# MOTHERING DURING COVID-19: AN ONLINE PSYCHOEDUCATIONAL WORKSHOP ON STRESS MANAGEMENT AND POSTPARTUM DEPRESSION

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## Abstract

Women face many challenges during the transition to motherhood. The transition to motherhood may be even more challenging in the current context of the global COVID-19 pandemic as public health measures have disrupted daily life, resulting in increased stress levels and social isolation. Due to the fact that high levels of stress and low levels of social support are associated with the development of postpartum depression, this final project presents a workshop aimed at providing mothers with psychoeducation on postpartum depression and stress, as well as providing them with strategies with which to independently manage their stress. Such a workshop may help to mitigate the negative effects of the COVID-19 and improve mothers' well-being.

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## Table of Contents

## List of Tables

# Chapter 1: Introduction

## Overview of Final Project

The objective of this final project was to develop an online interactive workshop for mothers, both postpartum and expectant, in order to provide an accessible way for them to learn about postpartum depression, stress, and how to manage stress during the COVID-19 pandemic. This workshop, titled, *Mothering During COVID-19: Stress Management and Postpartum Depression,* hereby shortened to *Mothering During COVID-19,* was created following an extensive review of the literature and research on the aforementioned topics and is a three-day workshop. The first two sessions are each two and a half hours in length, with the final session being two hours in length, for a total of seven hours. Ultimately, this workshop aims to provide mothers with information about their health as well as ways to independently manage their stress, due to the fact that COVID-19 has disrupted daily life in unprecedented and challenging ways.

A rationale for the creation of this workshop is offered in this chapter. The following chapter presents the literature and research reviewed in order to create the workshop. Topics addressed include psychological impact of COVID-19, postpartum depression, theories of stress, coping with stress, stress management, and learning psychology. This is followed by a description of the methodology undertaken when reviewing the literature and a description of the creation of the workshop, including workshop overview and objective. Finally, a discussion on the strengths and limitations of the final project, as well as directions for future research, is provided. The workshop and the accompanying materials can be found in the appendix of this document.

**Rationale**

COVID-19, the disease caused by the novel coronavirus SARS-CoV-2, has resulted in unprecedented measures around the globe to limit the spread of the deadly virus (World Health Organization, 2021). COVID-19 has completely disrupted daily life – from border closures, school closures, business closures, stay-at-home mandates, job loss, social distancing measures, and quarantine measures. As a result, COVID-19 has tremendously impacted the mental health of individuals worldwide and has also disproportionately affected women. Gender-based violence against women has increased exponentially as a result of social isolation measures, economic impacts of the virus including job loss and reduced income largely impact women, and reallocation of health resources has impacted sexual and reproductive health services for women (United Nations, 2020). Women who are pregnant have reported experiencing stress surrounding uncertainty of care, such as not knowing if prenatal care appointments will proceed in person (Farewell et al., 2020).

The transition to motherhood is difficult under normal circumstances, even more so in the midst of this global pandemic. COVID-19 has resulted in increased stress levels for many, as well as resulted in social isolation due to public health regulations (Elmer et al., 2020; Wang et al., 2020a). This is of critical concern as it has been well established in the literature that stress and lack of social support are risk factors for the development of postpartum depression (PPD) (Lanes et al., 2011; O'Hara, 2009; Pao et al., 2019; Robertson et al., 2004). PPD is a critical health concern that affects tens of millions of women worldwide, with a global prevalence rate of 17.7% (Hahn-Holbrook et al., 2018). PPD has severe consequences not just for maternal health, but for infant health as well, as PPD has been found to impact an infant's emotional, social, behavioural, and cognitive development (Slomian et al., 2019). Emerging research suggests that

the prevalence of PPD symptoms has increased during the COVID-19 pandemic, thus, putting both mothers and their infants at risk (Davenport et al., 2020; Lebel et al., 2020; Oskovi-Kaplan et al., 2020; Zanardo et al., 2020). Given this, it is imperative that mothers are provided information to further understand PPD and provided strategies with which to manage their stress.

A number of well-researched interventions have proven effective for reducing and managing stress that may result in maladaptive physical, emotional, and intellectual responses. Cognitive-behavioural therapy (CBT) based interventions, mind-body interventions, and mindfulness interventions have all been found to reduce stress levels (Amanvermez et al., 2021). Furthermore, such interventions have been found to reduce stress levels among pregnant women (Ertekin Pinar et al., 2018). Thus, a workshop that promotes awareness and enhances knowledge on the negative impact of COVID-19, provides mothers with information on PPD and stress, and offers techniques with which to reduce stress may help to mitigate the negative effects of the pandemic and improve mothers' well-being.

**Summary**

This project has the potential to be significant as mothers may be facing challenges as a result of the COVID-19 pandemic. While literature regarding the effects of stress management on stress levels of mothers exists, we are currently in a unique time in history. Much of the research on the impact of COVID-19 on mothers has focused on prevalence of depressive symptoms and has suggested that the prevalence of depressive symptoms has increased during the pandemic. Hence, it seems timely to provide mothers with an accessible, brief workshop in which they can learn about their health, understand the ways in which COVID-19 may be negatively impacting their health as a chronic stressor, and provide them with realistic interventions with which to manage this stress. Early and prompt delivery of stress-reducing

strategies may aid mothers in developing resilience ahead of the development of postpartum depression, and the creation of such a workshop may benefit mothers and families alike.

## Chapter 2: Literature Review

The aim of this final project is to create an interactive online workshop, utilizing a multimodal approach, that will provide mothers with psychoeducation on stress, the relationship between stress and postpartum depression, and provide them with stress management techniques to independently employ. The creation of this final project was underway during the global COVID-19 pandemic, however the stressors and trauma as a result of the pandemic may continue to be present for years after the pandemic is resolved. Based on this, the final project and resulting workshop incorporate the current relevant research and literature related to the possible impact of COVID-19 on a mother's health. The literature review provides an overview of the psychological impact of COVID-19, followed by a review of the emerging research on COVID-19 and postpartum depression. Next, an overview of postpartum depression and stress and theoretical explanations for both of these constructs is offered. Additionally, this literature review addresses the empirically based research on stress management interventions. In addition, learning psychology concepts are anchored and reviewed in order to inform the creation and delivery of the online workshop for mothers. Finally, ethical considerations of an online interactive workshop are briefly addressed in the conclusion of this chapter.

### Psychological Impact of COVID-19

COVID-19, the current crisis impacting humans on a psychological level, is the disease caused by the novel coronavirus, and was first reported in December 2019 in Wuhan, China (World Health Organization, 2021). In March 2020, the World Health Organization (WHO) categorized this disease as a global pandemic, with more than 200 countries reporting cases. Severe cases of the disease can lead to respiratory failure, heart failure, or even death (Centre for Disease Control and Prevention [CDC], 2021). As of August 5, 2021, there have been 200, 174,

883 confirmed cases of COVID-19, and 4, 255, 892 deaths worldwide (WHO, 2021). The measures taken to limit the spread of COVID-19 have resulted in unprecedented constraints around the world, with numerous countries implementing lockdown procedures and closing their borders in an attempt to limit the spread of the virus.

Aside from the physical health impact and loss of lives caused by COVID-19, the global pandemic has psychological consequences. COVID-19 has disrupted normal life, with public health measures causing school closures, business closures, job loss, and increased time spent at home. Stress about the disease, uncertainty about what could happen, and new public health actions can make people feel isolated, lonely, and anxious (CDC, 2021). Elmer et al. (2020) found that Swiss university students during the COVID-19 crisis were more depressed, slightly more anxious, more stressed, and more lonely than half a year prior, pre-COVID-19 crisis. Wang et al. (2020a) found that over half of respondents (n=1210) in their online study across 194 cities in China reported a moderate or severe psychological impact as a result of the COVID-19 outbreak. Additionally, 28.8% of respondents reported moderate to severe symptoms of anxiety, 16.5% reported moderate to severe symptoms of depression, and 8.1% reported moderate to severe stress levels. Furthermore, female gender was significantly associated with a greater psychological impact and greater levels of stress, anxiety, and depression due to the COVID-19 pandemic (Wang et al., 2020a). In April of 2020, The United Nations (UN) released a policy brief that described the unequal impact of COVID-19 on women and girls. The brief indicated that unpaid care work increased drastically with the onset of COVID-19 and the burden of this work was being placed on women (UN, 2020). An increase of unpaid care work, in addition to public health measures that result in social isolation, may be overwhelming for women who are

transitioning to motherhood. Mothers, then, are a population in need of support during the global pandemic.

**COVID-19 and Postpartum Depression**

Recent research on the impact of COVID-19 on mothers suggests that the pandemic has resulted in unprecedented stressors for new and expectant mothers. A mixed-methods study conducted by Farewell et al. (2020) interviewed 27 women who were pregnant or within 6 months postpartum in Colorado. They found that the primary COVID influenced themes surrounding sources of stress amongst the sample included uncertainty surrounding care, such as the ambiguity about the delivery process (if their husband or partners would be allowed in the delivery room with them) and if necessary check-up appointments would still proceed in person. Another primary theme found was isolation and lack of anticipated social support. Women reported feeling less excited about their pregnancy due to social isolation measures, and concern over postpartum supports that would no longer be available due to COVID-19, such as grandparents helping out. Participants also shared that COVID-19 has had some positive impacts, such as being able to work from home while pregnant, increased time spent with immediate family and those in the household, and the partner also being home and providing support (Farewell et al., 2020). However, for some mothers, this may not be the case. Not all partners may be working from home and the inability to receive support from friends and extended family during the pandemic is of critical concern as social isolation can negatively impact well-being (Elmer et al., 2020).

The psychological impact of COVID-19 on mothers may have extreme consequences for their health. Sustained psychological distress during pregnancy or after birth may result in the development of *Postpartum Depression* (PPD) (Lanes et al., 2011; Norhayati et al., 2015;

O'Hara, 2009; Pao, 2019; Robertson et al., 2004). Emerging research on the impact of COVID-19 on PPD has mainly focused on the prevalence of PPD within populations of mothers who have given birth during the COVID-19 pandemic. Zanardo et al. (2020) administered the Edinburgh Postnatal Depression Scale (EPDS) two days postpartum to women in Northeastern Italy between March and May of 2020. Women who had given birth during this time (n=91) had higher EPDS scores compared with a matched control group of mothers who gave birth during the same time in 2019. Almost 30% of women had an EPDS score above 12, indicating a fairly high possibility of depression. A similar study design was undertaken by Pariente et al. (2020) in Israel. Women who delivered during the strict isolation period of COVID-19 (n=223) were screened using the EPDS and compared to women who delivered prior to the pandemic (n=123). However, this study found that only 6.8% of women reported an EPDS score of greater than 13, compared to 15.2% of women who delivered before the COVID-19 pandemic. The authors of this study speculate that the strict lockdown measures may have actually caused mothers to gain more social support, as many significant others were forced to work from home (Pariente et al., 2020).

An additional study on the prevalence of PPD during COVID-19 was carried out in Turkey. Oskovi-Kaplan et al. (2020) conducted surveys that included the EPDS and the Maternal Attachment Inventory (MAI) 48 hours after women had given birth and found that 14.7% of the 226 women surveyed had an EPDS score greater than 12. Previous studies on PPD in Turkey found a prevalence rate of 7.8%, suggesting that the rates of women experiencing PPD in Turkey has doubled during COVID-19 (Oskovi-Kaplan et al., 2020).

Davenport et al. (2020), recruited women who were pregnant or within their first year of delivery to participate in an online study that included questions about their current physical

distancing/isolation measures, and utilized the EPDS and State-Trait Anxiety Inventory. Participants were asked to retrospectively report on their pre-pandemic feelings on these scales as well as their current feelings during the pandemic. The results indicated that an EPDS score of greater than 13 was self-reported in 15% of participants pre-pandemic and in 40.7% at the time of the study (during the pandemic) (Davenport et al., 2020). While this suggests that there is a substantial increase in the likelihood of PPD, the study is limited in that recall of feelings pre-pandemic may not be accurate. Finally, Lebel et al. (2020) found that 37% of pregnant Canadian mothers (n=1764) surveyed during April 2020 of the pandemic had elevated symptoms of depression, with EPDS scores greater than 13. Depressive symptoms did not differ amongst nulliparous, primiparous, and multiparous women, suggesting that the impact is not only affecting first-time mothers. The authors also found that elevated symptoms of depression were associated with the following COVID-19 related concerns: threat of COVID-19 on mother and baby's life, prenatal care concerns, relationship stress, and social isolation (Lebel et al., 2020).

Research evidences that the prevalence of PPD has increased during COVID-19 and that mothers are a population in need of support during this pandemic. In reflection of the increased prevalence of PPD, the aim of this final project is to provide mothers with psychoeducation on PPD. Hence, the literature on PPD, including the consequences, theories, and risk factors, is reviewed in the following section.

**Postpartum Depression**

Postpartum Depression (PPD), also called postnatal depression, is defined by the American Psychiatric Association's (APA) *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5) as a major depressive episode that begins during pregnancy or occurs within 4 weeks following delivery (2013). This is a change from the DSM-4, which did

not consider depression experienced during pregnancy, only following birth. Hence, the DSM-5 now also uses the term peripartum depression to recognize that depression associated with childbirth can begin during pregnancy (APA, 2013). According to the DSM-5, symptoms of PPD are the same as symptoms of depression that occur outside of the perinatal period. These symptoms include depressed mood, feelings of worthlessness or guilt, psychomotor retardation, low energy or fatigue, decreased concentration, loss of interest in activities, sleep disturbance, changes in appetite, and suicidal thoughts. For a DSM-5 diagnosis of depression, an individual must be experiencing at least five of these symptoms and have been experiencing these symptoms for at least two weeks. As aforementioned, if these symptoms begin during pregnancy or within four weeks of delivery, the major depressive episode is given a peripartum onset identifier (APA, 2013). However, in research and clinical practice, PPD has been regarded as occurring up to one year following birth (O'Hara, 2009; Stewart & Vigod, 2016). Stewart and Vigod (2016) note that other symptoms of PPD include feelings of anxiety, feelings of being overwhelmed, and an obsessional fixation regarding the health of the baby. PPD is different from the "baby blues", which approximately 70% of mothers experience, and typically includes feelings of sadness, irritability, and anxiety (O'Hara, 2009; Stewart & Vigod, 2016). The baby blues do not drastically impair the mother's functioning, and the symptoms usually resolve within two weeks without any intervention (Stewart & Vigod, 2016). Symptoms such as disorganized thinking, psychotic thoughts, and hallucinations characterize postpartum psychosis, which should also be differentiated from PPD as it requires different strategies for treatment (O'Hara, 2009; Stewart & Vigod, 2016).

Treatment of PPD is dependent on the severity of symptoms and may include psychosocial strategies (such as increasing social support), psychotherapy, and pharmacotherapy

(Stewart & Vigod, 2016). However, it is estimated that 50% of women who are depressed during and following pregnancy are undiagnosed and untreated (Rafferty et al., 2019). Screening for depressive symptoms during pregnancy has only become recommended by regulatory bodies (such as the American College of Obstetricians and Gynecologists) in the United States in the last decade (Rafferty et al., 2019). Furthermore, Werner et al. (2015) suggest that PPD goes untreated partly because of stigma (i.e., mothers are supposed to be joyous during this period of their lives and when welcoming their child to the world), reluctance to take medication while breastfeeding, and a lack of knowledge about PPD. Hence, psychoeducation on what PPD is may help mothers to seek the support they need and reduce the stigma associated with PPD.

**Prevalence of PPD**

Throughout the 1980s PPD was widely thought to be a western culture phenomenon, and it was theorized that the absence of social organization surrounding childbirth, absence of ritual, and absence of maternal support were contributing factors (Cox & Holden, 2003). However, it is now understood that PPD affects women worldwide. A recent meta-analysis conducted by Hahn-Holbrook et al. (2018) reported the global prevalence of PPD to be 17.7%. They found that studies that used lower cut-off scores for the Edinburgh Postnatal Depression Scale (EPDS) reported higher prevalence and studies that measured PPD later in the postpartum period reported slightly lower levels of PPD. This meta-analysis also found differences in PPD prevalence across countries. Turkey (28%), Hong Kong (30%), South Africa (37%), and Chile (38%) had the highest rates of PPD (Hahn-Holbrook et al., 2018). Countries with the lowest rates includes Switzerland (11%), the Netherlands (8%), Nepal (7%), and Singapore (3%). Analysis revealed that the discrepancy in rates of PPD across countries was not due to differing methodological conventions used, such as EPDS score cut-off, when the EPDS was

administered, or sample size of studies. The majority (73%) of the difference in rates of PPD between countries was due to health and economic inequalities amongst nations (Hahn-Holbrook et al., 2018).

Amongst Canadian mothers, Dennis et al. (2012) found that 462 out of 6336 (7.48%) women surveyed between five and 14 months postpartum had depressive symptoms. Similarly, Lanes et al. (2011) reported a national prevalence of 8.69% (n=6,421). Regional differences in prevalence were also noted. Both studies revealed lower rates of PPD among the Atlantic provinces (Dennis et al., 2012; Lanes et al., 2011). Additionally, Lanes et al. (2011) report a much higher prevalence of 15.90% in the Territories. The authors theorize that the discrepancy between prevalence rates may be explained by the greater amount of indigenous populations in the territories, as indigenous populations have been found to have an increased risk of depression (Lanes et al., 2011). As aforementioned, research evidences that the prevalence of PPD in Turkey, Italy, and Canada have increased during the COVID-19 pandemic and it could be assumed that rates of PPD have increased in other countries as well. This increased prevalence is of critical concern and requires increased attention and awareness from mental health and health professionals alike.

**Consequences of PPD**

O'Hara (2009) suggested that depression creates suffering regardless of the time it occurs in a woman's life. However, they argued that childbirth is typically culturally celebrated and perceived as a time of happiness and joy for parents, creating a unique challenge for depressed mothers. New mothers are faced with many demands that can be difficult to cope with under normal circumstances and the difficulty of these demands may increase when associated with

depressive symptoms such as difficulty concentrating, loss of interest, or low mood (O'Hara, 2009). Furthermore, PPD has been found to impact mothers and their offspring alike.

A recent meta-analysis conducted by Slomian et al. (2019) revealed the vast implications of PPD. Depressed mothers report lower self-esteem, higher levels of anger, less positive affect, higher levels of both state and trait anxiety, and a lower quality of life as compared to their non-depressed counterparts. Additionally, PPD is associated with increased relationship difficulties and lower social functioning, as well as engaging in risk behaviours such as illicit drug or substance use (Letourneau et al., 2012; Slomian et al., 2019).

The literature on the impact of maternal depression both during and following pregnancy on offspring is substantial. Mothers with PPD display maternal disturbances compared to their non-depressed counterparts. Depressed mothers may display low affect and low activity level, and they may differ with how they look at their infant and how they respond to infant sounds (O'Hara, 2009). This consequently can affect the infants of mothers with PPD; with infants engaging in less eye contact while feeding, less positive affect, and higher levels of insecure attachment (O'Hara, 2009; Pearlstein et al., 2009; Slomian et al., 2019). It has been found that children with mothers with PPD have temperamental difficulties, sleep issues, and higher frequency of excessive crying or colic (Pearlstein et al., 2009; Slomian et al., 2019), and that maternal PPD has the potential to negatively impact infant cognitive, emotional, behavioural, and language development (Letourneau et al., 2012; Slomian et al., 2019). The consequences of PPD may be even further reaching as a result of the increased prevalence of PPD that is being observed during the COVID-19 pandemic.

**Theories of Postpartum Depression**

Several perspectives have been put forth in the literature regarding explanations for the cause of PPD. The main theories include evolutionary perspectives, biological perspectives, and psychosocial perspectives. The theoretical lens through which PPD is viewed have important implications regarding prevention and treatment of PPD (Beck, 2002).

### *Evolutionary Perspectives*

Hagen (1999) argued that PPD was created by natural selection, thus making it an adaptation rather than an illness. They proposed that human reproductive effort is characterized by substantial investment from the parents, particularly the mother. The "defection hypothesis" posits that PPD, and the negative affect associated with it, informs the mother that she is suffering negative net fitness costs. That is, investment directed towards the offspring would be better directed elsewhere. Negative net fitness costs may be caused by inadequate investment on the part of the father, problems with the pregnancy or birth, or poor environmental conditions in which to raise the baby. Additionally, the symptoms of PPD serve to communicate the mother's need for increased support (Hagen, 1999).

More recent evolutionary perspectives posit that PPD is a consequence of civilization; that is, significant differences in mothering practices today as compared to the past has created a 'mismatch' between ancestral mothering and today's approaches (Hahn-Holbrook & Haselton, 2014). Early weaning, vitamin D deficiency, lower levels of physical activity, and smaller and more isolated family units are common parenting practices today that did not occur in human evolutionary history (Hahn-Holbrook & Haselton, 2014). This theory attempts to explain why mothers who have social support and no pregnancy or birth complications still experience PPD in the present (Yim et al., 2015).

### *Biological Perspectives*

Yim et al. (2015) note that biological models of PPD are formulized as withdrawal models concerned with the changes in reproductive and stress hormones following pregnancy and birth. They further note that pregnancy is characterized by biological changes in order to support fetal development, promote labour, birth, and nursing. After birth, the intricate balance that was maintained during pregnancy is upended, and substantial biological changes occur (Yim et al., 2015). This biochemical and hormonal imbalance is thought to be the cause of PPD (Beck, 2002; Yim et al., 2015). Biological perspectives also consider obstetric complications and genetics to be potential causal factors in the development of PPD (Cox & Holden, 2003).

### *Psychosocial Perspectives*

Psychosocial perspectives, also known as psychological perspectives, are the basis for this final project. These perspectives suggest that psychological stress, psychosocial resources (such as family support), and cognitive susceptibilities (such as negative thinking styles) play a role in the development of PPD (Yim et al., 2015). The interpersonal model posits that following the role transition involved with becoming a mother, social support is significantly related to the onset of PPD (Beck, 2002). That is, discrepancies between the mother's desired level of support, and actual support received, is thought to influence symptoms of PPD (Beck, 2002). The interpersonal approach is similar to the sociocultural approach, which posits that role changes, the marital relationship, and an expectation to be happy are possible causes for the development of PPD (Cox & Holden, 2003). Many psychosocial factors, such as stress and social support, and their relationship to PPD, have been researched extensively in the literature. Understanding these factors and how they negatively impact mothers allows for preventative measures or proactive interventions to take place and thereby reduce the risk of developing PPD.

**Risk Factors for PPD**

Past systematic reviews and meta-analyses have found that history of psychopathology, including depression or anxiety during pregnancy, low social support, and life stress are the strongest predictors of PPD (Norhayati et al., 2015; O'Hara, 2009; Robertson, 2004; Yim et al., 2015). Other risk factors that have been found to have a small effect size include obstetric factors, including complications during pregnancy and delivery, and socioeconomic status (Robertson et al., 2004). Given that stress and social support have been greatly impacted by the COVID-19 pandemic and are of interest to this final project, the research surrounding these constructs and their effects on PPD is examined further.

