UNDERSTANDING YOUNG WOMEN'S MENTAL HEALTH IN THE CHANGING

CLIMATE IN NOVA SCOTIA, CANADA

By

Kathryn Stone

Submitted in partial fulfillment of the requirements
for the degree of Master of Arts

at

Dalhousie University
Halifax, Nova Scotia
July 2021

Dedication

This project is dedicated to the feminist climate movement, and to those who have
dedicated their lives to taking care of one another, the lands, oceans, plants, and animals.

Table of Contents

Abstract

Women are disproportionately affected by climate change, yet little research focuses on their mental health. Young women have also been increasingly active in advocating for climate action. The purpose of this study is to explore young women's perceptions of the changing climate and their mental health and their suggestions for appropriate adaptation and mitigation work. Feminist structuralism guided by discourse analysis was used to explore 9 participants' relationships to discourses surrounding hopelessness, stereotypes, intersectionality, gender-based violence, individual VS corporation and government responsibility, and climate (in)action. Study findings supported by broader literature provide recommendations for the discipline of health promotion regarding gender appropriate climate mitigation and adaptation strategies that prioritize and recognize mental health.

List of Abbreviations Used
FPS: Feminist post structuralism
GBV: Gender-based violence
SEP: Socioeconomic position
NIMMIWG: The National Inquiry into Missing and Murdered Indigenous Women and Girls

Acknowledgements

I would like to begin by thanking the participants who took part in this project. I felt inspired, reassured, and hopeful after each interview.

To my supervisors, Dr. Barb Hamilton-Hinch and Dr. Rebecca Spencer, I can't thank you enough for sharing your wisdom with me, encouraging me, and supporting me throughout this process. Your knowledge, kind words, and compassion will stay with me for a lifetime. Special thanks to Dr. Megan Aston and Dr. Daniel Rainham, who have given their continuous support and expertise for this project.

Thanks to all my family and friends who have supported me these past two years. Special thanks to my mom, who owns this achievement just as much as I do. Thank you for believing in me, encouraging me, and comforting me. Thank you to Harry, for loving me, being excited for me, believing in the science of discourse analysis, and catching my many typos. Finally, thank you to all my health promotion colleagues; learning and laughing with you all has been an absolute pleasure, and I could not have finished without you.

Chapter One: Introduction

Climate change, as stated by many reports since 2009, is one of the largest threats to human health of the 21st century (Costello et al., 2007; Howard, et al., 2018; Watts et al., 2020). Women, among other marginalized populations, are disproportionately affected by climate change (Hayes & Poland, 2018; WHO, 2010; Women's Environmental Network, 2010). The physical health impacts of climate change, including increased risk of heat stroke, intensified and prolonged pollen season that could exacerbate asthma, increased spread of Lyme disease, and decreased cardiorespiratory functioning due to worsening air pollution from wildfires have been well documented (Howard et al., 2018). While the physical affects and the science behind climate change are well understood, the mental health impacts of climate change have been historically overlooked (Hayes & Poland, 2018).

Researchers have recognized this gap and have begun to study the mental health effects of climate change as a new, emerging field (Albretch et al., 2007; Berry et al., 2017; Hayes & Poland, 2018; Petrasek McDonald et al., 2015). Studies have found that extreme weather events such as floods, wildfires, storms, and heat waves, as well as more chronic changes in weather patterns, such as sea level rise, melting permafrost and ice, and drought, can all negatively impact mental health (Clayton et al., 2018; Hayes & Poland; Hayes et al., 2018; Willox et al., 2015). Other impacts, such as feelings of fatalism, eco-anxiety (intense fear for the future), and solastalgia (a homesickness while at home), have been related to the knowledge and awareness of climate change writ large (Albretch et al., 2007). Few studies have yet to be conducted that focus on the mental health effects of climate change on women specifically, even though many mention

women as vulnerable to climate change (Alston, 2013). Recently, there has been a surge of young women addressing climate change at international and local levels (Greta's not the Only one, 2019) and it is for this reason that this proposed study will explore the ways in which climate change impacts the mental health of young women.

Literature Overview

Human beings have and continue to release significant amounts of carbon dioxide and greenhouse gases, mostly through burning fossil fuels (coal, oil, natural gas, and gasoline), which trap heat and increase the global temperature (Comeau, 2019; WHO, 2019). The rise in global temperature threatens human health as it puts clean air, safe drinking water, food security, and safe shelter at serious risk (WHO, 2019). Climate change has the power to undermine years of progress in global health and is expected to cause approximately 250,000 additional deaths per year due to malnutrition, malaria, diarrhoea, and heat stress (WHO, 2019). Developing countries that may have limited health infrastructure are at most risk (WHO, 2019); however, Canada is a circumpolar country and contains some of the most rapidly warming areas in the world and is also at risk (Howard et al., 2018).

In Canada, rapid warming is impacting health by threatening food security and ice-based travel, increasing heat stroke and death, worsening asthma and cardiorespiratory symptoms due to prolonged pollen season and pollution, and increasing the spread of Lyme disease (Howard et al., 2018). Over 90 deaths were attributed to the health-related impacts of heat during the 2018 heat wave in Quebec (Wood, 2018) and heat is associated with an increased suicide risk (Thompson & Hornigold, 2018). Briefly, other mental health impacts of climate change include trauma and post-traumatic stress

disorder (PTSD) due to displacement from wildfires and floods, as well as a decreased sense of place and increased chronic stress from the change in landscape (Clayton et al., 2018, Willox et al., 2015).

The literature on climate change and health often overlooks mental health, which is likely in part due to the lack of consideration of mental health within the broader conceptualization of health (Hayes & Poland, 2018). For example, studies that focus on climate change and women often do not focus on their mental health, but rather on the inequities and physical health impacts they face (Alston, 2013; Boetto & McKinnon, 2013; Demetriades & Esplen, 2008). Further, studies that focus on mental health and climate change often either exclude or overlook the experiences of women (Polain et al., 2011; Willox et al., 2012). Thus, the mental health impacts of climate change on young women remains an untapped area of research, and there are a limited number of studies fully related to the field (Anastario et al., 2009; du Bray et al., 2019; Hayes, 2019; Mamum et al., 2019).

Beyond excluding gender or lacking a focus on mental health, existing studies have limitations, such as not having a control group (Mamum et al., 2019). Additionally, many studies focus on the experiences of rural women, as rural people in general have particular vulnerabilities to climate change; however, this creates a gap in the knowledge of women who live in urban centres (Boettoe & McKinnon, 2011; Jost et al., 2015). Another gap noted was the lack of research in North America, as most research has been conducted in the Global South (Mamum et al., 2019; Boettoe & McKinnon, 2011; Jost et al., 2015). Finally, no studies were found to focus on the experiences of young women in particular.

Women and girls are increasingly recognized as successful leaders in climate action in research, policy, composing literary works, organizing collective action, and more. Elizabeth Johnson and Wilkinson (2020) discuss the ways in which the climate movement continues to become more "characteristically feminine and more faithfully feminist" (pg.3) and provide four illustrative examples. First, they argue that the movement has become more about dedication to change rather than competing with one another – it is all about giving each other credit and joyfully following wise leaders. Second, there is a clear goal of healing systemic injustices at the same time as addressing climate change. Women and girls value justice and inclusion in their climate work. Third, the movement has grown to appreciate a "heart-centered, not just head centred, leadership" (p. xix), where women and girls are seen bringing their anger, fear, and passion to their work. Authors argue that there are undeniable psychological and spiritual dimensions to the climate crisis that cannot be ignored. Fourth, the movement prioritizes community building to address climate change. Women and girls are seen doing deeply relational and collaborative work, recognizing that our fates are intertwined, and we are in this together (Elizabeth Johnson & Wilkinson, 2020). They end by noting these characteristics are indicative of an emerging climate renaissance.

Youth in particular are progressively active and vocal in advocating for climate action (Elizabeth Johnson & Wilkinson, 2020. Thus, this study focused on the experiences of young women. Greta Thunberg, Autumn Peltier, Hilda Flavia Nakabuye, Helena Gualinga, Amariyanna Copeny, Kehkashan Basu, and Lily Gardner are only a small sample of young women across the world making change and advocating for climate and environmental justice (Greta's not the Only one, 2019). Many of these young women choose to address climate change because they have been and continue to be

unremittingly impacted by it. For example, Autumn Peltier from Wiikwemkoong First Nation is a water activist who advocates for clean water in numerous Indigenous communities, and Hilda Flavia Nakabuye from Kampala, Uganda was pushed to action because climate change is impacting her grandmother's ability to grow food (CBC, 2019; Time, 2019). Youth have also been found to be particularly vulnerable to climatic changes, especially in terms of heat exposure and exposure to environmental disasters associated with climate change (Majeed & Lee, 2017). Youth are also understudied in terms of mental health, where most studies that focus on mental health and climate change explore adult mental health (Majeed & Lee, 2017). The Government of Canada (n.d.) defines youth as 16-28 years of age, which are the age brackets for this study. This population is one worthy of study because of the disproportionate impacts they experience, as well as their grit in addressing climate change.

Study Overview

More research is needed to fully understand the impacts of climate change on young women's mental health. In addition, research on women living in cities instead of rural areas is needed to fill the current gap. Overall, this study provides a unique and important contribution to the literature, as its purpose is to explore young women's mental health and gendered experiences in relation to the changing climate, in Nova Scotia, Canada, using a critical qualitative methodology.

This study uses a feminist post-structural (FPS) approach. FPS is appropriate for studying the topic of women and climate change because it seeks to explore power relations and ways to resist dominant discourses (Weedon, 1987). I recruited nine participants and facilitated eight semi-structured interviews. I use discourse analysis

informed by feminist post-structuralism to conduct analysis (Aston, 2016). This study
seeks to address the following research questions: How do young women experience
mental health and gender in relation to the changing climate in Nova Scotia, Canada?
The research question is supported by the following objectives:

1. To understand how young women perceive their mental health in relation to the
   changing climate.

2. To explore how women's experiences with the changing climate are personally,
   socially, and institutionally constructed.

3. To uncover what young women would like to see in terms of climate adaptation
   and mitigation at the institutional, governmental, and community level.

FPS supports inclusion of diverse voices and challenges the exclusion of diversity and
unique experiences in research (Aston, 2016). This study avoids the potential limitation of
excluding the diverse voices in Nova Scotia by purposefully reaching out to diverse
organizations during recruitment. Further, Kaijser and Kronsell (2014) describe gender as
but one form of oppression among many that can impact an individuals' climate change
experience. It is suggested that focusing on one identity, such as gender, without
recognizing how it exists among other systems of oppression, is risking
oversimplification of an issue such as climate change (Kaijser & Kronsell, 2014). Further
potential study limitations relating to the COVID-19 pandemic are outlined in the
discussion chapter.

Briefly, study findings were divided into three chapters: mental health and climate
change, gender, and climate roots, responsibility, and action. The mental health of
participants is described in three subthemes of hopelessness, fear and anxiety, and grief
and frustration. The gender findings chapter focuses on intersectionality, gender

6

stereotypes, and gender-based violence. Finally, the third and final findings chapter focuses on the roots of climate change, the responsibility of corporations and leadership in address climate change, and the action and changes the participants would like to see taken moving forward. The following chapter, the discussion, situates each findings chapter in the broader literature and provides related implications for the health promotion discipline.

Key Terms and Definitions

These key terms and definitions are presented in chapter one to ensure readers begin this thesis with a similar understanding of key study concepts. First, I have decided to capitalize all races, following the advice of Dr. Ibram X. Kendi (Kendi, 2020). Climate change, mental health, and gender are sometimes controversial topics and different people may interpret each subject differently. The following definitions will be used throughout this thesis and all documents associated with the study. Participants were made aware of what is meant by each term in the informed consent package (Appendix A), as well as before interviews. As this study used discourse analysis informed by FPS during data analysis, having a basic understanding of language used will be important.

Climate Change

For the purposes of this study, climate change is defined as the change in global climate and weather that has been caused by human activity. Although no one weather event or change in weather pattern can be specifically linked to climate change, this study takes into consideration that climate change has and will continue to increase the frequency and intensity of extreme weather and changes in weather patterns (Comeau & Nunes, 2019). Thus, any extreme weather change or event could be related to climate

change and is discussed in this way throughout the study. The term 'climate change' will be used interchangeably with the terms "climate crisis" and "change in climate".

Mental Health

For the purposes of this study, mental health is defined broadly, as a concept that includes states of affirmative health as well as the more commonly discussed mental illness (Hayes & Poland, 2018). Further, mental health will be defined holistically, as it is often defined in Indigenous ways of knowing, including spiritual wellbeing and connectedness to one's environment and nature (Wilson, 2003).

Gender

For the purposes of this study, gender is defined as fluid, not as a system of binary opposites, as is keeping with the FPS methodology (Aston, 2016). Further, young women are the proposed study population; however, it is recognized that women (inclusive of Trans women) may share similar marginalities experienced by Nonbinary femme identified and Two Spirit persons, thus, were included in the study's inclusion criteria. I did not ask participants how they identified or which pronouns they use, thus I have referred to participants with the gender-neutral pronoun "they", which is aligned with APA formatting's recommendation for unbiased language. It is important to note that to my knowledge, no study attempts to understand how gender identities other than men and women experience climate change. Studies discussed in the literature review focus on women only and did not discuss the fluidity of gender. I chose to conceptualize gender broadly to avoid exclusion evident in previous work, and potentially facilitate diverse recruitment.

Researcher Reflexivity and Position

Reflexivity is how the researcher positions themselves in the context of the research, which is critical in qualitative studies (Creswell & Poth, 2018). It is important to consider my own potential biases, based on my values and experiences, that might have been brought to the study (Creswell & Poth, 2018). I am a young woman that has lived in Halifax, Nova Scotia, for many years now. I have always been up to date, interested, worried, and stressed about climate change. My interest, awareness, and fear of climate threats has the potential to bias analysis. For example, I could interpret the data to represent how I feel about the climate crisis, which could be different from the participants' feelings and perceptions. This potential bias is mitigated by careful supervision of data analysis by supervisors. By contrast, my closeness to the study population is advantageous, as participants may have felt they are able to relate to me and speak freely during data collection. My knowledge of climate change, gender, and mental health are integral to analysis and to assist in identifying important issues that that may not be clear to those who are unfamiliar with climate change and associated impacts on women.

It is important to note that I am a White settler in Kjipuktuk, Mi'kma'ki. I have never experienced a severe extreme weather event, other than storms such as Hurricane Dorian, White Juan, and others that have struck the east coast. During these events, I was always safe and taken care of, and after these events, my parents and I have always been able to replenish what was lost or damaged in our home. I have always lived far enough away from the coastline that sea-level rise is not an immediate threat to me and have never experienced drought. I recognize that this is not the same experience for many people living on the East Coast. I come to this study with the privilege of not having experienced extreme climatic changes or events directly; however, I have been concerned

about the fate of earth from the moment I heard about the climate crisis. It is for this reason that I conducted a study that will advance our understanding of the mental health impacts associated with climate change.

Significance and Implications

The findings of this study contribute to the body of knowledge on climate change and human health. Increasing knowledge on this subject is important so that we can track, treat, and prevent adverse health outcomes (Howard et al., 2018). Specifically, the Lancet Briefing for Canadian Policymakers (2018) has indicated that the inquiry on the mental health impacts of climate change is important and provides recommendations to increase funds to study this topic. This study contributes to the literature on mental health and climate change, while recognizing that those who have been marginalized will continue to experience the impacts of climate change at a heightened rate.

In addition to furthering the literature on health and climate change, this study allows for policy and climate action to be informed by research. For example, climate policy can take into consideration the outcomes of the third study objective, which seeks to understand what young women wish to see in terms of climate adaptation and mitigation. Further, government and institutions may be informed by study objectives numbers one and two, which seek to uncover how young women's mental health is impacted by the changing climate, and how gender plays a role in the way they experience climate change. By understanding these objectives, climate action and policy can be informed by the gendered lens that this study employs.

Summary of Chapter One

Women are disproportionately impacted by climate change, along with other marginalized groups. Mental health and climate change is a growing field, yet there is a dearth of literature on the specific mental health of women in relation to the climate crisis. Further, young women are global advocates for climate action, and thus are the population of this proposed study. This study aims to understand young women's mental health in the changing climate, as well as their wishes for future climate adaptation and mitigation. The study fills a current gap in the literature and adds to the important body of literature on climate change and health, more specifically, climate change and mental health, which has been recommended as a priority for Canadian policymakers (Howard et al., 2018).

Chapter Two: Review of the Literature

This chapter will provide a critical analysis of the literature on climate change and health, as well as mental health and gender. Next, an analysis of the literature on the mental health impacts of climate change on women will be provided. This chapter will situate the study within the literature, suggesting that although the physical and mental health impacts of climate change are known and growing fields, there is a gap in the knowledge of mental health impacts of on women. The review will also introduce the importance of intersectionality in climate research, noting that the variety in climate experiences that women can have and the relevance of a diverse study population. This exploration of the broader climate literature was important to shape this study.

