are willing to go to the doctor to address issues because of the system's efficiency. This is not to say that the US healthcare is without flaws. The US healthcare system is difficult for most to obtain if not through their employer and some people can go without for months if in between employers. However, the flaws of healthcare are a whole other paper topic within itself. Both systems can learn from one another's mistakes and continue to improve the health of their nations.

## **Limitations**

Essentially it is difficult to draw conclusions about which country is more productive due to the lack of evidence and research completed about workplace wellness programs in Canada with the most substantial study amounting to an analysis of 565 workplace wellness programs in Canada. Whereas there are studies that have been completed in the US showing that 90% of all

employers have a workplace wellness program, amounting to approximately 5 million employers. The US data is difficult to ascertain what the true values are since there is plenty of data on the topic. Although some assumptions can be made, they do not lead us to solid conclusions about the productivity being caused by the effectiveness of workplace wellness programs of the two countries.

I want to address a drawback of my research was that I was mostly looking at employed individuals who have access to healthcare. There are 27.9 million Americans that I did not account for (Tolbert et al., 2019). I also did not account for people that are not employed and do not receive benefits from employers in Canada. If there was more time, I would have liked to investigate these populations that I neglected to analyze. Despite the US positions the OECD highest health care spending and Canada's also higher-than-average spending, both countries have struggled to ensure that their citizens have affordable and equitable access to prescription drugs (Pomey et al., 2007).

Additionally, if this study was to be continued, I would want to focus on more productivity indicators. I would also like to explore Kaiser Family Foundation data as it is plentiful but dense and complex. I would also like to look at the correlation of wellness and productivity for people who work from home as that has becoming increasingly more popular in the context of the COVID-19 global pandemic. It would have also been interesting to look at fitness trackers, their prevalence and their impact on wellness and productivity if any. I hope that in the future I would be able to analyze uninsured, as well as Medicare and Medicaid individual's health, wellness, and productivity in the US. Lastly, I would want to request data from Canadian data sources that could've given me a fully developed perspective of Canadian wellness programs.

## **Conclusions**

The US and Canada are two OECD countries with a close proximity but extremely different set of values as well as healthcare systems. The US is driven by the dollar which has proven to be effective as far as workplace wellness programs with nearly all employers offering some kind of programming. Meanwhile 67% of Canadian employers provide some kind of programming but they have incredibly low turnout. The investment for a business is smart and if employees participate their lives could be changed for the better. Wellness programming is important, and it could be what makes people healthier and happier. The key to creating a healthier workforce that is more productive is getting employees to attend wellness programming with effective incentives.

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