The majority of studies examining the effects of stress on PPD have focused on stressful life events. Yim et al.'s (2015) meta-analysis reports that half of the longitudinal studies they included for analysis reported significant associations between prenatal stressful life events and symptoms of PPD. The authors theorize that different types of life events may have different effects; that is, severity of the event may influence whether it is a significant predictor. For example, all studies that examined the impact of catastrophic events (such as natural disasters) reported significant associations between these experiences and PPD symptoms. Finally, Yim et al. (2015) report that the majority of studies that use perceived stress or chronic strains (such as work stress) as a measure of stress more consistently predicted PPD. Indeed, Lanes et al. (2011) found a significant association between PPD symptoms and mothers (n=6421) who reported feeling "very stressed" or "somewhat stressed" during pregnancy.

As previously established, low social support or feelings of isolation can be a risk factor for PPD. Gan et al. (2019) found that lower perceived social support during pregnancy, measured by the ENRICHD Social Support Instrument, was associated with PPD symptoms at 6 weeks

postpartum (n=2546). Conversely, perceived social support can act as a protective factor against PPD. Lanes et al. (2011) found that Canadian mothers (n=6421) who reported receiving social support during their postpartum period "none of the time" or "some of the time" had a higher risk of experiencing PPD symptoms as compared to mothers who reported receiving social support "most of the time" (Lanes et al., 2011). Similarly, Gao et al. (2009) examined the prevalence of PPD in first time Chinese mothers and found that 13.8% of the mothers scored 13 or greater on the EPDS. The EPDS scores were significantly positively correlated with perceived stress scores and significantly negatively correlated with perceived social support scores, suggesting that higher levels of stress resulted in greater EPDS scores, and higher levels of social support resulted in lower EPDS scores. Additionally, the perceived stress scores were significantly correlated with the perceived social support scores, suggesting that the more social support an individual has, the lower their levels of stress are (Gao et al., 2009). More recently, Pao et al. (2018) found that women with PPD at 6 weeks postpartum (n=1517) were significantly more likely to have lower levels of perceived social support as compared to non-depressed mothers. Moreover, social support was significantly and negatively associated with severity of PPD symptoms. These results suggest that social support can act as a buffer against stress levels or depressive symptoms, and thus be a protective factor against PPD (Pao et al., 2018).

It is clear from the literature that PPD is a major health concern for women worldwide and has severe consequences for maternal and infant health. Furthermore, the psychosocial model of PPD, which is the theoretical basis for this project, suggests that high levels of stress and low levels of social support contributes to the development of PPD. Thus, it is important to understand the construct of stress in order to identify effective stress management interventions to reduce the negative impact of stress on mother's health.

## Theories of Stress

Stress is a common term used by many to describe feelings of being overwhelmed. Stress can broadly be defined as "any type of change that causes physical, emotional, or psychological, strain" on an individual (Scott, 2020, para. 1). In the literature, stress has been conceptualized in a variety of ways, including as a response, an environmental stimulus, and as a transaction. The prominent theories regarding the construct of stress are reviewed in this next section.

### *The Response Perspective*

Hans Selye, a Canadian-Hungarian endocrinologist, is credited as the first to introduce the term stress into the medical lexicon (Tan & Yip, 2018). Selye defined stress as the "non-specific response of the body to any demand" (1974, p.27 as cited in Straub, 2019). In a 1936 letter to the journal *Nature*, Selye described the patterns of responses within his General Adaptation Syndrome (GAS) model (Fink, 2016). The GAS model consists of three phases: (i) the alarm phase, (ii) the resistance phase, and (iii) the exhaustion phase. During the alarm stage, the body triggers mechanisms in order to prepare itself to deal with the stressor (Straub, 2019). Following the alarm stage, the resistance phase involves the body working to repair itself and return to homeostasis. The specificities of this physiological response is described in a subsequent section. If the stressor persists, the body is unable to keep up with the demands required to fight the stressor and will enter into the exhaustion stage. The long-term, chronic stress experienced in this stage can have detrimental effects on health (Fink, 2016; Straub, 2019).

### *The Environmental Perspective*

Monroe and Cummins (2015) described this perspective as stress being the result of the environment an individual is faced with – that is, external stimuli can be characterized as being psychologically threatening or non-threatening. They described that it was thought that

biological vulnerabilities in individuals was responsible for extreme experiences of stress; "normal" individuals were able to withstand the effects of stress. However, World War II challenged this notion, as many who returned from war and were previously considered normal and healthy suffered psychological and physical consequences as a result of the stressor (Monroe & Cummins, 2015). Subsequently, Thomas Holmes and Richard Rahe (1967) developed the Social Readjustment Rating Scale (SRRS), which lists 43 major life events – such as death of a family member, pregnancy, and marriage – in an attempt to study the impact of stressful life events on individuals. Based on interviews conducted, each event was assigned a mean value, with events that required an individual undergo more change assigned a higher value (Holmes & Rahe, 1967). It was theorized that higher scores would result in a greater likelihood of illness (Straub, 2019). The SRSS and similar scales have been criticized for various reasons. Straub (2019) suggested that the items are vague, assigned values do not consider individual differences in appraisal of stressors, positive and negative events (such as suddenly losing a job and getting married) are not separated, and it does not distinguish between stressors that have been resolved and unresolved. Despite these criticisms, Holmes and Rahe's work was influential, and studies examining the impact of life events have revealed an association between stressful life events and PPD (Yim et al., 2015).

### *The Transactional Perspective*

In 1966, Richard Lazarus first presented the theory that conceptualized stress as a transaction in his book, *Psychological Stress and the Coping Process* (Stangor & Walinga, 2014). Further expanded upon with Susan Folkman, this theory put forth the notion that stress is the result of a transaction between an individual (including their cognitive, physiological, affective, and psychological systems) and their environment (Stangor & Walinga, 2014). Known

as the transactional model of stress and coping, Lazarus and Folkman (1984) define stress as a result of imbalance between demands and resources, or as occurring when pressure exceeds one's perceived ability to cope with the stressor and their well-being is threatened. Most importantly, how an individual perceives or appraises the stressor determines how they will cope with it, or what impact it will have on them (Stangor & Walinga, 2014). Thus, the experience of stress differs greatly amongst individuals; depending on how they appraise the stressful event and what resources they have at their disposal to cope with the demand presented.

**Cognitive Appraisal**. According to Lazarus and Folkman (1987), humans continually evaluate what is happening to them in terms of what impact it will have on their well-being. They explain that *information* involves "what we know or think we know about the world" (p.145), and *appraisal* is concerned with what impact this information will have on our well-being. Whether, and how, we cope with demands, as well as our emotional response, follow this appraisal. They describe two categories of appraisal: *primary* and *secondary*.

Lazarus and Folkman (1987) explained that primary appraisal involves determining whether or not the stressor presents a threat to our well-being or will challenge us to grow as individuals. They further elaborate by describing primary appraisal as an individual deciding whether or not they have any stakes in the encounter. If there is no stake, the stressor does not matter or does not impact our well-being, and no reaction will take place. On the contrary, if the encounter is relevant, the intensity of our reaction will vary based on how much is at stake for the individual (Lazarus & Folkman, 1987). Take for example, that the daycare service a mother uses is unexpectedly closed for the day due to staff members being sick. The mother may perceive this to be event to be inconsequential because they have plenty of vacation time and can

take the day off work to watch her child. Conversely, a mother may perceive this event as a possible stressor because they have to go to work and need childcare.

Secondary appraisal involves determining the resources available to deal with the stressor and how much control we believe we have over the stressor (Lazarus & Folkman, 1987). If risk is present but an individual believes they have sufficient resources to deal with it, stress is not likely to occur. If resources are insufficient, the individual will experience stress, and must then turn to coping strategies to deal with the stress (Lazarus & Folkman, 1987). Considering the previous example again – if the mother perceived the daycare closing as negative, but had reliable childcare alternatives (sufficient resources), they may not experience stress. However, if they have no family, friends, or a babysitter in the area (insufficient resources), and they need to attend work, they will likely experience stress and now need to engage in coping processes (finding a solution, trying to see the bright side) to deal with the stress. Coping styles are described further in a following section.

**The Stress Response**

The human stress response is a dynamic and complex process that includes many systems of the body and results in physiological and behavioural changes (Chu et al., 2021; Russell & Lightman, 2019). The nervous system is one such system that plays a central role in the stress response. Straub (2019) explains that the nervous system is divided into two systems: the central nervous system (CNS), which includes the brain and spinal cord, and the peripheral nervous system, which consists of all nerves extending out from the CNS (Straub, 2019). The peripheral nervous system is comprised of the somatic nervous system, responsible for the transmission of motor and sensory signals to and from the CNS, and the automatic nervous system (ANS), responsible for regulating involuntary body functions, such as heartbeat. The ANS is additionally

separated into two systems: the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS), both of which play an important role in the stress response (Straub, 2019).

The stress response begins in the brain. When confronted with a stressor, sensory information is interpreted by the amygdala, a small area of the brain that is responsible for emotional processing (Straub, 2019). If the amygdala perceives dangers, a distress signal is sent to the hypothalamus. The hypothalamus activates the SNS by sending signals through the automatic nerves to the adrenal glands, located above the kidney. The adrenal medulla then secretes epinephrine and norepinephrine into the bloodstream. The activation of the SNS, in concert with the adrenal medulla is known as the sympatho-adreno-medullary (SAM) axis. Stimulation of the SNS triggers what is commonly known as the "fight or flight" response. This response involves many physiological changes including an increase in heart rate, dilation of the pupils, increased blood flow to muscles, increase in breathing rate, and more – all to prepare the body to deal with the stressor at hand (Chu et al., 2021; Straub, 2019).

At the same time, the hypothalamus-pituitary-adrenal axis (HPA) is also activated when alerted to the presence of a stressor. This second pathway is slower than the SAM axis and works to return the body to homeostasis (Russell & Lightman, 2019; Straub, 2019). Firstly, the hypothalamus stimulates the pituitary gland by secreting corticotropin-releasing hormone (CRH) (Chu et al., 2020). The pituitary gland then releases adrenocorticotropic hormone (ACTH) to stimulate the adrenal glands. The adrenal cortex then secretes cortisol into the bloodstream (Chu et al., 2020). Cortisol, commonly known as the stress hormone, helps to mobilize the body's resources to respond to the stressor. The secretion of cortisol in a major component of the stress response and is often used a physiological index of stress (Straub, 2019). The accumulation of

cortisol in the bloodstream, which peaks 15 to 20 minutes following the start of stress, alerts the hypothalamus to stop secreting CRH, which then activates the PNS (Russell & Lightman, 2019; Straub, 2019). The halt of CRH, in concert with the activation of the PNS, is the beginning of the end of the stress response. The PNS activates the "rest and digest" response. This response works to counteract the SNS by slowing heart rate down, slowing breathing, contracting pupils, and returning the body to homeostasis (Chu et al., 2021; Straub, 2019).

**Fight, Flight, Freeze Response**

As aforementioned, when our SNS becomes activated, we respond to the stressor by either fighting or fleeing. Individuals may have a response they resort to when faced with a stressor. The blog LifeStance Health (2021) offered an in-depth view of these responses. The fight response is characterized by anger, irritability, feelings of entitlement, and behaviours may include actual fighting with family, friends, and partners, or trying to control others. The flight response involves leaving the stressor or situation and may take the form of distracting oneself with other activities, such as watching TV, or an inability to sit still in an attempt to outrun the stress. In addition to fight or flight, a third response, freezing, has been proposed. Freezing is characterized by an inability to act. This may manifest as frequently "zoning out," difficulty deciding what to do, and experiencing "brain fog" (LifeStance Health, 2021). Understanding these responses is helpful as it allows for recognition of when we are engaging in a response and are dysregulated. Recognizing these responses may help individuals to then engage in stress management strategies in order to kickstart the PNS and regulate their nervous system.

The body is designed to recover quickly from acute stressors, such as running late for an important appointment. However, unpredictable, uncontrollable, long-term stressors, that are

difficult to cope with and prolong the stress response – such as the COVID-19 pandemic – may have detrimental effects on health.

**Stress and Health**

*Allostasis* is the physiological processes of the body to maintain homeostasis in response to demands (Zsoldos & Ebemier, 2016). This corresponds with Selye's alarm and resistance stages of the GAS. However, when these responses are overused, i.e., we are confronted with chronic stressors and homeostasis is repeatedly disrupted, our allostatic load levels increase (McEwen, 2007; Zsoldos & Ebemier, 2016). *Allostatic load* refers to the cumulative effects, or the "wear and tear," of being under stress (McEwen, 2007, p. 880). Allostatic load aligns with Selye's exhaustion phase of the GAS and can develop as a result of exposure to chronic stressors and repeated stimulation of the stress response, a lack of adaptation to stressors, or an inability to turn off the stress response after the stressor is gone (Guidi et al., 2021). High levels of allostatic load have been found to be associated with poor sleep quality, unhealthy diet, alcohol consumption, a higher risk for cardiovascular diseases, and diabetes (Guidi et al., 2021).

How does stress impact health? In 1964, George Solomon first speculated the links between emotion, immunity, and disease (Straub, 2019). Segerstrom and Miller's (2004) meta-analysis found over 300 published studies that have noted the relationship between stress and immune system functions and suggest that chronic stress can damage health by suppressing immunity. It is not fully understood how stress influences the immune system. It has been theorized that stress may directly affect the immune system through activation of the HPA and SAM axes, which attach to receptors of the immune system, thus suppressing it (Morey et al., 2015). Stress has also been theorized to effect the immune system indirectly on account of individuals engaging in dysfunctional behaviours (such as poor sleep, limited exercise, and

alcohol and drug use) due to feeling stressed (Morey et al., 2015; Straub, 2019). Regardless of the way in which stress suppresses the immune system, this theory supposes that stress leaves the individual unguarded against illness (Straub, 2019). Indeed, stress has been found to be associated with weakened immune resistance to viruses, autoimmune disorders, and delayed healing of wounds (Cohen et al., 2006; Straub & Kalden, 2009; Walburn et al., 2009).

In addition to impacting physical health, it is well established that there is an association between psychological stress and mental health, including mood disorders such as depression, as aforementioned (Yim et al., 2015). The mechanisms underlying this association, however, are less understood. It has been suggested that the immune system, affected by chronic stress, results in inflammatory conditions, leading to neurodegenerative changes in the brain, making it vulnerable to depression (Won & Kim, 2016). Emerging research suggests that proteins that play a role in the release of cortisol during the stress response may also play a role in the function of serotonin (a neurotransmitter that regulates mood) (Sousa et al., 2020).

**Social Support, Stress, and Health**

As previously described, social support can act as a buffer against the detrimental effects of stress (Gao et al., 2009; Lanes et al., 2011; Pao et al., 2018). Several hypotheses have been put forth to describe the link between social support, stress, and health. *The buffering hypothesis* predicts that social support is beneficial mostly during stressful times, whereas the *direct effects hypothesis* predicts that social support is beneficial all of the time (Zimet et al., 1988). In the former, social support acts as a buffer against stressful life events. The latter hypothesis assumes that regardless of stress, individuals with social support are healthier than those without social support. Finally, the *optimal matching theory* proposes that social support is most beneficial when it meets an individual's specific needs (Cutrona & Russell, 1990). To illustrate, this theory

would suggest that mothers who are overwhelmed with work and domestic responsibilities would benefit most from someone helping with chores, rather than motivational support such as words of encouragement.

As for how social support works to protect individuals from the negative effects of stress, Thoits (1986) suggests that social support operates as coping assistance. That is, the negative impact of a stressful situation can be reduced when other individuals intervene or offer advice (e.g. a friend giving you a loan), help to reinterpret the situation and give it a new meaning, or change the emotional state one is in when stressed (e.g. having a friend or significant other cheer you up). Pearlin et al. (1981) found that among individuals who lost their job, social support counteracted against any negative changes in self-esteem as a result of the job loss, thus mediating the effects of stress. All of these proposals are not mutually exclusive; rather, they may all be important factors of how social support works to counter stress. However, social support has been seriously impacted by the ongoing global pandemic, with public health measures limiting contact to those within your household. The resulting social isolation and stress caused by the pandemic could have disastrous effects on mother's psychological health.

Given the detrimental effect stress has on health, it is imperative that individuals are able to effectively cope with stressors. How individuals cope with stressors varies and coping strategies have been categorized as being either approach- or avoidance-oriented, as well as problem-focused or emotion-focused. These strategies are described subsequently.

**Coping Strategies**

Lazarus and Folkman (1984) define *coping* as an individual's cognitive and behavioural attempts to deal with stressors that have been appraised as exceeding their resources. Furthermore, Skinner and Zimmer-Gembeck (2016) describe coping as an adaptive process that

involves “neurophysiological, attentional, emotional, motivational, behavioural, cognitive, social, and interpersonal processes” (p. 350). Individual’s coping strategies are determined by both their personal resources (such as their disposition) and their social resources (such as a supportive partner) (Skinner & Zimmer-Gembeck, 2016). Coping strategies have been categorized in several ways. One such categorization is *approach-oriented* and *avoidance-oriented*. Approach coping involves taking steps to address the source of stress, whereas avoidance coping involves not dealing with the source of stress (Straub, 2019). Avoidance strategies can be both cognitive (suppressing your thoughts about a particular situation) and behavioral (procrastinating dealing with the stressor at hand). Lazarus and Folkman (1984) classified coping style into two categories*: problem-focused* and *emotion-focused*. Problem-focused, which would be considered approach oriented, involves finding ways to change, eliminate, or manage the source of stress. This may involve seeking information to help deal with the stressor or learning to skills to manage the stressor. Emotion-focused coping involves reducing, alleviating, or minimizing the negative or unpleasant feelings associated with the stressor (Lazarus & Folkman, 1984). Emotion-focused coping can be either approach or avoidance oriented. Stanton & Low (2012) suggest approach oriented emotional coping involves emotional expression and emotional processing (addressing what we are feeling and considering why we are feeling this way). They describe that this can take many forms, such as emotional disclosure to a friend or family member, or even through journaling. They also suggest that the utility of such emotional coping is moderated by when the emotional expression occurs (it is most likely to benefit if the stressor happened recently), how the emotions are expressed and how severely (intense expression, such as an angry outburst, may be maladaptive), and the social environment the emotional expression takes place in (if interpersonal environments are receptive

to such expressions). By labeling or addressing emotions, it is thought that it can lessen the intensity of emotion, provide individuals with a sense of control, and help individuals to understand and reappraise the stressor (Stanton & Low, 2012). However, in some cases, focusing on our emotional reactions too much can lead to rumination, which involves thinking repetitively about a stressful experience and the possible meanings and consequences of it (Straub, 2019). Finally, avoidance-oriented emotion-focused coping, known as *repressive coping*, may involve avoiding or inhibiting emotional reactions to a stressor. Myers (2010) suggests that emotional repression requires high physiological effort, resulting in the fight-or-flight response being activated. Repressive coping has also been found to be linked to poor physical health outcomes, such as heart disease and cancer (Myers, 2010).

The research suggests that approach oriented-coping is more effective for dealing with stress. Kamimura et al. (2015) used the Brief COPE to measure coping strategies of uninsured primary care patients (n=491) and found that negative coping strategies – which included self-distraction, denial, substance use, behavioural disengagement, and self-blame – was associated with higher levels of depression. Similarly, Wang et al. (2020b) used the Simplified Coping Style Questionnaire to assess participants (n=1599) coping styles during the COVID-19 pandemic. Those who employed a negative coping style during the pandemic were found to have a higher level of psychological distress than participants who reported a positive coping style (Wang et al., 2020b).

However, the coping strategies individuals use is dependent on 1) their appraisal of whether the stressor is manageable or not and, 2) an appraisal of their resources (Lazarus & Folkman, 1987). Perception that a stressor can be managed and confidence in one's coping resources would lead to an individual using problem-focused or approach strategies, whereas

feelings of powerlessness and low-control may promote a greater reliance on emotion-focused and avoidance-oriented strategies (Lazarus & Folkman, 1987; Stanton & Low, 2012; Straub, 2019). Much of the COVID-19 pandemic has been uncontrollable – sudden closures of schools and businesses as a result of rising cases, not knowing when restrictions will be lifted, etc. Given this, mothers may appraise the stressor as unmanageable and feel that their resources are not sufficient in order to deal with the stressor. As such, it is important for mothers to have strategies to reduce their stress levels even in the face of an uncontrollable stressor such as the COVID-19 pandemic.

**Stress Management**

A major focus of this final project workshop is to provide mothers with stress management strategies (also referred to as techniques or interventions in the literature) to aid with their stress response. Such strategies have been categorized as being primary, secondary, or tertiary. Holman et al. (2018) described primary interventions as proactive in nature and the focus is to prevent stress from happening in the first place by eliminating sources of stress. They further explain secondary interventions as focusing on decreasing the severity or duration of the stressor, whereas tertiary interventions focus on rehabilitation for those who are already in distress. Secondary interventions include mindfulness training, health promotion (such as exercise, eating healthy), cognitive-behavioural therapy (CBT), relaxation, personal/interpersonal skill training, and coping skills training. Finally, tertiary interventions are used when an individual is unable to function. For example, counselling may be considered a tertiary intervention (Holman et al., 2018). Given the time-limited nature of this workshop, and it's aim in providing psychoeducation and to assist mothers with managing their stress

independently following the workshop, the stress management strategies used are secondary in nature.

Amanvermez et al. (2021) conducted a systematic review of the effectiveness of stress management interventions for college students with regards to stress, depression, and anxiety levels. The study found that mind-body interventions (such as meditation, muscle relaxation, & breathing exercises), as well as cognitive-behavioural therapy (CBT) based interventions (such as cognitive restructuring), and mindfulness techniques had higher effects than skills training interventions (aimed at improving social, academic, or coping skills) in reducing stress. Similarly, Heber et al. (2017) examined the efficacy of web-based stress management interventions and found that interventions using third-wave CBT approaches (which included mindfulness, mediation, and acceptance of emotions) resulted in a highly significant and medium effect size (Cohen $d$=0.53) in reducing stress. They found CBT interventions (such as cognitive restructuring and challenging dysfunctional thoughts) delivered online also significantly reduced stress, with an effect size of Cohen $d$=0.40. Furthermore, they found guided interventions were significantly more effective than unguided interventions. While other meta-analysis on face-to-face interventions have reported higher effect sizes, the authors suggest that web-based interventions may reach individuals earlier, when they are less stressed to begin with and subsequently have less room to improve (Heber et al., 2017).

Ertekin Pinar et al. (2018) conducted a study to determine the efficacy of stress management training in reducing depression and stress among pregnant women (n=202). The stress management training included education about stress, information on what factors cause stress during pregnancy, and ways to cope with stress such as breathing and muscle relaxation exercises. This training occurred over two sessions, with each session lasting 30-40 minutes. The

experimental group had a greater decrease in average Beck Depression Inventory scores as compared to the control group following the stress management training. Additionally, the experimental group had lower averages scores on the Perceived Stress Scale following the training (Ertekin Pinar et al., 2018). Shaygan et al. (2021) studied COVID-19 patients and found that online multimedia psychoeducational interventions significantly reduced perceived stress levels of the patients after two weeks of delivery of interventions. The online modules consisted of cognitive-behavioural techniques, stress management techniques, mindfulness-based stress reduction and positive psychotherapy (focused on increasing positive emotions and optimism).

These results suggest that a multimodal approach, i.e., the use of several interventions with various theoretical orientations, that includes psychoeducation on stress may be effective in reducing stress levels of mothers experiencing stress during the COVID-19 pandemic. This approach may increase the likelihood of beneficial outcomes for mothers, as it will enable them to have multiple strategies that can be used in different circumstances for different stressors (Holman et al., 2018). Reduced stress levels would hopefully improve mother's overall quality of life, as well as reduce the risk of the development of PPD. The techniques used in the workshop is described in further detail in the subsequent sections.