Climate Change and Health

The Canadian Association of Physicians for the Environment (CAPE) (2019) is an organization that reports and summarizes the latest climate science, impacts of climate change on health, and climate solutions for health care providers in Canada. They summarize science and research mainly from the International Panel on Climate Change (IPCC) and the Lancet Countdown on Climate Change and Health. CAPE reports that human activities have resulted in 2,220 gigatons of carbon dioxide since pre-industrial times. This has resulted in an average global temperature increase of one percent since the industrial revolution (CAPE, 2019). Global temperatures are expected to reach 1.5 degrees Celsius by 2040, which will significantly intensify the climate change impacts we have seen so far, such as an increase in the intensity and frequency of: hot days and nights, precipitation, floods, droughts, and strong tropical cyclones (CAPE, 2019). All of

these impacts have and will continue to have impacts on global human health (CAPE, 2019).

In Canada specifically, there are many ways that the changing climate is impacting the health of Canadians (CAPE, 2019). The number of extremely hot days is expected to double or triple in the next 30 years, increasing mortality among older adults, people with chronic illness, and people who are socially isolated (CAPE, 2019). Heat exposure can induce heat stress, heat exhaustion, and heat stroke, and is able to irritate heart, lung, and kidney conditions (Howard et al., 2018; CAPE, 2019). Climate change can worsen air pollution as dry, long, and warm summers increase the risk of exposure to forest fire smoke, dust from droughts, and pollen; all of which can increase the risk of heart disease, stroke, lung cancer, and respiratory disease, and can irritate existing conditions (CAPE, 2019; Comeau & Nunes, 2019). Air pollution causes approximately 14,400 premature deaths per year in Canada (CAPE, 2019). Further, climate change is creating a more habitable environment for the spread of vector borne diseases in Canada, leading to increased diagnoses of Lyme disease and West Nile virus (CAPE, 2019). Finally, climate change is causing an increase in the severity and frequency of extreme weather events, such wildfires, floods, storms, and tornadoes, which can impact the health of a wide range of people in several ways (CAPE, 2019; Comeau, 2019).

Climate change amplifies existing inequities (Hayes & Poland, 2018). Although I am not specifically employing the theory of intersectionality in this research, it is important to acknowledge the concept as important when researching the impacts of climate change. Kaijser and Kronsell (2014) suggest using intersectionality when discussing climate change, as most current studies focus on one particular characteristic, such as gender, and in doing so oversimplify or fail to recognize inequity as intertwined

with other structures of oppression (Kaijser & Kronsell, 2014). Gender can intersect with other positions and aspects of identities, which can affect the severity of climate impacts (Kaijser & Kronsell, 2014). For example, people of colour, immigrants, people living in poverty, people with pre-existing health conditions, and Indigenous peoples experience a high risk of climate change related health implications (Hayes & Poland, 2018), all of whom could be women. Although this project focuses on gender, the concept of intersectionality is relevant, as it takes into consideration the varying experiences and backgrounds that create a woman's climate change experience.

As an example of intersectionality, Indigenous peoples are disproportionately impacted by climate change. By contrast, Indigenous people are among the populations that contribute the least to emissions, and protect 80% of earth's biodiversity (Garnier et al., 2020). Leadership in land and water protection is conducted predominantly by Indigenous women (Dennis & Bell, 2019). Further, Inuit in the circumpolar north experience the most rapid warming in the world, where ice is melting at an unprecedented rate, decreasing the times where Inuit travel, fish, forage, hunt, and trap, and adversely impacting food security (Cunsolo Willox et al., 2012; Cunsolo Willox et al., 2014; Cunsolo & Ellis, 2018). As the land is a determinant of Inuit health, there has been research conducted on the ways the changed landscape and conditions impact physical, mental, cultural, and spiritual health (Cunsolo Willox et al., 2012; Cunsolo Willox et al., 2014). In that study, women ranked higher levels of frustration, sadness, fear, anger, helplessness, and distress in response to climate change than men; however, gender was not discussed at any other point in the publication (Cunsolo Willox et al., 2012).

Mental Health and Gender

Mental health is gendered, and is impacted by social positions, status, treatment in society, and exposure to specific mental health risks (WHO, 2013). Women worldwide experience a high prevalence of mental health challenges. For example, unipolar depression is the leading cause of global disability, and is common in women (WHO, 2013). Women also predominate in the most common mental health disorders such as depression and anxiety (WHO, 2013). This could be due to the specific risk factors that women are susceptible to, such as gender-based violence, socioeconomic disadvantage, low income, subordinate social status, and the never-ending responsibility for the care of others (WHO, 2013). For example, women are the largest group of people affected by PTSD due to the high prevalence of sexual violence that they are exposed to (WHO, 2013).

Women can also face discrimination if they seek treatment for their ill health (WHO, 2013). For example, women are highly likely to be diagnosed with depression and prescribed mood-altering psychotropic drugs (WHO, 2013). Gender stereotypes such as proneness to emotional problems in women can reinforce social stigma, which could constrain help seeking behaviours (WHO, 2013). Finally, mental health challenges relating to violence are often not identified, as women may not want to disclose personal information about the topic to physicians, which can lead to poor health outcomes (WHO, 2013).

Finally, the WHO (2013) states that changes in economic and/or social policies that severely disrupt income, employment, and social capital can significantly increase gender inequity and thus the rate of common mental health disorders. As climate change has and continues to disrupt economy and social policies, we are seeing that mental health

impacts of climate change are accelerating in the most marginalized populations (Hayes et al., 2018).

Climate Change, Mental Health, and Gender

In the face of the changing climate, women are increasingly likely to experience gender-based violence (GBD) and mental health challenges (Boetto & McKinnon, 2011; Mamun et al., 2019; Meyiwa et al., 2014). Studies in this field are limited, as many either lack a focus on mental health (Boetto & McKinnon, 2013; Meyiwa et al., 2014) or lack a focus on women (Polain et al., 2011). Further, studies are mostly conducted in the rural Global South, meaning findings may not be generalizable or transferrable to the urban North American context (Boetto & McKinnon, 2013). No studies found for this review focused on the experiences of young women. Through critically analyzing these studies, it is clear there is a gap in our understanding of young women's mental health in relation to the climate crisis.

Gender-Based Violence and Mental Health Challenges

A study completed two years after Hurricane Katrina in the United States found that rates of GBV had significantly increased from before the hurricane (Annastario et al., 2009). Results indicate that the most rapid increase in all types of violence occurred in the first year following the disaster and continued to escalate in the two years following displacement, and the prevalence of intimate partner violence increased most severely (Annastario et al., 2009). These increases were found to heighten women's risk of developing major depressive disorder, depressive symptoms, and suicidal ideation (Annastario et al., 2009).

16

Another study focused on rates of depression was conducted by Mamun et al. (2019) and measured the depressions rates of 110 women after they survived cyclone Mora in Dalbangha village, Bangladesh by using the Bangla Patient Health Questionnaire. It was found that 64% of women presented with depression, with rates being higher among women who were of a lower age (18-30). While Mamun et al. (2019)'s results give rationale to the proposed study and population, they did not have access to a control group, and were unable to measure whether depression rates were altered by the cyclone (Mamum et al., 2019).

Conversely, a study that was able to access data from before a weather disaster, concluded that following the 2014 Alberta flood there was an increase in sexual assaults, as well as an increase in prescriptions for anxiety medication for women (Hayes, 2019). Another study conducted by Meyiwa et al. (2014) in Eastern Cape, KwaZulu-Netal, South Africa, gathered data on women's perceptions of climate change between the years 2013 and 2014 using workshops and qualitative interviews, finding that a major concern for women is the potential for climate change to increase the risk of violence against girls and young women (Meyiwa et al., 2014). As climate change increases water scarcity and women are responsible for fetching water, young women and girls are further subject to violence and abduction as they have to travel further and to more remote locations than was previously needed (Meyiwa, et al., 2014). The National Inquiry into Missing and Murdered Indigenous Women and Girls (NIMMIWG, 2019) report demonstrates how resource extractive industry and development, often related to emissions, can lead to increased violence against Indigenous women, girls, and 2SLGBTQQIA people. While neither the report nor Meyiwa et al. (2014) focused on mental health, violence against

women has been found, worldwide, to impact women's mental health severely (Riecher-Rossler, Garcia-Moreno, & Karger, 2013).

Lack of Mental Health Focus

Studies that focused on climate change and gender often lacked a focus on mental health. Boetto and McKinnon (2011) used a qualitative methodology by interviewing seven women in rural Australia, and found that participants experienced an increase in hardship, household roles, and subsequent organizational responsibilities (Boetto & McKinnon, 2011). Participants also discussed the increase in domestic violence after a recent flood and an increase in cost of living causing financial strain on women in particular, making it harder for them to leave domestic violence situations (Boetto & McKinnon, 2011). Participants also noted that because of the domestic role women often play in rural settings, they could be blamed for the increase in the bills that they are responsible to pay, even though these increases in resource prices could be caused by changing environmental factors (Boetto & McKinnon, 2011). This study suggested that women fare worse as the climate changes but did not mention mental health specifically.

Similarly, studies conducted in Uganda, Ghana, and Bangladesh explored the implications of gender and climate change in smallholder farming communities (Jost et al., 2015). Authors found that women were faced with limited resources and information regarding adaptation to climate change in agricultural practices (Jost et al., 2015). This is due both to new practices (which are labor intensive) seeming to fall on women, such as composting and vermiculture, and women's lack of access to technology, due to patriarchal norms (Jost et al., 2015). Further, women have limited land rights and ownership, which poses a serious challenge for women wanting to practice climate smart

agriculture. These findings suggest that women's mental health may be negatively

impacted climate change, but this was not a specific study result and cannot be verified.

A study conducted in Iglooik explored the impact of climate change on Inuit

women's food security (Beaumier & Ford, 2010). Findings reported that the change in

climate and ice melting would cause women to run out of food, skip meals so their family

can eat, and rely on selling their personal items to buy food; however, there was no

mention of how this hardship impacted women's mental health (Beaumier & Ford, 2010).

Similarly, Sunbald et al. (2007) found that women in Sweden worried more about climate

change, but did not investigate further as to why, or how this worry impacts mental

health. These studies are useful in demonstrating the inequities that women face in the

changing climate and the lack of attention to understand mental health impacts arising

from climate change in diverse settings.

Lack of Gender Focus

Studies focusing on mental health and climate change often sample from men and

women but do not conduct comprehensive sex and gender-based analyses in results,

creating a gap of knowledge on mental health and climate change (Cunsolo Willox et al.,

2012; Polain et al., 2011). By excluding gender differences, this gap in research can be

seen to reinforce the patriarchy, which the FPS methodology challenges (Aston, 2016).

For example, a study conducted with older farmers in Australia reports that climate

change is negatively impacting agriculture, which in turn severely impacts the mental

health of farmers as they are experiencing an intense, overwhelming, and devastating

sense of loss (Polain et al., 2011). While this study did not mention gender at any point,

researchers made it evident that their study population was mostly men. For example,

when researchers discussed the impacts of economic challenges as a farmer in the

changing climate, they stated that those who could not provide secure support felt they had failed their wives and families (Polain et al., 2011). Researchers also mention that wives now spend time away from the farm to undertake paid work to make ends meet, which results in the loss of social activities that wives had previously organized for the farmers (Polain et al., 2011). By focusing exclusively on how climate change impacts farmers and insinuating that all farmers are men, it is possible that this study failed to accurately portray the mental health impacts of climate change on women.

Similarly, Cunsolo Willox et al. (2012) reported that women in Rigolet, Nunatsiavut, were more frustrated, sad, scared, helpless, and distressed about the changing climate than men, but did not explain, discuss, or expand upon these results. Another study that explores Inuit health in the changing climate focused on sea ice and reported significant implications for mental, spiritual, and cultural well-being without completing a gender-based analysis (Durkalec et al., 2015). These studies are investigating important topics but by failing to acknowledge gender may miss important findings that are needed to inform policies and programs that ensure women are protected.

A study conducted by Xu et al., (2018) does not exclude gender from their findings but left out important information and discussion on gender in their analysis. The study sought to understand how the increasingly hot climate in Australia is impacting the mental health of children by distributing a national survey for children aged six to eleven (Xu, et al., 2018). The study suggests that the mental health of boys was impacted more than that of girls because of how temperature rises impact physical activity levels in boys. It is mentioned but not thoroughly discussed that boys receive more physical activity than girls, thus this physical activity measurement for mental health outcomes may be

irrelevant for girls. The study also notes that the mental health of girls was more influenced by household and individual socio-economic characteristics, without going into detail on what this actually means, or why this may be. The study also stated mental health outcomes for Indigenous girls were alarming, yet this was only briefly mentioned in the discussion without more information or investigation (Xu, et al., 2018). Finally, the quantitative questionnaire used in this study may have been misinterpreted by children of such a young age and reading level, and may have been subject to social desirability bias, potentially skewing results (Pedrogon et al., 2011).

Transferability

All studies discussed in this literature review may not be transferable to the Canadian context, as they were most were conducted in the Global South. For example, Australian studies conducted by Boetto and McKinnon (2011), Xu et al. (2018), and Polain et al. (2011) cannot be generalized to the Canadian context, as geographies vary in climate change impacts. Australia has been experiencing widespread drought and water shortages for the past 20 years, devastating bushfires and floods with high mortality rates, and has a warmer climate than Canada's (Aston, 2011). Similarly, studies conducted in Africa and Asia (e.g. Jost et al., 2015; Meyiwa et al., 2014) were done in countries that have experienced significantly more extreme drought and weather events than Canada. In addition, some countries from the reviewed studies are considered developing countries by the World Population Review (2019), which may result in different findings than studies conducted in Canada.

Most studies in this review focus on participants and experiences from rural contexts (Boetto & McKinnon, 2011; Jost et al., 2015). This leaves a gap of knowledge on the mental health impacts of young women living in the urban context, such as Nova

Scotia, Canada. In this study, women living in Nova Scotia may come from rural areas and talk about rural experiences with climate change. Although this study attempted to include an urban perspective by recruiting mainly in the urban centre of Halifax, it is recognized that participants' experiences that may not be specific to Halifax are still valid and worthy of study.

Summary of Chapter Two

There is ample research to suggest the severe threat of climate change to human health, both mental and physical, as well as evidence that women experience significant mental health challenges. It is clear that women's mental health is and will continue to be challenged by the changing climate; however, the review of the literature suggests that there is a limited number of studies fully dedicated to understanding the impacts of climate change on women's mental health. Studies either lack a focus on women themselves, or on mental health. Finally, no studies were found to investigate the experiences of young women, despite them being a seemingly powerful agent for climate action. The proposed study will fill this gap in the literature by using an FPS methodology to understand young women's mental health and climate experiences.

Chapter Three: Research Methods and Study Design

To begin, an overview of the transformative worldview and the FPS approach will be provided. To follow, characteristics of participants will be detailed with inclusion and exclusion criteria, as well as the study's recruitment processes and data collection setting. Interviews and focus groups will be described as the method of data collection for this study, as well as discourse analysis informed by FPS as the chosen analytical procedure. Measures taken to ensure trustworthiness and rigor including credibility, confirmability, dependability, and transferability will be outlined. Ethical considerations will be explored as well as anything that can be done to minimize the risk to participants. Finally, the researcher role in this study will be described, as well as the selected knowledge translation method. Congruency between methods and study purpose was considered throughout these sections to ensure integrity.

Purpose and Research Question

This chapter outlines the methodology and methods for this proposed study. The purpose of this study is to understand the mental health of young women in the changing climate, and to answer the question: *How do young women experience mental health and gender in relation to the changing climate in Nova Scotia, Canada?* The study objectives are three-fold: (1) to understand how young women perceive their mental health in relation to the changing climate; (2) to explore how women's experiences with the changing climate are personally, socially, and institutionally constructed; and (3) to uncover what young women would like to see in terms of climate adaptation and mitigation at the institutional, governmental, and community level.

Worldview and Methodology

This research will be situated within a transformative worldview. The transformative worldview suggests that it is impossible for knowledge to be neutral; knowledge instead reflects power and relationships within society (Creswell & Poth, 2018). The transformative paradigm often includes marginalized populations, such as women, Indigenous peoples, and racialized groups (Crewell & Poth, 2018). Systems of domination, oppression, and inequity are crucial issues to study, and by doing so, it is possible to provide a voice for participants (Creswell & Poth, 2018). Research under the transformative worldview is meant to improve the lives of participants, the institutions in which they live, work, and play, and/or the life of the researcher (Creswell &Poth, 2018). Finally, the transformative worldview encourages political participation and highlights issues of concern (Creswell & Poth, 2018). This study will highlight issues of concern by exploring diverse young women's mental health concerns in relation to the changing climate, which is a highly politicized issue. Climate change is political topic because of the ways in which we attempt to address it. By direct example, political parties each acknowledge climate change to varying degrees, ranging from denying the existence of the problem to creating strategies to reduce emissions (Smith, 2008). Included in the latter are diverse opinions about how to reduce emissions, with each Canadian party developing different climate strategies and policies in the most recent election (McCarthy & Walsh, 2019).

