

Consumers' Emotional and Behavioural Responses to COVID-19 in Canada

Major Research Paper

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Abstract

COVID-19 disrupted our lives since the very first day it was announced to be a global pandemic in early 2020. In Canada, social distancing measures and quarantine and health-protective regulations affected people's emotional stability and changed how they undergo certain consumer behaviours to cope with those emotional effects. I surveyed 687 participants residing in Canada to understand some of the emotional and behavioural changes they went through during the past two and a half years since the pandemic began. Participants were asked questions on their emotional responses during the early stages of the COVID-19 pandemic, their current well-being, and on some of their current consumer coping behaviours. Lastly, they were asked to report some demographic characteristics. My conceptual model, therefore, tests the relationship of consumers' initial emotional response to COVID-19 in Canada with five coping behaviours via their current well-being indicators, moderated by two demographic characteristics—gender and income level. Results of this study showed that there is a significant relationship between the initial emotional response to COVID-19 (IERC) and buying behaviour via depression and loneliness, moderated by income level. While the rest of the indirect relationships were not significant, the research revealed significant direct relationship between IERC and all coping behaviours except social media behaviour and to have directly affected feelings of depression, loneliness, and hopelessness. This research has many theoretical contributions to the consumer behaviour and healthcare literature and managerial contributions that could be used by marketers, mental health professionals, public employees, and the government.

Introduction

Since the COVID-19 pandemic began, there has been a significant change in our attitudes, emotions, and behaviours—as both individuals *and consumers*. For example, COVID-19 and government policies implemented to reduce the spread of the virus, such as governmental lockdowns, travel bans and other restrictions, have led to fluctuations in our mental health (Abbott, 2021), with 70% of Canadians reporting being negatively impacted by COVID-19 (Canada, 2021) and 25% of Canadian adults (age 18 and older) reporting symptoms of anxiety, depression, or PTSD in the spring of 2021 (Government of Canada, 2021); in Canada, alcohol and cannabis use increased by 16% and 5% (respectively) as of December 2020 (Canada, 2021); and users of social networks in Canada increased from 27.27 million in 2019 (pre-pandemic) (2019) to 31.76 million in 2021 (mid-pandemic; Statista Research Department, 2022). From these changes in mental health, alcohol and cannabis consumption, and social media use, it is clear that Canadians have been resorting to different behaviours to cope with their new norms.

The current research tests how initial emotional responses to COVID-19 influences consumers' general well-being and coping behaviours. In doing so, this work makes a number of contributions. First, it reveals the consequences of the consumers' COVID-induced emotions, that represent the initial emotional response that Canadians had to COVID-19. In addition, it explores how demographic characteristics moderate the effect of Canadian consumers' initial emotional response to COVID-19 on their subsequent coping behaviours.

Furthermore, it contributes to the consumer research literature on the emotional and behavioural repercussions of COVID-19 on consumers. My findings have implications for healthcare and mental health professionals that could use it to advance their knowledge of emotions and addictive behaviours—such as alcohol and cannabis consumption—that played a

role in the deterioration of Canadians' well-being during the pandemic in order to target their focus more efficiently. It will also be helpful for government and healthcare policy institutions to use the results developed by this research as a factor in initiating successful COVID-related policies and segmenting the population in terms of who was most affected and what attitudes and behaviours were affected the most.

Research Questions

1. How does Canadians' initial emotional response to COVID-19 relate to their subjective well-being?
2. How does the initial emotional response to COVID-19 affect Canadian consumers' coping behaviours?
3. What is the mediating effect of consumers' well-being on the relationship between their initial emotional response to COVID-19 and their coping behaviours?
4. Is the effect of the initial emotional response to COVID-19 on consumers' coping behaviours via subjective well-being moderated by demographic characteristics?

Theoretical Framework

Initial Emotional Response to COVID-19

While emotions have long been prominent in the literature on well-being and mental health, the attention devoted to emotions by the marketing literature increased as researchers began to realize that how people feel can alter their perceptions of, as well as how they respond to, consumer products and services. Based on the definitions of basic emotions by Storm and Storm (1987), this research defines emotions as descriptors of different acute psychological states. In particular, this research is interested in Canadian consumers' initial emotional response

to the onset of the COVID-19 pandemic and its subsequent impact on consumers' general well-being and ultimately, various marketplace behaviours.

Products and services can elicit emotions directly, for example, through advertising or experiences, and emotions have been shown to affect consumer decision-making and post-purchase behaviour (Laros and Steenkamp, 2005; Holbrook and Hirschman, 1982; Westbrook, 1987). Consumer emotions are typically represented in terms of positive and negative affect dimensions. For example, Laros and Steenkamp (2005) proposed a hierarchical structure that includes specific emotions that stem from those general dimensions of positive and negative. Emotions of negative affect include anger, fear, sadness, and shame, while emotions of positive affect include contentment, happiness, love, and pride (Laros and Steenkamp, 2005). This structure was adapted from the studies of Storm and Storm (1987) as it utilizes their understanding of basic emotions (such as anger, fear, and sadness) and groups them into different clusters that stem from the superordinate levels of positive and negative. Richins (1997) originally used a similar arrangement to the taxonomy of negative emotions reported by Laros and Steenkamp (2005) while only focusing on negative word of mouth and complaining. Her studies identify which emotions are experienced most often in consumption situations (anger, discontent, worry, sadness, fear, shame, envy, loneliness, romantic love, love, peacefulness, contentment, and optimism) and are grouped in the Consumption Emotion Set (Richins, 1997).

Based on the negative emotions in the hierarchical structure (Laros and Steenkamp, 2005) and Richins' Consumption Emotion Set (Richins, 1997), this study groups six emotions to represent the emotional state of Canadians at the onset of the COVID-19 pandemic (i.e., the first few months of the pandemic). To ensure that the study utilizes the most representative combination of emotions, I considered emotions that (1) signify negative affect and (2) are

elicited by external circumstances or people other than the self (Storm and Storm, 1987).

Accordingly, I focused on six emotions to capture Canadians' initial response to COVID-19: sadness, fear, anxiety, anger, discouragement, and distress.

Although research on emotional responses to COVID-19 is in its infancy, there is some indirect support for the premise that Canadians' initial emotional response to the onset of the COVID-19 pandemic may have been primarily negative. In particular, past research finds that feelings of fear, worry, and other negative emotions related to diseases can cause changes in crowd attitudes and behaviours (Usher et al., 2020). For example, Bults et al. (2011) explained how more anxious people were more likely to wash their hands than less anxious ones, suggesting a relationship between anxiety and fear of germs. Lau et al. (2010) speaks about people experiencing some type of distress on their mental well-being in that they felt the need to wear face masks during the H1N1 influenza epidemic more than ones who did not show signs of distress. These are a few examples that indicate some type of relationship between mental distress and coping behaviours, and more specifically, that people tend to utilize different coping behaviours depending on their type or level of distress. As the COVID-19 disease made its way through the globe, individuals experienced all kinds of negative emotions (Brooks et al., 2020). So, we could see how some of the negative emotions studied by Bults et al. (2011) and Lau et al. (2010) above in the context of the H1N1 influenza could branch into the COVID-19 pandemic.

The COVID-19 pandemic gave rise to many negative emotions such as fear, anxiety, and irritability (Brooks et al., 2020) that could result in a unanimous feeling of panic among community members (Usher et al., 2020). In this study, however, I look to quantify the effect of a negative emotional response induced by the pandemic and understand the influence it had on different consumer coping behaviours through its effect on their overall well-being. In doing so, I

hope to build on research demonstrating a clear link between past epidemics and how consumers behave as a result of their different states of well-being.

Subjective Well-being Indicators

As mentioned earlier, the COVID-19 pandemic disrupted our lives, from how we feel and think to how we act. Social distancing measures and stay-at-home orders, among many other restrictions, increased fear and anxiety in individuals (Bueno-Notivol et al., 2021), which likely had a strong negative impact on individuals' subjective well-being. Subjective well-being describes the measure of overall well-being of an individual dependent on their personal experiences and evaluation of those experiences (Diener and Ryan, 2009). These experiences could be evaluated as positive or negative and could arise from judgements of different aspects of one's life (e.g., relationships, work, personal interests, and engagements) and could even pertain to reactions to life events (Diener and Ryan, 2009). As further mentioned by Diener and Ryan (2009), while this term results from subjective experiences, it is measured objectively, generally through self-reporting. In this research, I use three distinct measures to provide a comprehensive depiction of Canadians' subjective well-being during the COVID-19 pandemic: depression, loneliness, and hopelessness. Notably, in contrast to COVID-induced emotions, which focuses on how Canadians felt during the early stages of the COVID-19 pandemic, the well-being measures are focused on Canadians' present state, that is, the longer term and more lasting impact of the pandemic

Depression

Depression is an emotional state that results from temporary adjustment in someone's mood (Higuera, 2018). It can potentially turn into clinical depression, which is a recognized and treatable mental illness (American Psychiatric Association, 2020). Importantly, in the current

research, I am focused on the former (i.e., situational or state depression). Depression can deteriorate someone's mood, leading to energy loss, weight loss due to changes in appetite, and difficulty in making decisions. This, in turn, can seriously damage one's ability to perform functionally at both a personal and professional level (American Psychiatric Association, 2020). Depressive feelings are usually also associated with feelings of anxiety or are said to stem from other emotions such as stress or fear, after these emotions reach the point of altering an individual's well-being (Bueno-Notivol et al., 2021).

There are several studies demonstrating an association between the ongoing COVID-19 pandemic and people's level of depression. The measures and restrictions that occurred during the COVID-19 pandemic elevated the average level of depression that people experience (Ettman et al., 2020). A study by Abbott (2021) shows that US adults reported an increase of around 31% in feeling symptoms of anxiety and depression from June 2019 to December 2020. In contexts of pandemics and other disasters, feeling depressed could be a motivator to act in certain ways. Another study, by Wardell et al. (2020), shows that higher levels of depression among Canadian adults were also associated with increased coping motives for certain behaviours such as alcohol consumption.