### *Cognitive-behavioural Therapy*

Cognitive-behavioural therapy (CBT) assumes that our thoughts, feelings, and behaviours are all connected (Beck, 1976). Hence, dysfunctional cognitions are responsible for maintaining psychological distress and maladaptive behaviours in response to stress (Holman et al., 2017). CBT aims to help individuals identify these dysfunctional cognitions, challenge these thoughts, and develop new understandings of stress (Holman et al., 2017). This process, known as *cognitive restructuring,* aims to reduce stress-producing thoughts, known as *cognitive*

*distortions*. *Stress inoculation training* (SIT), developed by Meichenbaum (2007) involves education on stress, acquiring and rehearsing skills such as cognitive restructuring, and practicing and applying new skills in real life. Khorsandi et al. (2015) examined the efficacy of SIT in reducing perceived stress among pregnant women (n=64). The educational component included the nature of stress, how to identify thoughts, feelings, and behaviours, problem-solving skills, ways of coping, and emotional regulation. Participants then practiced the newly learned skills in the clinic setting before finally applying the learned skills in daily life. The authors found that the mean perceived stress scores of participants significantly decreased following the SIT program (Khorsandi et al., 2015). These results suggest that a CBT-based intervention, when combined with psychoeducation and mind-body strategies, such as relaxation, may be an effective means of reducing perceived stress of mothers.

***Relaxation Techniques***

Relaxation techniques assume that stress and relaxation are opposites and that one cannot exist in both states at the same time – thus, increasing relaxation levels results in lower stress levels (Holman et al., 2017). *Progressive muscle relaxation* (PMR), described by Edmund Jacobson (1987) is one such relaxation technique. This technique involves systematically tensing and then relaxing muscle groups in sequence (Anxiety Canada, n.d.; Jacobson, 1987). According to Anxiety Canada (n.d), individuals begin by focusing on a particular muscle to group to tense. For example, the right hand. Individuals take a deep breath in and tense the hand by clenching it. After five seconds, individuals take a breath out and relax the tense muscles. It is crucial to pay attention to the difference between the tension and relaxation. After remaining in the relaxed state for five to 15 seconds, the next muscle group is tensed and subsequently relaxed, and so on

(Anxiety Canada, n.d.). By practicing PMR, individuals can identify where in their body they experience tension while stressed and relax these muscles when needed (Straub, 2019).

PMR has been found to reduce stress, anxiety, and depression. In a randomized trial of pregnant women (n=66), Nasiri et al. (2018) found significant mean differences in the mean scores of participants on the EPDS and Depression, Anxiety and Stress Scale-21 (DASS-21) following teaching and a 6-week implementation of PMR and guided imagery. No significant differences were found in the mean scores of the control group. Xiao et al. (2020) also used PMR with COVID-19 patients. Prior to the intervention, there was no statistically significant differences in Generalized Anxiety Disorder (GAD-7), Patient Health Questionnaire (PHQ-9) and the Pittsburgh Sleep Quality Index (PSQI) scores between the control group (n=40) and experimental group (n=39). Following the teaching and training of PMR to the experimental group, Xiao et al. (2020) found that the experimental group had significantly lower scores on the GAD-7, PHQ-9, and PSQI, suggesting that PMR helped to improve negative emotions experienced by COVID-19 patients and improved their sleep quality. Finally, PMR has also been found to reduce the physiological effects of stress. Using a shortened version of PMR, Chellew et al. (2015) found that PMR significantly reduced daily cortisol secretion following a one-week course among first year university students (n=101).

*Diaphragmatic breathing relaxation* (DBR) is another relaxation technique that involves lengthening inhalation and exhalation through contraction of the diaphragm, allowing the breath to move into and expand the belly (Ma et al., 2017). This breathing technique decreases breathing rate and is thought to activate the PNS (Ma et al., 2017). Chang et al. (2009) found that a 30-session intervention where DBR was practiced for five minutes daily significantly reduced the anxiety of pregnant women. Ma et al. (2017) used a control (n=20) and experimental (n=20)

group to examine the effects of DBR on stress and negative affect. Those in the experimental group were taught basic knowledge and skills on DBR and then received 20 sessions over 8 weeks in which 15 minutes of DBR occurred following 15-minutes of resting breathing. Negative affect score was significantly reduced following the intervention and salivary cortisol concentration significantly decreased as well (Ma et al., 2017).

### *Mindfulness Techniques*

Mindfulness involves "paying attention to the experiences, thoughts and emotions occurring in the present moment in a non-judgmental, compassionate, accepting and non-reactive way" (Holman et al., 2017, p. 3). The attention aspect involves focusing on what is happening in the present moment and directing awareness to our breathing, thoughts, physical sensations, and feelings (American Psychological Association [APA], 2019). The acceptance aspect involves acknowledging our thoughts and feelings without passing judgement, reacting or responding, and then releasing them (APA, 2019). Employing mindfulness helps individuals to separate negative thoughts and emotions from dysfunctional responses (Holman et al., 2017).

Mindfulness-Based Cognitive Therapy (MBCT) and Mindfulness-Based Stress Reduction (MBSR) are two manualized group programs (8-weeks) that teach mindfulness and have found to be effective in reducing stress (Parsons et al., 2017). Participants are introduced to the practice of meditation and how to focus their attention to their body and breath, before moving to being mindful of their thoughts and mental processes. Participants are also taught how to stabilize attention and how to recognize when their mind is wandering. By the end of the program, participants are encouraged to incorporate formal meditation practices into their daily routine (Parsons et al., 2017). Given the time-limited nature of *Mothering During COVID-19*, only brief elements of these programs are incorporated. Call et al. (2013) examined the efficacy

of two brief mindfulness interventions, body scan exercise and hatha yoga, in the reduction of stress symptoms among female undergraduates (n=91). The body scan exercise involves systematically attending to areas of the entire body, bringing to one's awareness the feelings and sensations occurring in each area. Hatha Yoga involves gentle movement and stretching alongside breathing. After completing three weekly 45-minute sessions, females in the experimental group showed a significant reduction in stress as compared to the waitlist controls (Call et al., 2013). These results suggest that the effectiveness of MBSR and MBCR remains even when presented in a brief form.

The techniques described in this section are taught and demonstrated in the workshop. Participants are encouraged to utilize and incorporate these techniques in their daily life as these techniques can benefit participants even when the stress of mothering during the COVID-19 pandemic has passed. Even with public health restrictions lifting, there is still likely to be stress as a result of the pandemic for years to come.

**Stress Beyond COVID-19**

With vaccine rollouts happening across the world, the threat of contracting the COVID-19 virus is slowly subsiding. However, it is probable that the psychological impact of COVID-19 will remain even when the physical threat of the virus is eliminated. Past traumatic experiences, such as natural disasters and previous pandemics, have been shown to have long-lasting impacts on health (Brooks et al., 2020; Ehrlich et al., 2010), hence it is anticipated that the effects of the COVID-19 pandemic will also linger. Ehrlich et al. (2010) found that a loss of nontangible resources (such as family stability, time with loved ones, stable employment, having a daily routine) following Hurricane Katrina, and not just the event itself, was significantly associated with depressive symptoms amongst postpartum women (n=208). This research highlighted that

long-term consequences following an event continues to impact individuals even when the event is over. Hagger et al. (2020) suggested that the elevated stress as a result of the COVID-19 pandemic and public health measures, including financial insecurity, will remain prolonged even when the virus is no longer a threat. This prolonged exposure could have disastrous long-term effects on health for many, and such effects are likely to remain even after the pandemic ends, making the development of useful stress management strategies a priority (Hagger et al., 2020).

Indeed, it has been found that stressful events experienced due to the COVID-19 pandemic are having an effect on American's long-term health. The American Psychological Association (APA) report that inability to cope with the stresses of the pandemic has resulted in undesired weight change, increased alcohol consumption, and disrupted sleep in the 3,103 U.S. adults surveyed (APA, 2021). Additionally, they note that almost 25% of adults surveyed reported that they or a member of their household were laid off during the pandemic, and nearly 25% of parents reported being diagnosed with a mental health disorder since the start of the pandemic. Furthermore, 82% of adults surveyed reported that they never thought the pandemic would be this long-lasting. Finally, despite the promise of vaccine rollouts, the survey revealed almost half (49%) of adults surveyed reported feeling uneasy about transitioning back to in-person interactions following the pandemic, and 46% adults reported that they feel uncomfortable going back to how they lived to prior to the pandemic (APA, 2021). It is clear that the stress caused by COVID-19 has manifested physically and mentally for many individuals and that adapting to a post-COVID world will most likely continue to cause stress in the future. Without healthy coping strategies and stress management interventions, it is possible that the elevated stress as a result of the pandemic will continue to have long-term effects on physical and mental health. Given this, it is clear that many mothers may still be experiencing stress as a

result of the COVID-19 pandemic for years to come. Hence, the information in this final project and the resulting workshop will still be highly relevant and of great importance to aid mothers in understanding the nature of stress and to provide them with interventions to manage their stress both during the pandemic and in the years that follow.

**Learning Psychology**

The creation of this psychoeducation workshop is educational in nature, with the primary goal of sharing information so that mothers can access educational supports related to their health and stress, hence the focus on learning psychology concepts is necessitated. It is pertinent to review learning psychology concepts, particularly addressing how individuals learn best when receiving volumes of information during a period of stress or anxiety, as well as instructional information on how to build social support amongst groups at a time when they might be distressed. In addition, learning psychology informs best practices for communicating information in an online format. The learning theories and models that informed the creation of *Mothering During COVID-19* include information processing theory, trauma-informed pedagogy, and learner-centered pedagogy.

According to Schunk (2012), learning involves a change in behaviour over time and happens through experience (e.g., practicing a skill). One such theory of learning they describe is the Information Processing theory. This theory posits that learning occurs when information is stored in long term memory (LTM). Firstly, information we attend to enters the information processing system through our sensory register and is transferred to short-term memory, also known as working memory (WM). WM is limited in how much information it can hold and for how long. Given the limited attentional capacity of individuals and the limited capacity of WM, the information processing system can only handle so much processing at any given time. Hence,

presenting too much information may result in cognitive load. Schunk (2012) describes *cognitive load* as the demand placed on the information processing system and can be categorized two ways. *Intrinsic cognitive load* refers to the properties of the material being learned, i.e., how complex it is, and the effort required to process the material. *Extrinsic* or *extraneous cognitive load* refers to how the information is being presented (Schunk, 2012). For example, a presentation with different sizes and colours of fonts, pictures, and graphics, that is taught in an unclear manner would present a higher extraneous cognitive load as the learner's attention would be overwhelmed by the various stimuli. Hence, how information is presented in *Mothering During COVID-19* is critical to ensure that participants are not experiencing high levels of cognitive load. Best practices for reducing cognitive load and strengthening memory (i.e., learning) is discussed next.

Briegger et al. (2020) suggested that information should be chunked to avoid cognitive overload. Chunking, which involves grouping individual components of information into meaningful units, or chunks, helps to reduce the load on WM by allowing learners to retrieve similar representations from LTM, thus replacing the individual components in WM and freeing up capacity (Thalman et al., 2019). Additionally, retrieval practice, which involves bringing information from LTM to mind, has been found to strengthen memory (Weinstein et al., 2018). They state that even merely bringing information to mind in the absence of feedback opportunities (such as a quiz) has been found to improve the memory of that information. Finally, Weinstein et al. (2018) suggest that the use of concrete examples alongside concepts can aid with learning. As such, the information in the workshop is presented in a chunked manner with examples to support the information, and participants are provided opportunities (such as open-ended prompts from the workshop facilitator) to recall what they have learned.

Stress also impacts learning. Acute stress has been found to impact learning in a time dependent manner, i.e., when acute stress occurs before encoding or retrieval it can impair these processes, and chronic stress and trauma can affect cognition and working memory (Darling-Hammond et al., 2020; Vogel & Schwabe, 2016). Furthermore, Darling-Hammond et al. (2020) note that a lack of safety in a learning environment can amplify cognitive load. Trauma-informed pedagogy or approaches to education suggest that providing learners with structure, consistency, and predictable routines can help learners who are unable to regulate themselves (Darling-Hammond et al., 2020; Brunzell et al., 2016). Such structure promotes safety and can reduce hyper-vigilance, anxiety, and extraneous cognitive load, thereby enhancing learning (Darling-Hammond et al., 2020). Additionally, Brunzell et al. (2016) note that trauma-informed approaches focus on increasing regulatory abilities of learners. They note that this may include taking time to practice mindfulness, teaching learners about stress and their body's responses, and practicing de-escalation. Given that much of the workshop is spent on these topics, yet participants may not have regulatory strategies to use to manage their stress at the beginning of the workshop when psychoeducational topics are being discussed, the workshop facilitator may find it valuable to utilize "brainbreaks". Brainbreaks involve short-burst opportunities for learners to physically regulate; this may take the form of a movement break, practicing mindfulness, or breathing (Brunzell et al., 2016). Thus, it is important for facilitators of the workshop to develop safety and ensure that the agenda for the workshop is outlined, participants are informed of transitions and timings, and opportunities are provided for participants to engage in regulation strategies, led by the facilitator.

Finally, learner-centered pedagogy suggests that the best learning occurs when the material is relevant to the experiences of the learner. Bourke-Taylor and Jane (2018) found that

mothers (n=19) interviewed following participation in the “Healthy Mothers Healthy Families” workshop reported that the relevant and tailored delivery of the material, specifically how the information provided could be integrated into their daily life, as a worthwhile aspect of the workshop. Furthermore, Brieger et al. (2019) suggest that adult learners use their personal experiences and backgrounds as a basis for learning, making group reflection an important aspect for meaningful learning as it is beneficial when learners are able to reflect on and exchange their personal experiences. Hence, the workshop was designed to include time to discuss how the stress management techniques can be incorporated into mothers’ lives and incorporate time for large and small group discussion. If group discussion is to be a part of the workshop, it is critical to examine how social support can be fostered in such an online workshop.

**Table 1**

*Summary of learning theories and models*

| | Description of Model | Applicability to Workshop |
|---|---|---|
| Information Processing theory | • Learning occurs when information is stored in LTM<br>• WM has a limited capacity and cognitive load occurs when demand is placed on the system | • Information is presented in a chunked manner<br>• Participants provided opportunities to recall/retrieve information<br>• Concrete examples provided to support material |
| Trauma-informed pedagogy | • Trauma and stress impact learning<br>• Focuses on providing structure and consistency for learners who are unable to regulate themselves as a result of trauma | • Workshop structure, format, and agenda is shared and negotiated with participants<br>• Brainbreaks are utilized to assist participants with regulating themselves so learning can occur |
| Learner-centered pedagogy | • Individuals learn best when the material is relevant to their own experiences | • Information tailored to population (i.e., mothers)<br>• Group discussion is incorporated into the workshop so that participants can share their personal experiences |

### *Building Social Support Online*

It is vital to understand that social support is a coping resource that can buffer against the effects of stress. Mothers (n=19) interviewed following participation in the "Healthy Mothers Healthy Families" workshop reported meeting and interacting with other mothers as an aspect of the workshop that they found worthwhile, and also reported being inspired by others in the workshop (Bourke-Taylor & Jane, 2018). Thus, related to this project the question arises; how can social support be fostered in *Mothering During COVID-19*? Especially amongst participants who may be distressed? A nonjudgmental atmosphere in which mothers are able to share openly without fear of judgment may be beneficial in this workshop.

In a qualitative study on the experience of sex workers in a supportive services group, Preble (2015) found that common experiences were a theme amongst the women. That is, women found comfort in not being judged by others who had been through similar experiences as them. Furthermore, sharing experiences they had in common with other participants allowed them to develop feelings of comradery and trust. Preble (2015) suggests that the staff of this program modeled trust by demonstrating respect, encouragement, and nonjudgmental attitudes towards the women. Thus, these attitudes are necessary to employ during the psychoeducational workshop. Mothers participating in the workshop may feel worried about being judged for experiencing stress or be hesitant to share their personal experiences with mothering due to the stigma around PPD. In addition to attitudes of respect and being non-judgmental, creation of a safe space is important to allow mothers to feel comfortable sharing with one another. The use of icebreakers, breakout rooms, and group discussion are used to within the workshop allow participants to get to know one another and to foster social support.

### *Communicating Information Online*

It is also important to consider best practices for communicating information online as *Mothering During COVID-19* will utilize videoconferencing technology to present the material. Videoconferencing allows for participants to join from anywhere, provided they have a computer-like device with a camera, and will allow for synchronous communication between the facilitator and participants. Additional considerations must be attended to in an electronic, synchronous environment.

First, Sanjeetha et al. (2020) note that if slides (such as PowerPoint) are used during an online presentation, it may be the case that the slides are the only thing the participants can see due to the nature of some video-conferencing platforms and technology. They offer additional advice, stating that slides should be free of distracting backgrounds, multiple colours, red or green font (for colour-blind audiences) or intricate, hard-to-read font, and the slide background should be simple and consistent throughout the presentation. They provide an example that for light backgrounds, dark fonts be used, and vice versa. Further to this, the slides should not be overloaded with information, as they are best used to summarize the main themes and can then be expanded on by the presenter. Images can also be used to enhance the slides and should be high quality in order to be seen clearly by participants, and the images should be copyright or royalty free if permission to use has not been obtained. Additionally, they suggest providing the slides ahead of time in order to support participants whose live-stream access may be limited. Hence, participants are provided with the workshop materials ahead of the delivery of the workshop. Furthermore, Sanjeetha et al. (2020) suggest the use of activities during the presentation, such as polling, discussion rooms, and chat room conversations. Given that these suggestions also support best practices for learning, these methods are employed in *Mothering*

*During COVID-19* to allow participants to discuss the material being taught and share their personal experiences.

## Ethical Considerations of Online Workshop

The final portion of this literature review will address ethical considerations of an online workshop and best practices for addressing consent, logistical issues such as online security issues, screening and recruiting of participants, and finally, best practices for addressing safety issues such as when a participant becomes distressed. These concepts are introduced by the facilitator at the beginning of the workshop and participants are checked in with throughout the workshop in order to gauge their comfort level.

### *Informed Consent Process*

Typically in a therapeutic setting, whether it be individual or group therapy, an informed consent process is carried out between the service provider and client(s). The informed consent process involves communication between the service provider and client regarding the purpose and nature of the activity, responsibilities of each party, privacy and confidentiality limits, risks and benefits of treatments, possible alternatives, and the right to refuse treatment or stop at any time (Canadian Psychological Association, 2017). Given that this workshop involves vulnerable individuals sharing with another, participants are to be informed of the purpose of the workshop, their rights, the possible risks of participating in the workshop, confidentiality issues that may arise, safety issues, and how to proceed if they do not accept or agree to the conditions. Participant rights to be addressed include: the right to participate as much or as little as they want, the right to pass or say no to any questions/discussions/activities that do not work for them, and the right to leave the workshop if it is not suited for them.

Due to the fact that *Mothering During COVID-19* is in an online workshop, issues with online security also exist. In online counselling situations, clients would be informed of the risk and benefits of e-counselling, including limits to online security, and possibility of misunderstanding and miscommunicating (Harris & Birnbaum, 2018). Similarly, participants partaking in *Mothering During COVID-19* are to be informed that despite best intentions and the use of secure technology, complete security cannot be guaranteed, that technological mishaps may occur, and difficulties of communicating online (internet lags, missing non-verbal cues, etc.).

### *Screening of Participants*

The workshop is open to all interested mothers pregnant or within one year postpartum. Hence, no screening will take place beyond meeting the aforementioned inclusion criteria. Thus, facilitators will need to be mindful that participants may have various perspectives, opinions, and values they express during the workshop that other participants are not in complete agreeance with. Thus, facilitators should be considerate of various perspectives and role model displaying respect for differing perspectives and experiences.

### *Safety Issues*

Anticipating possible barriers would alleviate stress for both the participants and workshop facilitators. Harris and Birnbaum (2018) noted that online counselling presents challenges for communicating during emergencies. The authors suggest that providing clients with a list of emergency/distress contacts and supportive services to access in case of emergency would be beneficial. Hence, workshop participants are provided with a list of resources and encouraged to use the resources if they feel distressed at any point during the workshop. They

are also informed prior to beginning the workshop of the content and provided with a warning that some of the material may be distressing.

**Summary**

Based on the literature review, it is clear that COVID-19 is a formidable stressor that has negatively impacted the mental health of many across the world. This stressor is chronic in nature – the world has been facing ongoing challenges as a result of COVID-19 for over a year. Furthermore, research and past experiences suggest that COVID-19 will continue to cause stress even when the physical threat subsides and we transition into a new normal post-COVID. Given what is known about the detrimental effects of stress and social isolation on mother's health, it is important for mental health professionals to provide mothers with ways to manage stress that is considerate of the current context. Research indicates that interventions that utilize a multimodal approach are effective in reducing stress levels, even via online formats. Hence, *Mothering During COVID-19* will incorporate CBT-based, mindfulness, and relaxation strategies into the stress management component. These strategies, alongside psychoeducational material on postpartum depression and stress, are presented to participants via an online presentation. This online presentation incorporates best practices for learning, fostering social support, and communicating information online, whilst also incorporating best practices for ethical issues.

## Chapter 3: Methodology

The global COVID-19 pandemic has presented many challenges due to the changing public health regulations, uncertainty about the future, and social isolation, resulting in increased stress and limited social support for mothers – both of which have been implicated in the development of PPD. Thus, the aim of this final project was to create a workshop that provides mothers with psychoeducation surrounding PPD, stress, and stress management. The process of creating the workshop, *Mothering During COVID-19,* involved a thorough examination of the literature. Scholarly-reviewed articles, government reports, books, and websites pertaining to the workshop topic were collected using the following methods:

1. A search of the University of Lethbridge's Library was conducted and included, but was not limited to, the following databases: PsycINFO, SAGE Journals Online, PubMed, ScienceDirect, and WileyOnline using variations of the following terms: *COVID-19, coronavirus, stress, stress response, coping, parenting, mothering, peripartum depression, postpartum depression, health, social support, social isolation, psychoeducation, stress management,* and *relaxation*
2. A search of GoogleScholar using multiple variations of the same terms noted above was conducted
3. Relevant literature was identified by manual searching of reference lists from the retrieved sources
4. A manual search of the journals: *Journal of Women's Health* and *International Journal of Stress Management* was carried out

The information procured from the examination of the literature was synthesized in Chapter Two of this final project and qualitatively describes several topics: 1) the psychological

impact of COVID-19 and emerging research on the relationship between the COVID-19 pandemic and PPD, 2) research regarding the construct of PPD, 3) research regarding the construct of stress, 4) empirically supported interventions for stress management, 5) best practices and strategies for learning and 6) ethical considerations of an online workshop. These topics guided the creation of the workshop, *Mothering During COVID-19* (Appendix B). The research on COVID-19, PPD, and stress informed the content of the workshop and the material taught to participants to fulfill the objective of the workshop. The literature on learning psychology best practices informed the format of the workshop, including amount of information included on the slides, length of workshop, inclusion of group discussion, times for questions and review periods. Furthermore, the final topic, ethical considerations of an online workshop, informed best practices for addressing ethical issues such as online security during the workshop. Due to the fact that *Mothering During COVID-19* is an online workshop, the presentation was created using PowerPoint. The workshop is comprised of three sections that total seven hours in duration and is delivered over three days. Further details about the workshop are provided in Chapter Four.