An FPS approach will be used to guide this research, as it appropriate with the transformative worldview and study content. FPS aligns well with the transformative worldview because it seeks to uncover areas, strategies, and opportunities for change (Weedon, 1997). Further, FPS is appropriate for studying the topic of women and climate

change because it seeks to explore power relations as well as ways to resist said power (Weedon, 1997). Power relations, considered by FPS as fluid and dynamic as opposed to something one can have or not, are relevant to this study because they are largely responsible for women's disproportionately negative experiences in the era of the changing climate (Boetto & McKinnon, 2011; Jost et al., 2015; Mamun et al., 2019; Meyiwa et al., 2014). Exploring opportunities for change is also imperative to this study, as the climate crisis begs for change in order to sustain human health (WHO, 2019). Women's perceptions of mental health in the changing climate will be explored knowing that the FPS approach accommodates the subjectivity of truth, and that truth and reality have been constructed in the patriarchal western society by male domination, serving male interests (Gavey, 1989). Thus, knowledge and truth are not neutral in FPS, but tied to power relations and dynamics (Gavey, 1989). Women's knowledge and experiences in this study are important to uncover to break down "what counts as truth", which is normally regulated by those who attempt to maintain privilege (Gavey, 1989). Thus, by hearing the voices and truths of women surrounding a subject requiring immediate global change, this study will challenge existing power relations.

FPS does not seek to create a discourse of women as the victim, but rather the opposite (Aston, 2016). It cannot be ignored that women are disproportionately impacted by climate change, but they are also strong and taking successful climate action and justice across the globe (Greta's not the only one, 2019). Women are not passive and acted upon (Aston, 2016), but rather what the world needs to address the climate crisis. Additionally, FPS does not aim to perpetuate binary opposites (Aston, 2016). Binary power relations are challenged in this study because it resists the idea that one group has power (men), and one does not (women) by providing the discourse of women's

(especially young women's) strong and successful action in addressing climate change. Finally, in order to not further perpetuate binaries, I will not be taking biological sex into account for study inclusion exclusion criteria, but rather choose to see gender as fluid and include Nonbinary and Two Spirit persons.

FPS also considers participant subjectivity and agency (Aston, 2016; Van Wijlen & Aston, 2019). This can apply to a participant's position, how they are positioned in the world, while considering how they move through dominant social discourses (Van Wijlen & Aston, 2019). Through this process, I reflected on participants agency in the experiences and scenarios they described. Participant discourses were situated within specific institutionally and socially constructed systems. Further, FPS considers that women can reconstitute discourses and reflect on their own thoughts, actions, and relationships, thus reconstructing subjectivity (Aston, 2016). Butler (1992) argues that agency can be utilized to participate in political fields.

Participants, Setting, and Recruitment

Inclusion and exclusion criteria are based on the age and gender identity of participants. The study population includes young women living in Nova Scotia, Canada. Originally, this study sought to exclude potential participants living outside of Halifax to include solely urban experiences. This decision was later changed to facilitate recruitment of more participants and included an ethics amendment. The inclusion criteria are based on the disproportionate impacts faced by women in relation to climate change, the current rise in young women climate activists, and the gap in the literature pertaining to young women's mental health in the changing climate. Thus, to be included in the study, participants must have been between the ages of 16 to 28, as this is how the Government

of Canada (n.d.) defines youth. In addition, this study does not focus on gender assigned at birth but rather will include anyone who identifies as a woman, nonbinary, or Two Spirit person. While understanding the harms of the socially constructed gender binary, I also recognize that although not all women have all experiences and interests in common, the category can still exist due to the overlapping oppression, exploitation, discrimination, and exclusion that exist within the group (Garry, 2011; Gunnarson, 2011). Participants must have lived in Nova Scotia in the past year and be able to speak English to be included in the study. One participant had recently moved out of Nova Scotia due to COVID-19 but had lived in the province earlier during the year and was included in the study.

Studies using an FPS approach often use a sample size of six-ten participants (Griscti et al., 2017; MacConnell et al., 2013; Mselle, 2017). With this range in mind, I was able to recruit nine participants, and fully explore their experiences. This range also allowed me to conduct enough interviews without going beyond the scope of a MA thesis.

Participants could choose to take part in a group or individual interview, depending on which felt more comfortable. Eight interviews took place over Microsoft Teams, where two participants wished to be interviewed together. Microsoft Teams interviews were recorded on a handheld recorder, as well as using Garage Band, an iOS audio recording software application from my computer.

Recruitment occurred mainly through social media. A virtual poster was shared on social media and emailed to organizations and societies (see Appendix B for poster). To facilitate recruiting a diverse population, the electronic poster was emailed strategically to diverse groups who may be interested in taking part or sharing the study on their social

media pages. For example, the poster was sent to organizations such as Laing House, the International Centre, the Indigenous Student Centre, the Black Student Advisory Centre, and South House (LGBTQ2IA+). The posters included the contact information of the researcher, where individuals interested in the study were directed to email the address. We then scheduled a phone call to discuss eligibility and study details. Participants were screened during this call to make sure they were between the ages of 16-28, lived in Nova Scotia, and were interested in participating in an approximately one-hour interview or focus group. Participants did not have to have any prior knowledge on climate change or mental health, or be experiencing mental health challenges to be included. The screening call also included scheduling a time and date for an online interview, as all interested participants took part.

Data Collection

Data collection involved semi-structured, online interviews, although participants had the option to choose to participate in a group interview if they wished. The decision to include this option for participants was made due to the sensitive subject matters of climate change, gender, and mental health. By having an option to participate in the study in whichever way they feel most comfortable, participants may have been more likely to join the study. Interviews align with the FPS approach, as their open-ended nature allows for a deep dive into the experiences and knowledge of the participant (Aston, 2016). Although no full focus groups session occurred, two participants chose to participate together in a group interview. Interview questions surrounded mental health, gender, and climate change, which can be found in Appendix C.

Participants were made aware that their data could be retracted from the study, if they wished, up to one week after their interview, as by this time transcription and analysis had started. Due to the COVID-19 pandemic, physical distance restrictions in Nova Scotia remained in place at the time of data collection. Thus, interviews took place on the online platform Microsoft Teams. Through this platform supported by Dalhousie University, I was able to send meeting invitations to singular or multiple participants, as was the case with the one group interview.

Data Analysis

Interviews were transcribed verbatim, and then analyzed using discourse analysis to interpret the results. Discourse analysis followed the steps of Aston (2016). The first step in this procedure was to identify important issues, where I read the transcripts and make note of certain quotations that I felt represented an important issue (Aston, 2016). Then, I attributed any beliefs, values, and practices that I felt aligned with the quotations, making sure to not add my own beliefs and values, but using those of the participants. The next step was to describe the social and institutional discourses that I saw informing the identified issues (Aston, 2016). Next, I wrote about how the discourses relate to the participant and their experiences of power relations. This means that I unpacked how the discourses affect the participant, if they disagree with the beliefs, values, and practices, and if there are conflicts and/or tensions (Aston, 2016).

Finally, I provided the participants' subjectivity, or, how they are positioned in the world (gender, career, student, etc.). In addition, I often added in the participants' agency, looking at how they "chose" to act in each situation, perhaps by embracing or challenging the discourse in question (Aston, 2016). By using this method of analysis that allowed me to pay close attention to the way participants tell their stories, I was able to explore

relations of power. In addition, I was able to offer a different interpretation of a situation and find a way to challenge oppression. This did not mean blaming institutions, but rather, unpacking the ways in which people accept or challenge different ideas, and use analysis to find possibilities for change, which is one main focus of FPS (Aston, 2016).

All transcripts were analyzed with this process separately, as well as together to find common themes. My supervisors and I chose the same transcript to analyse separately, after which we met via Microsoft Teams to compare and discuss our findings together. After finding similar results and interpretations, I continued to analyze transcripts on my own. Findings were divided into three chapters: (1) mental health and climate change, (2) gender, (3) climate roots, responsibility, and action. Each findings chapter was reviewed iteratively by my supervisors and committee members to ensure my interpretations were logical and grounded in the FPS methodology.

Quality and Rigor

Qualitative research must be judged for quality and rigor differently than quantitative research (Bradshaw et al., 2017; Creswell, 2014), and is done so by concerning principals of credibility, confirmability, dependability, authenticity, and transferability, which together demonstrate trustworthiness (Bradshaw et al., 2017; Creswell & Poth, 2018). Credibility is the confidence in the truth and reality of the study (Connelly, 2016). To ensure this, I expressed compassion and empathy during interviews, and repeated points back to participants to ensure accuracy in interpreting the meaning of their words (Bradshaw et al., 2017). Further, Aston (2016) notes that participants are experts in their own lived experiences, which allows for credibility. Next, confirmability is the degree to which the findings are consistent, for which I described participant

demographics and used direct quotes from the participants in my findings section (Bradshaw et al., 2017). Dependability is the stability of the data overtime (Connelly, 2016). To ensure dependability, I was transparent about changes to the study and remained consistent throughout the study process (Bradshaw et al., 2017; Creswell & Poth, 2018). Authenticity was maintained by conducting analysis with both of my supervisors and committee members to ensure later themes are accurate (Creswell & Poth, 2018). Finally, transferability was achieved through the in-depth descriptions of participants' experiences and perceptions, allowing for transferability of results to a similar context or setting (Bradshaw et al., 2017; Creswell & Poth, 2018).

Ethical Considerations

As gender and mental health are sensitive topics, they could evoke strong emotions. This concern was furthered by the COVID-19 pandemic and the impacts it may have on participant mental health. Depending on the background of the participant, which could vary in this study population, climate change could be a difficult and sensitive topic as well. It is for these reasons that a list of formal and non-formal mental health resources was made available at every interview (Appendix E). Only two participants decided to do their interview together, which did not result in any focus groups but rather a group interview. The two participants knew each other, thus mitigating any uncomfortableness associated with sharing stories with strangers. In addition, all participants were be made aware that they were able to leave the study at any point, skip any questions that they do not feel comfortable answering, as well as revoke their data from the study up to a week after their interview/focus group, all without any repercussions.

As Nova Scotia is a small province, confidentiality was a consideration for this study. Qualitative methods attempt to gather rich data, which heightens the risk of participant identification. Confidentiality was attempted on every aspect of the study from the researcher's end, and participants were notified of this potential risk before agreeing to participate. To mitigate the risk of identities being uncovered, I did not use the names of the participants in data analysis or dissemination, and stored data on a password protected hard drive.

Chapter Three Summary

This study took a qualitative approach, using an FPS approach to gather the experiences of young women in relation to the changing climate with a focus on their perceived mental health. Nine participants were recruited through posters posted virtually. Although participants had the choice between a one-on-one semi structured interview or a focus groups, whichever situation in which they feel more comfortable, all participants selected the interview option. Findings from this research project will be shared with participants themselves, who are welcome to share the results with others. Further, findings will be shared within academia to further research on climate change and health, as well as with local government organizations with intent to contribute to informed climate policy and programs.

Chapter Four: Findings – Climate Change and Mental Health

Participant Information

To provide context to findings, it should be noted that participants varied in age, race, and profession. Specific ages, pronouns, and identities were not asked of participants, leaving this information up to them to share should they have felt it necessary. Two participants mentioned being from the Caribbean, one mentioned being from the United Kingdom, and one mentioned being Mohawk First Nation. Other participants noted roots in the Atlantic provinces, but details were not fully discussed. Most participants mentioned attending post-secondary education in the past or at the time of the interviews. None declared themselves climate activists, nor did any participants mention being part of an activist group or attending climate-related protests, talks, sit-ins, etc, although one participant did state that they worked in the field of climate adaptation. This may have influenced results, as people more engaged in the climate change/justice movement may have answered questions differently and expressed different values, practices, and beliefs based on their experiences as activists.

Participants were all asked where they receive their climate information from, as this could markedly shape beliefs on climate change. Answers were vague and varied from peers and formal education to social media and email newsletters. No participants mentioned a specific news source. Occasionally, participants discussed an article they had read relating to climate change, and how it shaped their feelings and beliefs. This is important context, as findings, especially in this chapter, are dependent on the discourses that are partly constructed by media.

All participants exemplified a belief that climate change is our reality caused by humans, of which we are now seeing symptoms. Participants embraced a discourse of hopelessness surrounding climate change, where most avoided thinking about the topic all together. Participants also demonstrated fear and anxiety for the current and future changes in weather, related to a discourse of uncertainty, and discussed ethical considerations for birthing children. Finally, participants displayed grief for what is being done to the planet, and frustration related to a discourse of inaction. Throughout this chapter, participants exhibited "psychoterratic syndromes", such as ecoparalysis, ecoanxiety, ecological grief, and solastalgia, which are words used to describe emotional distress related to the awareness and experiences of the climate crisis (Albrecht, 2011; Albrecht 2007; Cunsolo & Ellis, 2018).

Hopelessness

Discourse concerning the future was overly hopeless and pessimistic, where participants implied that the future is potentially doomed, and doubted the ability of humans to adequately address climate change. Further, the idea of climate change and the future was so uncomfortable for participants that many discussed their conscious efforts not to think about it to avoid feelings of hopelessness and protect their mental health.

Doubt and Doom

Participants embraced popular discourses of doubt and doom surrounding climate change. This discourse was constructed by the ways in which climate change issues and solutions are framed as complicated and overwhelming, where media captures catastrophes significantly more than solutions (Boykoff & Boykoff, 2007). For example, the language used to describe climate change by the public is often scary, using words

such as catastrophe, terror, extinction, and danger (Hulme, 2008; Stecula & Merkley, 2019), creating a discourse wherein the problem is too big for humanity to deal with. Participants expressed doubt that the climate crisis can even be addressed, where one participant believed that the damage done is already too much for the planet to heal from: *"the world is definitely going to end from climate change because we've gone too far now" (P3)*. One participant noted their concern that we might not be able to *"handle it"* and that *"we might not start to react until it's too late, I think it's probably already too late*" (P9). In these instances, participants reflect, embracing a discourse of doubt because humans have gone *"too far"* and one of doom and pessimism where "*it's already too late",* implying that there is no hope. P1 expressed their concern for adequate action by saying "*it's all downhill from here unless something changes"* (P1), indicating doubt that things will in fact change for the better. Similarly, another participant mentioned their own doubt in a sustainable future: *"prospects don't look good right now and so just, it's a bit hopeless in a way." (*P5). These instances provide evidence of the doubt and hopelessness discussed by participants.

The discourse of doubt in the ability and willingness of humans to address climate change embraced by participants also challenges the prevailing discourse of climate change denial from politicians and industry around the world. For example, denial discourse has prevailed despite near scientific consensus for years, beginning largely in the 1990's spearheaded by conservative think tanks (De Pryck & Gemenne, 2017). Such denial has been used widely by the Trump administration and fossil fuel corporations, such as ExxonMobil, to protect businesses and economy (De Pryck & Gemenne, 2017). More subtle discourses exist that do not outwardly deny the phenomenon but downplay the severity of the problem, discredit and devalue scientific findings, and/or suggest no

change is required (Capstick & Steinberger, 2020). These denial discourses counter climate mitigation and adaptation efforts (Jacques & Connolly, 2016), and can include telling people not to worry, that climate change is an exaggeration, and that there are more important things to worry about (Klein, 2020). Participants have rejected these narratives and criticized human ability to address climate change adequately, considering the scale of the problem to be potentially larger than we can manage.

In addition to participant hesitation in what will happen to address climate change, participants also expressed feelings of hopelessness on individual levels. For example, P2 admits thinking about waste a lot, but does not know how to solve the problem, they reflect: "*that's how I see climate change as impacting mental health the most is because I literally don't know what to do.*" (P2), exhibiting a challenge in uncovering even hypothetical solutions when thinking about climate change on their own. Similarly, P6 stated that they "*don't even know what could be done at this point*" (P6), indicating their doubt that adequate solutions even exist to address the sheer scale of the problem, regardless of whether humans act on it or not. These quotes imply that participants are pessimistic about climate solutions.

Discourse regarding addressing the climate crisis was overwhelmingly pessimistic, resulting in participants feeling *"existential dread" (P8)* when thinking about the contradiction of what needs to be done to mitigate climate change and what is being done currently. One participant believed that it is easy to feel helpless about climate change, considering how big of an issue it is:

> *I think that it's really overwhelming because there's so many far-reaching*
>
> *impacts and if you sort of, like if you sort of think about and acknowledge all of*

them it's a lot so it can be pretty heavy and you can feel quite helpless that there's

nothing you can do and so everyone, everything's doomed (P7)

This participant described feeling overwhelmed because climate change can make them feel helpless, as if there is nothing they could do. These feelings could relate to discourse of a lack of agency or limited power toward climate change, where you believe your power is not enough to deal with the issue. In the broader literature on climate change and mental health, these feelings of hopelessness can be attributed to a phenomenon described as "ecoparalysis", a symptom derived from the complex feelings that arise when we feel we cannot take enough action to significantly address the climate crisis (Albrecht, 2011; Hayes et al., 2018). Participant discourse of hopelessness may stem from a social discourse of cynicism surrounding climate change, one that suggests we will never make a difference anyway, and that human existence will end in demise, so it is silly to try to prevent the inevitable (Klein, 2020). Conversely, in these instances participants are embracing a popular discourse whereby climate change is presented as an overly complex issue, meaning action to address it appears difficult, overwhelming, or pointless (Fleming et al., 2014).