Loneliness

Loneliness is defined as a deficiency in a person's social network that arises when their current social relations do not coincide with what they desire them to be (Peplau and Perlman, 1982). There are three different forms of loneliness: emotional, social, and physical (Landmann and Rohmann, 2021). The different forms of loneliness can be triggered in different ways, usually from separate events that occur throughout an individual's life (Landmann and Rohmann, 2021). Emotional loneliness describes the absence of emotional connections that a

person could experience with others while social loneliness describes the absence of having a satisfactory social network (Landmann and Rohmann, 2021). In addition to emotional and social loneliness, there is physical loneliness as well. Physical loneliness is experienced when there is a lack of physical contact with others or having the presence of others around, which was experienced in large amounts during the COVID-19 pandemic (Landmann and Rohmann, 2021).

The level of loneliness a person is experiencing at a point in time can affect their motivation to connect with others, whether in-person or by electronic means. A study by Juvonen et al. (2021) among adults in the U.S shows that people were less prone to connect with others through electronic means (i.e., social media, video chatting, texting, etc.) when they were feeling lonelier, in addition to being more depressed.

Much of the consumer behaviour literature links loneliness to depression as they both have similar properties (Cacioppo et al., 2006). Loneliness is also increasingly being studied separately as having the ability to strengthen a person's chances to undergo depression (Cacioppo et al., 2006). While loneliness can differ from one individual to the next (Peplau and Perlman, 1982), it is most evident among people who are socially isolated or separated from others (Cacioppo et al., 2015).

Hopelessness

As defined by Beck et al. (1974), hopelessness is a person's tendency to anticipate and assume negative future outcomes. Hopelessness is a concept that has been studied in relation to depression in the context of life event responses and as an indicator to depression through the Hopelessness Theory of Depression (Liu et al., 2015). Generally speaking, more (less) hope reflects higher (lower) well-being. Of import to the current research, recent literature on hopelessness shows that feelings of hopelessness can arise during global economic crises (Fiskin,

2021). Given that the COVID-19 pandemic was both a global economic and health crisis, it's plausible that it also elicited feelings of hopelessness.

Coping Behaviours

As lockdowns, government restrictions, social distancing measures, and the fear and spread of the novel coronavirus changed the lives of people from around the globe, consumers coped in a variety of different ways. In the context of global pandemics, coping is defined as a consumer's instant reaction to regain the freedom or control that they feel has been taken away from them by the current situation (Kirk and Rifkin, 2020). This reaction then leads to coping behaviours that allow consumers to exert the control they have lost and eventually, acquire new behaviours and adapt to the new norms as time passes (Kirk and Rifkin, 2020). In my research, I examined two categories of coping behaviours: maladaptive and adaptive. Maladaptive behaviours tend to help people cope with issues by providing short-term solutions that may not necessarily be constructive in the long term, whereas adaptive behaviours could be capable of improving well-being over the long-term. Maladaptive behaviours could include alcohol and cannabis consumption, impulse buying, compulsive buying, buying to cope, panic buying, stockpiling items, and excessive use of social media. In contrast, adaptive behaviours include seeking and attending therapy or counselling sessions and using meditation or other well-being-related applications.

As consumers lost access to some of the coping resources that they would have usually used pre-COVID, such as in-person counselling services, places of worship, and the ability to meet up with and confide in friends and family, they may have turned to marketplace products and services to find other means of coping. Many people began consuming more alcohol, for example, as one way to cope with the COVID-19 pandemic (Wardell et al., 2020). Alcohol

consumption is predicted to be one consequence of the pandemic that will last long-term (Rehm et al., 2020). A reason for this is because of the distress that pandemics, and other disasters, cause due to their economic and social consequences (de Goeij et al., 2015). The pandemic also caused individual and at-home alcohol consumption to increase as bars, restaurants and other places that are perceived to be typical for alcohol drinking closed down (Wardell et al., 2020). This, in turn, changed how people perceived solitary drinking. As more solitary drinking occurred, it became a less unusual or “atypical” activity, compared to pre-COVID times (Wardell et al., 2020). Therefore, alcohol consumption did not just increase during the pandemic, but the norms around this behaviour also changed.

Cannabis is also a substance that is widely used in Canada. In 2019, it was the most used drug among Canadians (Canada, 2021). Due to its wide use, it seems important to understand the effect of COVID-19 on cannabis consumption in Canada as a function of the emotional states of Canadians. There also seems to be a pattern in cannabis consumption among youths, in that it changes rapidly and most often in an increasing, as opposed to decreasing, fashion (Zuckermann et al., 2018). In a cross-sectional study by Leatherdale et al. (2021) in Canada, 27.3% of participants reported increases in their cannabis consumption during COVID-19, and 27.4% of participants reported this behaviour as a coping mechanism to the pandemic. The study also showed significant differences in Cannabis consumption between females and males and in different age groups (Leatherdale et al., 2021). In this research, I will be taking cannabis consumption as an outcome to COVID-19 pandemic’s effect on the emotional states of Canadians and will consider use of cannabis as all use of legal marijuana.

Natural disasters, such as the COVID-19 pandemic, count as one out of four of the major disruptors of consumption (Sheth, 2020), and substance consumption habits were not the only

ones that changed during the pandemic. The lack of leisure activities and stay-at-home orders that caused people to have more free time on their hands caused people all around to exhibit different types and extents of shopping or buying behaviours than they would have prior to the pandemic (Chiu et al., 2022; Sheth, 2020). Impulse buying is one behaviour. Impulse buying is a purchasing behaviour exhibited by consumers when they feel the need to make an instantaneous purchase of an item(s) with no deep thought of consequences or planning ahead (Rook, 1987). Impulse buying, particularly, was shown to have increased during the pandemic as a result of consumers' online shopping behaviour (Sheth, 2020), which was amplified due to their need to stay at home in fear of catching the virus (Jeffrey and Hodge, 2007). Impulse buying can also rise as a coping mechanism to negative emotions, such as distress, that rise during disruptive events (Li et al., 2020).

Panic buying is a form of impulse buying behaviour that has been exhibited by consumers during situations of uncertainty such as pandemics and natural disasters through time. Panic buying behaviour is exhibited when consumers shop for higher-than-usual amounts of products in fear of them running out (Chua et al., 2021). This behaviour stems from consumers' needs to protect themselves from supply shortages by overstocking on products (Chua et al., 2021). Panic buying is a coping behaviour that arises as a consequence to pandemics, and it usually results in the disruption of the current equilibrium and could differ per culture or country of residence (Arafat et al., 2020). However, during the COVID-19 pandemic, panic buying was not only displayed as a way for consumers to protect themselves from stockouts, but also to decrease their trips to grocery stores and shops in hope of reducing their risk of contact with people who may have the COVID-19 disease (Chua et al., 2021). In addition to the causes above, there could be psychological aspects that can result in panic buying behaviour among consumers

as well (Yeun et al., 2020). As discussed by Yeun et al. (2020), the four main psychological factors that affect panic buying include a person's perception of the level of risk that a crisis entails, the way someone chooses to cope with a crisis, the fear of not knowing what the future holds, and factors related to social-psychology such as social influence and trust.

Panic buying could be a result of emotional and psychological factors, especially ones that elicit fear or anxiety such as fear of catching a disease or losing a loved one, fear of an everlasting uncomfortable situation, or anxiety from being alone. During the COVID-19 pandemic, governmental restrictions began taking place and the need for social distancing increased, which in return, increased fear of the coronavirus disease and caused people to attempt different coping mechanisms to put themselves at ease (Islam et al., 2021). One of these coping mechanisms was the shift in their consumption. For example, in addition to buying essential products such as toilet paper and dried pasta, COVID-19 also increased the need to buy other products, such as hand sanitizer, that became a permanent part of almost every household (Barnes et al., 2021).

Impulsive shopping behaviours, such as panic buying, were not the only behaviours that resulted as a cause of the COVID-19 pandemic. All the restrictions that occurred to prevent the spread of COVID-19 caused for the need for people to turn to more low-risk social connections, particularly through digital mediums (Pandya & Lodha, 2021). In particular, the rise in fear-related emotions lead to increased need for transparency and knowledge seeking behaviours (Du et al., 2020). One way that consumers may have satisfied these needs is by turning to social media platforms for news on world matters and all kinds of information these days. Social media refers to any platform that allows for open conversation, interaction among users, and exchange of content by users (Simon et al., 2015). Popular examples include Twitter, Instagram, and

Facebook. These various social media platforms provide users the option to share their opinions on real-time events to a wide-range of people and can therefore have some of the most up-to-date content (Lerman and Ghosh, 2010). With COVID-19 hindering people's ability to go out and share their opinions in-person, I speculate that there was an increase in posting or sharing information on social media platforms during the pandemic. Not only that, but I believe that this relationship is tied to people's well-being changes over the time of the pandemic.

As mental well-being deteriorated due to the closures, lockdowns, and the spread of the COVID disease during the pandemic, the need to seek and use help services and products increased as a way to adaptively cope with the changes that the pandemic caused. In this research, I consider help services to be any services that consumers would seek to improve their well-being or feel better about themselves. These could include one-on-one sessions with therapists, group counselling, or online therapy platforms. These could also be online counselling services provided by companies such as MDLive, Talkspace, or BetterHelp (Caron, 2021). According to a poll done by the American Psychological Association (2020), 30% of psychologists claimed to have been meeting with more patients than they used to prior to the pandemic. MDLive, a telehealth provider in the United States, claimed to have had five times the amount of online therapy and psychiatric care services in 2020 compared to 2019 (Caron, 2021).

Other ways in which people could seek help is through mobile applications such as mental health or meditation applications. Businesses sought to address the issue of deteriorating mental well-being during COVID-19 in many different ways. One way is through the creation of wellness mobile applications that help consumers cope with the negative impact of the pandemic on their well-being. For example, COVID Coach is a mobile application that was created to help its consumers during COVID-19 by helping them look for coping resources and allowing them to

track their mental health throughout a time period (Jaworski et al., 2021). In this research, I investigate whether the COVID-19 pandemic increased the usage of such help services and products via the initial emotional response to COVID and subjective well-being.