**Summary**

This project may benefit mothers and families alike. Postpartum depression impacts not only the mother, but the child, partner, and family of those affected – PPD places strain on intimate relationships and has negative health outcomes for mothers and infants of mothers with PPD (Letourneau et al., 2012; Slomian et al., 2019). Early prevention, if possible, will provide better outcomes for everyone. Additionally, practitioners working with pregnant women and new mothers may also benefit from the information on included in this final project. This project has synthesized the latest research on the COVID-19 pandemic and postpartum depression, further

allowing mental health professionals to understand the impact of the global pandemic on mothers. It is currently understood that the prevalence of PPD has increased during this global pandemic, and that new and expectant mothers have faced many challenging stressors, such as uncertainty about prenatal care and feelings of isolation (Davenport et al., 2020; Farewell et al., 2020; Lebel et al., 2020; Oskovi-Kaplan et al., 2020; Zanardo et al., 2020). Furthermore, this workshop can act as a resource for mental health professionals to utilize interventions and techniques that are mindful of the restrictions imposed as a result of COVID-19. For example, mindfulness and diaphragmatic breathing are interventions that mothers can utilize easily throughout their day as they take only a few minutes to practice.

The workshop and any accompanying materials may be shared with agencies that employ mental health professionals who could deliver this workshop to mothers, such as Lethbridge Family Services, Family Centre, and Lethbridge Pregnancy Care Centre. Additionally, this project has been submitted to Open ULeth Scholarship (OPUS), the University of Lethbridge's open access research repository, allowing for anyone to access the workshop. The application component of the final project, the workshop, is described in the following chapter.

# Chapter 4: Workshop Development

## Workshop Objective

Mothers face many challenges during the transition to motherhood. Given that the stress evoked by the COVID-19 pandemic is unprecedented and that the pandemic has resulted in a complete loss of normalcy, the primary aim of this final project was to create an interactive online workshop that provided mothers with psychoeducation surrounding PPD and stress, accompanied by strategies for them to employ independently in order to alleviate stress. This workshop, *Mothering During COVID-19*, is unique in that it addresses the impact of COVID-19 and the ongoing, chronic nature of this stressor, and allows for mothers to share and discuss their experiences navigating the transition to motherhood during this global pandemic. *Mothering During COVID-19* is not intended to act as or replace psychotherapy, rather, it is proactive in nature and is intended to equip mothers with information and skills to enhance their well-being.

## Workshop Overview

A brief facilitation guide (Appendix A) is included alongside the workshop in order to assist future facilitators with the delivery of the workshop. This guide includes the objective of the workshop, preparation required in order to facilitate the workshop, information on inclusion criteria for participants, materials required, and suggestions for delivering the workshop.

The workshop is presented as a PowerPoint presentation and is seven hours in its entirety. The PowerPoint presentation is divided into three sections, with the first two being two and a half hours in length and the final section being two hours in length. The workshop may be presented in one day or split up over three days or even weeks. The intention behind the brief duration of the workshop is that mothers are busy. The workshop is accessible and practical for

mothers to attend; thus the three sections allows for flexibility in scheduling delivery of the workshop.

Firstly, workshop participants are welcomed and thanked for joining. After the facilitator introduces themselves, participants are informed of workshop guidelines, such as respecting one another and keeping discussions that happen within the workshop confidential, and workshop structure. Furthermore, online security issues and participant rights are discussed with participants. Participants are also informed that some of the workshop material may be distressing and are provided with a list of resources to use should they need them. Participants are provided an opportunity to ask questions regarding the workshop structure and informed of their right to leave the workshop if they do not agree or consent to the guidelines, risks, etc. Following this, an icebreaker activity is used to allow participants to get to know one another and get participants talking in order to warm up for subsequent group discussions. Finally, workshop agenda, topics to be discussed, and timing of the session is shared with participants.

The next section of the workshop involves a discussion on the impact of COVID-19 on mental health and mothers' health. Next, psychoeducation is provided on the topic of postpartum depression, including what it is, the prevalence of it, consequences, and risk factors. Next, the topic of stress is covered. This includes information on what stress is, how stress impacts our health, and the role of social support.

The second section of the workshop is comprised of information on stress appraisal, the physiological stress response, and coping with stress. Finally, the third section of the workshop focused on stress management strategies. Several evidence-based stress management techniques, such as cognitive restructuring, progressive muscle relaxation, diaphragmatic breathing, mindfulness, and body scanning, are shared with participants. This section involves providing

information on the stress management techniques as well as facilitator-led instruction through the stress techniques in order for participants to try out the techniques with the support of the facilitator. Finally, the workshop addresses how these stress management techniques can be incorporated into a daily routine in order for mothers to engage in these techniques independently.

Throughout the workshop, large and small group discussion, review of concepts, question periods, and movement/nutrient breaks are incorporated in order for learning to occur. Social support is incorporated in this workshop with the use of icebreakers at the start of each day of the workshop. This allows for participants to get to know one another and serves a team-building activity, developing trust and safety. Furthermore, the use of small and large group discussion is used to build upon social support by providing a space in which mothers can relate to one another and share their experiences. At the beginning of the workshop, participants will be informed of the use of discussion periods. Participants will be encouraged to be open to the process of sharing about themselves and connecting with others, and informed that doing so may contribute to feeling supported by those in the workshop, a potential benefit of the workshop.

Handouts (Appendix C) also accompany the PowerPoint presentation. These handouts include a resource list for mothers should they need additional support, a list of cognitive distortions, a table for identifying cognitive distortion, instructions for progressive muscle relaxation, a summary of stress management techniques learned in the workshop, a table for identifying and managing stress, and a list of additional resources. These handouts are meant to supplement the material provided in the PowerPoint slides. Finally, participants are asked to fill out a feedback form (Appendix D) in order to provide facilitators feedback regarding the delivery and content of the workshop.

# Chapter 5: Discussion

This chapter provides a brief discussion of the final project and reviews the strengths and limitations of the final project. Recommendations for future research and development is also discussed.

## Discussion

The workshop was developed to be psychoeducational in nature to provide mothers with the aforementioned information, and also to be brief. As mothers are very busy, this workshop provides an opportunity for them learn about their health in a way that doesn't take too much time out of their already busy schedules. The workshop was designed to be online in line with COVID-19 public health restrictions at the time of conception, however, this also allows for mothers to join from home, allowing them to save time on travelling to the workshop as well as potentially saving on childcare. The language used throughout the workshop is intended to be accessible to mothers, although some terms that refer to stress systems and processes may not be readily accessible. Where possible, terms are defined for participants and time for questions and periods for review is included within the workshop in order to provide participants with opportunities to deepen their understanding.

Given the detrimental effects of stress on mother's health, and the potential for stress management strategies to reduce stress levels faced as a result of COVID-19, this workshop may provide mothers with an accessible option to learn about how COVID-19 and stress has been impacting their health. Providing information on what stress is will better allow mothers to recognize when they are experiencing stress, think about how this stress is impacting them, and regulate themselves using one of the strategies taught in the workshop. Additionally, information on postpartum depression may provide mothers with a better understanding of the construct and

reduce the stigma surrounding it, allowing mothers to seek treatment if needed. Providing this information and stress management strategies may allow mothers to address their stress, which would have beneficial outcomes for both their own health and that of their children and family.

**Strengths**

A strength of the literature review is the comprehensive search for articles to ensure that a strong theoretical understanding of the constructs and concepts in the workshop were understood. The approach was multidisciplinary in nature; articles from journals of educational psychology, health psychology, biology, medicine, social work, and more were included. While many of the articles are dated, this allowed for the inclusion of foundational and primary works that make up our current understandings of several of the constructs included in the workshop. For example, pioneers of research on stress, such as Selye, Lazarus, and Folkman were all included within this literature review. Furthermore, a strength of the literature review was the use of recent and emerging research on the impact of the COVID-19 on individual's and mother's health, providing readers with a thorough understanding of the detrimental effects of COVID-19.

A strength of the application component, *Mothering During COVID-19*, is that it takes a multimodal approach. That is, the stress management component utilizes multiple types of interventions or techniques. Such an approach offers mothers a greater likelihood of finding a strategy that works for them and can be incorporated into their daily life. Furthermore, the workshop was developed based on learning psychology best practices and incorporates breaks, discussion time, and review periods in order to ensure that mothers are engaging with and learning from the workshop material.

**Limitations**

A limitation of this final project is the lack of cultural considerations. While the literature review included studies from countries beyond North America, such as China, on a variety of topics such as the relationship between social support and PPD and the psychological impact of COVID-19, the literature review and resulting workshop do not consider the way in which stress may differ across cultures. More specifically, how stress is expressed, how stress is coped with, and how stress is managed may differ across cultures. Moreover, mothering itself is deeply rooted in culture. That is, expectations of motherhood, roles of mothers, and responsibilities of mothers varies across cultures. Due to the fact that Canada is a multicultural society, many participants may have different experiences about what it means to be a mother and as such, may have different experiences regarding the transition to motherhood. Hence, the information in *Mothering During COVID-19* may not appropriately apply to participants from other cultures, or workshop participants may feel as though cultural differences are not being adequately addressed.

A limitation of *Mothering During COVID-19* is that it has not been implemented. Hence, it is not possible to determine if the workshop is successful in achieving it's intended aims. Additionally, *Mothering During COVID-19* was designed with mothers who are peripartum or within one year postpartum in mind. Other populations, such as fathers, may also benefit from this workshop, however the information contained in the workshop has not been modified for such use. Moreover, this workshop assumes mothers will have access to a computer, laptop, or tablet with videoconferencing abilities and a quiet place in which to attend and participate in the workshop. Furthermore, *Mothering During COVID-19* is brief in nature and designed as such to provide mothers with very busy schedules the opportunity to learn about their health and how to

manage stress. Some participants may benefit from a longer workshop in order to receive more social support from other mothers and the facilitator, have the opportunity to ask questions, and evaluate how the stress management techniques are working for them over the course of a few weeks. Finally, the workshop was created without consultation of experts or the target audience. Such collaboration would only serve to improve the workshop and ensure that the content meets the needs of mothers.

**Recommendations for Future Research and Development**

As aforementioned, much of the emerging research on the impact of COVID-19 on postpartum depression has focused on prevalence of symptoms, with some studies focusing on what mothers found stressful during the pandemic. I could not find any research during the time of writing on the efficacy of stress management workshops for mothers during COVID-19. Given the unique nature of COVID-19, it would be useful to know if stress management workshops are effective in reducing the chronic stress created by the pandemic, as the COVID-19 pandemic has created stress in many aspects of life and for a very long time. Hence, research on the efficacy of this workshop and other stress management workshops would help to inform future interventions. Furthermore, research on the format of such workshops (online delivery, length, information provided) would help to inform what is most effective for achieving the intended aims.

This development of this project began in November 2020, during the height of the COVID-19 pandemic. Now, many are fully vaccinated against the virus and restrictions are easing around the province and country. While the threat of variants of COVID-19 still pose a real concern, we are beginning to transition back into how life was pre-pandemic. For example, universities in Alberta are welcoming students back for in-person classes beginning in September

2021. For some, the transition may elicit feelings of uncertainty or hesitancy. Research that examines the impact this transition has on well-being, including what concerns and stress mothers are experiencing as a result of this transition, would allow us to further understand the impact of the pandemic on the world. Furthermore, I would suggest that this workshop be adapted in the future to discuss the worries, concerns, and fears mothers have about returning to "normal."

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## Appendix A: Facilitator Guide

## Mothering During COVID-19: An Online Psychoeducational Workshop on Stress Management and Postpartum Depression

## Facilitator Guide

### Workshop Objective

This purpose of this workshop is to educate mothers on the nature of stress, the relationship between stress and postpartum depression, and provide them with stress management techniques and practices to employ independently. This workshop also addresses the impact of COVID-19 and the ongoing, chronic nature of this stressor, and allows for mothers to share and discuss their experiences navigating the transition to motherhood during this global pandemic.

### Facilitator Preparation

Please familiarize yourself with Chapters One through Five of this final project as the information in the workshop follows the material covered in these chapters, particularly Chapter Two. The text included on the PowerPoint slides of the workshop is meant to be brief; thus, it is important to review the material in order to expand on what is included in the slides. Facilitators should familiarize themselves with the PowerPoint slides and handouts and also be familiar and well-versed with a video-conferencing platform such as Zoom or Microsoft Teams.

### Workshop Participants

This workshop was created for mothers who are expectant or within one year postpartum in mind. Additionally, this workshop is psychoeducational in nature and not a therapeutic group. Hence, there is no specific screening criteria for who can participate in the workshop. It is suggested that at least eight participants participate in the workshop, with a maximum of 20 participants, in order for effective group discussion to take place.

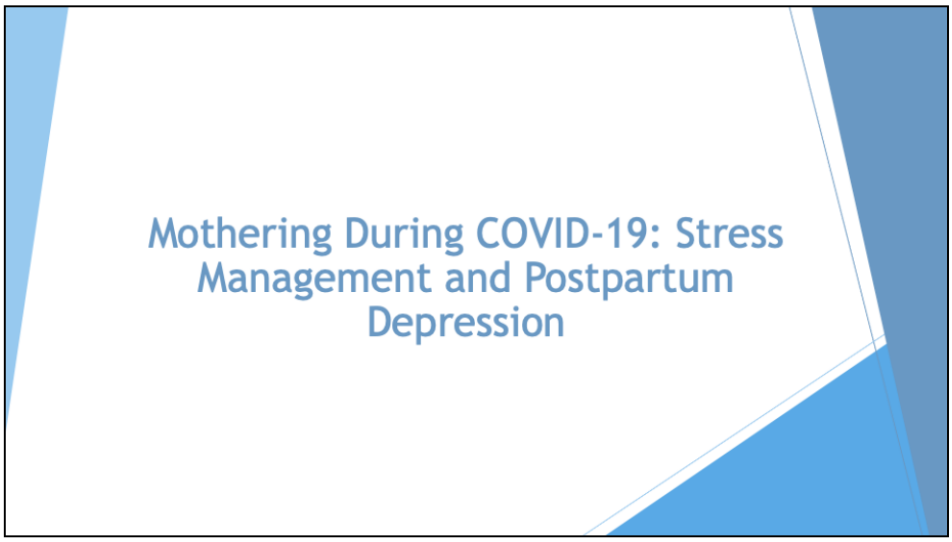
### Materials

Prior to the workshop, please provide each participant with a copy of the PowerPoint slides, handouts, and feedback form, as participants may experience technical difficulties during the workshop that limits their ability to follow the workshop. Sending materials in advance allows participants to refer to the content even if technical difficulties occur. Furthermore, sending materials in advance allows those who may choose to opt out of the workshop access to the materials to learn from on their own time. The facilitator will also need to send a link to the videoconferencing meeting one week prior to the workshop, with a reminder email the day prior.

**Workshop Delivery**

The workshop in its entirety is seven hours in length. The workshop is split into three parts, with the first two parts being two and half hours in length and the final part being two hours in length. It is up to the facilitator and the agency offering this workshop when the two parts are delivered, i.e., over the course of one day, over two days, etc. Please consider the population (mothers) when making this decision. Due to the fact that many opportunities for group discussion is included in the workshop, the workshop length may vary depending on how much or how little participants engage in group discussion. Furthermore, carefully review the section on Learning Psychology in Chapter Two and note that participants may need more time to process the material included on the slides. The timelines provided are merely a suggestion. Use professional judgement to ensure that the needs of participants are met. This may include omitting slides, spending more time on certain topics, revisiting topics, expanding group discussion time, etc.

## Appendix B: Workshop




All images used in this PowerPoint are free stock images.

1


At this point, the facilitator should introduce themselves to participants.

2


Workshop Agenda
Over the next three days we will discuss…
Workshop guidelines
COVID-19
Postpartum Depression
Stress
And we will participate in…
Icebreaker activities
Small and large group discussion
Self-discovery activities
Stress management strategies

## Workshop Structure

- This workshop was designed using learning psychology principles and best practices to optimize learning. This involves:
  - Grouping information in chunks to reduce cognitive load
  - Making use of group discussion so you can relate your personal experiences to the material being taught
  - Review periods to discuss and reflect on what you have learned
  - Movement and nourishment breaks throughout to allow you to stretch, shake it out, breathe, and regulate
- Feel free to ask questions throughout the workshop ☺

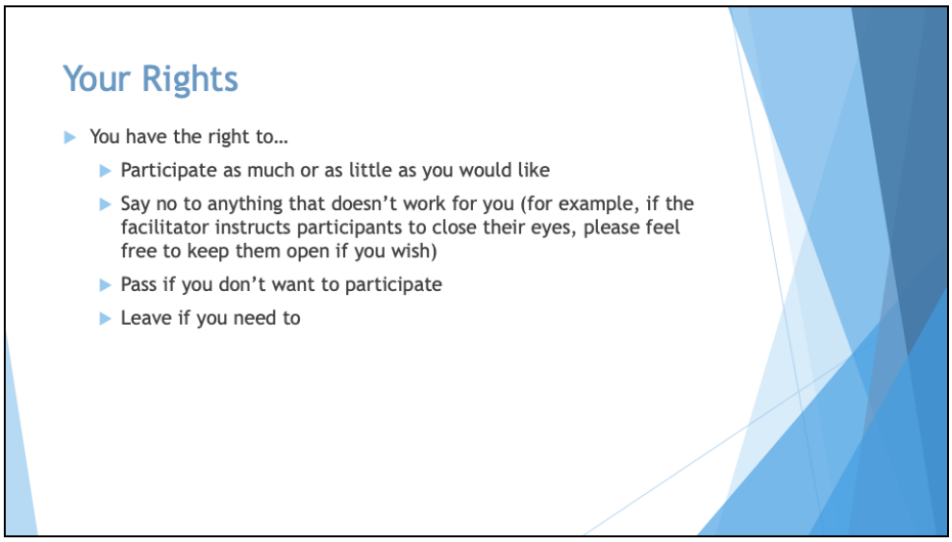
## Workshop Structure

- Despite our best intentions and the use of secure technology, security cannot be 100% guaranteed when online
- Technological mishaps may occur
- Misunderstandings and miscommunications may occur
- This workshop will not be recorded for later use, so your attendance or the discussions that occur will not be recorded

## Workshop Guidelines

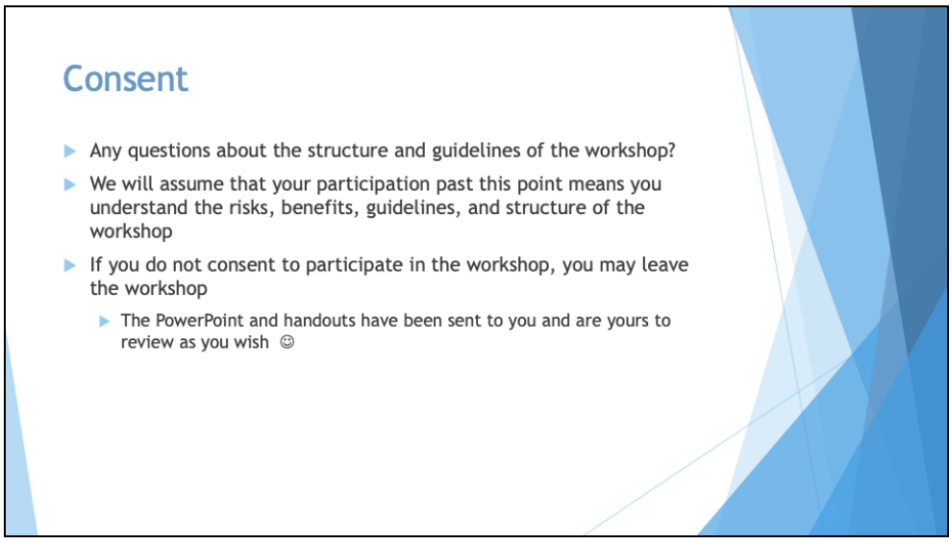
- This is a nonjudgmental, accepting, and safe space
- Please listen to others when they are speaking and be respectful of everyone's experiences
- Keep discussions confidential → this allows everyone to feel safe sharing personal experiences if they wish
- The information included in this workshop is educational in nature and not meant to be therapeutic
  - Please refer to Handout #1 for resources that provide counselling services if needed

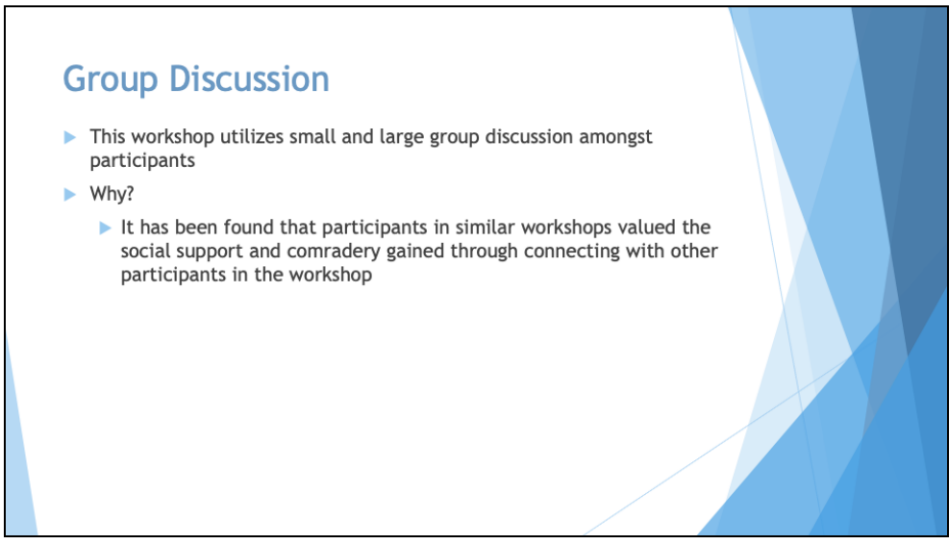
6


Your Rights
You have the right to…
Participate as much or as little as you would like
Say no to anything that doesn't work for you (for example, if the facilitator instructs participants to close their eyes, please feel free to keep them open if you wish)
Pass if you don't want to participate
Leave if you need to

7

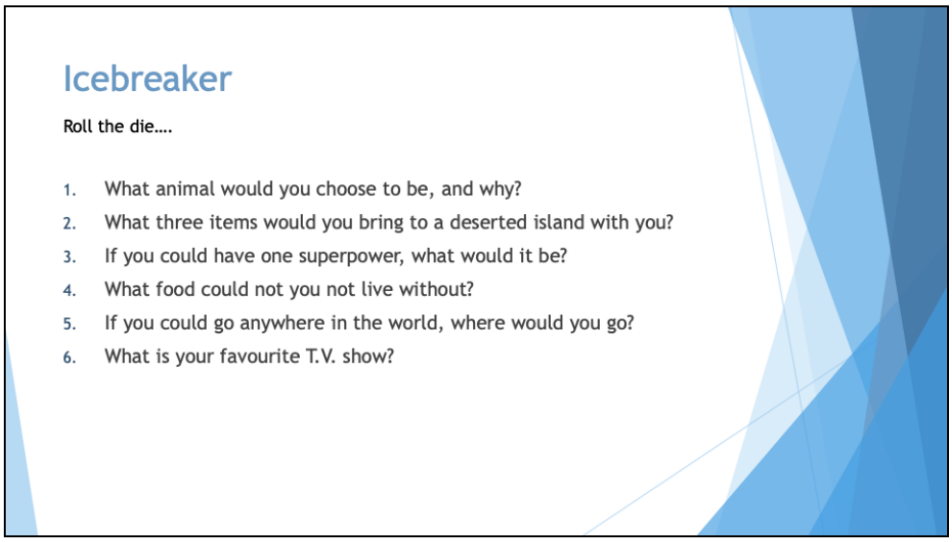

Direct participants to Handout #1, titled “Resources.”