One participant conceptualized the topic of climate change as a "rabbit hole" " in which they believed *"you can't really get out which is yah definitely not good for mental health"(*P3). This idea of climate change as a topic that is poor for mental health was common in participants, especially when discussing the future and what needs to happen now to ensure a sustainable planet. The mere thought of the future in the context of climate change produced negative feelings in participants, to the point where they actively avoided thinking about it all together.

Climate Avoidance

Participant relationships with climate change and outlooks for the future were mostly pessimistic, ultimately leading most participants to not want to think about climate change at all. One participant noted actively not seeking climate news out anymore, comparing it to death: *"I don't want to read it cause I don't want to think about it. Like it's sort of, like I wouldn't seek out an article about death, it's something I don't want my mind to go to"* (P9). The same participant further discussed their fear by noting their dislike for the new clock on Time Square that counts down to an irreversible climate catastrophe, stating: *"that just makes me just more paralyzed with fear. I'm just so scared that I don't even want to think about it"* (P9). The same sentiment is echoed repeatedly, with P4 noting that in their peer group, climate change is *"not something we like thinking about because it's so devastating."* (P4). When climate change is framed using sensational and alarming techniques, some authors argue that denial, paralysis, or apathy are evoked instead of action (Moser & Dilling, 2007). Instead of their fear motivating them to act, it instead leads to avoiding the topic of climate change overall. These quotes further demonstrate symptoms of ecoparalysis, where participants have learned uncomfortable truths about climate change and are thus avoiding thoughts of climate change (Albrecht, 2011).

A few participants believed that refraining from thinking about climate change was not a helpful method of action but found the topic still too difficult to think about. For example: *"I find I'm mostly not trying to think about it which is super not helpful. But yah when you think about it, just, it really does feel like there's nothing good, like there's no silver lining "* (P3). This participant recognized their own conflict, where they knew that avoidance behaviours are not helpful towards climate action, but they still could not think about it because of how helpless the topic feels. Similarly, P9 realized that they are

"*less good about the environment*" than they were as a child because now they understand the role large companies play in causing harm to the environment in comparison to the small scale of individual behaviors. As P3 mentioned, individual habits, such as recycling, are "*never going to be enough*" (P3). The idea that individual behaviors are not enough to solve the climate crisis deepens the discourse of hopelessness, implying that climate change is a matter beyond our control. Participants have embraced the social discourse that highlights how we may never make a difference, discussed by Klein (2020) in the previous section. This discourse could lead to further feelings of hopelessness because if what we are able to do as individuals is not nearly enough, our agency feels limited.

It is possible that these levels of hopelessness are due to fear mongering tactics such as the clock in Times Square, or climate media in general. One participant noticed that they do not see any positive climate news:

> *I think if I saw stuff being done or read some good news about us not being completely screwed but so far there hasn't been much of that. Like just good news, or just to hear something is being done on a large scale but it's just not really happening or I'm not finding out about it if it is happening. I'm sure there's a lot of good stuff being done but it would be encouraging if I saw more, if that were more readily available to me* (P2)

This participant claims that there must be positive climate news, but they are not seeing or hearing about it, implying that news sources may be perpetuating a discourse of fear mongering or excluding hopeful information. This theme suggests that motivation for climate action may occur with a more hopeful discourse, one that presents optimistic solutions and avoids fear mongering.

Fear and Anxiety

Participants displayed heightened levels of anxiety for the health and safety of their loved ones during and after extreme weather events and changes. This was especially true during hurricane seasons that are changing in frequency and nature due the climate crisis. Further, participants discussed their fear for the future through embracing a discourse of uncertainty, especially for the next generation. Through discussing future generations, participants also considered their fears and negotiations about the decision to birth children. Overall, participants demonstrated fear and anxiety related to the changing climate.

Weather Changes

Participants described experiencing extreme weather, such as storms, flooding, and hurricanes, as well as general shifts in weather patterns due to the earth's rising temperature, such as drought, dust, hotter summers, ice melting, and sea level rise. One participant from The Caribbean grew up experiencing hurricanes**.** This participant recalls that the year before last, they had hurricanes "*back to back to back to back. Where some of the islands before they could even catch a break there was another one hitting" (*P6). P6's worry came mostly from losing their home and for the safety of their family:

I would say the worrying aspect is home. I am very attached to home […] I always want to be able to go there and to be able to enjoy it, like everything I know, and I want my family to be safe so I think that's the biggest thing […] I just want my family to be safe like if they needed to be evacuated, would they have access to that? (P6)

Words such as "back to back to back" and "catch a break" in particular indicate a feeling of anxiety in participants, where the impact of the hurricane on the community is emphasized.

P6 discussed their experience further, where in more recent years, their hometown has experienced drought, flooding, and Saharan Desert dust. P6 considered these climate impacts to be new and changing in nature, for example: "*the Saharan dust is something that we've dealt with from time to time in the past but never to the extent that we saw it this year*" (P6). In these instances, P6 discussed their belief that the changes experienced on the island are potentially due to climate change: "*I feel like that changed where it's affecting us to this point is also due to climate change, I don't know if it's the wind that's changing and how far it's carrying the dust but…*" (P6). They mentioned feeling worried for family members at this time, as some have asthma that may be exacerbated by the dust. P6 noted their fear and worry when their family was "*trapped in that [the dust] cause there was really nothing that anybody could do*" (P6). The way that P6 describes how nothing could be done to help their family through the dust further demonstrates the previously discussed discourse of hopelessness.

All participants believed that hurricanes were happening more frequently. One participant mentioned how scared they felt to not be in Halifax during Hurricane Dorian: "*I was pretty scared when I wasn't there but there was the hurricane last September where the crane, so things like that are just becoming more frequent. Like this year there were so many hurricanes*" (P9). This participant is referring to hurricanes globally, where in 2020 we experienced record breaking storms and hurricanes both in intensity and quantity (Milman, 2020). Another participant noticed that the United Kingdom summers are much warmer than usual and there have been more cases of extreme weather, such as

41

"*freak snowstorms*" (P7). When asked how these changes made them feel, P7 believed

they induced worry and stress for the future. Another participant noted sea levels rising,

and the fear that brings since most of their family lives in Nova Scotia which is coastal.

They also mentioned hearing about ice melting:

> *I heard somewhere and I haven't even googled if this is true but there's like all*
>
> *sorts of diseases under the ice, like the Arctic and then the Arctic will melt and all*
>
> *these diseases will come out. It just kind of seems like, honestly the way I*
>
> *understand it now is impending apocalypse type thing is how it's made out to be*
>
> (P9)

This participant's description of an "*impending apocalypse*" demonstrates their anxiety

and fear for the future.

Fear for the Future

Participants expressed a worry and fear for the next generation who may not be

inheriting a sustainable world, embracing a discourse of uncertainty in the future. The

discourse of uncertainty surrounding climate change is constructed by the unknown

nature of the phenomenon. For example, we do not know to what extent emissions will be

reduced, nor exactly what will happen to humanity. One participant mentioned how

anxious they are for generations ahead given this uncertainty:

> *So I get anxious and like scared that there's not gonna be a good future for future*
>
> *generations like its already different for me than it was my parents or my*
>
> *grandparents or those generations before. And they're scared for me. And I am in*
>
> *turn scared for the people ahead because we need to be able to keep sharing these*

relationships with the natural world and like the knowledge that's embedded

within it (P1).

This participant demonstrates a fear for the future associated with a discourse of uncertainty, which is furthered by their position as an Indigenous woman. P1 expressed worry for the knowledge systems held within the relationships with the natural world that have been threatened since the first contact of colonists.

The fear for future generations is something that participants discussed with their friends: "*we were just talking about how, you know, within the next hundred years things are not going to be as liveable on earth and how that was going to affect our kids and grandchildren and kind of how that's pretty nerve wracking*" (P5). This conversation with P5 and their friend's is described as "*nerve wracking*", where the discourse is uncertain, and participants are scared for their potential children and grandchildren. P6 mentioned their friend refuses to buy land in The Caribbean because of the belief that it will be under water in the future. Although this participant had not considered their homeland disappearing, it is worth noting that people in their community are worried about this happening. Another participant also from The Caribbean expressed concern for the islands, stating "*I worry about the Caribbean because it's just a bunch of little islands right and so there is concern that eventually they're going to be under water*" (P2). The anxiety for the survival of their homelands is unique to both participants' positions as islanders.

Other participants discussed their concern for the future. One reflected that their fear comes less from concern for their own health, but more for future generations: "*I guess it's kind of that fear of like what type of state we're leaving the planet in as I get older and move on*" (P5). This quote is embracive of a discourse of uncertainty, as P5

does not know that the planet will be healthy for others. Another participant noted seeing the anxiety in their friends: "*I can definitely see it in my friends, we might not talk about it, but I do see it in them when they're talking about climate change but not necessarily their mental health. Like they are definitely stressed about it, and it does give them anxiety for sure, like I can see that*" (P4). P4 demonstrates how peers may not discuss their feelings of anxiety directly, but there is a sense of anxiety in among them. Finally, when asked how thinking about children and grandchildren made them feel, P9 said: **"*just literally so, so, so overwhelmed, cannot like wrap my head around it. It just feels like just way too scary to even comprehend*"** (*P9). This quote is representative of symptoms of ecoanxiety, where they state being overwhelmed and view climate change as too scary to think about.

Ecoanxiety is a type of anxiety specifically related to a changing and uncertain environment and can be brought about when we are bombarded with threatening facts about climate change (Albrecht, 2011; Hayes et al., 2018). With the internet, there has been an increase of negative information about what is happening to Earth, sparking feelings of anxiety surrounding the scope and complexity of the problem. As climate change continues and our ability to predict the future weakens, concern for children and future generations are intensified (Albrecht, 2011). These worries for future generations quickly led into conversations about participant biological reproduction and that relationship to climate change.

Reproductive Choices. With such fear of the future, most participants shifted to the ethics and their own reservations about birthing children. These reservations were mostly related to the discourse of uncertainty about leaving a safe and sustainable planet for their children. While no participants fully declared their decision to not have children

because of climate change, it was one of the ways participants discussed climate change as impacting their lives and mental health. One participant, embracing the discourses of hopelessness and uncertainty surrounding the future, mentioned how always being surrounded by negative climate media has impacted their decision to have kids. They note having children does not make a lot of sense to them anymore: *"Like it doesn't really make a lot of sense with where the world is going in terms of climate and everything, I feel like if I had children, I'm almost accepting the fact where I'm putting them in a position where they're not inheriting sustainable world" (P9)*. Another participant discussed the popular timeline that suggests humans have 11 years to adequately take action to address climate change in relation to having children now: *"I don't know what type of world it's going to be in 11 years, that child is only going to be 11 so I feel like that's going to be pretty impactful on like reproduction"* (P8). This quote furthers the discourse of uncertainty for the future, where they note not knowing how the world will look in years to come.

A few participants discussed potential judgement from others if they were to birth their own babies, as if it were no longer entirely socially acceptable: "*I feel like there's a little bit of pressure within our peer group that kind of feels like yah there might be a bit of judgement, especially if people have more than two" (*P3). Another participant discussed their internal negotiations about starting a family, and the contradictions they face about this decision:

> *It's not a good feeling, like I think a lot of women, like I definitely struggle with it because I love the idea of having a family so it sucks to think that like it might be frowned upon or it might end bad because I want it so bad but at the same time I*

don't want to be causing harm to anyone or making the situation worse so it's

pretty conflicting (P2)

The feeling of guilt that this participant describes could be related to a discourse of moral

responsibility, constructed media and news that frame climate action as a moral

responsibility (Gardiner & Hartzell-Nichols, 2012; Lambertz, 2019). Climate change

framed as a moral issue is particularly relevant due to the intergenerational effects of

emissions, where future negative impacts are severe and cumulative due to the actions or

inactions of today (Gardiner & Hartzell-Nichols, 2012). Participants took up this

discourse and related it to reproduction, where having children was believed to be

potentially irresponsible. Another participant recognized their struggle and conflict with

the topic: *"Well it's really shitty because I really do want to have kids but then when you*

think about it it's like would that be just completely selfish?" (P3). These inner conflicts

surrounding having children revealed a complex relationship between discourses of

uncertainty, hopelessness, and moral responsibility for participants wishing to someday

start a family. Decision making and reproductive choices related to climate change is

further discussed in the next chapter on gender.

Grief and Frustration

Many participants discussed their grief for the climate, describing it as "*heavy*"

(P2). This discourse of climate change as something that "*weighs" (P9)* on participants

relates to the discourse of climate change as a burden. Climate change was also described

as something that disrupts our connection to nature. The heavy climate burden also meant

frustration, where participants felt anger related to a discourse of inaction.

A Heavy Burden

Although most participants said that climate change did not drastically, permanently, or consistently alter their state of wellbeing, they described it as something that can weigh on them. For example, P2 notes: *"It's just kind of one of those things that weigh on you a little, I find like, you know, it can be hard to talk about, especially with me and my partner when we get into this topic and then having a family it just feels super heavy sometimes"* (P2). A similar sentiment was discussed with P9, as they believed that although climate change may not be someone's entire reason for being unwell, it is certainly one of the "*weights*" and burdens that most Generation Z or Millennials have grown up with. This discourse of heaviness may derive from climate change's ever-present threat, as is not a problem that has ever or will ever (in near future) simply go away. Another participant told a story from their education, where causes of climate change, in this example resource extraction, were "*heavy*" conversations:

> *There were a few classes we had and some were climate change and some were just other sort of like other marine issues and like for example, deep sea mining was a big one actually and you could see that everyone was like feeling pretty heavy. There was one of my classmates she actually started crying* (P7)

Describing everyone as feeling *"heavy"* is an example of the metaphor of climate change weighing on participants. Even resource extraction, what comes before the actual change of the climate, was enough to make someone in P7's class cry. The idea that climate change is a heavy topic exemplifies its impact on mental health.

One participant described how important it is for them to be on the land and take *"care of the natural world so it in turn can like take care of me and my community"* (P1), while reflecting that climate change is creating *"less connection to the land and the*

*natural world" (*P1). For example, P1 describes how not only caribou migration has changed, but the seasonal times when deer shed their antlers is different which has significant cultural implications: *"it's like important for me to like, find antlers that were shed and like, make things out of it to like honour the spirit of the animal but if you don't know when the deer shed their antlers you like can't find it" (*P1).

In these discussions, elements of solastagia are present. Solastagia describes a sadness caused by gradual changes to one's environment, through recognition that the place you love is going through ecological degradation (Albrecht, 2011). Deep sea mining and changes to animal and ecosystem patterns are changes that could evoke solastalgia. In addition to grief, the burden of learning and knowing about ecological degradation also led to frustration related to a discourse of inaction.

Frustration

Participants experienced frustration at the burden they carry related to a discourse of inaction. This discourse is in the headings of news articles across the globe, constructed potentially by the impacts of climate change itself. For example, "Leading scientists condemn politician inaction on climate change as Australia literally burns" (Cox, 2019), or, "The political theater of climate change: a 62-year history of inaction ((Van Der Voo, 2020). One participant grew up in New Brunswick, a province well known in Atlantic Canada for Spring flooding, where their family home floods every year. They state that their "*neighbours are a lot more affected than us for some reason but it's more just like the community hurts, like people are evacuating, it's just frustrating and not a fun experience to go through every spring" (*P8). This participant suggests that the floods are somewhat natural, but do not have to reach record breaking flood levels

that they have been the past several years: "*It can be really annoying because it could be preventable […] the water levels will rise but they don't have to rise as high which can be frustrating*" (P8). The frustration related to the discourse of inaction was common among participants, potentially feeling that maybe if we engaged with appropriate climate mitigation, we would not have to see these changes to Earth.

One participant described their frustration at wasted energy when working in old buildings where the electricity was never turned off and paper was wasted. They realized that these issues might not have a large effect on the environment but stated: *"oh my gosh that kind of stuff would bother me so much, it would kind of drive me crazy"* (P5). This participant knew that small acts such as turning off the lights may not do much to mitigate climate change, but the inaction of the building overall frustrated them.

The same participant voiced their frustration related to the discourse of inaction, specifically, with the ultra-rich. They note that people such as Jeff Bezos (the CEO of Amazon) have the resources and ability to address climate change but do not do enough: "*Jeff Bezos could literally pay for that [reversal of global warming] out of pocket and you know make that change but obviously he's not doing that"* (P5). Another participant mentioned Amazon, remembering reading that "*If you return something to Amazon, they just like throw it out. Like not all the time but a large amount of the time it just goes on some huge conveyor belt to a huge trash heap which was very, very upsetting"* (P9). These concerns related to the discourse of inaction furthered the feeling of frustration within participants.