Demographics as Moderators

Demographics have long been used by marketers to define sub-markets through useful classifications of different segments in the market in their segmentation strategies (Lin, 2002). For example, in a recent study by Lim (2002), demographic features were found to be useful identifiers in brand loyalty and preference differences from one consumer to another. Demographics do not just play a role in explaining what products consumers purchase or how their purchasing behaviour is, but they can also help describe why consumers sometimes behave the way they do. For example, while single men often buy and use luxury goods to attract romantic partners, women often buy these products as signals to other women (Wang and Griskevicius, 2014). This implies the importance of relationship status and gender in consumers' purchasing behaviour. Gender can also affect how consumers shop and how they perceive shopping as an activity. For example, women have been discovered to be more loyal to brands or shops than men (Herter et al., 2014). Highlighting the importance of demographic segmentation in consumer behaviour, this research will focus on two demographic characteristics commonly used to segment consumers (gender and income level) and explore whether they moderate the relationship between consumers' subjective well-being and their coping behaviours.

As briefly mentioned above, the effect of gender differences on different variable relationships has been studied in fields like consumer behaviour for decades. Specifically, people of different genders have been shown to undergo emotional experiences and get affected by

changes in well-being distinctively (Wilhelm, 2014). For example, adult females showed to have greater extremes of well-being than males in a study by George (2010). Gender also differentiates between emotional experiences, especially when it comes to expressing those emotions (Wilhelm, 2014).

Gender not only affects people's subjective well-being; it affects how they behave as well. While women usually tend to report higher well-being indicators, such as depressive symptoms, than men, men tend to report more behavioural outcomes than women. That being said, substance abuse, such as nicotine or alcohol consumption, is reported at a much higher level in men than women (Wilhelm, 2014). In terms of marijuana consumption, a study by Carliner et al. (2017) among Americans from the years 2002 through 2014 showed that significantly higher consumption was reported among men than women with an even higher increase rate within men (Carliner et al., 2017). Contrasting to the above statement, however, women tend to experiment with a larger range of coping mechanisms than men during times of stress, partially due to their nature to experience emotions—whether pleasure or pain—more deeply than men (Wilhelm, 2014).

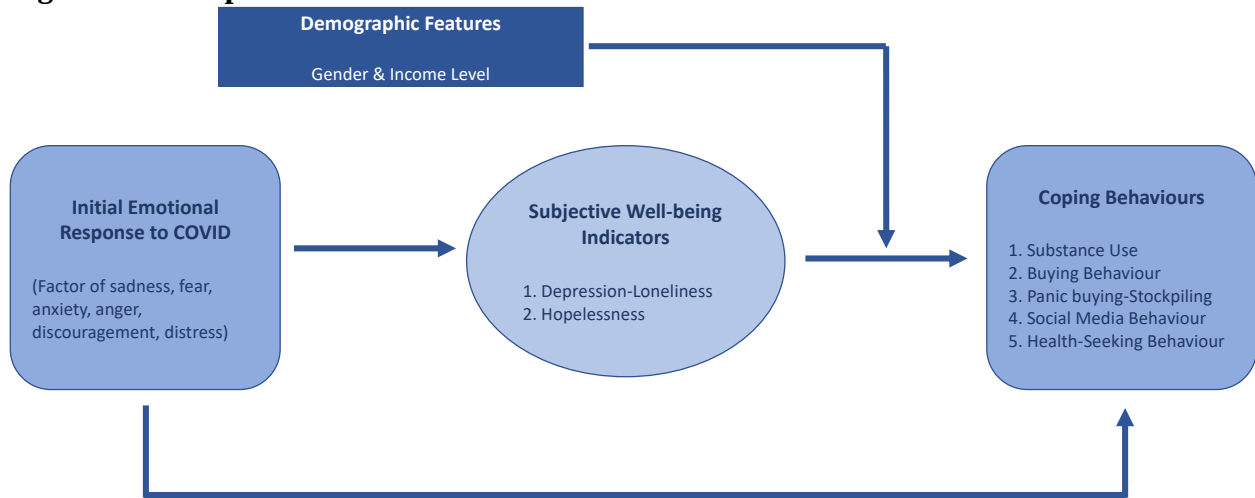
As stated by Yu and Chen (2016), the impact of income level has been largely a debated topic in the consumer behaviour literature on subjective well-being throughout the years. In some literature, income level is studied to be one of the predictors of both negative and positive emotional well-being, primarily due to the effect of social comparison (Deaton and Stone, 2013). Coping with negative emotional well-being that arises from having low-income levels (e.g., pain of hunger or sickness) was speculated to be more difficult than other types of coping (Yu and Chen, 2016). In theory, this was due to prospect theory, introduced by Tversky and Kahneman (1992), which demonstrates that pain from loss (of monetary value) is much stronger than

pleasure arising from gain. In my study, I believe that income level may moderate the relationship between the subjective well-being of individuals in Canada and their behaviours as consumers during the COVID-19 pandemic.

While direct relationships of income level such as the ones outlined above have been studied over time, in my research, I focus on the moderating effect of income level on the relationship between consumers' initial emotional response consumers' to COVID-19 and their coping behaviours via their subjective well-being. I predict that some behaviours will have been more exhibited by people in higher income brackets and that subjective well-being was overall worse among people in lower income brackets. As shown by Kesebir and Hong (2008), income level has been shown to be an important predictor in times of distress. The feeling of control that arises from monetary power leads people to cope differently with stress-inducing events (Lachman and Weaver, 1998). People with higher incomes, who in turn have access to more financial resources, tend to exert better coping mechanisms when dealing with negative emotions such as fear, especially under stressful conditions (Lachman and Weaver, 1998; Chiu et al., 2022). This leads me to speculate that income level will moderate the relationships stated above among consumers in Canada who were struggling to cope, emotionally and behaviourally, with the COVID-19 pandemic.

Conceptual Model and Hypotheses

Figure 1. below shows a visual representation of the research and hypotheses described above.

Figure 1. Conceptual Model

Formally, my hypotheses are:

H1 → Subjective well-being will mediate the effect of Canadian consumers' initial emotional response to COVID-19 on their coping behaviours. The more intense the initial emotional response to COVID-19, the greater the decrease in subjective well-being, and the greater the subsequent increase in coping behaviours.

H2 → Canadian consumers' gender and income level will moderate the effect of their initial emotional response to COVID-19 on coping behaviours via subjective well-being.

Methodology

Data Collection and Measures

I collected data from 687 Canadian adults through a survey (see Appendix for full survey) posted on Prolific Academic in June 2022. The participants were asked 57 questions about their emotions, behaviours, and demographic characteristics. The survey took, on average, around 5 minutes and 43 minutes to complete. In the first section of the survey, participants were asked two different types of questions about their initial emotional response to COVID-19 (IERC). Specifically, participants were first told, “First, we have some questions regarding how you felt during the onset of the COVID-19 pandemic. There are no right or wrong answers, just try to recall how you felt about COVID-19 when the pandemic began (around March 2020).”

The first set of questions in this section asked how often participants felt sad, afraid, anxious, angry, discouraged, and distressed during the first few months of the pandemic (i.e., *state* emotions; 1 = *not at all* to 7 = *almost every day*, $\alpha = .906$). The second set of questions asked how the COVID-19 pandemic changed how participants felt each of those emotions (i.e., *change* in emotions; 1 = *much less* to 7 = *much more*, $\alpha = .886$). For these measures and all subsequent measures, a composite score was computed by calculating the mean of all the scale items.

After completing these questions, participants completed my three subjective well-being measures: depression, loneliness, and hopelessness. Depression was measured with two items drawn from the PHQ-2 (Löwe et al., 2010). Participants were first instructed to think how often they were feeling bothered by the following two problems over the last two weeks (“having little interest or pleasure in doing things” and “feeling down, depressed or hopeless”, 0 = *not at all* to 3 = *nearly every day*, $\alpha = .827$). For measures on loneliness and hopelessness, participants were

instructed to indicate the extent to which they agreed with some statements provided to them; loneliness was measured with five items drawn from the Russell et al. (1980) R-UCLA scale (e.g., “I feel isolated from others,” 1 = *never* to 5 = *often*, $\alpha = .909$); and hopelessness was measured as a negative construct of measures of hope with three items taken from Lester (1998) measures of helplessness and hopelessness (e.g., “I look forward to the future with hope and enthusiasm,” 1 = *never* to 7 = *often*, $\alpha = .780$). Because higher scores on the hopelessness scale indicate greater hope, I refer to the construct as hope in my analysis and results. As previously mentioned, in contrast to the emotion measures which were focused on the early days of the pandemic, these measures were focused on the present and aimed to depict the longer-term effects of COVID-19 on Canadians.

Next, participants were asked a series of questions regarding the frequency at which they engage in certain behaviours. These behaviours include substance abuse (including alcohol consumption and cannabis consumption), social media usage (including commenting, posting and initiating communication on different social media platforms), buying behaviours (including impulse buying, compulsive buying, buying as a coping mechanism, panic buying and stockpiling), and health seeking behaviours such as using self-help applications and seeking therapy and/or counselling. These questions were asked using three scales, depending on the way the question was posed. Substance use was measured with two items—alcohol consumption and cannabis consumption—using a four-point scale in times per week (e.g., “how many times a week do you drink alcohol”, 1 = *0 days a week* to 4 = *6-7 days a week*, $\alpha = .113$). Buying behaviour was measured through three items—impulse buying, compulsive buying, and buying to cope; participants were asked how often they engaged in each of those behaviours (e.g., “how often do you make unplanned (i.e., spontaneous) purchases”, from 1 = *never* to 7 = *always*, $\alpha =$

.878). For panic buying-stockpiling, panic buying was measured on a scale from 1 = *none* to 7 = *all* and stockpiling was measured on a scale from 1 = *never* to 7 = *always* ($\alpha = .622$). Social media behaviour was measured with three items—commenting, posting, and initiating communication—on social media (e.g., “how often do you post on social media”, scale from 1 = *never* to 7 = *always*, $\alpha = .823$). Lastly, health-seeking behaviour was measured with three items as well: using meditation applications, using mental health-related applications, and speaking to a therapist (e.g., “how often do you use meditation applications?”, 1 = *never* to 7 = *always*, $\alpha = .715$).