Consent
Any questions about the structure and guidelines of the workshop?
We will assume that your participation past this point means you understand the risks, benefits, guidelines, and structure of the workshop
If you do not consent to participate in the workshop, you may leave the workshop
The PowerPoint and handouts have been sent to you and are yours to review as you wish ☺


Group Discussion
This workshop utilizes small and large group discussion amongst participants
Why?
It has been found that participants in similar workshops valued the social support and comradery gained through connecting with other participants in the workshop

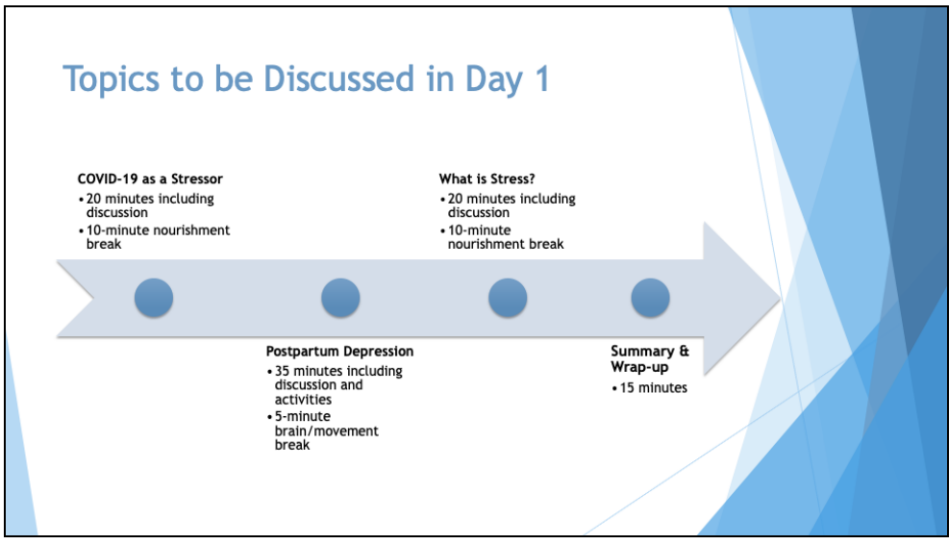
## Group Discussion

- It may be uncomfortable to talk to new people…we all experience this!
- By adopting a nonjudgmental attitude, we can create a safe space to share and connect with one another about our lived experiences




Participants will roll a die and answer the question that corresponds with the die roll.

Options if participants do not have a die:
1) facilitator rolls a physical die on their end and shares the result with participants.
2) facilitator uses online die roll: https://eslkidsgames.com/classroom-dice



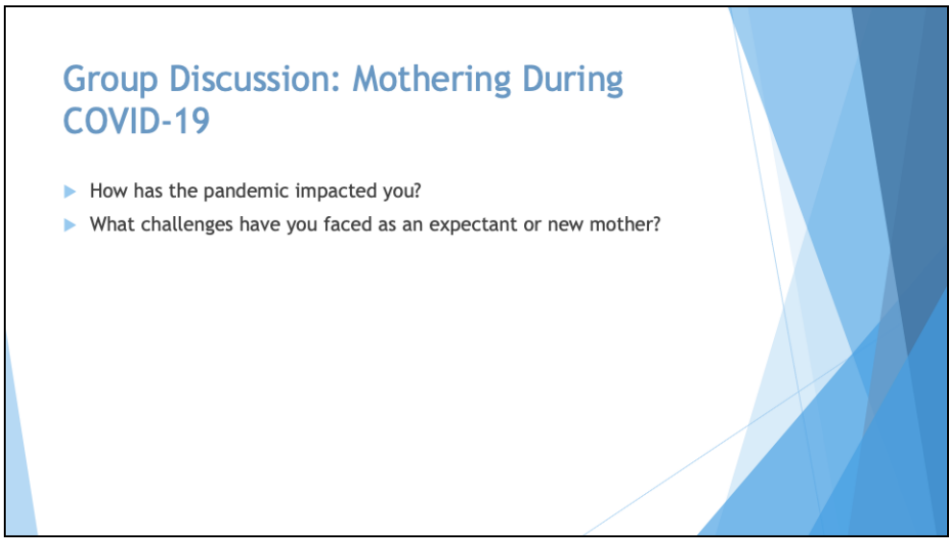

Facilitator, please note that the purpose of this timeline is to provide participants with structure/reduce anxiety and is merely a suggestion. Please adjust the timeline as necessary to meet the learning needs of participants.

## Impact of COVID-19

- 200,000,000+ cases of COVID-19 worldwide (as of August 2021)
- Lockdowns and public health measures have disrupted life and normalcy
- Individuals have reported being more stressed, more anxious, more depressed, and socially isolated as a result of the pandemic

## Mothering During COVID-19

- Unpaid care work (e.g., watching children) has increased during the pandemic, and much of this work is being placed on women
- New and expectant mothers have reported facing unexpected and unprecedented challenges
  - Among pregnant women: uncertainty surrounding care, ambiguity about delivery process, concern over lack of anticipated social networks, loneliness
- Research suggests that the rate of ***postpartum depression*** has increased during the pandemic



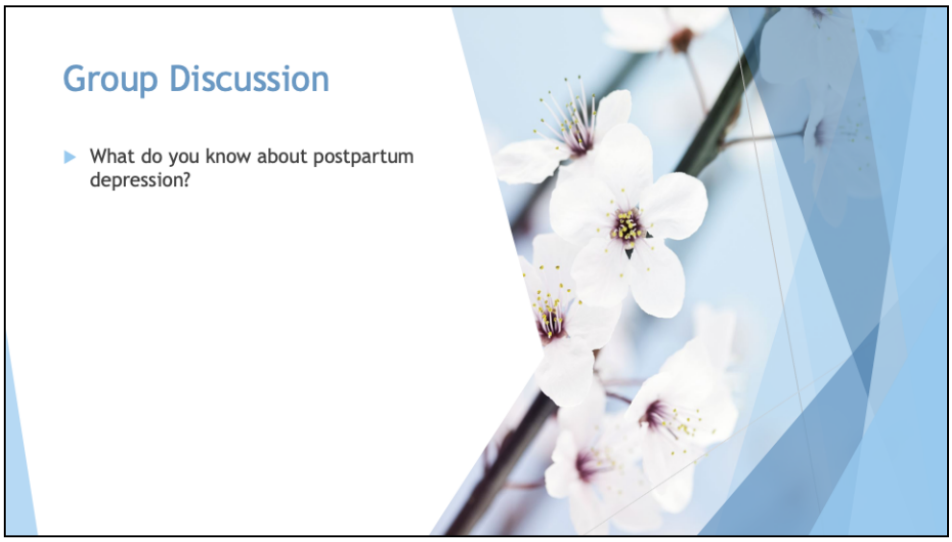

Prompt participants to reflect on the following questions about stress during COVID-19. Then, open the floor for 5-10 minutes of discussion and sharing about participant's experiences with COVID-19.

Depending on number of participants, it may be pertinent to use breakout rooms. Note that the facilitator can only be in one breakout room at a time. Use professional judgment to determine if this will enhance participant experience to interact in smaller groups.

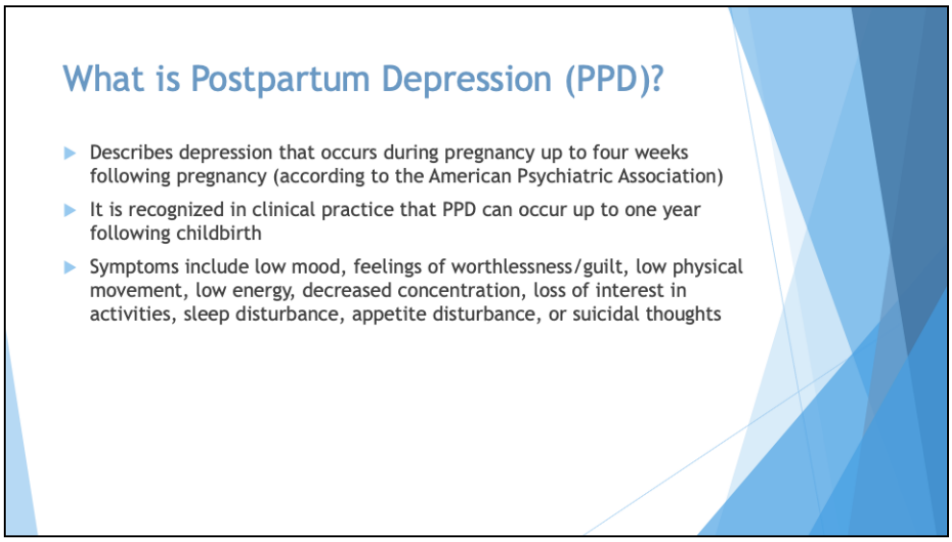
## Nourishment Break

- Grab a coffee/tea/water/juice and/or snack
- Stretch!
- See you in 10 minutes

17



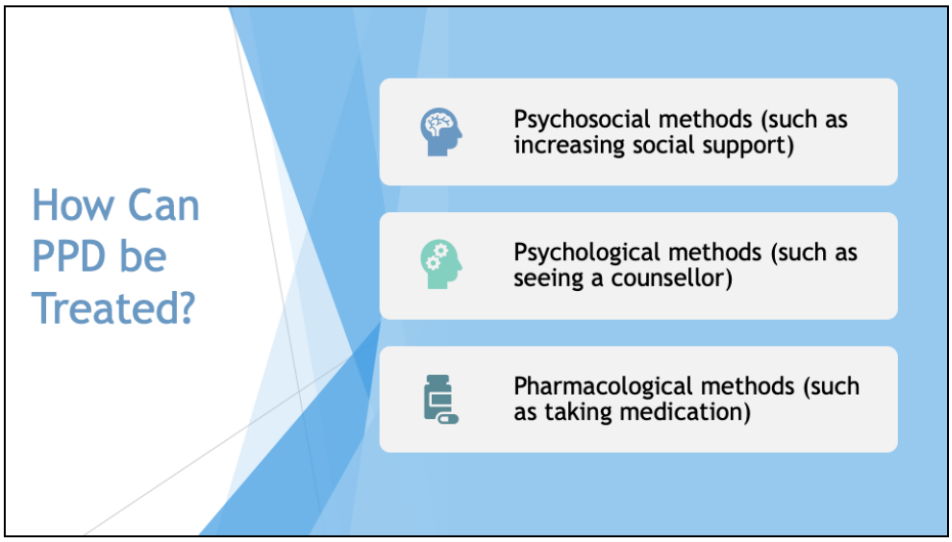

Group discussion for participants to share their current knowledge or experiences associated with postpartum depression.



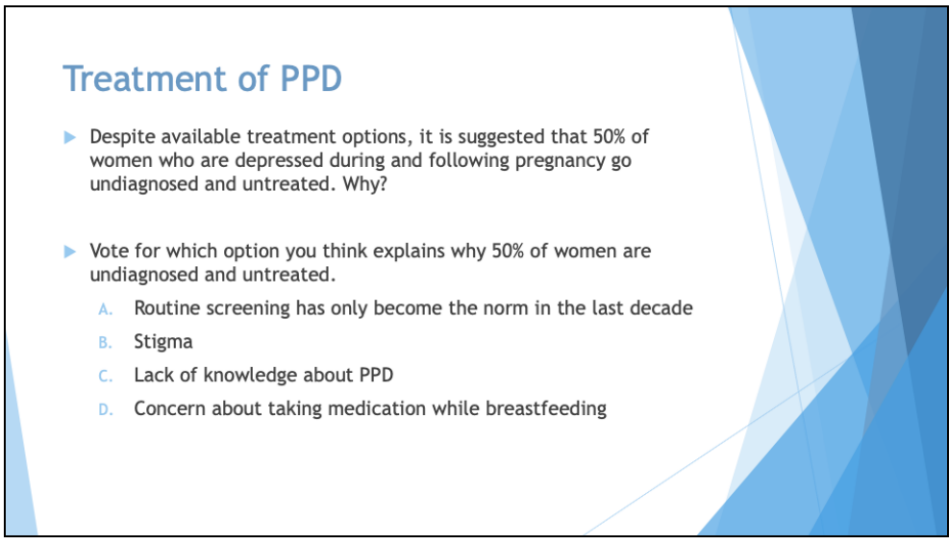

Other symptoms include feelings of being overwhelmed, feelings of anxiety, and an obsessional fixation on baby's health.

## What is PPD?

- Different from the *baby blues* which ~70% of mothers experience
  - The baby blues includes feelings of sadness, irritability, and anxiety
  - Does not drastically impair functioning and usually resolves within two weeks


How Can PPD be Treated?
Psychosocial methods (such as increasing social support)
Psychological methods (such as seeing a counsellor)
Pharmacological methods (such as taking medication)

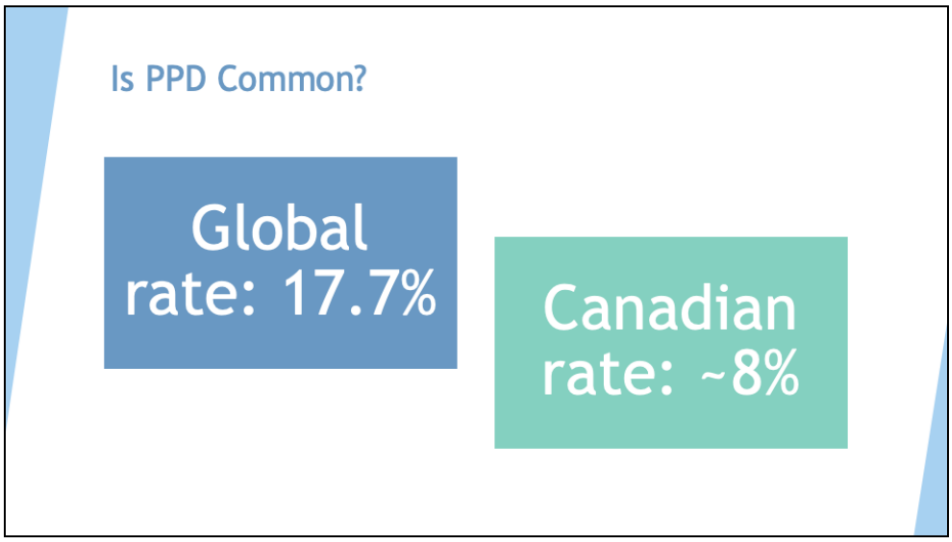
21




Have participants vote for which option they think explains why 50% of women are undiagnosed and untreated. Voting can be done by a show of hands for each option or using the poll option in Zoom.

## Answer

- Trick question… all of the above!


Is PPD Common?
Global rate: 17.7%
Canadian rate: ~8%

## Rates of PPD During COVID-19

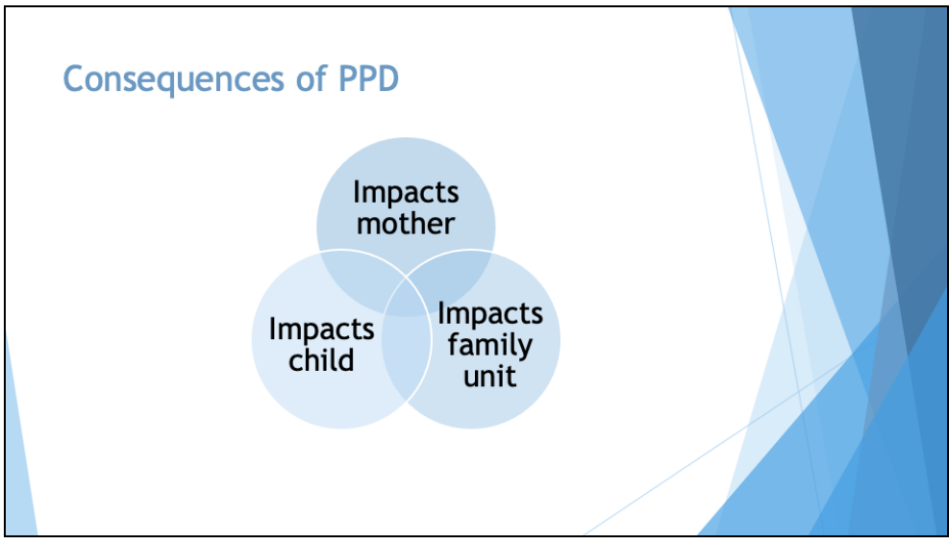
Italy: rate of 30% of during the pandemic

Turkey: rate of 14.7% during the pandemic compared to 7.8% pre-pandemic

Canada: rate of 37% during the pandemic compared to ~8% pre-pandemic

## Small Group Discussion

- Did anything surprise you?
- What caught your attention?



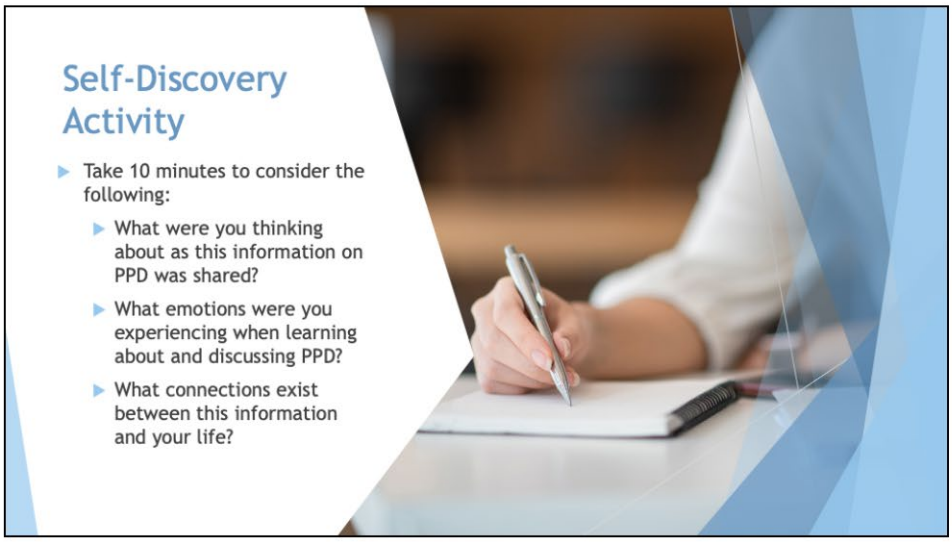

-Results in poor health outcomes for entire family unit
-Places strain on intimate relationships (such as your partner)
-Mothers with PPD report lower self-esteem, lower quality of life, and difficulties with social functioning compared to non-depressed mothers
-Children of mothers with PPD have higher incidence of crying/colic, sleep problems, temperamental difficulties
-PPD has the potential to negatively impact infant cognitive, emotional, behavioural and language development


Risk Factors for PPD
History of depression
Stressful life events
Low social support

28

## Risk Factors For PPD

- *Psychosocial models* suggest that psychological stress and psychosocial resources (social support) play a role in the development of PPD
- High levels of stress and low levels of social support are associated with PPD symptoms
- Given this, COVID-19 may present many challenges for new and expectant mothers




Encourage participants to write down or journal their answers.

30

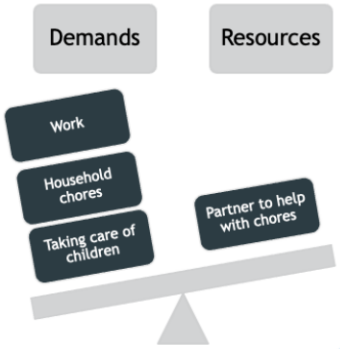
# Brain/Movement Break

Let's take 5 minutes to stretch and shake it out


Ask participants what words/thoughts/images come to mind when they think of the word “stress.”

## What is Stress?

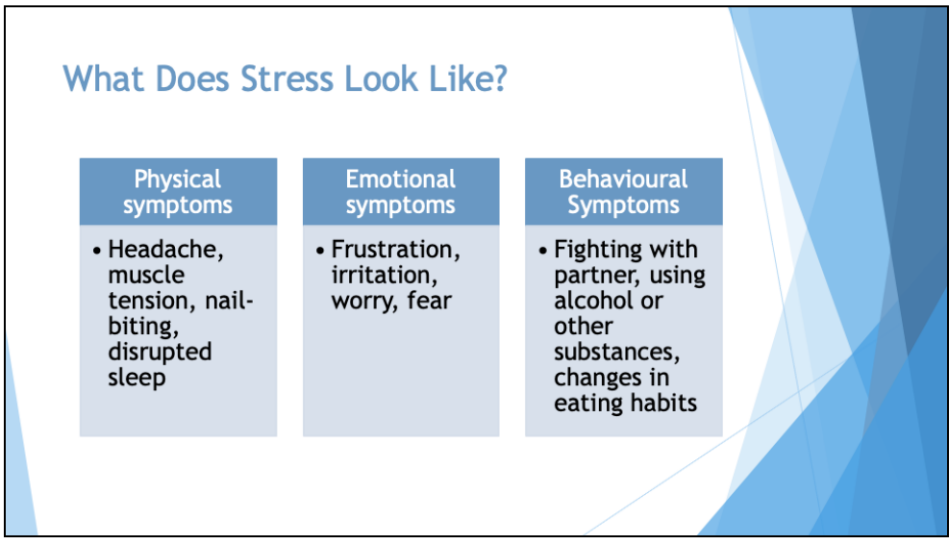
- Any type of change that causes psychological, physical, or emotional strain
- The result of an imbalance between demands and resources

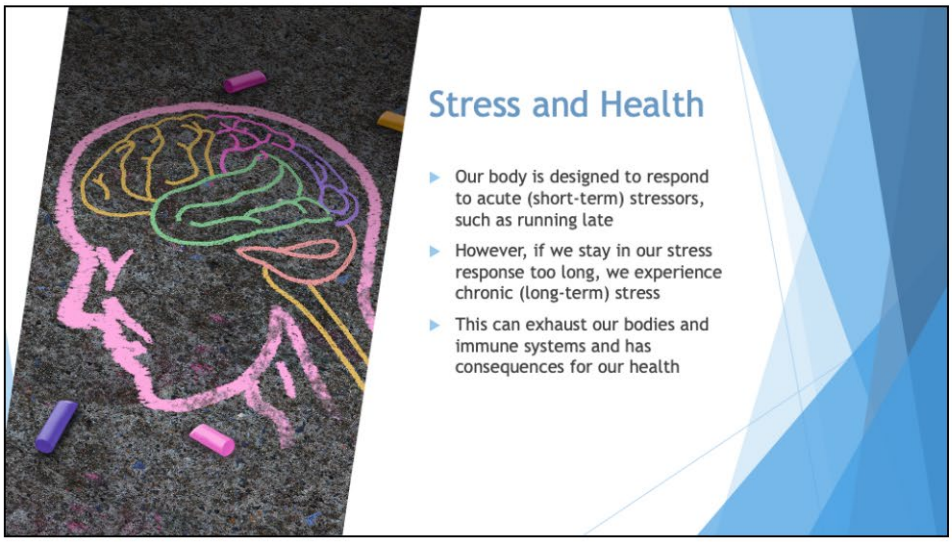


## Stressors

A stressor is anything that causes stress. They can be categorized as....


What are some other examples you can think of?