Chapter Summary

This chapter deconstructed participant values, beliefs, and feelings about climate change. Interviews revealed discourses of hopelessness among participants, and their

anxiety about the future. The discourse of hopelessness was so entrenched in participants that they discussed not wanting to think about climate change at all. When participants did allow themselves to think about climate change, they discussed an uncertain future, grief, and frustration at the devastation that could be avoided. The discourse of uncertainty related to the future forced participants to consider whether it is appropriate to birth their own children. Participants gendered positions in relation to climate change are further discussed in the next chapter.

Chapter Five: Gender

Participants discussed how gender can relate to climate change. Participants also discussed how race and income intersect with gender and can impact the experience of climate change. Specifically, they spoke about how gender stereotypes, such as women as traditional care takers, impacts the way women experience climate change. These stereotypes especially impacted participants' perceived ability to be taken seriously when speaking up about climate change. Finally, participants discussed the ways in which gender-based violence are related to the changing climate. This chapter reveals how gender is relevant in discussions of the climate crisis.

Intersectionality

As many Black feminists have contended (Crenshaw, 1989; Davis, 1981; Hamilton-Hinch, 2015; Hill Collins & Bilge, 2016; Lorde, 1984; The Combahee River Collective, 1983) gender, race, sexuality, class, and other identities cannot be separated, as they are inextricably linked and interdependent on one another. In other words, they intersect. Though the word "intersectionality" was not used by all participants, they all discussed the concept, especially when discussing the impacts of climate change. Briefly, intersectionality refers to how multiple forms of oppression, such as racism, sexism, homophobia, and classism, intersect. Intersectionality can be used as a tool when it is recognized that people need a better framework to understand the multiple and complex forms of discrimination they face (Hill Collins & Bilge, 2016). Overall, participants were aware of some of the ways in which race and socioeconomic position (SEP) can impact how women experience climate change, in addition to existing discourses of

environmental racism, women as economically subordinate, and the survival of the powerful.

Race

Several participants discussed the unfair treatment of Indigenous communities. One participant clearly stated that, in the context of climate change, *"Indigenous people bear the burden. And within that, Indigenous women bear the burden."* (P1). Further, this participant recognized how Indigenous women have a "*really particular experience of being dispossessed of our land, our environmental stewardship, our traditional governance, and our duties within traditional governance, and our health in many ways*"*(P1)*, referring to the ways in which colonists have stolen land from Indigenous peoples, and therefore the rights of Indigenous peoples to care for and be in good relation with the natural world (Wall Kimmerer, 2013). This participant later described the importance of environmental stewardship for women of many Indigenous cultures, including their own.

Another participant mentioned the inequities Indigenous people face, believing the Trudeau government has "*vastly ignored Indigenous communities in Canada and they are experiencing climate change in much different ways than the rest of us*" *(P8)*. The same participant mentioned there have been many Indigenous young women climate and social justice advocates that receive less media coverage than Greta Thunberg, and even backlash on Facebook for their intersecting identities (young, Indigenous, women). P8 states that this difference in recognition most likely has to do with media being "*deeply rooted in some type of systemic racism against Indigenous women*" *(P8)*. Finally, this participant noted that racist practices are not only perpetuated by the media but also by politics: "*Indigenous communities are not cared for politically*" in terms of water, food,

or housing security, and therefore at further risk for negative climate impacts than White communities.

One participant described their experience visiting New Orleans, where the tour guide described the city as a bowl, telling tourists *"not to worry"* about the nice homes flooding because "*it's all the ghettos and stuff that are in the middle" (P9)* that will be washed away. This is an example of a tour guide using environmental racism discourse, as he perpetuates the disproportionate value of "*beautiful homes"* versus the "*ghetto"* homes: "*He [the tour guide] was like people predict that like in how ever many years New Orleans will be flooded and only those nice areas will remain and all those ghettos and stuff will be gone but who really cares cause they're like the ghettos." (P9)*. The tour guide noting that we need not care about the sustainability and survival of the "*ghettos"* is representative of the discourse of environmental racism that has been constructed by colonization and White supremacy, where Indigenous, Black, and communities of colour are disproportionately impacted by environmental harms (Waldron, 2018). The tour guide embraced the environmental racism discourse, and by doing so potentially entrenches racist and classist norms in clients, yet P9 challenged this narrative by labelling it as unacceptable systemic racism. Another participant discussed environmental racism more generally, stating while they "*haven't had to worry about the environment" (P5)*, they recognized it is different for Indigenous and Black people who have often been pushed to the margins where housing is unstable and risks are larger during extreme weather.

One participant noted how people with high paying jobs will often hire people who look like them: "*let's say we talk about a cis white man but then the more different you are from that the more challenging employment becomes" (P3).* This participant highlighted the systematic and institutional challenges that BIPOC (Black, Indigenous,

People of Colour) and those who identify as women or outside of the gender binary face in gaining high paying, secure employment. P3 then connects income type to climate change, noting that people earning high income are more likely to fair better throughout the climate crisis. Participants explored the relationships between SEP and climate change in the next subtheme.

Socioeconomic Position

Participants recognized the relationship between SEP and gender and how it plays a role in experiencing the climate crisis. Participants recognized the overarching discourse of women as economically subordinate, where women predominate in low paying, undervalued jobs (Levanon et al., 2009; Miller, 2016). For example, one participant believed that women-dominated careers are often unstable, which can make climate change more difficult to deal with: "*Women tend to have more vulnerable employment and so like when the shit hits the fan with climate change it's the vulnerable employment that you know it's less likely to carry on" (P2)*. P2 later related the practice of instable employment to the COVID-19 pandemic:

> *With like the pandemic for example, like the service industries suffered a huge hit and it's a lot of women working in the service industry so that like I think there's some interplay [...] or some concern over what might happen to the vast majority of these positions which tend to be female dominated when things go bad (P2)*

This concept of gender and employment was discussed further by P3 noting that "*if you're in a vulnerable sector of the job, of the employment system, you're more likely to become homeless quicker [...] and men make more than women, so you know statistically men are going to be able to afford more of the rent"(P3)*. These quotes demonstrate

54

participant recognition of women's oppression in employment and income, exacerbated by the pandemic and climate change. This exacerbation has been termed "disaster patriarchy", where during times of civil unrest and economic disaster, women's hard-earned rights are severely curtailed (V, 2021). Participants later related these concepts to SEP more broadly, where participants discussed how one's placement in society dictates the impact of extreme weather on communities, as well as their ability to recover.

One participant mentioned that how in their home in the Caribbean, hurricane season takes a toll on people's finances. They describe what people go through to prepare and recover from each season, where people in low SEPs fear having to rebuild their home and stress over being able to buy enough water and food each year. Although P6's family is able to purchase jugs of water to prepare for drought and storms, they recognize this is not possible for everyone. This participant discussed at length the difficulties that migrant women face in terms of employment and hurricanes, again recognizing the discourse of women's economical subordination:

> *There's almost nothing for them to do, they don't have anywhere to go, they can't afford to go back home nor will they be in a better position if they go back home and here it's just they don't have good homes either or good jobs and for them especially with relating it back to climate change on the whole, like especially in situations where we're having hurricane after hurricane after hurricane like before you can even catch your breath like another one is hitting, that's stressful for them (P6)*

P6 has highlighted the discourse of hopelessness, indicating that there is *"nothing for them [migrant women] to do"*. Further, P6 also recognized the discourse of women as economically subordinate as they do not have "*good homes*" or "*good jobs"*, as well as

that of disaster patriarchy, where women in disasters, such as hurricanes, face disproportionate impacts.

Similarly, another participant mentioned their worries for people in unstable housing, where roughly 30 people next to their apartment live in a tent encampment: "*if something were to happen some sort of like storm or something they're going to be much more impacted than you know I am in my heated, cooled, cared-for apartment*"(P9). These sentiments were echoed by another participant: "*what's coming to mind right now are these weather events and thinking about housing and how much that can be impacted, but yah even education, the ability to make money, it's all a big circle right*" (P5). Finally, another participant mentioned the interplay between extreme weather, food, and survival of climate change, noting that being in a position of power, regardless of gender, is important for survival:

> *Like if there's a ton of bad weather and stuff or just bad conditions or like not enough food to go around, like I can picture people in powerful positions surviving it but if you have a more vulnerable employment you might struggle more and that can include men and women (P2)*

The idea that some people in society hold "*powerful positions*" and are thus able to survive the climate crisis easier than others was consistent throughout most interviews. This discussion of power dynamics and climate change is further detailed in the next subtheme.

Relations of Power

Participants discussed the combinations of race, SEP, and any other identities mentioned (geography, disability, 2SLGBTQ+ status, etc.) as related to relations of

power. Participants subsequently related power dynamics to how people fair during the climate crisis, where aspects of race and SEP determined power relations. Participants used a discourse of survival, particularly embraced by young people and constructed by neoliberal society, wherein economic survival is valued and is the responsibility of the individual (Brunila, 2014).

By example, one participant discussed notions of power and survival in society in relation to climate change:

> *I think that the less power you have in society, the less you're going to be able to deal with climate change and odds are if you're a woman who's a person of colour, who is LGBTQ, the more of these intersections that you face the less likely you are to be in a position of power and I think that's why climate change is going to be harder for people like that* (*P2)*

Directly corelating identity intersections to "*position[s] of power*" and the climate crisis, this participant recognized intersections as amplifiers to climate impacts, and embraced the discourse the survival of the powerful. Further, P3 discussed how "*people in power" (P3)* are both able to survive the climate crisis and contribute to the crisis. P3 notes that although "*powerful people"* will continue to experience the weather changes we all experience, "*they will have the resources to build stronger houses, or buy the more expensive food or somehow afford to live in a different planet if that becomes an option" (P3)*. In these instances, participants described a binary discourse of power, noting that people "with" power, or, "powerful people" will be able to survive climate change, indicating people with less power, or perhaps unpowerful people, will be subsequently less likely to survive. Although FPS does not conceptualize power as binary but rather as

dynamic and relational, it is important to note the ways in which participants

conceptualized power.

In addition to the discourse of the survival of the powerful and there was also

discussion about the ease in which certain populations stand up for the planet to be heard.

Participants felt that the farther away from being a cisgender, White, male, the harder it

would be to be heard. One participant noted that especially being young, having a strong

mindset about climate change, and having negative stereotypes attached to your race, "*it*

would be harder to get your word out (P4). Another participant mentioned:

> *As hard as it would be for me to stand up as a cis white female, to stand up in*
>
> *front of crowd and talk about the science behind climate change it would be much*
>
> *harder for you know someone else who was you know a woman of colour or with*
>
> *a different sexual orientation like that would be much more challenging I'm sure*
>
> *for them to stand up and for people to take in what they're saying (P5)*

The notion of being able to stand up for climate change and be taken seriously was

important to participants, and as P5 notes, sometimes people might not always "take in"

what is said. This concept of being able to speak out about climate change and be heard is

further developed and discussed in the next theme of stereotypes.

Stereotypes

Participants discussed gender stereotypes and norms that they face, and how they

relate to living in a climate crisis. Participants recognized the social discourse of women

as care takers and women as family-oriented. Further, participants also explored,

recognized, and challenged social discourse around the ability for women to be taken

seriously by men and people in general when speaking up about climate change or other issues that they are passionate about.

Traditional Care Takers

Most participants recognized the discourse of women as care takers, where in most societies' women often take care of the land, water, food, children, and overall, the health and safety of those around them. For example, one participant noted how "*in many ways, it feels like traditionally a woman's role is to kind of be in charge of the food"* (P2). P1 states more broadly that "*in colonial society, also in many Indigenous societies, women are positioned as care takers, and stewards, and caring of things" (P1).* This discourse of women as care takers is consistent with the literature, where women's responsibility to care for others and natural resources impacts their mental and physical health, especially during extreme weather and weather pattern changes (Ajibade et al., 2013; Alston, 2013; Beaumier & Ford, 2010; Demetriades & Esplen, 2009; Eissler, 2019; Kevany & Huisingh, 2013).

The discourse of women as care takers can be related to emotions, as women are not only responsible for care taking in the physical sense, but also for emotional and cognitive labour (Daminger, 2019; Hackman, 2015). Emotional labour encompasses at home labour, such as always remembering birthdays, planning, scheduling, and problem solving, as well as in the work force, where women feel they are expected and sometimes required to use unpaid emotional labour at their paid jobs (Daminger, 2019; Hackman, 2015). For example, the expectation that women modulate the appearance of their feelings to influence office harmony or the experience of a colleague, or doubling up as a professor and therapist for their students (Hackman, 2015). Emotional and cognitive

labour is sometimes referred to as a mental load, as the social discourse of women as traditional care takers for those around them has impacts women's mental health (Daminger, 2019; Gonsalves, 2020).

There is a relationship between emotionality and care taking, where women are often seen as inherently "better" at this emotional type of work (Hackman, 2015), which perpetuates inequalities and reinforces a binary wherein men are not emotional and do not do care taking work and women continue to do it because they are good at it. Women's emotionality and sensitivity can also seemingly be valued for its utility in home maintenance and childcare while these same characteristics are central to the female defect in character (Shields, 2007). Further, emotional labour and caretaking can be seen as denigrated work, where women have often been seen as emotional and therefore weak, while men are recognized for their strength and rationality (Nelson, 2010). Through this binary, participants discussed how societal values, beliefs, and discourses about women shape their experiences with the climate crisis. Participants did not always challenge or accept this gendered discourse around care taking, but rather recognized it and how it relates to climate change.

Participants recognized how women have expectations to be care takers in times of climatic changes. For example, one participant noted that in times of flooding, their community followed strict gender roles where the mothers took care of the children and food while the fathers did the physical labour. This participant recognized that this norm was socially perpetuated and challenged it by saying that "*both parties would have been equally capable to do each thing but it was kind of the way that it was separated" (P8)*. The discourse of gendered tasks is challenged when their social construction is recognized.

One participant simply imagined how they would feel if they were at home with children during the climate crisis:

> *I would feel pretty trapped and unable to change anything about what was happening, sort of like it would, I would feel like less in a position to act and I think that would really impact sort of yah my mental health in terms of how I treated the kids and yah I'd feel more helpless (P7)*

Due to this participant's gendered position, in this imaginary scenario they are trapped, and their mental health is compromised because they want to act on climate change but feel they may not be able to. Imagining scenarios was common among participants, where one envisioned that during times of climate migration, the mother would be the one to make the decision to migrate and move the family to safety, which is supported by broader literature on the gendered responses to climatic changes (Reynolds & Tyler, 2018; Tyler & Fairbrother, 2013; Whittaker et al., 2016). P3 envisioned a similar scenario with animals: *"when I think about animals, I have an image of a mother animal taking their babies out of the unsafe, like forest fire or like you know they smell a fox (P3).* This is an example of a participant recognizing how women can use agency, where P3 related women to mother animals being able to use their strength to survive the climate crisis or immediate danger. This offers a counter discourse to that of women as emotional care takers and therefore weak and demonstrates a strength in care taking.

Gender norms were discussed further, with one participant drawing connections between care taking and the COVID-19 pandemic, stating that now that "*everyone has to work from home, it's expected the woman will take care of the kids because she's the caregiver" (P9),* which in turn impacts women's career progression. The concept of gender inequities during the pandemic was then related to climate change: "*So if you look*

at whatever impacts climate change starts to have on society I feel like maybe women will feel them worse because we tend to throw them under the bus before we throw men under the bus" (P9). In these instances, the participant was frustrated with the oppressive expectations of caretaking and treatment in society. Another participant recognized that women in particular "*face pressures about family too that men don't necessarily face" (P2)*. The observation of this power imbalance that women face in the family demonstrates that participants recognized the discourse of women as traditional care takers. The belief that women face particular familial and reproductive pressures was further discussed by most participants.

Reproductive Choices. Participants noted that although all genders may experience a struggle in deciding whether to have children, women often bear the burden of that decision-making. This finding ties in with the larger social discourse of women as care takers. For example:

> *Women are known for being so family-oriented that when it comes to like them having to make the decision not to have kids or being faced with that decision it feels like a big decision that is not necessarily, well I think it's, I think that as women maybe we feel it more (P2)*

While P2 did not explicitly disagree or challenge the notions of women facing disproportionate pressures related to families and reproduction, they recognized that the social discourse of women as family-oriented exists.

P3 felt similarly, noting how "*it takes two people to make a baby, whatever but it still does feel like that's kind of under the woman's responsibility"(P3)*, which relates back to women as care takers. Interestingly, the same participant reflected upon this concept, noting that the reason for this heighted responsibility on women may be in part

62

due to feminism, where *"I support my body my choice [...] I do like to think that that's my choice which whether I would get an abortion or not [...] and so in that regard, it feels like feminism is leading us to have more of the responsibility whether or not we're having kids."(P).* This is an example of the negotiation that women face, where they want responsibility and agency over their bodies, but recognize the complexity that comes with the decision during a time where they are unsure of the sustainability of the planet.