After asking participants how often they engage in each of these behaviours, we asked them if the COVID-19 pandemic changed their engagement in them. In order to do so, we included a scale of 1-7 where 1 indicated that they now engage in the behaviour much less than they did before than the pandemic began, 4 indicated that they engage in it about the same as they did before, and 7 indicated that they engage in it much more than they did before the pandemic. These behavioural changes were measured in the same breakdown mentioned above for measuring the behavioural states (change in substance use $\alpha = .421$; change in buying behaviour $\alpha = .911$; change in panic buying-stockpiling $\alpha = .790$; change in social media behaviour $\alpha = .869$; change in health-seeking behaviour $\alpha = .784$).

The study concluded with basic demographic questions: gender, age, pre-tax income, living arrangement, relationship status, and political orientation. These questions were used to understand participants’ demographic background and test for a moderating relationship that each of these features may have had on the effect of the initial emotional response to COVID-19 on someone’s subjective well-being and the effect of well-being on someone’s coping behaviours to COVID-19.

Descriptive Analysis

As mentioned earlier, 687 Canadian adults participated in this survey. The average age was 33 and ranged from 18 to 76. In terms of gender, 346 participants reported identifying as male, and 341 reported identifying as female. Furthermore, 345 participants (50.7%) reported their pre-tax income level to be lower than or equivalent to \$69,999 CAD in the year of 2021. 20.2% of participants reported to be living alone while the rest were either living with an adult, living with a child(ren), or had other living arrangements. In terms of their relationship status, 54.3% of people reported to be in a relationship (either common law, non-common law, or married), while the second largest majority, 42.5%, reported to be single. Lastly, as participants had to report their political orientation on a scale of 1 to 7, where 1 depicted a very conservative view and 7 depicted a very liberal view, 61.3% reported a number higher than 4, indicating the sample was, on average, politically liberal.

Prior to testing my hypotheses, I ran a factor analysis including the emotions (states and changes) and subjective well-being questions to investigate whether the questions loaded on the anticipated factors. An exploratory factor analysis with a Direct Oblimin rotation yielded five factors with eigenvalues above 1. The first factor included the six state emotion questions; the second factor included the six change in emotion questions; the third included the two depression questions and the five loneliness questions; the fourth included the three hopelessness items; and the fifth and last factor included the state and change-in anger questions. However, given that the state and change anger questions also loaded on factor 1 and factor 2 respectively, I chose to opt for a four-factor solution and leave anger with the other four emotions. As for the well-being indicators, I combined depression and loneliness into one variable (hereafter, “depression-

loneliness” or DL) and kept hopelessness as a separate variable. This left me with two distinct indicators of subjective well-being.

I ran similar analyses with my dependent measures, one of which included all the states of behaviours and another of which included the changes in behaviours. The analysis with all five states yielded four factors with eigenvalues above 1. The first factor included the three measures of impulse buying, compulsive buying, and buying to cope; the second factor included stockpiling and panic buying; the third included the four measures of scrolling, posting, commenting and initiating communication on social media; and the fourth included two measures, using meditation applications and mental health-related applications.

The second analysis done was one for all five changes in behaviours, in which five factors were yielded with an eigenvalue above 1. The first factor included measures of alcohol consumption and cannabis consumption; the second factor included three buying measures, impulse buying, compulsive buying, and buying to cope; the third included stockpiling and panic buying; the fourth included three social media measures, posting, commenting, and initiating communication on social media; and the fifth and final factor included the three measures of using meditation applications, using mental health-related applications, and speaking to a therapist.

As the changes in behaviour loaded more clearly and more reliably (as indicated by a higher Cronbach’s alpha), I decided to focus my analysis on the change in behaviour. I combined change in alcohol consumption and change in cannabis consumption under the category of substance use; impulse buying, compulsive buying, and buying to cope under the category of buying behaviour; panic buying and stockpiling into a single category (hereafter, panic buying-stockpiling); posting, commenting and initiating communication on social media under the

category of social media behaviour; and lastly, using mediation applications, using mental health applications, and speaking to a therapist under the category of health-seeking behaviour.

Complete details of all three factor analyses are reported in the Appendix.

In conclusion, after thoroughly analyzing the data, I came up with eight variables to describe the direct and mediating relationships of COVID-19 and consumers' coping behaviours. The independent variable is the initial emotional response to COVID-19 (hereafter, IERC), which is comprised of six emotions. The mediating variables are depression-loneliness (hereafter, DL) and hopelessness, which are subjective well-being indicators of consumers in Canada. The dependent variables (i.e., the coping behaviours) are substance use, buying behaviour, panic buying-stockpiling, social media behaviour, and health-seeking behaviour.

Table 1 depicts means, standard deviations, and correlations of all model variables. Evidently, the IERC has the highest mean amongst all the variables in the model. Based on this table, it is noteworthy to point out that hope is negatively correlated with all the variables as it is the only variable that was measured on a negative scale (i.e., the only predictive variable where reporting a higher score on the scale indicated more positive well-being). Also, it is amongst one of the least correlated with other variables in the model. It seems that the only two variables that it correlates with are DL ($p < 0.001$) and buying behaviour ($p < 0.05$). Also, social media behaviour is only significantly correlated with the other coping behaviours; it is not significantly correlated with any of the predictive variables (IERC, DL or hope).

Table 1. Variables' Correlations Table

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Initial Emotional Response to COVID-19 (IERC)	4.80	0.94	–							
2. Depression-Loneliness (DL)	2.46	0.91	.35***	–						
3. Hope	3.19	0.83	-.27	-.52***	–					
4. Substance Use	3.82	1.04	.12**	.08*	-.05	–				
5. Buying Behaviour	4.09	1.27	.20***	.16	-.08*	.22***	–			
6. Panic Buying-Stockpiling	3.97	1.07	.21***	.07'	-.07	.21***	.46***	–		

7. Socialmedia Behaviour	3.80	1.10	.02	-.01	.05	.18***	.25***	.23***	—	
8. Health-Seeking Behaviour	3.97	0.90	.20***	.08*	-.04	.14***	.21***	.25***	.19***	—

‘p=0.054, * $p < .05$, ** $p < .01$, *** $p < .001$

In addition to the above, I did a descriptive analysis on the breakdown of the emotions that construct the IERC and created tables and graphs to capture a descriptive representation of the emotional impact of COVID-19 in its early stages through each emotion and its changes.

Tables 2 and 3 below show the means and standard deviations of each emotional response (initially) at the early stages of the pandemic and the changes in emotions from pre-COVID to after the pandemic began, respectively. Looking at Table 2, it is evident that anxiety ($M = 4.12$) was exhibited the most out of all six emotions during the early stages of the pandemic. Anxiety is also shown to be the emotion that has changed the most ($M = 5.08$) after the COVID-19 pandemic hit (see Table 3). On the contrary, anger was shown to have been least exhibited ($M = 3.49$, Table 2) and least changed after the pandemic began ($M = 4.50$, Table 3).

Table 2. Status of Emotions

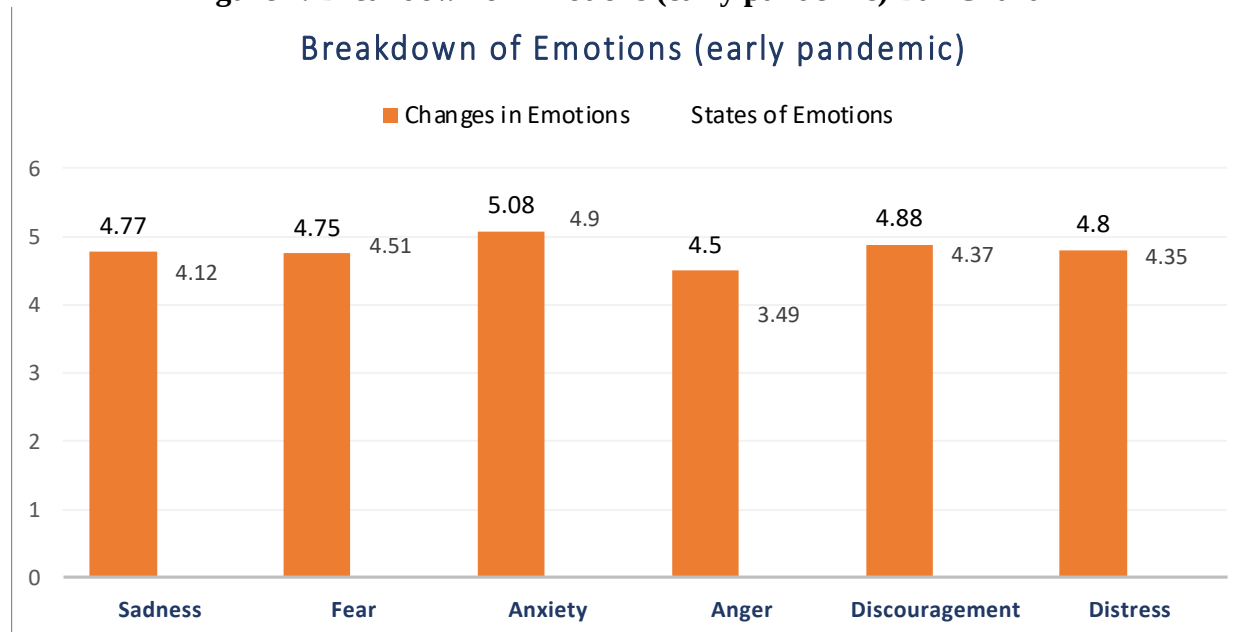
Emotion	<i>M</i>	SD
Sadness	4.12	1.70
Fear	4.51	1.78
Anxiety	4.90	1.76
Anger	3.49	1.70
Discouragement	4.37	1.79
Distress	4.35	1.77

Table 3. Change in Emotions

Emotion	<i>M</i>	SD
Sadness	4.77	1.14
Fear	4.75	1.22
Anxiety	5.08	1.22
Anger	4.50	1.20
Discouragement	4.88	1.22
Distress	4.80	1.09

Figure 2 shows a bar chart to visually represent the information in Tables 2 and 3.