What Does Stress Look Like?
Physical symptoms
• Headache, muscle tension, nail-biting, disrupted sleep
Emotional symptoms
• Frustration, irritation, worry, fear
Behavioural Symptoms
• Fighting with partner, using alcohol or other substances, changes in eating habits


Stress and Health
Our body is designed to respond to acute (short-term) stressors, such as running late
However, if we stay in our stress response too long, we experience chronic (long-term) stress
This can exhaust our bodies and immune systems and has consequences for our health

## Stress and Health

- *Allostatic load* is the cumulative effect of our body being under stress
- High allostatic load is associated with poor sleep, alcohol consumption, unhealthy diet, and increased risk for cardiovascular disease and diabetes
- Stress results in lower immune functioning, leaving us vulnerable to viral infections, autoimmune disorder, and a delayed healing of wounds
- Stress also impacts mental health (Remember: risk factor for PPD!)

## The Role of Social Support

- Social support can act as a buffer against stress
- Studies have found that perceived social support is a protective factor against PPD
- However, social support has been impacted by public health restrictions as a result of the pandemic

## Self-Discovery Activity

- Take 5-10 minutes to consider the following:
  - What are your biggest stressors?
  - What does stress look like for you?
    - Consider your thoughts, feelings, body sensations, or behaviours
- What do you do when you feel stressed?

## Summary

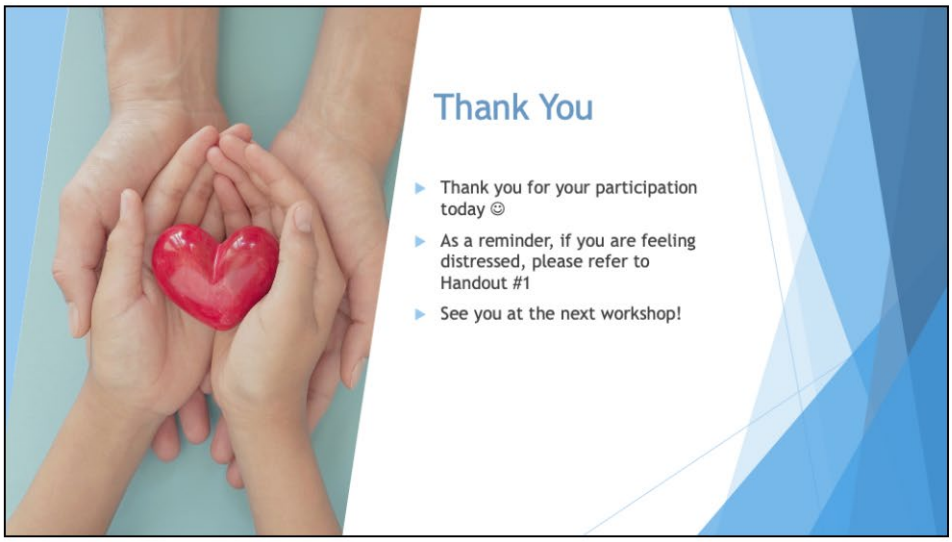
- COVID-19 has impacted the psychological health/well-being of many, and presented many challenges for new and expectant mothers
- PPD describes depression that occurs during pregnancy and after childbirth and rates of PPD have increased during the global pandemic
- High levels of stress and low levels of social support are associated with PPD
- Stress impacts our physical health as well as mental health, but social support can protect us against the negative effects of stress

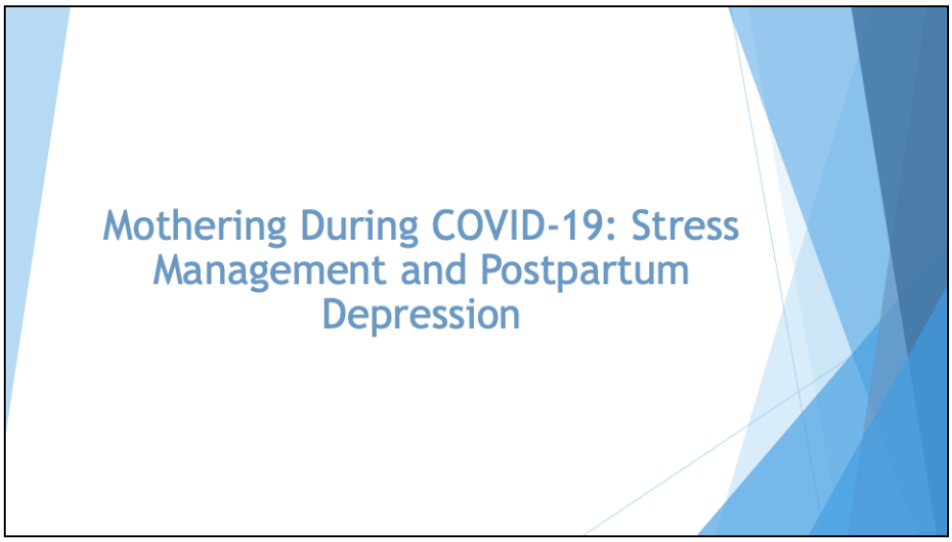

41

## Wrap-up

- Congratulations! You learned a LOT today!
- In small groups:
  - Discuss how you can access social support and connect with someone following this workshop
  - Share one thing you will do following this workshop as an act of self-care

42


Thank You
Thank you for your participation today ☺
As a reminder, if you are feeling distressed, please refer to Handout #1
See you at the next workshop!

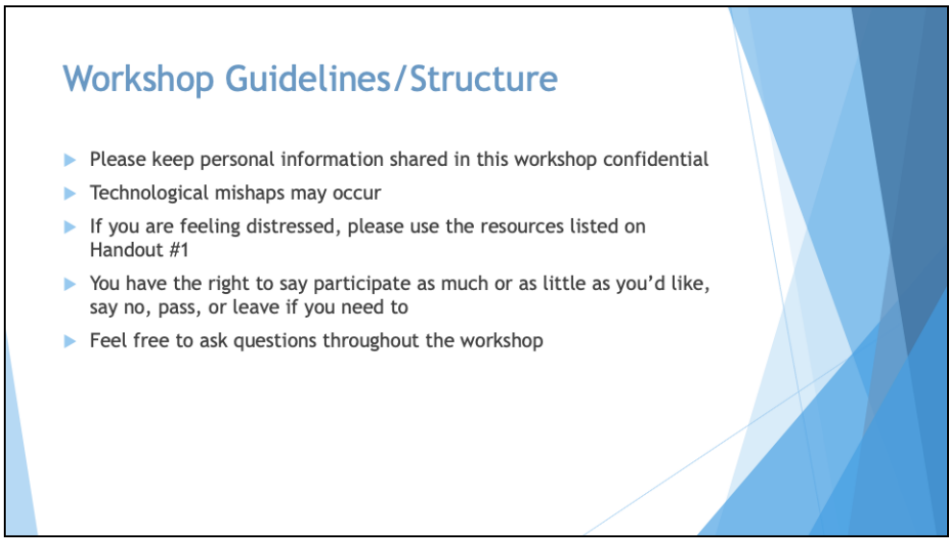



All images used in this PowerPoint are free stock images.


45

## Workshop Agenda

- Review workshop guidelines
- Icebreaker
- Stress Appraisal
- Stress Response
- Coping Strategies

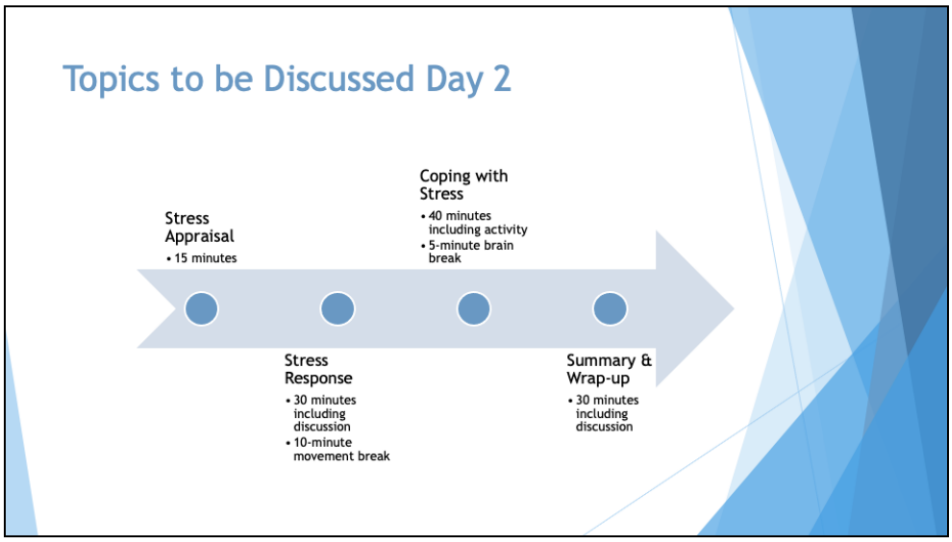



Facilitator, please note that this is a summary of slides two through eight. Feel free to reuse those slides if further review of workshop guidelines and structure is required.

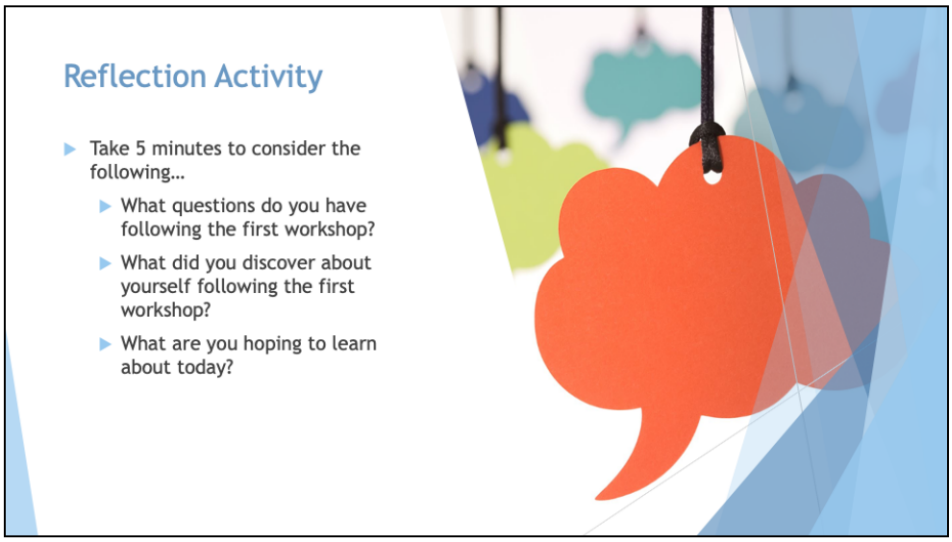
## Icebreaker

**Roll the die…**

1. What is the grossest food you've ever eaten?
2. If you had to get a tattoo the size of a dinner plate, what would you get?
3. What is the best book you've ever read?
4. If you won a million dollars, what is the first thing you'd buy?
5. If you could spend the day with a fictional character who would it be?
6. If you had a time machine, would you go into the future or the past? Why?




Facilitator, please note that the purpose of this timeline is to provide participants with structure/reduce anxiety and is merely a suggestion. Please adjust the timeline as necessary to meet the learning needs of participants.




Following this reflection activity, have participants share what they wrote within small groups or the larger group.

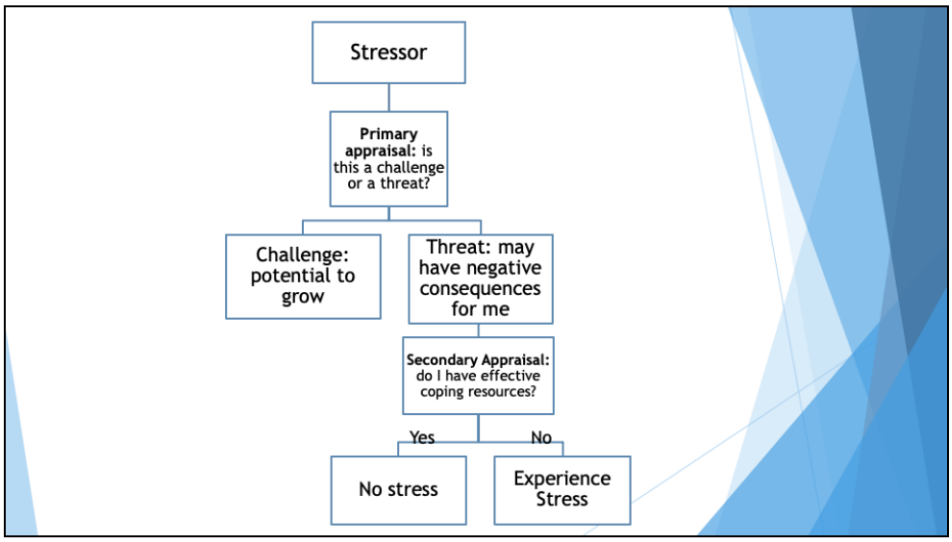
## Review

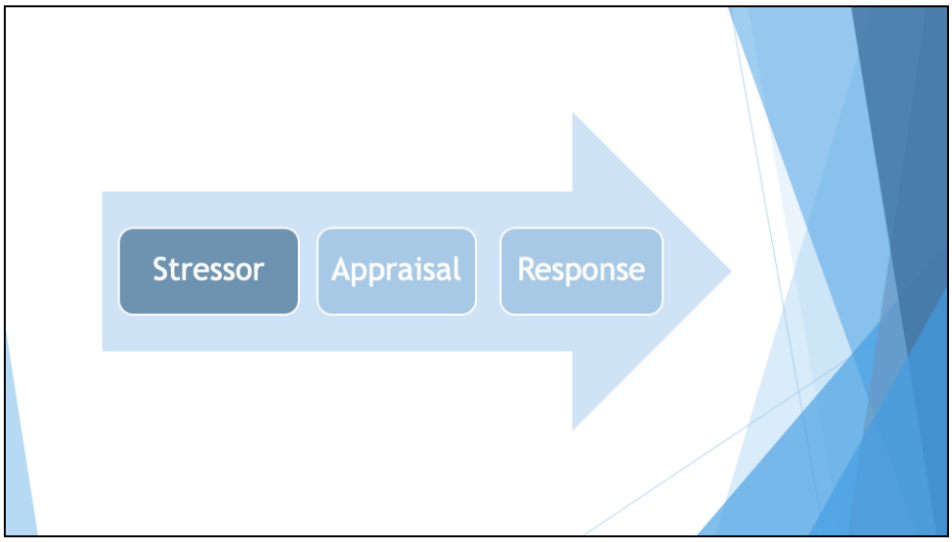
- What is the difference between PPD and Postpartum Blues?
- What is the incidence (rate) of PPD worldwide?
- What is stress?

## Appraising a Stressor

What is stressful for one individual may not be stressful for another….

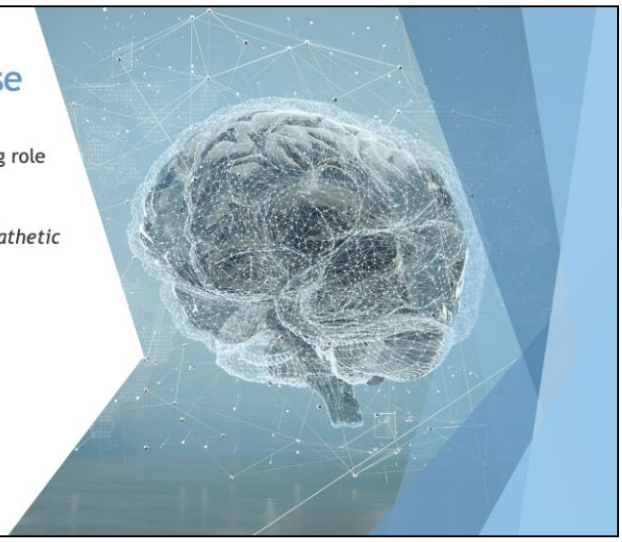
- When a stressor occurs, we undergo a process called ***appraisal***
- We determine if this stressor is a threat to us, and if so, if we have enough resources to deal with the stressor


Stressor
Primary appraisal: is this a challenge or a threat?
Challenge: potential to grow
Threat: may have negative consequences for me
Secondary Appraisal: do I have effective coping resources?
Yes
No
No stress
Experience Stress


Stressor
Appraisal
Response

## Our Stress Response

- Our *nervous system* plays a big role in our body's stress response
- When our brain is alerted to a stressor, it activates the *sympathetic nervous system* (SNS)



55

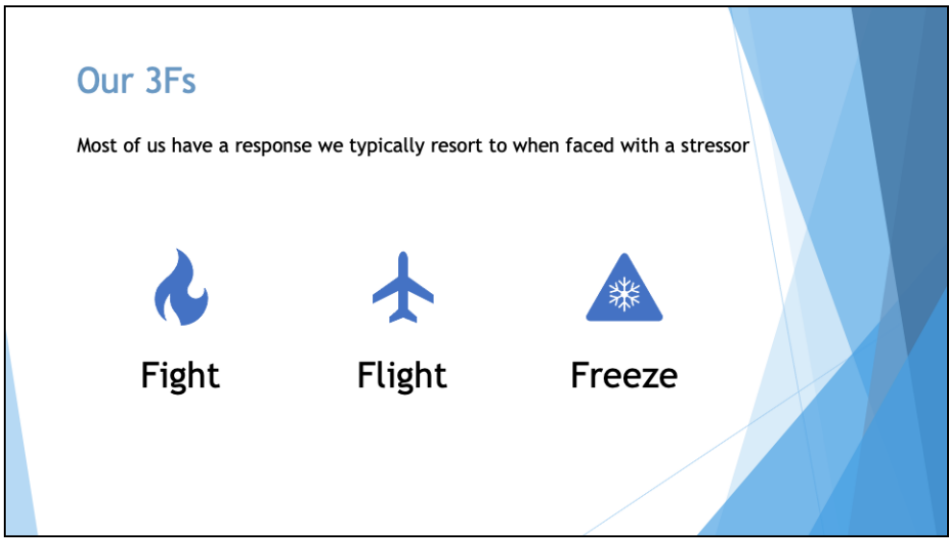
## Our Stress Response

- The activation of the SNS results in the release of the hormones adrenaline and noradrenaline which prepare the body to FIGHT, FLIGHT, or FREEZE
- Our body prepares us to FIGHT, FLIGHT, or FREEZE by increasing heart rate, slowing digestion, increasing breathing rate, dilating pupils, and more


57

## Our 3Fs

Most of us have a response we typically resort to when faced with a stressor

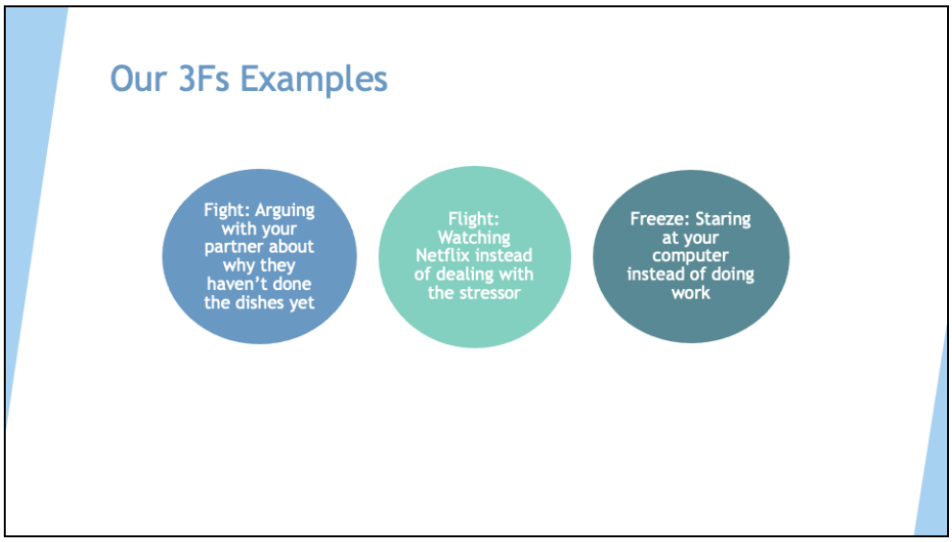


## Our 3Fs

**Fight**: characterized by anger, irritability, feelings of entitlement, demanding perfection from others, fighting with friends, family, or partners

**Flight**: involves leaving the stressor or situation and may take the form of distracting oneself, or an inability to sit still in an attempt to outrun or outwork the stressor

**Freeze**: characterized by an inability to act, may manifest as "zoning out," difficulty making decisions or taking actions, experiencing "brain fog"

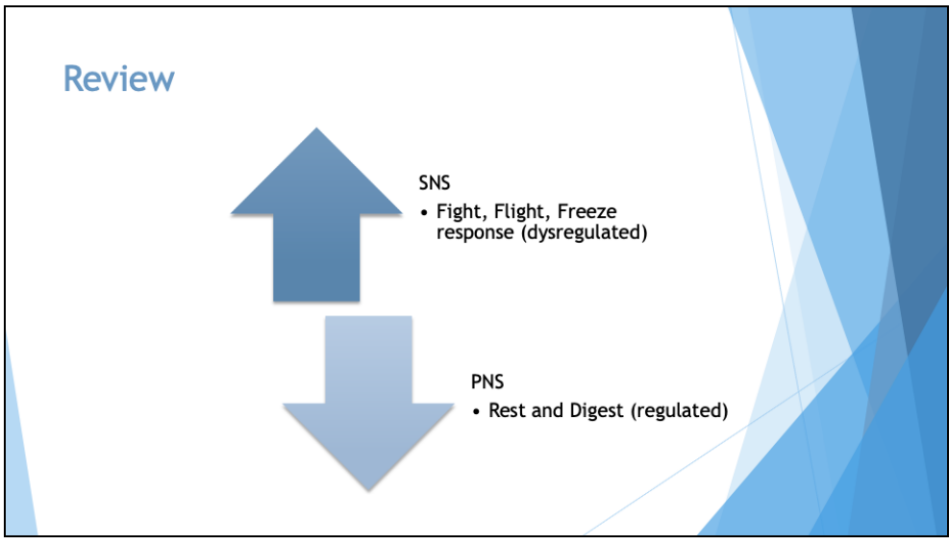

Our 3Fs Examples
Fight: Arguing with your partner about why they haven't done the dishes yet
Flight: Watching Netflix instead of dealing with the stressor
Freeze: Staring at your computer instead of doing work

## Small Group Discussion

- What 3F response do you typically resort to?

## How does the stress response stop?

- Cortisol (AKA the stress hormone) levels increase
- Eventually, the Parasympathetic Nervous System (PNS) is activated
- The PNS works to counteract the SNS known as the "rest and digest" response, works to get your body back to "normal"
  - Heart rate slows, breathing rate slows, pupils constrict


Review
SNS
• Fight, Flight, Freeze response (dysregulated)
PNS
• Rest and Digest (regulated)

## Review and Discussion

- Any questions?
- What stood out for you about the stress response?
- What did you learn about how stress impacts health?
- How has your social support been impacted by the pandemic?

## Coping with Stress

- ***Coping*** refers to our efforts to manage stress
- Our coping strategies are influenced by the situation, our personal resources, and social resources
  - Remember: social support is a protective factor against PPD!