Other participants mentioned having concerns about making the decision to have children as well, with P5 stating they discuss the topic with their friends all the time; they then reflected: "*I feel that I might think about it more as a woman and am more stressed"(P5).* This is an example of emotional labour, where women are expending mental energy by thinking details, processes, and decisions, and are stressed by it (Hackman, 2015). Whether or not young women have made final decisions about birthing babies, they are recognizing the stress in the decision-making process as amplified by their gendered position and climate change. Another participant noted that the decision to have children is increasingly challenging:

> *It never felt like this before but it suddenly just feels like a pretty heavy decision to make and a pretty heavy response, you know and then you're like you have the kid, they're your kid you have to take care of them, and like the world is going to shit, am I going to be toting around a child with me? (P9)*

Even imagining being responsible for children was daunting for this participant. These negotiations among participants are not uncommon; over 400 people (85% women) have now vowed to not have children because of climate change, or until they feel the crisis has been adequately addressed (MacLeod, 2019). Most participants dealt with the struggles of deciding to reproduce while embracing the discourses of uncertainty and

unsustainability of the future. Participants believed that these types of decisions are put on women because of the social discourse of women as care takers and family oriented.

Relatedly, women historically bore the responsibility to reproduce, with some scholars indicating this discourse was so strong it rendered women unfulfilled until reproduction had occurred McDaniel (1988). Yet, this research reveals the current tension between narratives surrounding climate change and women's choices. Participants did not discuss the discourse of women's responsibility to reproduce, but rather suggested the decision to reproduce or not is largely put on women because of their disproportionate responsibility of care taking. This is potentially representative of a shift in discourses.

Women's Voices (Not Taken Seriously)

Participants discussed their concerns around the social discourse of women's voices not being taken seriously, especially in the context of advocating for climate action. Social discourses regarding women's voices have been examined by many researchers (Pearson & Dancey, 2011; Pelletier, 2010). Briefly, women, even before speaking, are subject to judgement from not only the listener but themselves about being too emotional, powerless, and scattered (Lyons, 2013). Women politicians are constantly criticized and deemed less credible because of their emotions, or the fact that they are mothers (Lyons, 2013). James (1998), in studying gendered derogatory terminology, found that the nature of derogatory terms used against men reflects the idea that women are weak in character compared to men, where simply being compared to a woman is an insult to men. These discourses feed into the narrative that women's voices are weak and untrustworthy. This narrative was mentioned by most participants, both in the broader

sense due to misogynistic relations, as well as instances where they do not feel they are taken seriously by men specifically.

Some participants used Greta Thunberg as an example, where the young climate activist has received relentless criticism since beginning to speak out about climate change. For example, one participant discussed the narrative as a whole: *"a lot of male politicians and a lot of male people look down on her currently because she's young but also because she's a girl which I think plays into the narrative of how women are affected by climate change"(P8).* Another participant uses Greta's backlash as an example of what happens "*when women try to advocate or fight for something there's always men or people who are going to just like say oh they're a woman and don't know what they're talking about" (P9)*. This quote exemplifies how women's voices are automatically discredited because of their gender, whereby no matter what they say, they "*don't know what they're talking about"*. Another participant notes that Greta has been "*mocked for being a sad little girl and those types of comments relate to her gender even though what she's saying should have absolutely nothing to do with her gender" (P5).* This is an example resistance of dominant social discourse on women's voices, stating that the current model is wrong, and that women should be able to speak without the listeners relating their speech to their gender. Since the mere presence of their gender is enough to discredit women, P5 suggests that gender should be removed from the conversation, potentially allowing for women's ideas and arguments to be taken seriously. These quotes highlight the oppression of women and their voices.

Participants discussed and challenged the consistent gendered discourse regarding the intelligence of women. The majority of participants believed that the ideas of women were not regarded with respect. One participant noted that women are "*typically not*

65

listened to in science" and are not *"always as respected as men are in leadership positions" (P5).* The same participant noted that their *"word might not come across as strongly or as valid as a male's which is ridiculous (P5)*, highlighting their frustration with the inequities related to being taken seriously. Similarly, P4 noted that if women have ideas about climate solutions, *"it might be harder to get a direct response rather than if you're a male" (P4).* The belief that men's voices are taken more seriously and more truthfully were so entrenched in participants that one even reflected on times where they themselves took a scientific presentation given by a man more seriously:

> *I found this and I hated that I found this but […] there was one guy who gave his presentation and he was just like really confident and pretty like big and I found myself really paying attention, and he had quite a deep voice and I found myself really paying attention and sort of like trusting what he said and I was like I hate that I did that but it's sort of engrained into us that that's what we look for and say a leader or someone who is an expert on the topic. That confidence and the way they carry themselves and actually after that I've been trying to think about how I perceive the information I'm being told a bit more (P7)*

This participant recognized the power imbalance and social belief that men are taken more seriously than women. They discussed hating its impact of luring them to accept men's ideas over women's; however, P7 challenged this binary relation of power by questioning it's worth and using agency to change thought patterns and beliefs when they state that they now contemplate how they perceive new information.

P7 also noted that this scenario and related thoughts and feelings could stem from their own insecurities, where it feels as though anyone who looks like them is probably insecure and unsure of themselves as well, whereas men are different and therefore strong

and valid. P7 reflected more and recognized that we have learned what strength is based on stereotypically male characteristics. P7 further deconstructs these ideas by describing how their insecurities have been perpetuated by the media and family:

> *I think quite a lot of it is taught so I think like my parents, my parents' sort of relationship and my mom sort of I guess not just she's never had a lot of confidence, and I think that a lot of that passed on how I view women in society and I'm grabbling and questioning that and realizing yah and a lot of things, especially looking back at t.v. shows and films that came out ten years ago when I was growing up I'm like oh wow the gender like sort of like biases and stereotypes are ridiculous and I think that's definitely impacted how I view the world and view gender and yah. I'm just like on a journey of trying to correct that* (P7)

P7 is representative of a resistance of internalized misogyny and the discourse of women's voices as unserious and not respected. They note being on a *"journey"* of unlearning deep rooted gender norms and stereotypes. This example is demonstrative of the depth of patriarchal values in society, and some of the norms that women deconstruct within themselves.

Notions of male strength and validity were further discussed by P9, who believed that it is challenging for women to speak up about social justice issues because there is "*always the narrative of like the bitchy woman who speaks up too much*."*(P9).* Baumann (2016) discusses the complexities and contradictions that women face with such narratives. For example, when women act stereotypically masculine, they are subject to discourse such as bitchy, scary, bossy, bullying, and irrational; however, when they display stereotypically feminine characteristics, they are depicted as weak and lacking in leadership skills (Baumann, 2016). The former is the narrative that this participant notes

67

they actively try and avoid by picking and choosing how, when, and what to speak up about, especially amongst male friends:

> *I have a group of like all male friends and I know that I pick carefully when I'm going to speak up, they're all like wonderful guys and stuff but I can seem like chill still, cause you don't want to be the girl, and I think that's my internalized norms honestly, I'm not saying that these guys are going to be like you speak up too much, but my own internalized norms are like I need to be chill so I can't speak up about everything so I'm going to pick the things I speak up about (P9)*

P9 speaks further about the belief that women need to pick the topics on which they "*speak up about*" carefully in order to avoid the *"bitchy woman"* narrative. When this participant discusses needing to remain "*chill",* they are also avoiding the emotional, weak, narrative often present when women display stereotypically feminine traits. This participant has recognized the social norms that silence them, such as the bitchy woman narrative, but chooses to assert their agency and use power to speak up about things that matter.

P9 is committed to speaking out, even if it means complex negotiations every time. They described these negotiations in particular when talking to their brother who is cynical and frequently plays devil's advocate:

> *I get so tactical when I talk to him about this stuff. I feel like I'm doing a terrorism negotiation, like I just stay so calm like so careful about what I say cause if I say the wrong thing I'm going to lose my case. As opposed to just being able to actually talk about it and if climate change is going to be, if I'm having a conversation with a man and we're talking about all these topics, is climate*

change going to be the topic that I defend or am I going to defend you know right

to abortion?"(P9)

This quote exemplifies the complexities of decision-making that women experience when speaking up on issues that they are passionate about. They do not want to "lose" because of the way they talk, or what they talk about. Some of these internal negotiations about when to speak up and how are due to stereotypes surrounding women being emotional.

Emotionality. The stereotype of women as emotional stems from attempts to maintain social hierarchies (Shields, 2007). Specifically, British and American psychology in the 19th century portrays feminine emotionality as ineffective, weak, dangerously unregulated, and a by-product of women's evolutionary need to be seen as attractive to men. Conversely, men were depicted as using the power of emotion to serve as the voice of reason. Framing women's emotions as out of control was an attempt to disempower them (Shields, 2007). Participants made it clear that the discourse surrounding women's emotions today still attempts to disempower and depict their beliefs as irrational.

One participant mentioned how women's emotions and beliefs surrounding climatic changes are not taken seriously. Many women in P6's community hold strong beliefs and values of astrology. Part of this is feeling how the surrounding environments (moons, tides, weather) effect people physically, emotionally, and spiritually. In this context, P6 states that women who believe in this are belittled, especially on social media. Many of P6's friends strongly believe that their moods and levels of anxiety are impacted by the earth, but P6 notes that "*there is a tendency to have a negative stereotype associated with that and it's just "oh you women" P6).* Astrology might relate to climate change and mental health:

With climate change and with changes to the earth systems that they believe in

and how that affects their mental health for people to place those stereotypes on

them and just be like, basically tell them it's just a bunch of shit and "you

women", like just basically saying you're silly for believing in it (P6)

This participant's description of men in their community saying "*you women*" is

derogatory. This is not only because the term in the quote is prefaced by explaining that

women's beliefs are *"just a bunch of shit"*, but because *"you women"* exemplifies

knowledge of socially constructed gender norms where women are seen as emotional and

therefore weak/unserious/foolish, or out of control (Shields, 2007). Thus using *"you*

women" is an insult in which the speaker does not need to explain what they mean

because they believe everyone knows that women are weak, irrational, and unreasonable.

Another participant noted that "*I guess like sort of the idea being emotional can be sort of*

like detrimental as well to issues (P7). "*Issues"* meaning the ability, or inability, to have

one's voice heard and taken seriously.

Conversely, another participant noted the stereotype of women being emotional,

but it was instead not discussed as something that people may perceive as unserious, but

rather an asset to the climate movement. P1 explored the gender norm of women being

emotional and protecting of the environment, believing that these traits could be inherent

within women or simply a cause of expectations: "*certainly, if we're expected, or if we*

are, more nurturing and emotional, like, I think we're gonna feel that [climate change]

more deeply" *(P1)*. Though stereotypes of being emotional and caring were constructed in

a negative or burdensome way in other participants, this participant provides a counter

discourse by highlighting the positive, powerful side to being emotional. P1 states that the

data are not making people act to address climate change, but feelings could: *"women are*

70

willing to speak about emotional and spiritual connections with the land, or with the

natural world" (P1), which could also be a quality that protects the environment and

promotes health.

Gender Based Violence

Although gender-based violence (GBV) was mentioned sparingly throughout

interviews, it is a theme increasingly reported in literature around gender and climate

change (Alston, 2013; Anastario et al., 2009; Boetto & McKinnon, 2013; Meyiwa et al.,

2014). Violence against women is also extremely relevant and impactful to women's

health and wellbeing, and thus is included as a subtheme in this research (Riecher-Rossler

et al., 2013). One participant examines the relationship between Murdered and Missing

Indigenous Women, girls, and Two-Sprit people (MMIWG2S) and climate change. P1

related MMIWG2S and violence against the land, where: "*the land's our mother; that's*

violence against women and as climate change has intensified so have rates of violence

against women especially Indigenous women" *(P1)*. Because Indigenous ways of

knowing and understanding the land and climate have been silenced and oppressed within

settler culture, this participant is using their knowledge to challenge climate change and

settler ways of imparting harm on the Earth. They note further:

> *Residentials schools weren't fully successful in disconnecting Indigenous people*
>
> *with the land and our responsibilities to the land. Essentializing us to reserves*
>
> *wasn't fully, umm, successful in its intentions to disconnect with the land and the*
>
> *natural world. So, maybe, resource extraction, creating climate change, will be*
>
> *(P1).*

Residential schools, the 60's scoop, the Indian Act, the reserve system, and countless other forms of colonial violence targeted at First Nations, Inuit, and Métis peoples were not entirely successful in their attempts to erase their cultures and people; however, this participant notes that the violence targeted at the land may be more successful. Similarly, research with Inuit communities in the circumpolar north are studying how the climate change driven decline in caribou disrupts a whole host of other connections to the landscape, animals, as well as cultural identity and knowledge (Borish et al., 2021).

One participant detailed the situation of many women who flee other countries to arrive in the Caribbean in hope of a better life. These women often face significant challenges, especially in the face of climate change. P6 states that immigrant women are largely marginalized, and live in "*run-down homes, like shacks almost and for them I would say they would probably experience the most anxiety" (P6)*. Some of these houses are in flood zones, so P6 notes that it is very challenging and stressful to experience hurricane season each year when homes are barely able to stand as is. P6 discusses their mother's relationship with some of the immigrant women: "*I know my mom has had a couple of friends in those communities and for them it's definitely been challenging and especially for a lot of them where they're single mothers so there's anxiety for them*" (P6), highlighting the intersections between where women live, gender, and SEP.

One of P6's mother's friends moved to the Caribbean to avoid an abusive husband, shortly before hurricane season. She then had nowhere to live, which was very upsetting for P6's mother because she did not have the space to host her. P6 describes the mental load that this situation places on their mother: *"She'll (mother) take on their problem and like be down about it or be upset about it and there's only so much she can do so it'll make her emotional, or depressed…"* (P6). This quote demonstrates the

intersection of gender, race, and location, as well as how these may influence the mental health impacts of climate change. Although not all issues in this story are direct GBV, it is clear that the outcomes of violence against women have spread far, causing displacement, anxiety, and hurt to all those involved.

Another participant discussed the potential of GBV in their own apartment building when attempting to dispose of garbage properly:

> *It was like super complicated to learn like well you know can't recycle in our building, you can't, there's no, there's one garbage chute and there's a dumpster in P2, in a parking garage where you're definitely going to get raped so like you basically can't and that really bothers me (P9)*

This quote represents a strong belief and feeling that P9 will be raped and that their body is in danger if they use their apartment dumpster. In this instance, P9 has vocalized and recognized the existence of rape culture by naming it. Rape culture can often remain a hidden and unspoken topic, yet P9 has used their agency to state this reality even if others do not (Keller et al., 2018). Misogyny and patriarchal discourse construct rape culture, which normalizes, legitimizes, and reinforces GBV through humour, for example, rape jokes, and can strengthen gendered power relations (Lockyer & Savigny, 2020). P9 negotiates power by making a conscious decision not to risk using the dumpster.

P9 also explained how men have sexualized Greta Thunberg, which could lead women to feel uncomfortable speaking out about climate change considering what Greta has been through:

> *The one that really bothers me is that men always feel a need to sexualize it, I see people sexualizing it, I don't know how old she is, is she (Greta) like 15 maybe? Yah and like there were like these badges or stickers that people made that were*

73

like her with her braids and she was naked or something, I don't know it's just

icky (P9)

This participant is referring to a sticker that depicts Greta in a violent sexual position, for which X-Site Energy Services, an Alberta oil company, took responsibility for (Messervey, 2020). This example is an act of sexualized violence that bothered the participant. The fact that Greta has spoken out about climate change and has become known around the world but has been assaulted in this way could be a serious deterrent for young women to speak out about climate change or other issues, with P9 describing it as "*icky*". The sexualization of women's bodies has led to the objectification, harassment, exploitation, and dehumanization of women; norms that reflect rape culture and are particularly disturbing due to the age of the survivor.

Chapter Summary

Overall, participants detailed their experiences and concerns about climate change in relation to gender. They discussed the ways in which gender intersects with other systems of oppression, gender stereotypes, and GBV, all in relation to the changing climate. Participants recognized notions of power in society, and what this means for people living in a climate crisis. Discussions around women's voice and roles as care takers were also deconstructed in the context of the changing climate. In the next chapter, participants discuss the root causes of climate change, where responsibility must be taken, and what we should do to stop it.

Chapter Six: Climate Roots, Responsibility, and Action

In this chapter participants discussed the root causes of climate change, inaction of corporations, and their perceptions of failed leadership. This chapter also presents the changes the participants would like to see moving forward. Desired changes ranged from entire paradigm shifts in the human relationship with nature to more individual, small-scale changes. Finally, all participants were interested in further understanding the gendered climate impacts worldwide. Further, they wanted results of this study to be shared with other women so that other women may learn about the findings.

Roots and Responsibility

Participants discuss the root causes of climate change, discussing discourse of colonization and overconsumption, as well as where responsibility must be taken for emissions. Participants both challenged and embraced the discourse of individual of responsibility. This theme uncovers participant perceptions of why climate change began and persists, as well as the organizations and groups that should be held responsible.