Figure 2. Breakdown of Emotions (early pandemic) Bar Chart



The same analysis was done for coping behaviours. I broke down the five main categories into their separate components and created a descriptive representation of both how people are currently undergoing each behaviour and the change in each after the COVID-19 pandemic began.

Table 4 demonstrates the means and standard deviations of all components of coping behaviours in their current status. From this table, it is evident that the buying behaviours—impulse buying ($M = 3.61$), compulsive buying ($M = 3.46$), and buying to cope ($M = 3.63$)—are currently being exhibited more by consumers than other coping behaviours, with buying to cope being the most. Cannabis consumption ($M = 1.41$) was the least exhibited among all coping behaviours.

Table 5 demonstrates the means and standard deviations of the change in each behaviour after the COVID-19 pandemic occurred. The table shows that buying to cope is also the behaviour that changed the most ($M = 4.19$). In addition, impulse buying ($M = 4.08$) and

stockpiling ($M = 4.07$) also changed substantively. On the contrary, alcohol consumption ($M = 3.78$) changed the least after COVID began.

Table 4. Current Coping Behaviours

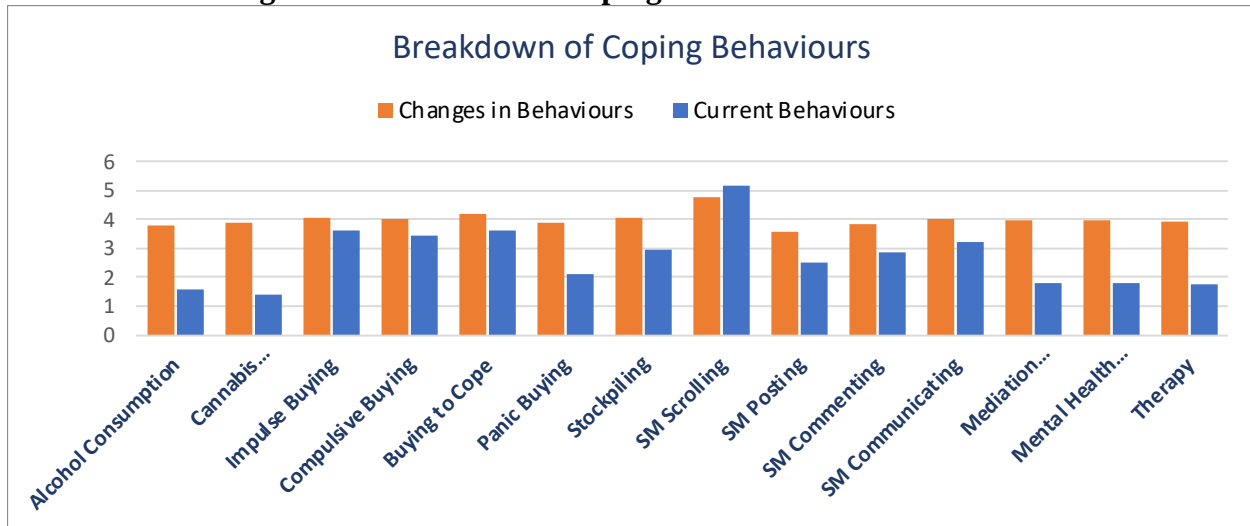
Coping Behaviour	Mean	SD
Alcohol Consumption	1.58	0.73
Cannabis Consumption	1.41	0.89
Impulse Buying	3.61	1.47
Compulsive Buying	3.46	1.59
Buying to Cope	3.63	1.72
Panic Buying	2.13	1.30
Stockpiling	2.96	1.61
SM Posting	2.49	1.45
SM Commenting	2.86	1.60
SM Communicating	3.20	1.75
Mediation Apps	1.82	1.35
Mental Health Apps	1.78	1.24
Therapy	1.77	1.40

Table 5. Changes in Coping Behaviours

Coping Behaviour	Mean	SD
Alcohol Consumption	3.78	1.27
Cannabis Consumption	3.87	1.33
Impulse Buying	4.08	1.35
Compulsive Buying	4.01	1.39
Buying to Cope	4.19	1.41
Panic Buying	3.88	1.13
Stockpiling	4.07	1.23
SM Posting	3.57	1.27
SM Commenting	3.82	1.18
SM Communicating	4.02	1.25
Mediation Apps	3.97	1.05
Mental Health Apps	3.98	1.01
Therapy	3.95	1.16

Figure 3 shows a bar chart to visually represent the information in Tables 4 and 5.

Figure 3. Breakdown of Coping Behaviours Bar Chart

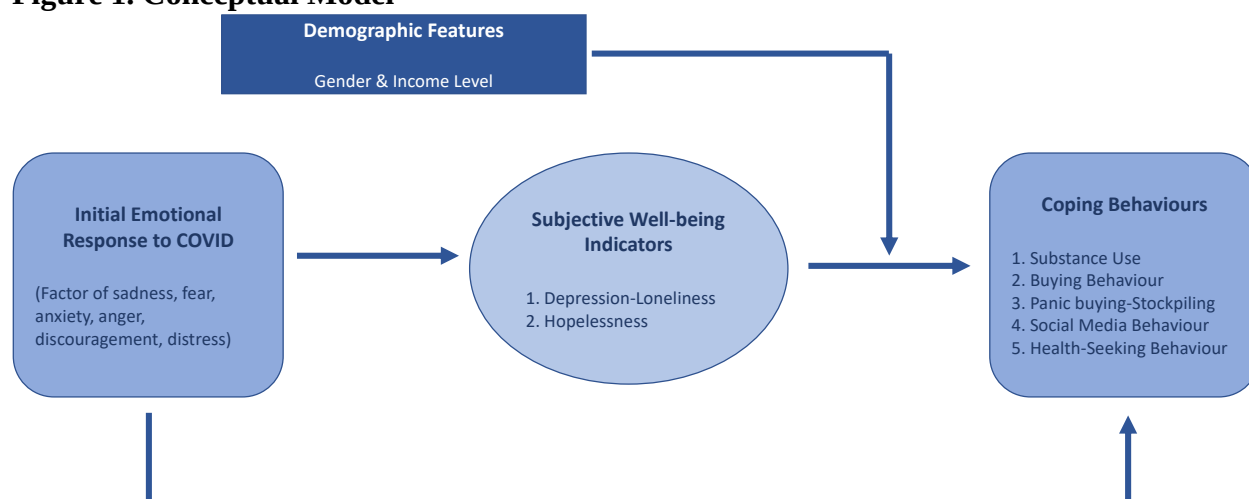


Regression Analysis

To test my conceptual model depicted in Figure 1, I used Hayes' PROCESS macro model 16. This model tests my two proposed hypotheses. It tests the direct effect on IERC on each

coping behaviour: substance use, buying behaviour, panic buying-stockpiling, social media behaviour, and health-seeking behaviour (a separate model was run for each coping behavior.) It also tests the indirect effect of IERC on each coping behaviour through DL and hope (i.e., mediation), and whether gender and income moderate these indirect effects.

Figure 1. Conceptual Model



Results

For ease of exposition, because the front half of the model (i.e., IERC → DL and hope) is the same regardless of the outcome variable, I have separated the presentations of results accordingly.

The Effect of IERC on Hope

For the effect of IERC on the subjective well-being indicator hope, the regression analyses revealed that IERC significantly predicted Hope ($B = -.237$, $SE = .0326$, $t = -7.26$, $p < .001$). As IERC increased, hope decreased. This means that the stronger the negative emotional impact of COVID-19 was on people, the less hopeful (i.e., the more hopeless) they felt.

The Effect of IERC on Depression-Loneliness

For the effect of IERC on the subjective well-being indicator DL, the regression analyses revealed that IERC also significantly predicted DL ($B = .3403$, $SE = .0349$, $t = 9.75$, $p < .001$).

As IERC increased, DL also increased. This means that as participants reported feeling a stronger negative emotional impact of COVID-19, they also reported higher levels of depression and loneliness.

Moderation

After looking into the front half of the model, I looked into the back half of the model. In this section, I will be reporting the results of the main (direct) effect of IERC on each coping behaviour individually.

Substance Use

A regression model with the IERC, DL, hope, income, gender, DL x income, hope x income, DL x gender, and hope x gender as predictors, and substance use as an outcome, revealed only a significant main effect of IERC ($B = 0.12$, $SE = 0.05$, $t = 2.52$, $p = .012$). Meaning, as the IERC increased, so did substance use.

Buying Behaviour

The same model with buying behaviour as an outcome revealed a significant main effect of the IERC ($B = .21$, $SE = .06$, $t = 3.72$, $p < .001$), a significant effect of hope ($B = -.41$, $SE = .21$, $t = -1.98$, $p = .049$), a significant DL x income interaction ($B = -.08$, $SE = .36$, $t = -2.30$, $p = .021$), and a significant hope x gender interaction ($B = .29$, $SE = .14$, $t = 2.17$, $p = 0.03$).

To further breakdown the interactions, I examined the conditional effects of each. The conditional effects revealed that for both genders, DL significantly positively impacted buying behavior when income was low (-1 SD from the mean; for males: $B = .33$, $SE = .12$, $t = 2.82$, p

= .005; for females: $B = .37$, $SE = .12$, $t = 3.05$, $p = .002$) or at the mean (for males: $B = .17$, $SE = .09$, $t = 1.95$, $p = .05$; for females: $B = .21$, $SE = .09$, $t = 2.21$, $p = .027$).