## Social Support as a Coping Resource

- Having others to support us through stressful situations can be beneficial for our health as social support can act as a buffer against stress
  - The negative impact of a stressful situation can be reduced when others help us manage the stressful situation, help us reappraise the situation, or help us cope or process our emotions

## Coping Strategies

**Strategies have been categorized in the following ways:**

- Approach-oriented vs. avoidance-oriented
- Problem-focused vs. emotion-focused

## Coping Strategies

- **Approach-oriented**: involves taking action to confront the source of stress
  - Example: Asking for more information about a task you don't know how to do
  - **Can you think of another example?**
- **Avoidance-oriented**: ignoring or escaping the source of stress
  - Procrastinating a work task because you don't know how to do it
  - **Can you think of another example?**

## Coping Strategies

- **Problem-focused**: involves finding ways to change, eliminate, or manage the source of stress and is *approach-oriented*
- **Emotion-focused**: involves reducing, alleviating, or minimizing the negative or unpleasant feelings associated with the stressor and can be either *approach-oriented* or *avoidance-oriented*


Brain/Movement Break
Let's take five minutes to stand, stretch, and breathe!

## Emotion-focused coping

Approach-oriented

- Involves emotional expression and emotional processing
- It is thought that labelling and addressing our emotions can help to lessen the intensity, provide us with a sense of control, and help us to reappraise a stressful situation
  - Examples: emotional disclosure to a friend or family member, journaling

## Emotion-focused coping

Approach-oriented

- The benefit of coping this way depends on:
  - Timing
  - How we express the emotions
  - Social context

72

## Emotion-focused Coping

Avoidance-oriented

- ***Rumination:*** focusing on our emotions too much so that we don't deal with the stressor at hand
- ***Repressing emotions:*** avoiding or inhibiting emotional reactions to a stressor

## Which Coping Strategy is Best?

- If we perceive a stressor to be manageable and have confidence in our resources, we are likely to use problem-focused or approach strategies
- Feelings of powerlessness and low-control may promote a greater reliance on emotion-focused strategies and avoidant strategies

## Coping and COVID-19

- Avoidant coping strategies, such as self-distraction, denial, substance use, self-blame, were associated with a higher level of psychological distress
- COVID-19 is a stressor that is unpredictable, uncontrollable, and long-term, making it difficult to cope with

## Coping, Mothering, and COVID-19

- Motherhood comes with many challenges such as:
  - Transitioning into a new role
  - Running low on sleep
  - Hormonal changes
  - Feeling isolated due to public health restrictions
- What are positive coping strategies for dealing with the stressors you experience as a mother?
  - Establishing a support network
  - Setting realistic expectations
  - Establishing a routine

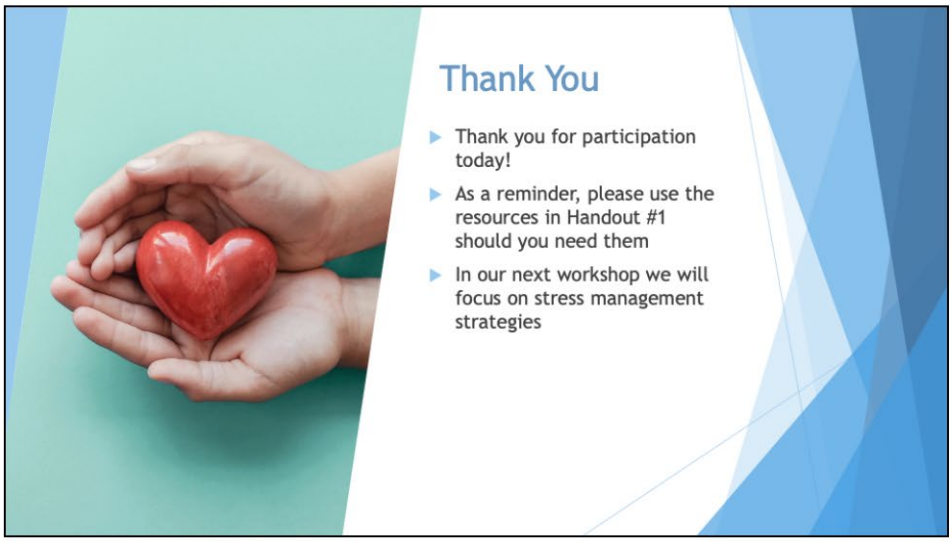
## Other Coping Strategies

- Humour
- Exercise
- Going outside
- Eating well
- Self-care

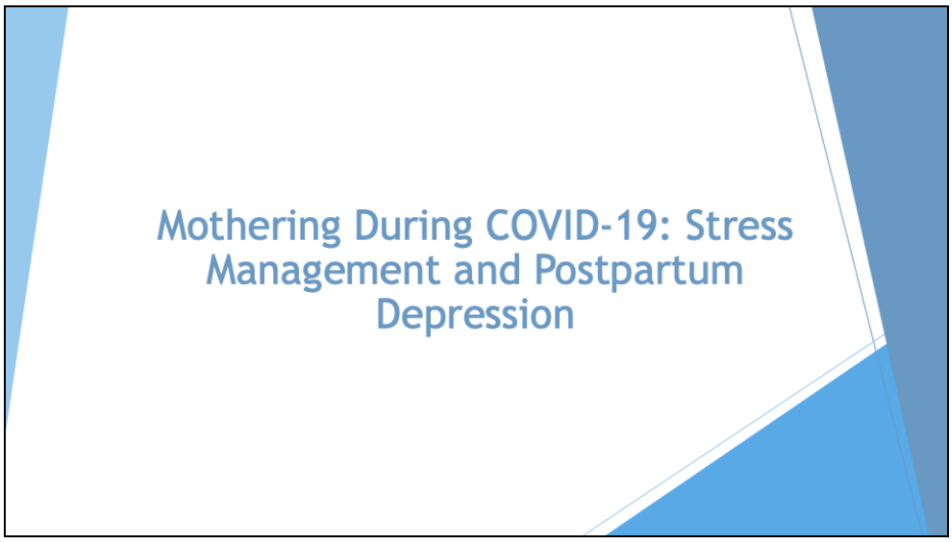
## Wrap-up

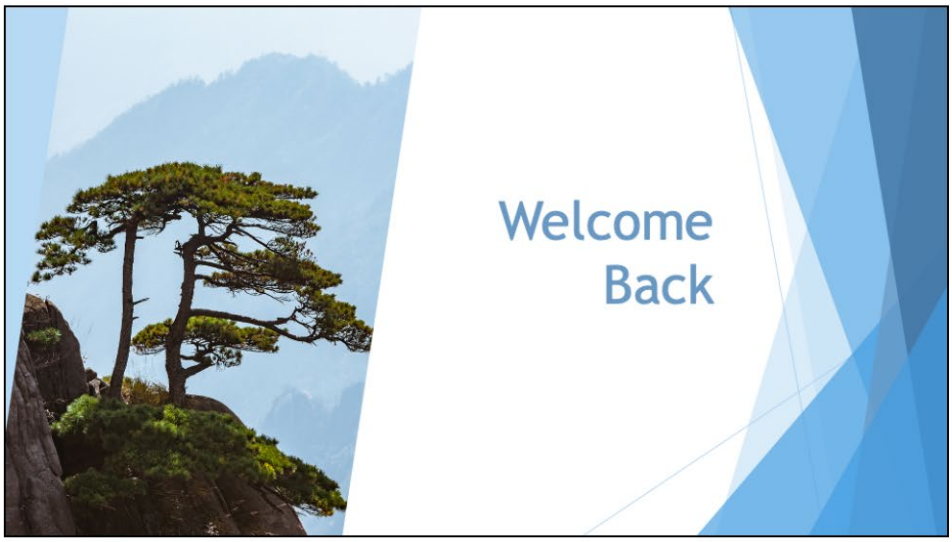
- Congratulations! You learned a LOT today!
- Checkout:
  - What is one take-a-way you have following today's workshop?

78


Thank You
Thank you for participation today!
As a reminder, please use the resources in Handout #1 should you need them
In our next workshop we will focus on stress management strategies

79

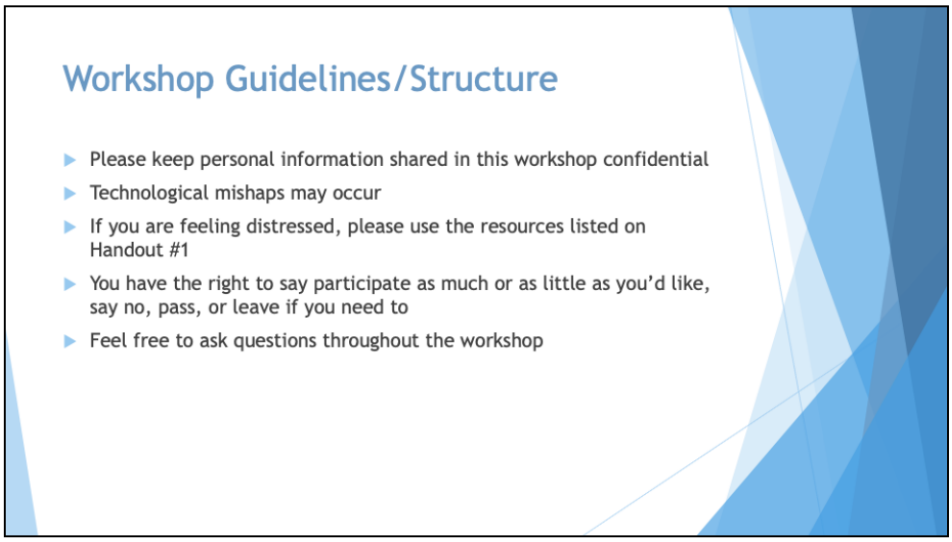

Mothering During COVID-19: Stress Management and Postpartum Depression




81

## Workshop Agenda

- Review workshop guidelines
- Icebreaker
- Stress management strategies
- Incorporating stress management into our daily routine

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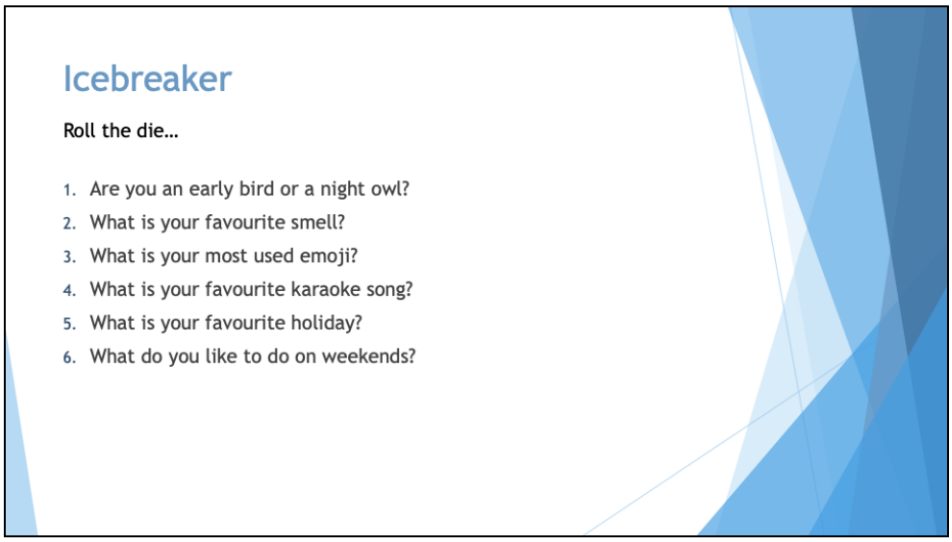
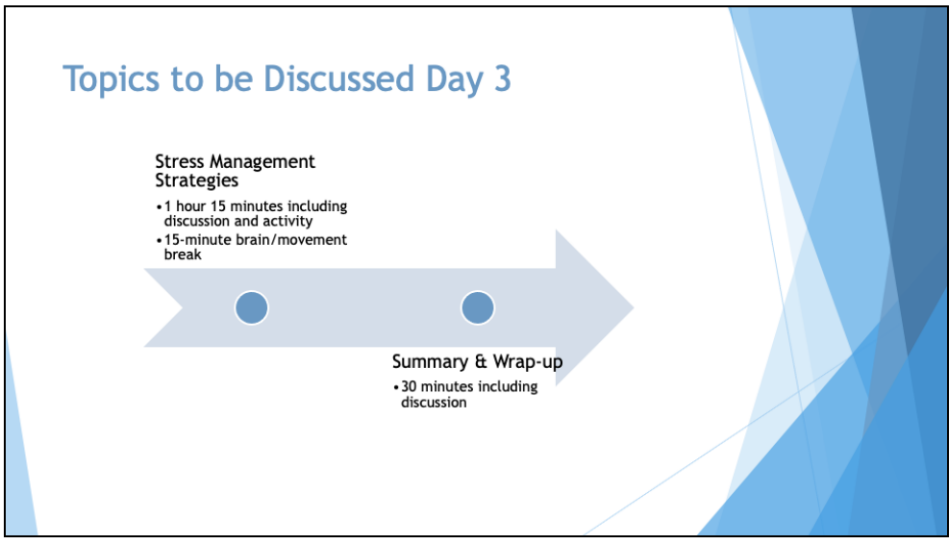

Icebreaker
Roll the die…
1. Are you an early bird or a night owl?
2. What is your favourite smell?
3. What is your most used emoji?
4. What is your favourite karaoke song?
5. What is your favourite holiday?
6. What do you like to do on weekends?



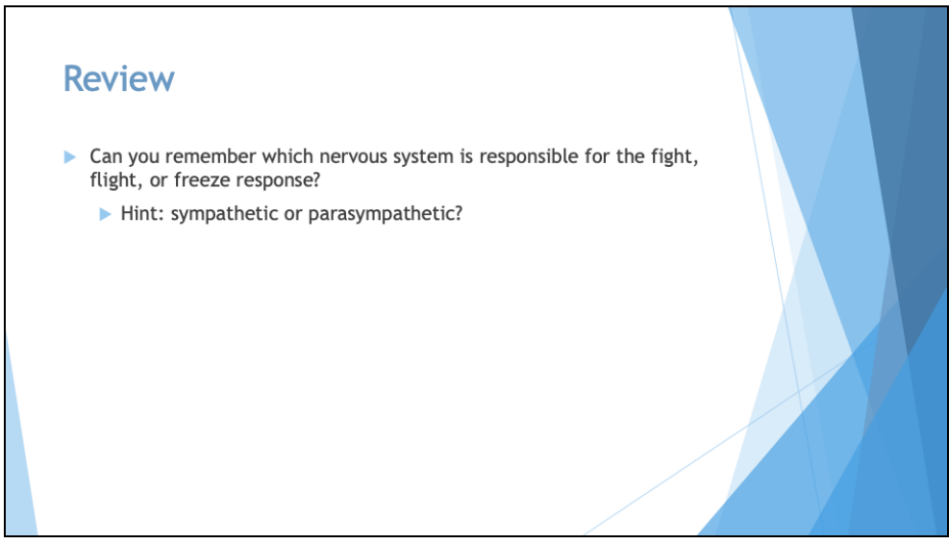

Facilitator, please note that the purpose of this timeline is to provide participants with structure/reduce anxiety., and is merely a suggestion. Please adjust the timeline as necessary to meet the learning needs of participants.

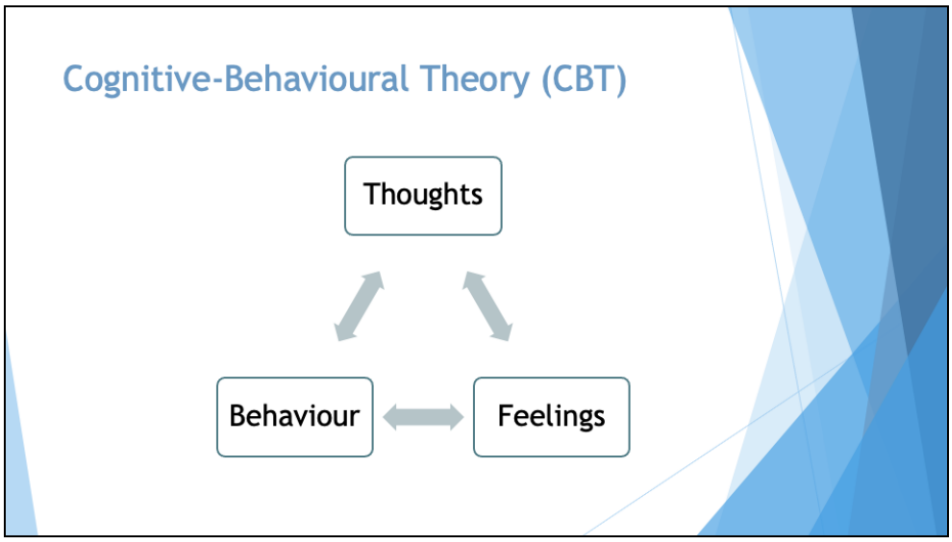
## Review/Discussion

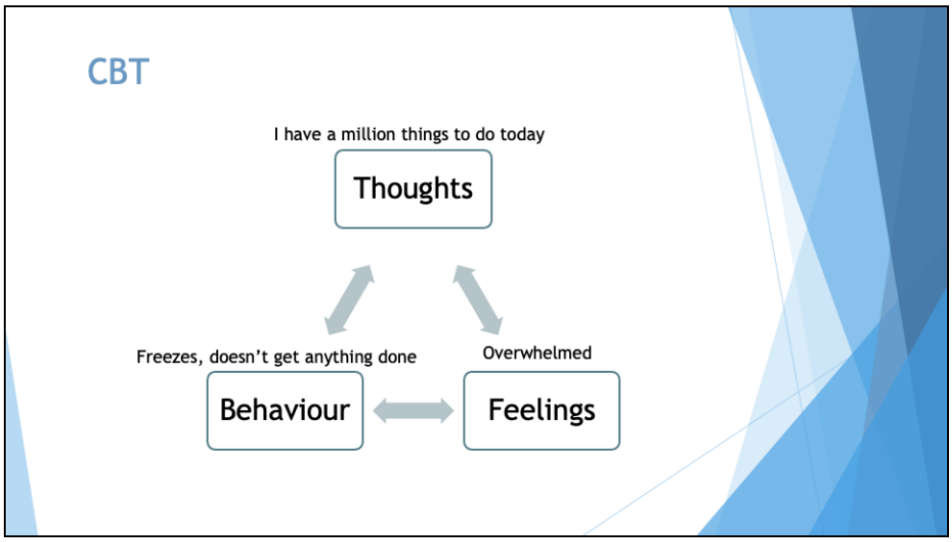
- What is the difference between approach-oriented and avoidant-oriented coping?
- What are the 3Fs?
- Any questions about any of the material/topics discussed in our last workshop?

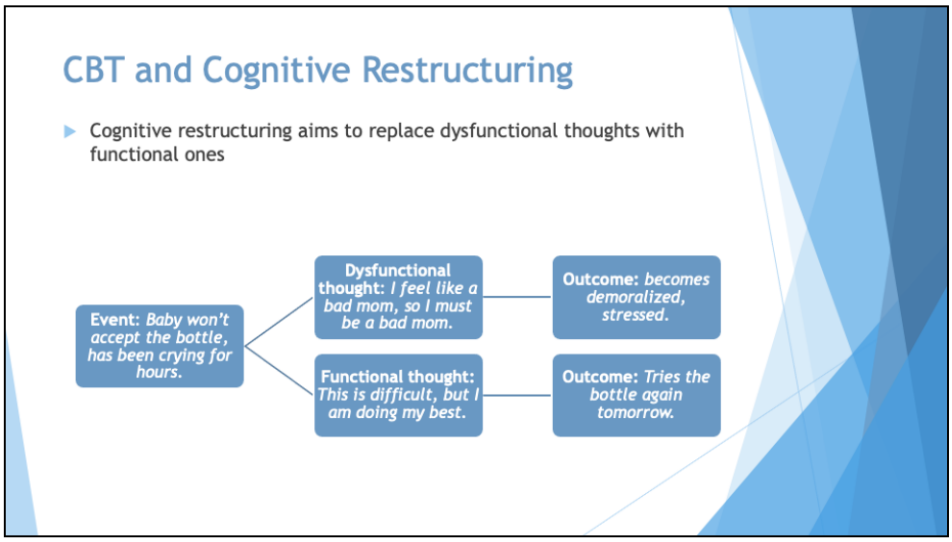
## Stress Management Strategies

- We will review five strategies/techniques for reducing stress
- These strategies can help us to regulate our nervous system and get out of our 3F response, allowing us to focus on coping with the stressor
- Reducing stress can have a positive impact on health and well-being!

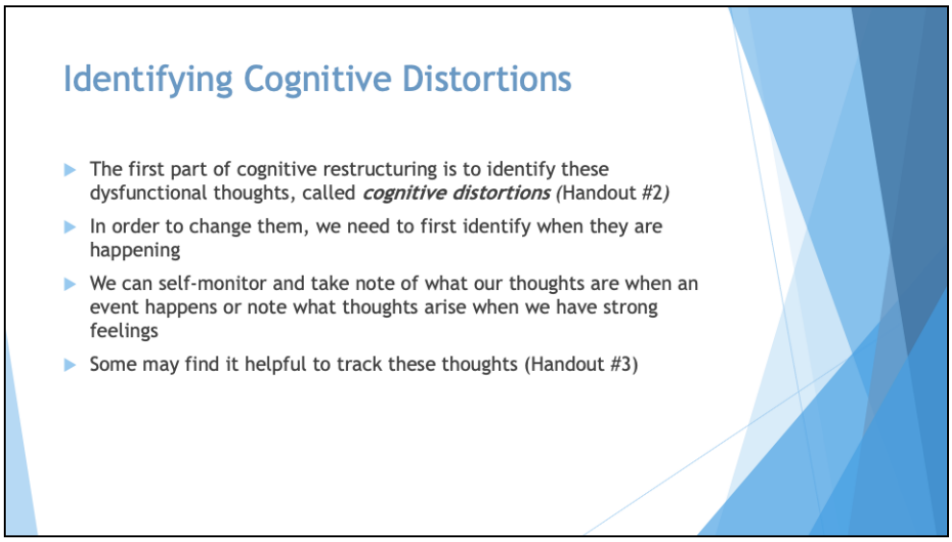

Review
Can you remember which nervous system is responsible for the fight, flight, or freeze response?
Hint: sympathetic or parasympathetic?


Cognitive-Behavioural Theory (CBT)
Thoughts
Behaviour
Feelings

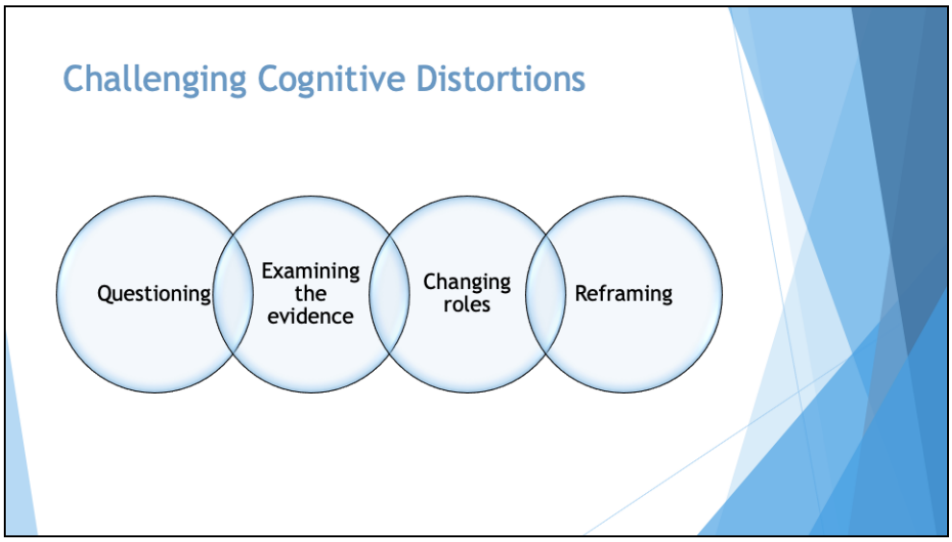

CBT
I have a million things to do today
Thoughts
Freezes, doesn't get anything done
Overwhelmed
Behaviour
Feelings




Direct participants to handout #X.