Roots of Climate Change

P1 discusses the ways in which colonization is connected to climate change, and what this means for Indigenous people, especially Indigenous women, today. They state: *"It's important to recognize climate change as a continuation of colonial legacies that have been in the settler state of what is now known as Canada for hundreds of years"* *(P1).* This participant challenges how Canada is normally viewed by framing it as a settler state, and by prefacing *"Canada"* with *"what is now known as",* as a reminder that the land on which we stand has not always been called Canada. This language resists and challenges colonialism, where P1 has used their agency to reject the colonial discourse

surrounding Canada. Further, P1 discusses how many Indigenous Nations, and especially Indigenous women, consider themselves responsible for maintaining a good relationship with the land, and how colonization has consistently attempted to disrupt this relationship. By naming the concept of colonial disruption to the land and thus to Indigenous peoples P1 demonstrates their knowledge and fear of what may happen as a result of colonialism, where the rights and responsibilities of P1 as a woman to be in good relation with the natural world are under threat. P1 notes further how this is upsetting:

> *There are these things that are out of my control like cooperate greed and resource extraction, I get really like anxious and overwhelmed because like there's nothing I can do about that and like, the natural world is like so important for our health and well-being and knowledge systems and like way of being (P1)*

In this instance, P1 embraces a discourse of limited control over corporate greed and resource extraction. The discourse of limited control in relation to climate change was previously discussed in Chapter Four. Distress associated with the discourse of limited control is amplified by P1's position as an Indigenous person, as they noted the importance of the natural world for their health, knowledge systems, and ways of being.

Similarly, P6 discusses how greed is at the crux of climate change, embracing a discourse of over consumption. This discourse is socially constructed by the notion that climate change is a result of overconsumption and the belief that too many people are consuming too many things (Bhalla, 2020; Hulme, 2011). P6 is concerned by this discourse and describes it as "*the excessive want for what you don't need*", which allows emissions to thrive. They note that "*just the idea of these things being produced for no reason just to benefit like a higher class that is fine with or without is troubling*" (P6).

The topic of classism is brought up by P6 again later in the interview, discussing the very fuels of climate change:

> *bringing it back to how climate change is fueled in terms of again higher classes and having that level of greed or even a good example to use is the restaurants at home. Like I know the restaurants at home throw away a lot of food, like a lot. And if we're looking at that in terms of class and people not having access to things and how that fuels climate change* (P5).

The concern for the discourse of over consumption as a root cause of climate change is discussed in the broader literature, particularly in Indigenous ways of knowing.

In Robin Wall Kimmerer's (2013) book *Braiding Sweetgrass* (pg. 303-309) she discusses an Anishinaabe legendary monster, closely related to greed and the discourse of over consumption. The monster, Windigo, was traditionally used to frighten children into safe behaviours, but also used as an example of the dangers of over consumption and greed. Kimmerer discusses Windigo, a human-like large beast who used to wander the north woods but has since moved south. Windigo travels alone looking for prey, with an insatiable hunger that only intensifies the more he eats, producing a craze of uncontrolled consumption that leaves him eternally starving. Kimmerer argues that you can see Windigo's footprints across the globe if you look carefully; on oil-soaked shores of the Gulf of Mexico and in closets overflowing with clothing. Windigo, in Kimmerer's book and as described by other Indigenous scholars (Johnston, 2001), symbolizes the negative consequences of taking too much and thinking only of oneself so much so that satiety can never be achieved. Without discussing Windigo or even knowing about Windigo, P6 depicted him perfectly, noting that "*greed is what bewills all of it*", "it", meaning the

mass production of what we do not need. Johnston (2001) suggests that multinational companies have bred a new Windigo, one that pillages Earth's resources out of greed.

"Large Emitters" (Corporations)

In this section, participant challenged the discourse of individual responsibility, constructed and perpetuated by the media and industry (Deacon et al., 2015; Nyberg & Wright, 2016). Beliefs associated with the discourse of individual responsibility are that individuals and people most impacted by climate change are just as responsible for reducing their own emissions and committing to climate action as large corporations. Participants challenged this narrative by highlighting their frustrations with large corporations who hold considerable power and wealth yet refuse to commit to real change. One participant noted that this is where we need to focus efforts to address climate change: *"I think we need to target the larger corporations, the large emitters"* (P5). Similarly, P3 notes "*A lot of what I hear is like "oh these corporations are going to keep doing what they're doing""* (P3) and that "*it's not like that much, what you and I are doing that are causing climate change, it's the bigger corporations and the government"* (P3). This participant noted that the main discourse they hear is that individuals are not responsible for climate change, but rather, large corporations are to blame, which is representative of the resistance to the discourse of individual responsibility.

Interestingly, P3 also mentions that doing little individual actions, such as using Tupperware instead of single use plastics, makes them feel better. This contradiction was common among participants, where they commented on industry and companies being responsible for mitigating climate change but noted how they often made small changes

to mitigate climate change themselves. This contradiction aligns with Scott (1992)'s belief that subjects may have multiple constructs of meaning, where language changes depending on the available meaning of the times. This is an example of participants taking up multiple discourses regarding climate mitigation, which is unpacked in further detail in the following climate action section and discussion chapter.

One participant discussed why these internal contradictions around recognizing corporations as those to blame but still taking individual actions may exist. P9 notes that it might because "*we don't really maybe make those conversations accessible like companies don't want to understand how they should handle climate change because they don't have to handle climate change*" (P9). This participant recognized that the conversations that hold corporations accountable are not accessible, and hints that this may be intentional since companies may want to maintain the status quo. P9 challenged the notion that individuals are responsible for mitigating climate change further:

> *I think the big thing is holding companies accountable. I guess like one thing that I guess COVID has shown that is a good thing is when something is a priority like we can do it, it's too late and stuff but we can tell companies like no you can't dump all your garbage in the ocean, you can do it, just do it (P9).*

This participant also notes that we should only hold individuals accountable if companies are: "*I think yah multinational companies and governments and everything have to set an example and then they can expect to follow, but ideally people would follow anyways but I don't think it's realistic to expect them to unless that example is set*" (P9).

Participants felt frustrated with the dominant discourse of large companies contributing to climate change, where companies could use their agency and resources to do something helpful for the climate but chose not to. P5 noted how they "*find it super*

frustrating that you know these businesses like Amazon for instance like Jeff Bezos is a

bajillionaire, one of the richest people in the world if not the richest, and you know he

obviously has the means to make a difference [...but does not]" (P5). Another participant

noted how:

> *It does feel like a lot of the people in power are kind of like [...] we're all in this*
>
> *together, but then it's like well no, it's everybody's at a different level of*
>
> *vulnerability and susceptibility to climate change. And they need to address that*
>
> *when they're addressing climate change as opposed to just addressing climate*
>
> *change* (P3)

This participant vocalized their frustration for those "*in power"* who do not understand,

recognize, or acknowledge how systems of oppression are part of the experience of

climate change. P3 rejects the popular discourse fed by industry that emphasizes how

everyone needs to do their part because "*climate change is about all of us*" (Nyberg &

Wright, 2016, p. 628). Further, P3 believed in the importance of addressing inequity

alongside addressing climate change.

These discussions and critiques of large businesses may be representative of an

anti-capitalism discourse, as capitalism allows those with capital control of the market.

The anti-capitalism discourse is prevalent in literature, especially surrounding concepts of

degrowth, environmental justice, and Indigenous sovereignty (Black, Milligan, &

Heynen, 2016; Frost, 2019; Waldron, 2018;). Yet, participants never named capitalism or

the "free" market, and conversations did not delve deeply enough into economics to

unpack their relationships to the anti-capitalism discourse. This could be because fully

embracing an anti-capitalism discourse may seem too radical, as it is the system behind

the only life participants have ever known. It may also be hard to in vision a world

without capitalism, as it is the moral philosophy that guides society on what is right (profit) and wrong (lack of growth) (Mandela Gray, 2021). Participants were comfortable critiquing the capital and agency of large businesses in interviews but did not dive into the underlying system that allows the corporations such capital and agency.

In a few instances, participants discussed how companies will try and trick them into thinking they are taking action on climate change: *"the media also portrays it as something completely different where it might actually be, like a lot of it is just propaganda for these companies, so it's hard to know if it's accurate" (P4).* The distrust in the media and companies was discussed further by P9, who wanted transparency about what companies are doing to address climate change and for their internal processes to reflect the severity of climate change:

> *It's not something that like they tack on to the end as like something to put on a page on their website that's like "don't worry we're good people", but more so like being there yah in every decision they make. So any time they're implementing a program they're like what are we going to do with the waste from this program or yah just making it just as deeply integrated into the institution as possible instead of just a little pledge that they put a signature on and can turn around and say that they care* (P9).

This participant is referring to performative corporate action, commonly known as greenwashing. Nyberg and Wright (2016) describe how corporations use marketing to brand themselves and promote their "green" credentials, emphasizing their involvement, and sometimes leadership, in reducing carbon emissions. Another study specifically describes "eco-labelling", wherein companies attempt to assure that their product meets some type of environmental standard all while gaining a wider consumer audience and

increasing profits (Gingerich, 2015). Participants rejected these performative discourses by expressing their frustration and distrust of them.

Overall, participants demonstrated frustration and distrust in large corporations, whom they deemed responsible for a significant proportion of greenhouse gas emissions. Participants desire for corporations to be held responsible is representative of a resistance to the discourse of individual responsibility. Similar to participant frustration with a perceived lack of corporate action, they also believed government inaction is a significant cause of climate change.

Government. Some participants discussed the position and agency of government that could be used to address climate change. For example, one participant notes: *"obviously politicians hold so much power in terms of how we respond to climate change so you would have to have a political party that's willing to make the right policies and acknowledge the right things in environmental ways and not deny climate change"* (P8). These feelings of wanting government to take responsibility are similar to those toward large corporations, where there is a belief that some people and entities have the agency help address climate change but chose not to. P8 further reflects that some politicians both do not believe in, or act on upon, climate change: "*like politicians are saying they don't believe in science, looking at Trump"* (P8). This participant is referring to then US president Donald Trump, who while in office denied the existence of anthropogenic climate change and made efforts to derail climate solutions (Gross, 2020). The same participant noted how addressing climate change is not in the best interest of current political leaders:

> *A lot of them have already raised families, like Joe Biden and Trump are 74 and*
> *78, like they're not going to live for 11 years most likely and they're the ones that*

are about to take office and have like an exceptional amount of control of how

climate change plays out in the States (P8)

P8 is referencing the supposed 11 years that humans have to address the climate crisis before it becomes an irreversible issue (United Nations, 2019). They further discussed that there should be more representation from the younger generation in such positions: *"I don't think having old men run for like office in any situation is good because they're not going to see the lasting effects of climate change at all" (P8),* implying that such men would not care about acting on climate change as aggressively as someone who will be impacted throughout their lives.

When asked what would make them feel better about climate change, one participant discussed having a more proactive government, and believed that *"the government and those positions of authority are sort of lagging behind on their opinions on a lot of these issues and so it would be great if yah, more practical action could be taken (P7).* These feelings toward government could be related to the previously discussed discourse of inaction. Similarly, another participant notes that they would feel better if they *"knew that my political leaders were taking it seriously [...] I know my peers understand it like I know the people that I interact with on a daily basis understand it and see the effects of it but I don't think the people in power do" (P8)*. Finally, another participant mentioned being able to feel better about the climate if it was made a priority, similar to how government reacted to the pandemic: *"we look at COVID look at how much money this has cost us and we did it because we had to and we need to start looking at climate like that, we need to, it's not optional, there's no oh it's expensive, well o.k. it's going to be more expensive in ten years, like just fucking do it"* (P9). Overall, participants felt frustrated with governments with respect to climate action.

Climate Action

After discussions about why climate change begun and persists, and who and what is responsible, participants discussed more tangible ideas about how to solve the issue. Though previous conversations around corporations and government demonstrate that participants recognize causes of climate change to be beyond the individual, they still recommended individual and small changes that may help, embracing the previously discussed discourse of responsibility. They also suggested large, high-level changes wherein we re-orient systems to reflect the crisis and respect nature.

Individual Change

Participants believed that climate change is largely fueled and maintained by corporations and government inaction, seemingly rendering individual actions useless and arguing that climate action should target large companies and government. Interestingly, despite believing their actions to be too small to make a difference and their hopelessness surrounding climate change and the future, most participants noted how small changes, on a local or individual level, may help mitigate climate change. For example, P4 wishes for *"more biodegradable products and less single-use products" (P4).* Similarly, P3 notes the need for more sustainable products, like waste free shampoo, to be more accessible: *"if there was more accessibility to stuff like that even it would just feel better, cause then I kind of like would be o.k. I'm trying"* (P3). They note further that their mental health improves when doing something small such using Tupperware or reusable bags, "*even though it's making you know probably a teeny tiny difference, it makes me feel so much better*" (P3). Similarly, P7 learned that to protect their own mental health, they have to focus on solutions rather than "*all these awful things that are happening" (P7).* They note

further: *"I just try and think like proactively about small-scale changes and like preparing for those and how we can help people" (P7).* P9 also believed that if they made climate action more of a goal, it would make them feel better knowing they were doing their part. Thinking about these "*small-scale*" changes helped participants feel better about climate change and offers a counter discourse to those of hopelessness and limited control.

Most climate solutions suggested by participants were related to waste. For example, one participant suggested *"more accessible recycling bins all over the cities [...] it encourages no littering which would definitely be a helpful one."* (P8). Further, P9 discussed small-scale changes that involve the community: *"I really love, you know it's little things, but I think it sets good habits when people do garbage clean ups and stuff like that, yah definitely more individual involvement from communities doesn't hurt, it helps, it's a small help but I think it does build good habits"* (P9). One participant even noted wanting to be better with their own recycling efforts. They discuss how recycling was not a practice they grew up with and are not used to it, thus *"that's probably how I contribute to climate change myself because I am not a recycler"* (P6). Similarly, P9 notes that they would "*I would like to make it [climate action] more of a priority in my life. I'd love to be a vegetarian, that's like the goal one day but I just love meat"* (P9). These quotes represent a contradiction in participants, where they go from blaming industry and greed to then embracing the discourse of individual responsibility and placing blame and responsibility on themselves.

These recommendations for small scale and individual change contradict participant beliefs of individual actions as useless and the discourse of hopelessness exhibited in chapter 4. Further, despite the understanding that their individual

contribution to the climate crisis is small relative to that of large corporations and industry, participants still embraced the individualistic narrative that their actions matter. In this, participants may regain a sense of agency as they are not as inactive as they appeared in conversations of pessimism and hopelessness (see Chapter Four). Action, however small, means that participants in fact do believe they have the agency to make a difference. These contradictions indicate a complexity in feelings towards climate action.

System Changes and Paradigm Shifts

In addition to holding companies, government, and individuals accountable for climate change, participants also discussed system changes and paradigm shifts. One participant mentioned solving climate change is not "*about money, and it's not even just about like innovating our way out, or using science to get out, or like stopping resource extraction" (P1),* Rather, addressing climate change entails the:

> *…return to living in a good way with the land and the beings within it, you return to living in a good way among each other, and like a healthy environment, a health holistic environment is like a health population, so. That's important. Like it really takes an entire paradigm (P1).*

This paradigm shift relates to *"Land Back",* a popular term and concept that emerged in in 2019 as a meme on Native social media (Gouldhawke, 2020) among Indigenous youth. It is described as regaining *"our place in keeping land alive and spiritually connected"* (Wilson, 2020 p. 2).

P1 described Land Back as ensuring that *"Indigenous people, as the traditional stewards of this land, are able to have full control and say over the activities that take place on this land and that we can like, have relationships with the natural world in a*

86

good way, that are accessible to all" (P1). Moreover, P1 uses the example of provincial

parks being expensive and inaccessible for many Indigenous peoples, thus Land Back

would encompass ensuring that Indigenous peoples would have:

> *Full access to our traditional territories, full say over the development that*
>
> *happens in these territories, so that we can have full relationships with the land*
>
> *and all beings within it, as well as the ability to live under Indigenous natural law,*
>
> *which includes environmental stewardship as some of the top priorities. So like*
>
> *really re-orienting the way we exist, I guess, and existing, so that we're in good*
>
> *relationship with the land. Good reciprocal relationships with the land* (P1)

Land Back requires a paradigm shift in how we live with nature, where we would start

"re-orienting the way we exist", and potentially follow Indigenous leadership.

Another participant mentioned following Indigenous leadership, remembering

reading about how *"they [Indigenous peoples] did like regular burning to like prevent*

wildfires and for other reasons and people this year were like we should do that, it's like

you didn't listen to that before?" (P9). Similarly, P1 recalls that Halifax recently released

a climate action plan, but it included nothing about Mi'kmaq governance or ways of

knowing. This exclusion of cultures and BIPOC voices and systems from climate change

management is common, as the climate movement has historically, and evidently

currently by this participant's example, been White led (Stone et al., 2021).