Because the conditional effects of the full model were not significant for hope x gender, I ran a simplified Model 1 to further probe the interaction, where hope was the predictor variable, buying behaviour was the dependent variable, and gender was the moderator. This analysis revealed that gender significantly moderates the direct relationship between hope and buying behaviour for males ($B = -.23$, $SE = .08$, $t = -2.86$, $p = .0044$), but not for females. In other words, the more hopeful male participants were, the less buying behaviours they reported during COVID-19.

Panic buying-Stockpiling

The same model was run for panic buying-stockpiling as an outcome and showed a significant main effect of IERC ($B = .23$, $SE = .05$, $t = 4.82$, $p < .001$), a significant effect of DL ($B = .39$, $SE = .19$, $t = 2.05$, $p = .041$), and a significant effect of hope ($B = -.49$, $SE = .21$, $t = -2.31$, $p = .021$). Neither interaction term was significant ($ps > .05$).

Social Media Behaviour

The same model with social media behaviour as an outcome revealed only one significant effect: DL x income ($B = -.07$, $SE = .032$, $t = -2.06$, $p = .0402$). Because the conditional effects of the full model were not significant for DL x income, I ran a simplified Model 1 for social media behaviour to further probe the interaction, where DL was a predictor variable, social media behaviour was the dependent variable, and income level was the moderator. This analysis showed that income significantly moderates the effect of DL on social media behaviour for people with higher incomes only (+1 SD from the mean; $B = -.13$, $SE = .07$, $t = -1.94$, $p = .0524$). This means that people with higher income levels demonstrated decreases in their social

media behaviour during COVID-19, as they felt more depressed and lonelier. When income was at the mean or lower (-1 SD from the mean), the effect of DL on social media behaviour was not significant.

Health-Seeking Behaviour

The final model that was run includes the same predictive and moderating variables as above with health-seeking behaviour as an outcome. This model revealed a significant main effect of IERC ($B = .16$, $SE = .04$, $t = 3.97$, $p < .001$) and a significant main effect of gender ($B = .28$, $SE = .07$, $t = 4.11$, $p < .001$).

Moderated Mediation

In this section, I will be reporting results from the regression analyses that explain whether the indirect effect of IERC on each coping behaviour via DL and hope is moderated by gender and income.

Substance Use

For the moderated mediated relationship between IERC and the first coping behaviour, substance use, the regression analyses showed that both mediation via DL and hope were not significant (95% CIs for each index of partial moderated mediation include 0).

Buying Behaviour

For the moderated mediated relationship between IERC and buying behaviour, the regression analyses showed that the indirect effect of emotions on buying behaviour via DL was significantly moderated by income level (index = $-.0278$, $SE = .01$, 95% CI = $-.0559$ to $-.0008$). Further analysis revealed that when income was low (-1 SD from the mean), increasing emotions lead to increased buying behaviours via DL ($B = .11$ for males, $B = -.13$ for females). When income was mid (at the mean) or high ($+1$ SD from the mean), the indirect effect was not significant. Lastly, gender did not significantly moderate the indirect effect of IERC on buying

behaviour via DL (95% CIs for each index of partial moderated mediation include 0), and neither gender nor income significantly moderated the indirect effect of IERC on buying behaviour via DL or hope (95% CIs for each index of partial moderated mediation include 0).

Panic buying-Stockpiling

For the moderated mediated relationship between IERC and panic buying-stockpiling behaviour, regression analyses showed that neither the effect of IERC on substance use through DL nor hope were significant (95% CIs for each index of partial moderated mediation include 0).

Social Media Behaviour

For the moderated mediated relationship between IERC and the coping behaviour, social media behaviour, regression analyses showed that neither the effect of IERC on substance use through DL nor hope were significant (95% CIs for each index of partial moderated mediation include 0).

Health-Seeking Behaviour

For the moderated mediated relationship between IERC and health-seeking behaviour, regression analyses showed that neither the effect of IERC on substance use through DL nor hope were significant (95% CIs for each index of partial moderated mediation include 0).

In conclusion, the indirect relationship between IERC and changes in their buying behaviour via DL was the only indirect relationship significantly moderated by income or gender.

Discussion

The emotional response that consumers initially felt during the early stages of the pandemic appeared to influence their subjective well-being and their coping behaviours in one way or another. People around the world felt emotionally influenced by COVID-19 (Brooks et al., 2020), just as in the past they felt this influence due to other outbreaks such as H1N1 influenza (Bults et al., 2011; Lau et al., 2010).

My model tests the direct relationship between IERC and consumers' coping behaviours in Canada, the indirect relationship via DL and hope, and the moderation of gender and income level on the indirect relationship. The independent variable, IERC, represents the initial emotional impact of COVID-19 through a combination of six negative emotions, the mediator variables, DL and hope reflect an individuals' subjective well-being and were used to capture the long-term effects of COVID-19 that are evident in the present moment (as compared to IERC which focused on the beginning of the pandemic), and the dependent variables represent five changes in behaviours demonstrated by Canadian consumers.

After collecting data through Prolific Academic and running multiple versions of Model 16 (one per dependent variable) with Hayes' PROCESS macro, I reached a number of conclusions.

To begin, this research identified the past emotional status and current behavioural status of consumers in Canada as it demonstrated a descriptive analysis of the strength of the impact of each negative emotion and subsequent coping behaviour. The results from the descriptive analysis on emotions revealed that anxiety was the most affected emotion during the pandemic. Canadians felt anxious much more than they felt angry, sad, afraid, discouraged or distressed. This leads to many possibilities on how we, as a community, could do to overcome the surplus in

anxiety among individuals. As for coping behaviours, the descriptive analysis revealed that the most increased behavioural response to COVID-19 was buying to cope, i.e., buying items to make oneself feel better. This aligns with the results discussed in the next few paragraphs on the relationship between the IERC, depression-loneliness, and hopelessness on buying behaviour.

It was clear from the results that both mediating variables (DL and hope) showed a significant relationship with IERC. The relationship between IERC and DL was positive, meaning that as people reported feeling a stronger negative emotional impact of COVID-19, they felt more depressed and lonelier; likewise, the relationship between IERC and hope was negative, in that as IERC increased, hope decreased (i.e., hopelessness increased).

As for the moderated direct relationships, IERC had a significant effect on all the dependent variables, except for social media behaviour. Since all coefficients explaining those relationships were positive, as IERC increased, all coping behaviours— except social media behaviour—increased as well. That being said, as individuals felt stronger negative emotions when the pandemic first began, they tended to cope with those emotions by increasing some typical consumer coping behaviours such as using substances, buying and seeking health outlets.

Breaking down these relationships further, there are a few notable findings. The first being that substance use is not significantly related to any predictive variable, except IERC. This means that subjective well-being, when measured as DL and hope, does not predict consumers' change in substance use. The analysis of buying behaviour revealed the largest number of significant relationships. It was positively predicted by IERC, positively predicted by the DL x income level interaction, and negatively predicted by the hope x gender interaction. Moreover, its relationship with the DL x income interaction demonstrated that for people who make low and average incomes, feeling more depressed and lonelier was associated with a greater change

in buying behavior after the COVID-19 pandemic began. As for panic buying-stockpiling, its significant positive relationship with IERC indicates that as IERC increased, so did the tendency for consumers to engage in panic buying and stockpiling. The results also showed that hope had a significant negative direct relationship with consumers' panic buying and stockpiling.

While social media behaviour was not significantly predicted by IERC, it was significantly predicted by the interaction of DL x income. Follow-up analysis revealed that, for high-income consumers, feeling more depressed and lonelier was associated with less social media behaviour during the COVID-19 pandemic as compared to before the pandemic. Lastly, for health-seeking behaviours, the only significant effects were positive relationships with IERC and gender.

As for the moderated mediation analysis, the only significant result was that income level moderated the indirect effect of IERC on buying behaviour via DL. For low-income consumers, the greater the IERC, the more depressed and lonelier they felt, and the greater their increase in buying behaviour. The same relationship for average or high-income consumers was not significant. This result demonstrates potentially long-term implications on the nature of purchasing and its impact on the economy in the future. As low-income consumers increase their purchasing to cope with negative changes in their wellbeing due to traumatic events such as COVID-19, it can cause retailers to change their demand/supply policies and, in turn, cause a disequilibrium in the economy. I discuss this issue more in the implications section below.

In the last two sections of this paper, I will discuss the theoretical and managerial implications of my research while also highlighting a few obstacles that I stumbled upon and possible ideas for future research.

Theoretical and Managerial Implications

Theoretical Implications

The results of my research make a number of theoretical contributions. First, it advances the research on how COVID-19 impacted consumer behaviour. As COVID-19 is still a relatively novel topic, there is still ongoing research on the matter. For example, the lasting effects that it has had on consumers' well-being and their behaviour in the marketplace is still relatively unknown due to the novelty of the topic and the sudden changes it caused in our world. My research helps explain the dynamics of various consumption behaviours (substance use, typical buying behaviours, panic buying, social media behaviour, and health-seeking behaviour) in Canada since the pandemic began.

Furthermore, it builds on previous consumer behaviour literature on emotions (see Richins', 1997; Laros and Steenkamp, 2005; Storm and Storm, 1987) and goes into modern literature on COVID-19 to create a new, single variable that captures the negative emotional impact of COVID-19.

Another theoretical implication comes from this study's contribution to the literature on healthcare, specifically mental health. With IERC as the primary independent variable, this research investigates the impact of initial emotional response to COVID-19 on long-term, subjective well-being. Therefore, it helps explain some mental well-being drivers that can potentially lead to maladaptive consumer behaviours that harm consumers' mental and physical health (e.g., alcohol consumption). It helps researchers in this field in connecting consumers' mental well-being to their subsequent coping behaviours and allows for more detailed studies on the impact of COVID-19 on mental health in Canada.