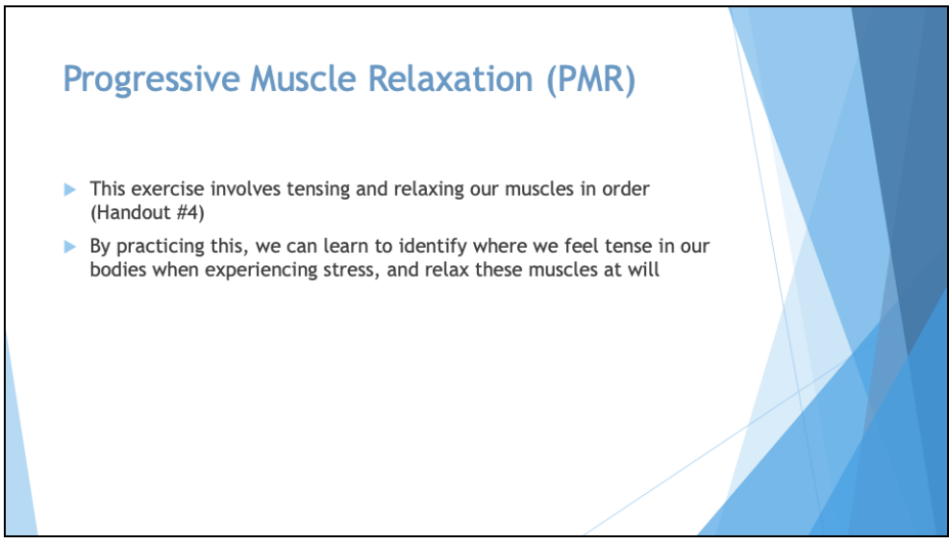

Note: feelings are included in the table found on Handout #3 because identifying what we were feeling during the event may help us to remember the accompanying thoughts.



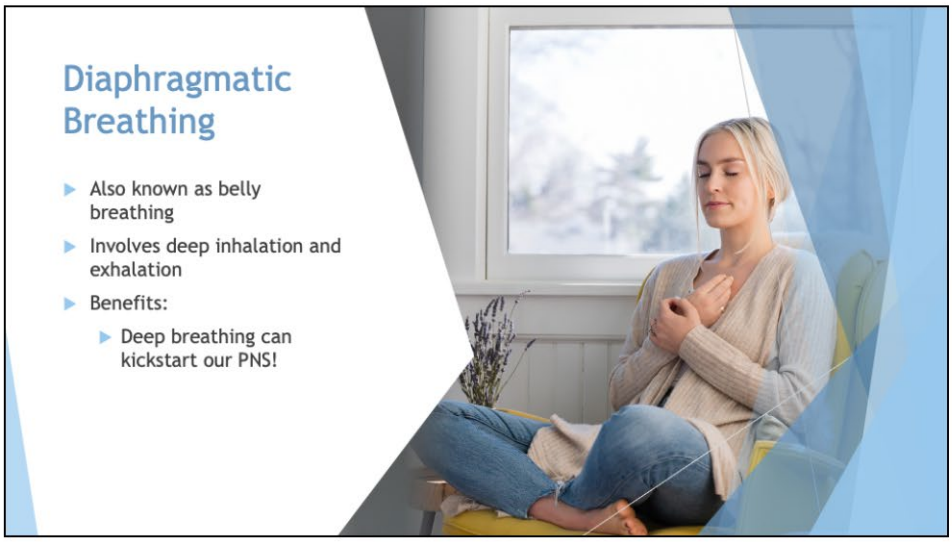

- Questioning: Involves asking yourself questions about the thought in order to challenge it
    - Examples: Is this thought helpful? Is this thought based on facts or emotions?
- Examining the evidence: Involves examining the evidence for and against the thought
- Changing roles: Would you say this thought to your best friend? Partner? Family member? Child?
- Reframing: Generating an alternative, more functional thought


Nourishment
Break
See you in ten minutes


Relaxation Techniques
Assumes that stressed and relaxed are opposite states and that it is impossible to be both relaxed and stressed at the same time
Increasing levels of relaxation = decreasing levels of stress




Guide participants through progressive muscle relaxation exercise.




Guide participants through diaphragmatic breathing exercise.

## Diaphragmatic Breathing

- Sit or lay comfortably, with one hand on your chest and one on your stomach (below rib cage)
- Breathe in slowly, so that your stomach moves up against your hand
- Tighten stomach muscles, let them fall as you exhale through your mouth
- Throughout this process, the hand on your rib cage should remain still (i.e., your rib cage should not be expanding)
- Do this for 5-10 minutes

## Mindfulness

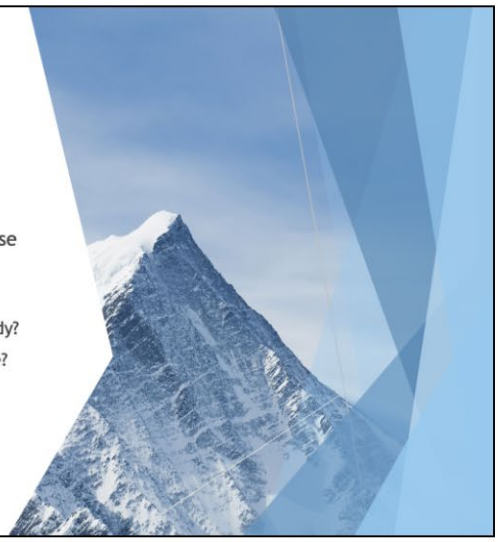
- **Attention**: what is happening in the present moment? What is our breathing like? What thoughts are we having? What physical sensations are we experiencing? What are we feeling?
- **Acceptance**: involves observing these experiences without judgement. Instead of reacting or responding, we address these thoughts/feelings/sensations, and let them go

## Practicing Mindfulness

- Throughout your day, if you notice stressful thoughts/feelings/sensations arise, take a moment to pause and attend to them
- Observe your experience without judgement, and then come back to the present moment
  - This can be done with a statement, such as “come back,” or a deep breath

## Practicing Mindfulness

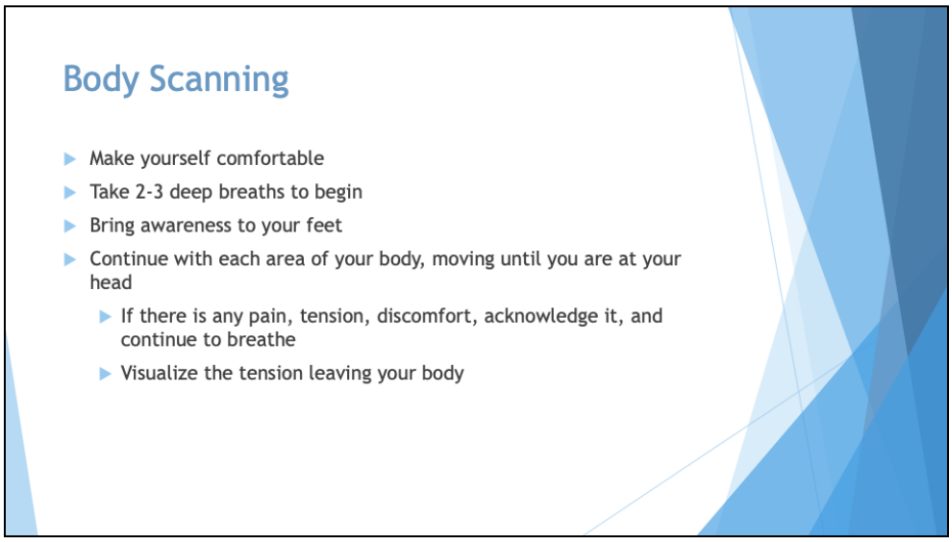
- You can also practice mindfulness in the absence of stressful thoughts/feelings/sensations
- Simply take a moment in your day to pause and notice what you are experiencing
- Let's try it now
  - What are three things you feel in your body?
  - What are three things you smell/hear/see?



101

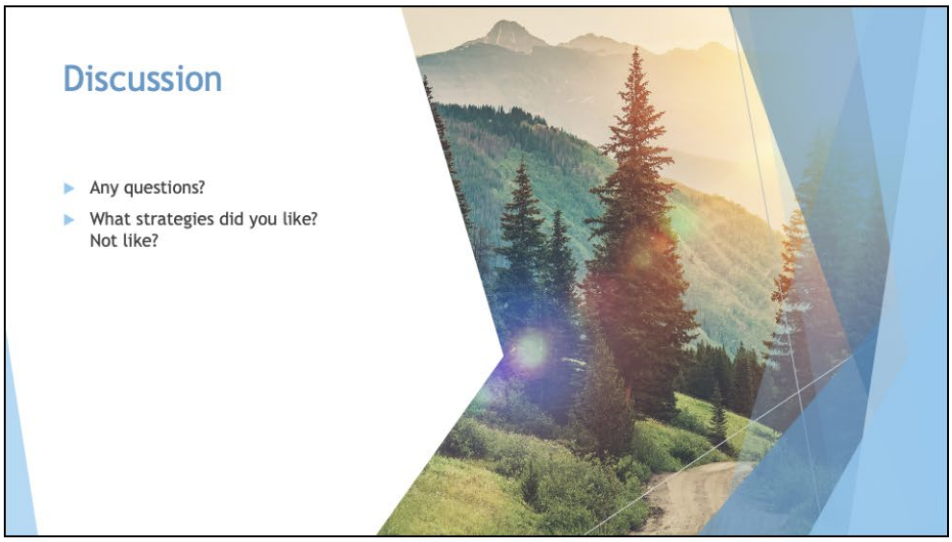
## Body Scanning

- This mindfulness exercise is similar to PMR but does not involve tensing muscles
- Allows us to bring awareness to our body and connect with our physical self




Take participants through the body scan exercise.

103




Direct participants to Handout #5 for a summary of stress management techniques.

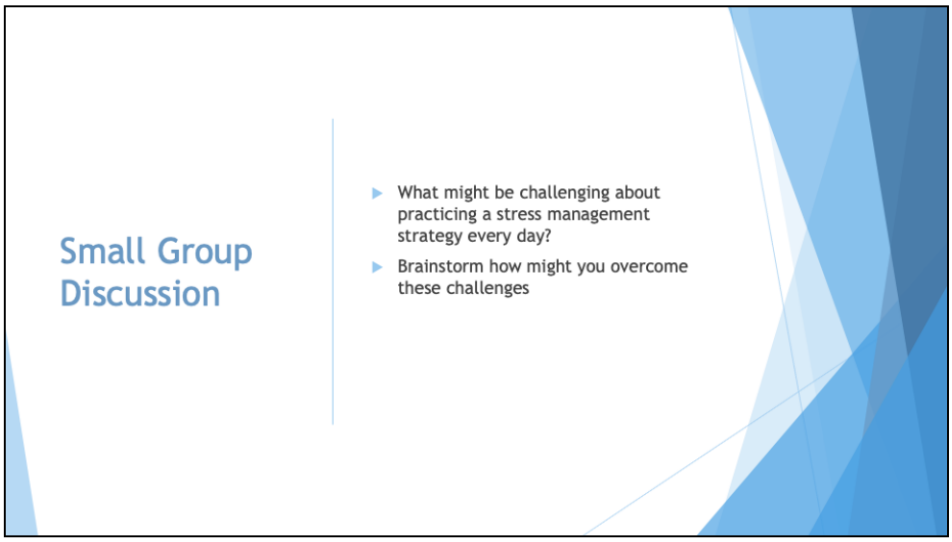
104

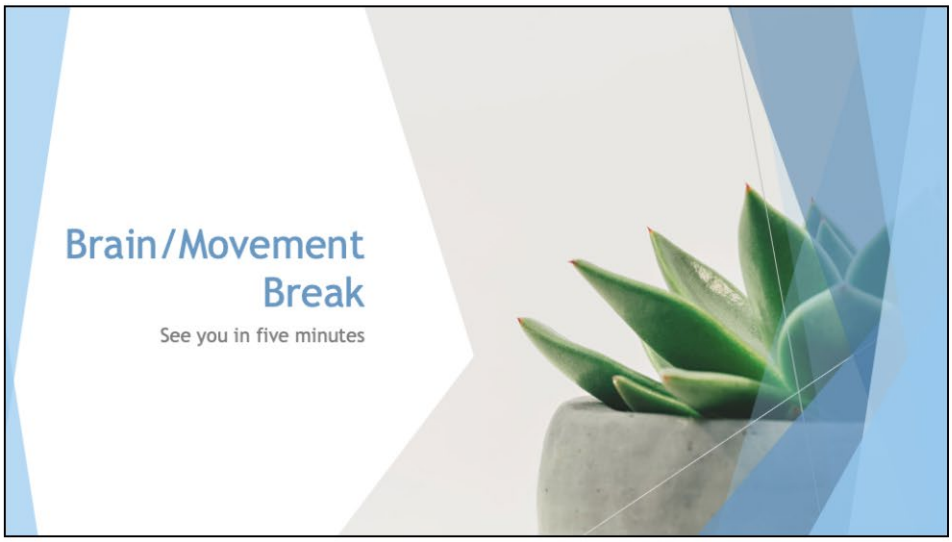

Self-Discovery Activity
Take ten minutes to consider the following:
What have you learned about yourself while participating in this workshop?
How does your newly acquired knowledge impact your life?
What in your changes, if any, might you like to make in your life?

105

## Incorporating Strategies into Daily Routine

- Many of these techniques can be practiced in the absence of stress in order to use them with ease when experiencing stress
- Select a technique that you enjoyed or want to incorporate into your daily routine
- Intentionally set aside a time each day to practice this technique
  - To remember: set a reminder on your phone, write it down and place it on the fridge, tell your partner


Small Group Discussion
What might be challenging about practicing a stress management strategy every day?
Brainstorm how might you overcome these challenges


Brain/Movement Break
See you in five minutes

## Summary

Putting it all together…

- Managing our stress involves an awareness of what causes us stress and how we experience stress
- When we understand our stress response, we can engage in a stress management strategy to regulate ourselves
- Once regulated, we can consider how we may cope with the stressor at hand
- See handout #6

## Summary

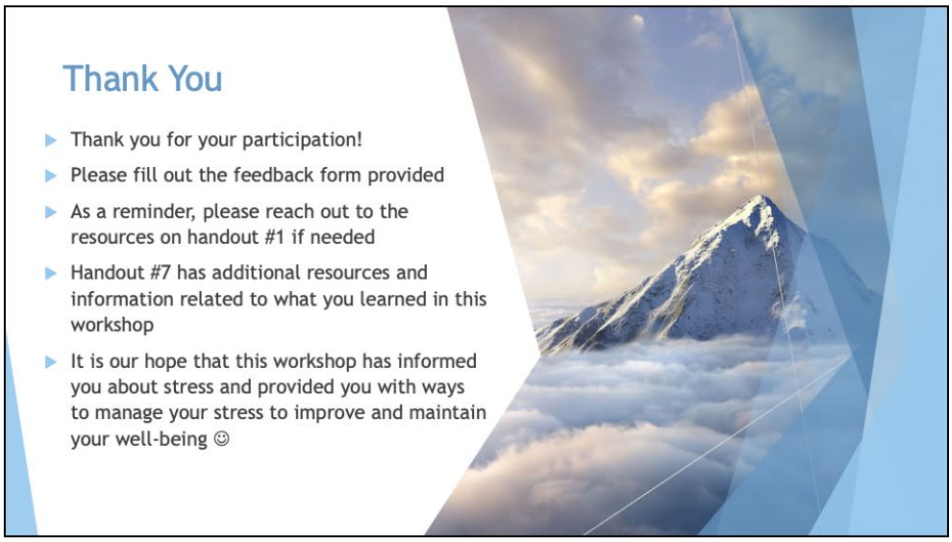
Putting it all together…

- COVID-19 has resulted in feelings of social isolation and high levels of stress for some
- High levels of stress and low levels of social support are associated with the development of PPD
- Understanding PPD and stress may allow you to better understand your health and address your stress
- Managing our stress can improve our health and well-being!

## Wrap-up

- 4, 3, 2, 1…
- What are four things you learned today?
- What are three things you want to learn more about to reduce your stress?
- What are two things you will do twice this week to reduce your stress?
- What is one thing you will share with a friend to support them?

111




Feedback form is found in Appendix D of Final Project document.

**Appendix C: Handouts**

# Handout #1: Resources

If you are in an emergency, call 911.

Crisis Services Canada
1-833-456-4566
Text 45645
https://www.crisisservicescanada.ca/en/

The Distress Line of Southwest Alberta
403-327-7905 or 1-888-787-2880

Alberta Mental Health Help Line
1-877-303-2642

Alberta Health Services Mental Health Clinic
403-381-116

Text4Hope
Text COVID19HOPE to 393939

Alberta Parenting for the Future Association (Edmonton)
Family Support Groups
780-963-0549
http://apfa.ca

Families Matter (Calgary)
Perinatal Mood Support for Postpartum Depression and Anxiety
403-205-5178
http://www.familiesmatter.ca

Lethbridge Family Services
Individual and Group Counselling
403-327-5724
https://www.lfsfamily.ca/content.php?p=41

# Handout #2: Cognitive Distortions

| | |
|---|---|
| All-or-nothing Thinking | • Seeing things in black and white with no middle ground<br>• Example: Nobody likes me |
| Overgeneralizing | • Making a broad interpretation from one negative<br>• Example: I didn't heat up the bottle right, I'm a bad mother |
| Mental Filtering | • Focusing on the negatives and ignoring the positives<br>• Example: COVID-19 ruined my birth plans |
| Disqualifying the Positive | •Discounting the good things; insisting that accomplishments or positive qualities do not matter<br>•Example: It doesn't matter that I exercised three times this week, I'm still overweight |
| Jumping to Conclusions (mind reading and fortune telling) | •Making predictions about how thing wills turn out with little evidence or assuming you know what someone else is thinking<br>•Example: My partner is mad at me because I didn't help with dinner |
| Magnification and Minimization | • Blowing things out of proportion or minimizing the importance of something<br>• Example: I forgot the baby blanket, this entire vacation is ruined |
| Personalization | • Holding yourself responsible for something not in your control<br>• Example: It's my fault my child is small for their age |
| "Should" Statements | • Believing that something should be a certain way<br>• Example: I should be thinner than I am three months after giving birth |
| Emotional Reasoning | • Assuming our feelings are facts<br>• Example: I feel like a bad mom, therefore I am a bad mom |
| Labelling | • Assigning labels to ourselves or others<br>• Example: I'm stupid for forgetting to start the dishwasher |

Source:
Adapted from the work of: Burns, D. D. (1989). *The feeling good handbook: Using the new mood therapy in everyday life*. William Morrow & Co.

# Handout #3: Identifying Cognitive Distortions

| **Event**: What happened? | **Feelings**: What did you feel when this event happened? | **Thoughts**: What were you thinking? | **Cognitive Distortion**: is there a cognitive distortion occurring? If so, which one(s)? |
|---|---|---|---|
| | | | |
| | | | |
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| | | | |
| | | | |

# Handout #4: Progressive Muscle Relaxation

Instructions:

Find somewhere you can sit or lay comfortably. Inhale and tense each muscle group provided in the list below for 5-10 seconds, then exhale and relax the muscle slowly. Spend 10-20 seconds in the relaxed state. Move to the next muscle group.

Pay attention to how it feels to be in the tense state and the relaxed state. Notice the differences between these two states. Listen to your body; muscles should be tense but not in extreme pain.

When finished, return to the present moment by counting backwards from five.

| Muscle Group | How to Tense |
|---|---|
| Hands | Clench into fists |
| Wrists/Forearms | Extend and bend hands at the wrist |
| Biceps/Upper arms | Bend arms at elbows, clench fists, and flex biceps |
| Shoulders | Shrug them up towards your ears |
| Forehead | Wrinkle eyebrows upwards |
| Eyes/nose | Close eyes tightly |
| Cheeks/Jaw | Smile widely |
| Mouth | Press lips together |
| Back of neck | Push head back |
| Front of neck | Touch chin to chest |
| Chest | Hold deep breath |
| Back | Arch back |
| Stomach | Clench abdominal muscle |
| Hips/Glutes | Press glutes together |
| Thighs | Clench together |
| Lower legs | Point toes towards or away |

Adapted from Anxiety Canada (n.d.). *How to do progressive muscle relaxation*. https://www.anxietycanada.com/articles/how-to-do-progressive-muscle-relaxation/

# Handout #5: Summary of Stress Management Techniques

## Cognitive Restructuring

- Involves identifying cognitive distortions and challenging them so we can have more functional thoughts

## Progressive Muscle Relaxation

- Involves tensing and relaxing groups of muscles so that we can learn to relax muscles at will when stressed

## Diaphragmatic Breathing

- Involves intentionally taking deep inhalations and exhalations from our stomach

## Mindfulness

- Involves awareness and acceptance of our experiences

## Body Scanning

- Involves bringing awareness to our body and observing any tension we may feel, breathing through tensions, and visualizing the tension leaving our body

# Handout #6: Managing Stress

| **Stressor** (what happened?) | **Signs/Symptoms** (how can you tell your stressed? Any emotional/physical symptoms?) | **Response** (which 3F am I in?) | How can I **manage the stress** I'm experiencing (what stress management technique can I use to regulate myself?) | How can I **cope** with this stress (what resources do I have to deal with this stressor)? |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

# Handout #7: Additional Resources

## Information on Postpartum Depression

Centre for Addiction and Mental Health
https://www.camh.ca/en/health-info/mental-illness-and-addiction-index/postpartum-depression

HealthLink BC
https://www.healthlinkbc.ca/health-topics/tn9653

## COVID-19 Resources

Government of Canada
Coronavirus Disease: Awareness Resources
https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/awareness-resources.html

Alberta Health Services
COVID-19 Pregnancy, Birth, Postpartum, and Breastfeeding: Information for Expectant and New Parents
https://www.albertahealthservices.ca/assets/info/ppih/if-ppih-covid-19-prenatal-postnatal.pdf

## Guided Videos on Stress Management Strategies

Progressive Muscle Relaxation
https://www.youtube.com/watch?v=1nZEdqcGVzo

Diaphragmatic Breathing
https://www.youtube.com/watch?v=g2wo2Impnfg

## Apps

Happify
https://www.happify.com

Headspace
https://www.headspace.com

Calm App
https://www.calm.com

## Appendix D: Feedback Form

Date:_____

Please consider the following statements and then circle your level of agreement.

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | The length of this workshop was appropriate. | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 2. | The facilitator made me feel comfortable and safe during this workshop. | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 3. | Attending this workshop helped me to learn about what postpartum depression is. | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 4. | Attending this workshop helped me to learn about what stress is. | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| 5. | Attending this workshop provided me with stress management strategies I can see using in my daily life. | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |

Any comments/suggestions on how this workshop could be better?

_____

_____

_____

_____