Lastly, the study explores the moderating effects of two demographic characteristics, gender and income level, and in doing so, contributes to both the consumer behaviour literature and healthcare literature by testing novel relationships regarding how the effects of IERC, subjective well-being, and consumer coping behaviors may change depending on gender and income level. As explained previously, I chose gender as females and males have been shown to experience emotions (Wilhelm, 2014) and behave (Carliner et al., 2017) differently over time. I chose income level as it has been widely discussed over the years in the consumer behaviour research (Yu and Chen, 2016), but not much research demonstrates its moderating impact, especially within the context of Canadian consumers.

Managerial Implications

The results of my research also have managerial implications, particularly for the Government of Canada, marketers, mental health professionals, and public sector employees.

As this research focuses on the Canadian market, and in return the Canadian economy, the Government of Canada could benefit from using it to understand the pain points that have been evident in the past two and a half years since the pandemic began as a result of extreme buying behaviours. It could help in identifying changes in buying behaviour that may have affected the overall economy and lead to implementing policies that are more tailored to the issues at-hand. Furthermore, as this research also looks into the moderating effect of income level, the Government of Canada could use the results to adjust the allocation of subsidies, tax returns or funding according to the required part of the economy or needs of people depending on their level of income.

As the research showed that one way of coping for low-income consumers is through increasing their buying behaviour, it is important to point out the long-term effect that this

finding may imply. It is noteworthy to look into this impact further as low-income consumers might continue to buy more in order to cope with traumatic experiences, such as COVID-19, causing them to fall further down the income level and potentially under the line of poverty. This issue should be dealt with, either by addressing it with low-income individuals and giving them the opportunity to cope through more adaptive behaviours, or by increasing subsidies to households with low-income individuals.

Furthermore, as the results revealed that gender or income-level significantly moderated the relationship between hope or DL and buying behaviour, marketers can benefit from using the results in this research to improve their approaches when targeting females vs. males, or people with low vs. average vs. high income levels. They can also benefit in understanding how people have been behaving on social media when they were feeling depressed and lonely or hopeless during the pandemic and use this information to create the appropriate social media advertising.

Mental health professionals would benefit from this study in identifying ways to deal with their patients, depending on them being depressed and lonely or hopeless, to create a more effective and specifically targeted healing plan per patient category. It can also help them in classifying adaptive from maladaptive coping behaviours that may have increased during the COVID-19 pandemic and could understand what mental triggers may play a role in increasing those behaviours. It could also be used to inspire collaborations with the public sector and create more focused AA meetings, group counselling, etc., and include ways to subsidize those services for lower income sectors as there was a significant main effect of IERC on health-seeking behaviour.

Limitations and Future Research

While having important both theoretical and managerial implications, this research also has some limitations that should be made aware of and possibly improved upon in the future.

As mentioned earlier, the relationship between IERC and buying behaviour via DL was the only significant moderated mediation relationship, moderated by income. One suggestion for future research could be to simplify the conceptual model to include one moderated mediation effect with one mediator and one dependent variable. In addition, since each dependent variable is a construct of several measures, focusing on less variables (or category of measures) and extracting more data on a single variable could have possibly created more significant results. Also, breaking down the change in buying behaviour variable (i.e., the one pertaining to the only significant moderated mediation relationship) into its three measures—impulse buying, compulsive buying, and buying to cope—and looking at the relationship with each individually may have provided further insights.

Human error should not be taken for granted when assessing this research as I am well aware that the results are based on people's opinion on COVID-19 and the emotional impact it has caused them. The timelapse between the point at which the survey was released to participants and the beginning of the pandemic is a bit over two years, and so, could cause some ambiguity in the data that was collected. While I attempted to differentiate between IERC and subjective well-being indicators by clearly defining them and distinguishing the time frame at which their effect was present, I could not avoid the issues that may have risen from people's biases and any distortion in their memories while trying to recall feelings and emotions that they felt in the past.

I would also like to point out that by using survey methodology, I could not infer any causal relationships between the variables in the model. The findings from the research all refer to correlated relationships only. I tried to mitigate this issue by separating the variables into independent and dependent variables, however, as there are many other variables that could potentially come into play when explaining my observed findings, I cannot claim any causal relationships took place. Future research could be done on similar variables with experimental methodology instead of survey in order to claim causality from the results.

Given that the findings clearly demonstrated buying behaviour to be a coping response, it might be possible that as people increased their purchasing over the past couple of years to cope with the pandemic, they lead retailers to misinterpret the stock they would require to sustain the spurge in purchases (Selyukh, 2022). The outcome for this misinterpretation has already caused retailers to put a larger than normal amount of their items on sale or send them to liquidators to get rid of them (Selyukh, 2022) and large multinational companies to lay off employees to cut costs (Durrani, 2022). As Selyukh (2022) explains that recent purchasing behaviour is normalizing once again but is still higher than pre-COVID purchasing behaviour, future research could entail to tracking buying behaviour trends over a period of time to identify whether it has reached a peak.

As COVID-19 has been somewhat of a controversial topic over the past couple of years, I understand that studying the emotional effect it had on consumers' coping behaviours in Canada does not necessarily depict an accurate view of the global impact, especially since each country had its own regulations and precautions throughout the pandemic that may have affected people's well-being and behaviours. Therefore, future research can be done to test the hypotheses on a global basis rather than in Canada, to broaden this study's range of relevance.

Lastly, my research was limited to two demographic moderator variables—gender and income level. However, there could have been many other moderators to consider, such as living arrangements or relationship status, that could have played a major role in influence the effect of IERC on coping behaviours via my two subjective well-being indicators. Lastly, whereas I investigated the effect of the emotional impact of COVID-19 on consumers' coping behaviours, future research could be done on other effects of COVID-19 (e.g., the social impact of COVID-19 or the physical impact of getting sick with the virus).

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Appendix

Survey

Emotional & Behavioural Responses to COVID-19 Full Survey (from Qualtrics)

Welcome and Consent Form

Informed Consent Date: ``${date://CurrentDate/FL}``

Study Name: Consumers' Emotional and Behavioural Responses to COVID-19 in Canada

Researchers: Tima Abboud (Principal Investigator, Graduate Student, Master of Science in Management Practice Program, York University, tabboud@yorku.ca)

Purpose of the research: We are interested in knowing the effect of COVID-19 on some of your emotions and behaviours.

What you will be asked to do in the research: In this study, you will be asked to answer questions in an online survey on some of your current feelings and behaviours and how they have changed since the COVID-19 pandemic began. You will also provide basic demographic information in the survey. In exchange for your participation for your participation, you will be compensated approximately 0.8 GBP by the Prolific Academic panel.

Risks and Discomforts: Potential risks from this study are low. You may be asked to read or recall information that elicits a mild degree of discomfort. Some of the survey questions may make you uncomfortable or upset, or you may simply wish not to answer some questions. You are free to decline to answer any questions you do not wish to answer, or to stop participating at any time by closing your browser and doing so will not affect your compensation.

Benefits of the Research and Benefits to You: This study will provide valuable information about how people have been affected by the COVID-19 pandemic.

Voluntary Participation: Your participation in the study is completely voluntary and you may choose to stop participating at any time and doing so will not affect your compensation. Your decision not to volunteer will not influence the nature of the ongoing relationship you may have with the researchers, study staff, or York University either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you so decide. Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, York University, or any other group

associated with this project. Additionally, withdrawing from the study will not affect your compensation.

Confidentiality: All information you supply during the research will be held in confidence and your identity will remain anonymous and will not appear in any report or publication of the research. All information you supply during the research will be held in confidence. Electronic data will be stored on a password-protected computer, and only research staff will have access to this information. The data will be archived on password-protected devices and upon publication of this research, anonymous data may be made available to other researchers either via the journal publication system, an online research data repository, or by individual request. Confidentiality will be provided to the fullest extent possible by law.

The data collected in this research project may be used – in an anonymized form - by members of the research team in subsequent research investigations exploring similar lines of inquiry. Such projects will still undergo ethics review by the HPRC, our institutional REB. Any secondary use of anonymized data by the research team will be treated with the same degree of confidentiality and anonymity as in the original research project.

The researcher(s) acknowledge that the host of the online survey (e.g., Qualtrics, Survey Monkey etc.) may automatically collect participant data without their knowledge (i.e., IP addresses.) Although this information may be provided or made accessible to the researchers, it will not be used or saved without participant's consent on the researcher's system. Further, because this project employs e-based collection techniques, data may be subject to access by third parties as a result of various security legislation now in place in many countries and thus the confidentiality and privacy of data cannot be guaranteed during web-based transmission.

Questions about the Research: If you have questions about the research in general or about your role in the study, please feel free to contact me, Tima Abboud, at tabboud@yorku.ca or my supervisor by email at mmaute@yorku.ca or by phone 416-736-2100 Ext: 33926. You may also contact the Program in Master of Science in Management Practice at mscinfo@yorku.ca and/or 416-736-5407.

This research has received ethics review and approval by the Delegated Ethics Review Committee, which is delegated authority to review research ethics protocols by the Human Participants Review Sub-Committee, York University's Ethics Review Board, and conforms to the standards of the Canadian Tri-Council Research Ethics guidelines. If you have any questions about this process, or about your rights as a participant in the study, please contact the Sr. Manager & Policy Advisor for the Office of Research Ethics, 5th Floor, Kaneff Tower, York University (telephone 416-736-5914 or e-mail ore@yorku.ca).

Legal Rights and Signatures: I have understood the nature of this project and wish to participate.

I am not waiving any of my legal rights by signing this form. By selecting "yes" below, I consent to participate in this study.

- ☐ Yes, I consent to participate in this survey.
- ☐ No, I do not consent.

IERC Instructions

First, we have some questions regarding how you felt during the onset of the COVID-19 pandemic. There are no right or wrong answers, just try to recall how you felt about COVID-19 when the pandemic began (around March 2020).

IERC Questions

During the first few months of the COVID-19 pandemic, how often did you feel sad?

- ☐ 1- Not at all
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Almost everyday

During the first few months of the COVID-19 pandemic, how often did you feel afraid?

- ☐ 1- Not at all
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Almost everyday

During the first few months of the COVID-19 pandemic, how often did you feel anxious?

- ☐ 1- Not at all
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Almost everyday

During the first few months of the COVID-19 pandemic, how often did you feel angry?

- ☐ 1- Not at all
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Almost everyday

During the first few months of the COVID-19 pandemic, how often did you feel discouraged?

- ☐ 1- Not at all
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Almost everyday

During the first few months of the COVID-19 pandemic, how often did you feel distressed?

- ☐ 1- Not at all
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Almost everyday

How has the COVID-19 pandemic changed/affected your level of sadness?

- ☐ 1- Much less
- ☐ 2
- ☐ 3
- ☐ 4- No difference
- ☐ 5
- ☐ 6
- ☐ 7- Much more

How has the COVID-19 pandemic changed/affected your level of fear?

- ☐ 1- Much less
- ☐ 2
- ☐ 3
- ☐ 4- No difference
- ☐ 5
- ☐ 6
- ☐ 7- Much more

How has the COVID-19 pandemic changed/affected your level of anxiety?

- ☐ 1- Much less
- ☐ 2
- ☐ 3
- ☐ 4- No difference
- ☐ 5
- ☐ 6
- ☐ 7- Much more

How has the COVID-19 pandemic changed/affected your level of anger?

- ☐ 1- Much less
- ☐ 2
- ☐ 3
- ☐ 4- No difference
- ☐ 5
- ☐ 6
- ☐ 7- Much more

How has the COVID-19 pandemic changed/affected your level of discouragement?

- ☐ 1- Much less
- ☐ 2
- ☐ 3
- ☐ 4- No difference
- ☐ 5
- ☐ 6
- ☐ 7- Much more

How has the COVID-19 pandemic changed/affected your level of distress?

- ☐ 1- Much less
- ☐ 2
- ☐ 3
- ☐ 4- No difference
- ☐ 5
- ☐ 6
- ☐ 7- Much more

Wellbeing Instructions

Next, we are interested in **how you're feeling now**. Again, there are no right or wrong answers. Just please answer honestly.

Wellbeing Questions

Over the last two weeks, how often have you been bothered by the following problems?

Having little interest or pleasure in doing things

- ☐ 0- Not at all
- ☐ 1- Several days
- ☐ 2- More than half the days
- ☐ 3- Nearly everyday

Feeling down, depressed or hopeless

- ☐ 0- Not at all
- ☐ 1- Several days
- ☐ 2- More than half the days
- ☐ 3- Nearly everyday

Please indicate the extent to which you agree with the following statements.

I feel isolated from others.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

I lack companionship.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

I am no longer close to anyone.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

I am unhappy being so withdrawn.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

There is no one I can turn to.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

I look forward to the future with hope and enthusiasm.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

I have enough time to accomplish the things I most want to do.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

In the future I expect to succeed in what concerns me most.

- ☐ 1- Never
- ☐ 2- Seldom
- ☐ 3- Sometimes
- ☐ 4- Regularly
- ☐ 5- Often

Coping Behaviours Instructions

Thank you for answering those questions about how you are feeling.

In the last part of the survey, we are interested in how often you engage in various consumer behaviours.

Coping Behaviour Questions

CB Instructions Please answer the following questions.

How many times a week do you drink alcohol?

- ☐ 0 days a week
- ☐ 1-2 days a week
- ☐ 3-5 days a week
- ☐ 6-7 days a week

Cannabis Consumption How many times a week do you consume cannabis (known as marijuana, hash or pot)?

- ☐ 0 days a week
- ☐ 1-2 days a week
- ☐ 3-5 days a week
- ☐ 6-7 days a week

How often do you make unplanned (i.e., spontaneous) purchases?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you buy things to make yourself feel better?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you find yourself buying things you don't need?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you stockpile items?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

From what you can recall, how much of your purchasing can be categorized as panic buying?

- ☐ 1- None
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- All

How often do you scroll through social media?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you post on social media?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you comment on social media (e.g., like stories, comment on posts, etc.)?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you initiate communication with others on social media (e.g., replying to stories, sending DMs, video chat, etc.)?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you use meditation applications?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you use mental health related applications?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

How often do you speak to a therapist or other licensed mental health professional?

- ☐ 1- Never
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Always

Now, we would like to know if the COVID-19 pandemic **has changed** how frequently you engage in the following behaviours. When answering these questions, try to recall how often you did these things before the pandemic started compared to now.

Alcohol Consumption

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Cannabis Consumption

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Unplanned (i.e., spontaneous) purchasing

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Unnecessary purchasing (i.e., buying things you don't need)

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Emotional purchasing (i.e., buying items to make you feel better)

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Stockpiling items

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Panic Buying

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Scrolling through social media

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Posting on social media

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Commenting on social media posts

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Initiating communication/conversation through social media

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Using meditation apps

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Using mental health applications

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Speaking to a therapist or other licensed mental health professionals

- ☐ 1- Much less than before
- ☐ 2
- ☐ 3
- ☐ 4- About the same as before
- ☐ 5
- ☐ 6
- ☐ 7- Much more than before

Demographics Questions

What gender do you identify as?

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to say

What is your age?

What is your relationship status?

- ☐ Single
- ☐ In a non-common law relationship
- ☐ In a common law relationship
- ☐ Married
- ☐ Divorced
- ☐ Other

What is your living status?

- ☐ Living alone
- ☐ Living with a partner
- ☐ Living with a roommate
- ☐ Living with children
- ☐ Living with both a partner and children
- ☐ Other

What was your pre-tax household income during the year 2021?

- ☐ Below 30,000 CAD
- ☐ 30,000-49,999 CAD
- ☐ 50,000-69,999 CAD
- ☐ 70,000-89,999 CAD
- ☐ 90,000-109,999 CAD
- ☐ 110,000 CAD and above

What is your political orientation?

- ☐ 1- Very conservative
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7- Very liberal

Which Canadian political party do you most identify with?

- ☐ Conservative
- ☐ Liberal
- ☐ People's Party of Canada
- ☐ New Democratic Party
- ☐ Other
- ☐ None

Factor Analysis

1. Emotions (States and Changes) and Subjective Wellbeing Components

Factor	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	7.659	34.814	34.814
2	3.726	16.934	51.748
3	1.941	8.822	60.57
4	1.287	5.85	66.42
5	1.085	4.932	71.352
6	0.89	4.047	75.399
7	0.63	2.865	78.264
8	0.581	2.642	80.906
9	0.525	2.385	83.291
10	0.437	1.986	85.277
11	0.396	1.798	87.075
12	0.35	1.591	88.666
13	0.338	1.537	90.204
14	0.315	1.433	91.636
15	0.299	1.361	92.997
16	0.278	1.266	94.263
17	0.258	1.171	95.434
18	0.244	1.108	96.542
19	0.222	1.007	97.55
20	0.207	0.941	98.49
21	0.179	0.815	99.305
22	0.153	0.695	100

Extraction Method: Principal Axis Factoring.

Emotions (States and Changes) and Subjective Wellbeing Components Pattern Matrix

	Factor				
	1	2	3	4	5
Sadness	0.756				
Fear	0.747				
Anxiety	0.832				
Anger	0.661				0.427
Discouragement	0.747				
Distress	0.859				

Sadness Change		-0.704	
Fear Change		-0.788	
Anxiety Change		-0.828	
Anger Change		-0.485	
Discouragement Change		-0.721	
Distress Change		-0.8	
Dep 1	-0.495		
Dep 2	-0.542		
Loneliness 1	-0.844		
Loneliness 2	-0.897		
Loneliness 3	-0.832		
Loneliness 4	-0.787		
Loneliness 4	-0.757		
Hope 1			0.781
Hope 2			0.578
Hope 3			0.821

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 14 iterations.

2. Coping Behaviours States

Factor	Initial Eigenvalues		% of Variance	Cumulative %
	Total			
1	3.933		28.091	28.091
2	1.98		14.14	42.231
3	1.714		12.243	54.474
4	1.025		7.318	61.792
5	1.001		7.152	68.944
6	0.857		6.119	75.063
7	0.712		5.085	80.148
8	0.599		4.28	84.428
9	0.521		3.721	88.148
10	0.474		3.388	91.536
11	0.365		2.611	94.147
12	0.338		2.417	96.564
13	0.258		1.841	98.405
14	0.223		1.595	100

Extraction Method: Principal Axis Factoring.

Coping Behaviour States Pattern Matrix

	Factor	1	2	3	4	5
Alcohol Consumption						
Cannabis Consumption						
Impulse Buying		0.798				
Compulsive Buying		0.857				
Buying to Cope		0.697				
Stockpiling					0.696	
Panic Buying					0.561	
Scrolling on SM			0.55			
Posting on SM			0.789			
Commenting on SM			0.881			
Initiation communication on SM			0.691			
Meditation Apps				0.74		
Mental health Apps				0.838		
Therapy						

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a Rotation converged in 6 iterations.

3. Coping Behaviours Changes

Factor	Initial Eigenvalues		% of Variance	Cumulative %
	Total			
1	4.383		31.307	31.307
2	1.965		14.037	45.344
3	1.808		12.914	58.258
4	1.155		8.252	66.51
5	1.048		7.488	73.998
6	0.743		5.31	79.308
7	0.673		4.807	84.115
8	0.554		3.954	88.069
9	0.415		2.964	91.033
10	0.323		2.308	93.341
11	0.321		2.29	95.631
12	0.255		1.82	97.451
13	0.189		1.35	98.801
14	0.168		1.199	100

Extraction Method: Principal Axis Factoring.

Coping Behaviour Changes Pattern Matrix

	Factor				
	1	2	3	4	5
Alcohol Consumption					0.479
Cannabis Consumption					0.565
Impulse Buying	0.937				
Compulsive Buying	0.867				
Buying to Cope	0.778				
Stockpiling				0.835	
Panic Buying				0.721	
Scrolling on SM					
Posting on SM		0.763			
Commenting on SM		0.995			
Initiation communication on SM		0.767			
Meditation Apps			0.719		
Mental health Apps			0.913		
Therapy			0.596		

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a Rotation converged in 5 iterations.