Other participants discussed large system level changes broadly. One noted how

we will have to re-structure "*the way we power the world" (P2)* to use greener energy

sources. Another participant suggested that we *"need to work together as a whole planet*

to work towards this goal similar to like the pandemic and trying to stop the spread."

(P5). Working together may seem generic, but it is a tactic. Another participant suggested

integrating climate change into every decision that we make: *"if we thought about it and were conscious of it and integrated it into every decision we make, it would probably be a lot better than just ignoring it"* (P9). Finally, P3 reflected on the Me Too movement, relating it to a potential climate action tactic:

> *When I think about how the Me Too movement worked and how it was when people, like you said, it was when people shared personal stories that the people in power went oh my god, or then they heard from their daughter or their wife, it was like yah well that's happened to me like a million times and they were like what? [...]and then everyone from that demographic can be like yah same. Everyone kind of wakes up. And so I wonder if it's maybe one of those things that we need?* (P3)

This idea suggests that more women and people who are impacted by climate change should share their story, akin to the stories told during the Me Too campaign, established by Tara Burke. The Me Too movement allowed women from all corners of the world to describe their experiences of sexual assault, leading to widespread social change to better protect women and prevent gender-based violence (North, 2019). This participant highlighted how the Me Too movement changed the discourse on sexual assault from a subversive discourse, to one that is widely accepted and highlights the strength of survivors. Relatedly, participants discussed their desires for hearing more women's climate experiences and stories.

Women and Knowledge Sharing

Absent from other findings chapters, participants displayed a sense of empowerment near the end of interviews when discussing study result dissemination.

While participants noted their desires to hold corporations and governments accountable, as well as individual and system changes, they recognized a need to discuss climate change impacts on women, among other women. Participants were interested in knowledge sharing. Both learning from other women, as well as sharing the results of this study with other women were discussed near the end of each interview. Further, participants were interested in inspirational women leaders, as well as helping others who may not know about how climate change is impacting them or how it might in the future.

Learning

Participants wanted to know more about climate change in general. For example, one participant noted: *"I wish like somebody could just teach me what are the main things that are causing climate change" (P2).* This desire to learn extended to climate impacts, where P8 mentioned wanting to know more because they understood how climate was a topic that would impact them further into the future; however, they note that they do not know much now: "*But I don't really know how it affects me right now if that makes sense. So it's more something that I want to learn about, that's why I think all post-secondary students should have access to the information on how climate change is going to affect them and how climate change and gender is going to affect them* (P8). This participant has highlighted their keenness in learning more, specifically about gender and climate change.

In addition to wanting to learn more about climate change, participants wanted to know how other women are impacted. These quotes may be representative of the previously discussed discourse of women as care takers, as participants are interested in learning about how other women experience climate change. For example, P2 mentioned

wanting further research on the topic: *"one thing I think worth looking into is like how women in less developed countries would be experiencing it" (P2).* They also noted that *"there's a lot of coastal communities and I think that like I would be interested to hear the stories of women living in those areas"* (P2). Similarly, P5 describes not having much knowledge on how climate change impacts women and not experiencing the harshest affects themself, thus *"would like to learn more about that and so I guess just I think a wide range of women maybe you know ones that, women that it has a deeper impact on that could definitely be helpful"* (P5). Another participant noted how younger women are likely learning about climate change in "*a more magnified way than we did"* and are thus more impacted and "*struggling more with the mental health impacts of climate change"* (P7), indicating the need to bring attention to and investigate to this issue. Finally, when asked who research results should be shared with, one participant said simply, women. *"I know that's such a silly answer but I mean like even I read your title, I kind of read a little bit about your research, I thought those are the things that I'd like to read and learn more about" (P5).* Through these quotes it is clear that interviews and subsequent reflection sparked an interest in the topic of women and climate change for participants.

Sharing and Inspiring

One participant discussed how women are talked about in climate change discussion and noted that we are not always seen as the agents of change that we are. They reflect: *"I always see these things about how like, women bear the brunt of climate change and like are disproportionately impacted or, whatever, but it never really talks about how we're also like agents of change and really powerful" (P1).* This very discourse is discussed by (Arora-Jonsson, 2011), who argues that there are two discourses

90

present when discussing women in climate change: first, their perpetual vulnerability to it, and second, their inherent caring and environmentalist nature. The author believes that these two competing discourses are not helpful in advocating for women's safety and inclusion in the climate change decision-making circle, but rather, they portray women as helpless and caring. P1 captures these negotiations and challenges them as they wish for women to be recognized as agents of change, suggesting a sense of empowerment.

P8 discussed wanting results of this study to be shared with women who are, indeed, agents of change. Prime Minister of New Zealand, Jacinda Ardern, came to mind for P8: *"She just kind of popped into my head and I think she would, like she's making such good and positive changes in New Zealand so I feel this is something that she would also find interesting"* (P8). This participant noted further that Alexandria Ocasio-Cortez, a United States Representative, was someone they admire and might like to see study results: *"I would send this to her cause she's such an advocate for the Green New Deal and like climate change sustaining healthy living and healthy communities through climate change so I feel like she would really find this interesting"* (P8). This desire to share knowledge with women that participants admire, or other women in general, demonstrates how climate change is becoming a feminist and feminine movement, where women are seen valuing knowledge sharing, giving each other credit, and joyfully inspirational leadership (Elizabeth Johnson and Wilkinson, 2020). This emerging, collaborative way of engaging in climate work counters the dominant discourse of previous climate work, based on ego, competition, and control (Elizabeth Johnson and Wilkinson, 2020).

When asked who they thought results would benefit most, participants repeatedly said women. One participant noted: *"I want it to be shared with women. I feel like a lot of*

them don't know what the effects are [...] I feel that women are the most important for them to understand how this may affect them" (P6). Relatedly, another participant wanted results to be shared with women so they could know that *"they're not alone and to know that you know they have support" (P2).* These quotes represent a desire for other women to benefit from this study.

In these instances, participants displayed a sense of empowerment. Despite prior conversations surrounding hopelessness, inaction of politicians and corporations, and perceived lack of control over the climate crisis, participants found agency in wanting to understand more about the gendered impacts of climate change and spreading the word. Participants wanted other women to understand the impacts of climate change as well. It was clear from the end of the interviews that participants were excited to see the results of the study and to know what other participants had said. Participants were interested and engaged about learning and knowledge sharing with other women instead of earlier displays of fatalism. It may be that participants seek agency, empowerment, and support from other women in learning and knowledge sharing before engaging in further activism.

Chapter Summary

Overall, participants discussed the ways in which they believed climate change began and persists. They exhibited feelings of frustration associated with a discourse of individual responsibility towards large companies and government for their emissions and climate inaction. Climate actions, big and small, were discussed at length, and provided insight into contradictions participants had about corporate versus individual action.

Finally, participants discussed their desires to learn more about the gendered impacts of

climate change and share study results with other women.

Chapter Seven: Discussion

This research set out to understand how young women experience mental health and gender in relation to the changing climate in Nova Scotia, Canada. Specifically, I explored how young women perceive their mental health in relation to the changing climate, how young women's experiences with the changing climate are personally, socially, and institutionally constructed, and what young women would like to see in terms of climate adaptation and mitigation at the institutional, governmental, and community level. Through interviews with nine study participants, study objectives were achieved and unpacked in three findings chapters: Mental Health and Climate Change, Gender, and Climate Roots, Responsibility, and Action. Through an FPS and discourse analysis lens, each findings chapter explores how the available discourses in the world of climate change constitute participant experiences, values, and beliefs, and how they relate to their positions. This chapter will focus on situating findings in current and relevant literature and provide recommendations for the discipline of health promotion.

The research objectives were addressed and developed by deconstructing participant experiences and language, as well as by examining how participants negotiated and discussed power. The main study findings are as follows. First, participants embraced the discourse of hopelessness and pessimism surrounding climate change and our future, with the issue seeming too uncertain, grave, and anxiety-inducing to think about. Second, participants believed that subject positions, such as gender, SEP, and race, impact how people experience climate change. This was especially relevant for participants when discussing ability to speak up about climate change, where participants felt that women's voices are often not taken seriously, perpetuated by to the social construction of the discourse of women's voices as unserious. Finally, participants held

94

beliefs about why climate change began and persists, and challenged the discourse of individual responsibility by focusing on how corporations should be held accountable for their emissions and inaction. Participants also mentioned that their small-scale climate action made them feel better mentally, and that they wanted to learn more about the gendered impacts of climate change from other women.

Mental Health and Climate Change

Robin Waller Kimmerer (2013, pg. 327) discusses the fear and despair narrative, whereby we are inundated by information of ecological degradation but know less on how we can nurture it. She notes that with this discourse, environmentalism relates to "powerless feelings" (pg. 327). Such feelings were evident in the theme of hopelessness as participants produced discourses of pessimism, where they felt they could never do enough to help. Participants have confirmed that fear mongering climate tactics, such as the clock in Time Square, do not motivate action. With most participants recalling not wanting to think about climate change because of its devastation, we can assume that when people are not thinking about climate change, they are most likely not acting on it. This narrative of despair could stem from the ways in which participants received their climate information, which was mostly from peers, social media, and general news sources. It should also be noted that no participant mentioned being involved in any specific climate action organization or group, as feelings of helplessness may have been mitigated by engagement with the climate change/justice movement.

Further, there is a dominant social discourse surrounding climate change that we cannot act until more research is done and we understand the research better (Flemming et al., 2014). This discourse assumes that the lack of information is the most important

barrier to climate action; however, the health promotion discipline challenges the idea that knowledge spurs behaviour change, seeking rather to change systems to allow the possibility of behaviour change. Participants both rejected and accepted these opposing discourses, where they commented on not knowing how to address climate change and viewed it as an issue so complex that we might not be able to solve, suggesting the need for more knowledge, yet they also believed that individuals cannot make enough change on their own and that large corporations could act but choose not to. This uptake of competing discourses relating to climate mitigation is complex, and potentially leads to the mental health stressors discussed by participants.

Albrecht's (2011, 2019) theories are consistent with those of Fritze et al. (2008), where, as people's knowledge of climate change grows deeper, they are likely to see impacts on their social, emotional, and spiritual health. Fritze et al. (2008) also notes that feelings of hopelessness are common for many people when information is unsettling and solutions seem to hard, which can lead to the avoidance of the problem. These feelings of hopelessness and practices of avoidance due to overwhelming information about the climate crisis were seen in study findings, where many participants mentioned actively trying not to think about climate change.

Implications

Participants may benefit from hearing more positive, hopeful, and empowering news on climate change. For example, Stacey Abrams is well known across the United States for flipping Georgia to a democratic majority by allowing Black and minority citizens to overcome voter suppression. This allowed for now President Biden to win the presidential election. Stacey Abrams is often seen as a climate advocate, as without her

help in battling racist voter suppression policies, today's president may be one that denies climate change (Scanlan & Robinson, 2020). News that demonstrates the strength and successful action of women may help to mitigate feelings of hopelessness, as well as feelings of women not being taken seriously. Health promotion media specialists should understand the dangers and ineffectiveness of fear mongering, and attempt to promote climate solutions and hope as opposed to stories of despair and ecological degradation. Further, Clayton et al. (2017) encourages mental health care providers to help clients foster optimism to help protect against the mental health impacts of climate change.

Mental health care providers may also benefit from understanding how young women conceptualize the climate crisis. For example, climate change was described by participants as a heavy subject that ways on them. They also described the future as hopeless and out of their control. As participants noted, the topic does not cause significant mental health challenges or mental illness but acts as an added layer of stress. This additional stress, understood with client position could be further unpacked by mental health providers and integrated into practice. Further, Hayes (2018) recommends that mental health practitioners communicate about climate change and mental health in a way that allows patients to understand what is relevant and important to them, advocate for reducing greenhouse gas emissions in health care facilities and engage in adaptation measures such as preparing and responding to extreme weather events.

Conversely, Hayes et al. (2018) discusses how mental health can be positively impacted by climate change related extreme weather events. If people come together to rebuild, salvage, and heal during this time of a changing climate, they can foster a sense of meaning and personal growth, sometimes referred to as Post-Traumatic Growth (PTG) (Hayes et al., 2018). While extreme weather can cause anxiety, depression, and

psychological distress, it can also instil compassion and optimism in coming together to work in climate adaptation and mitigation. Even an increase in climate change acceptance and engagement with climate action can occur post extreme weather. This area of research requires further investigation, as most research to date focuses on the negative impacts of climate change on mental health (Hayes et al., 2018). Relatedly, engaging in climate activism (in any form) has been shown to bolster mental health, which is concurrent with participants who claimed to feel better after doing small actions, such as using Tupperware and reusable masks.

Gender

Women of colour and Indigenous women have long fought against environmental destruction (Dennis & Bell, 2019; Waldron, 2018), yet are not always recognized as climate leaders and activists and excluded from the White majority led climate movement (Elizabeth Johnson, 2020; Olson, 2015). Those with the experience and knowledge have been overlooked despite their appropriate position as climate leaders. Further, Black and Indigenous women face climate impacts disproportionately, along with people with low incomes or in low-income countries, as discussed in Chapter One. Climate change amplifies existing inequities, and those closest to climate impacts need to be part of solution development (Elizabeth Johnson & Wilkinson, 2020; Hayes & Poland, 2018). This narrative may have played into participant beliefs that climate experiences are different depending on gender, race, and SEP. Particularly, when participants discussed the ability of women to speak up, be heard, and be taken seriously, a couple mentioned that being heard appropriately can depend on race, where Indigenous and women of color can experience disproportionate difficulty being heard.

All participants discussed historical and current social inequities, which is congruent with the emerging climate movement. As noted by Elizabeth Johnson and Wilkinson (2020), the climate movement is becoming increasingly intersectoral, where women and girls are engaging in climate action in ways that heal systemic injustices, not perpetuate them. Participants were overly aware that climate change is not felt equally across ages, geographies, races, and identities, understanding the need for justice and inclusion in adaptation and mitigation.

Women's responsibility as care takers is repeatedly discussed in the literature around gender inequality and climate change (Ajibade et al., 2013; Alston, 2013; Beaumier & Ford, 2010; Demetriades & Esplen, 2009; Eissler, 2019; Kevany & Huisingh, 2013). Women have been reported to skip meals in times of climate-related food or water scarcity, put the needs of others before their own, and handle multiple stresses and tasks at once due to their disporportionate burden of care (Alston, 2013; Beaumier & Ford, 2010; Demetriades & Esplen, 2009). Although participants did not discuss experiencing these types of care burdens, they were aware of them, and even hypothesized that some day they may become a reality for them. Participants also recognized the discourse of women as care takers by reflecting on their stress in deciding whether or not to birth children, a stress they felt was amplified by their positionatliy as women. While mupltiple participants viewed care taking as a somewhat burdensome, one participant recognized women's agency in care taking, and provided a counter discourse of women as those who can be relied upon to move their families away from danger.

Participants noted that discourse surrounding women's emotions attempts to disempower and depict their beliefs as irrational. This was particularly exemplified when one particiapnt spoke about the backlash women in their community recevied for

99

believing in astrology and the impact of the earth's changing weather on their mental health. Conversely, women's emotions were also discusssed as a strength by one participant, noting that they could lead to care of the planet and climate action. This is an emerging discourse in the literature, where women's emotions surround cliamte change are commended and helpful for making change (Elizabeth Johnson & Wilkinson, 2020). For example, while Greta Thunberg was mocked or ignored by some for showing her passion, anger, and tears during her famous "How Dare You" United Nations speech (Anthony, 2019; Volcovici & Green, 2019), she simultaneously sparked a global movement of climate activism.

Participant concerns of women's voices not being taken seriously can be related back to climate science in the mid 19th century. In 1856, Eunice Newton Foote became the first woman in climate science by theorizing changes in carbon dioxide in the atmosphere could affect Earth's temperature (Elizabeth Johnson & Wilkinson, 2020). Specifically, she concluded an association between carbon dioxide and planetary warming yet was overlooked until just a few years ago. John Tyndall, who published his paper on heat trapping gases three years after Eunice published hers, has been typically regarded and cited as the foundation of climate science (Elizabeth Johnson & Wilkinson, 2020). With the very history of women in climate science beginning with this narrative of women not being listen to, credited, or taken seriously, it is no surprise that participants produced this research theme.

The connection between gender-based violence and climate change has been well documented in the literature. Both after extreme weather events and during times of climate related resource scarcity, women face an increase in sexual, domestic, and intimate partner violence (Alston, 2013; Anastario et al., 2009; Boetto & McKinnon,

2013; Hayes, 2019; Meyiwa et al., 2014). However, participants did not describe GBV

associated with climate related weather changes and events, but rather in a variety of

other ways. For example, one participant discussed the relationship between climate

change and MMIWG2S. This issue demonstrates the interconnectedness of climate

change, the resource extractive industry, and GBV, where man camps (often set up near

resource extraction sites) have been found to significantly increase the risk of MMIWG2S

(National Inquiry into Missing and Murdered Indigenous Women and Girls

[NIMMIWG], 2019).

Implications

Chapter Five findings indicate that society would benefit from dismantling

systems that produce gender, racial, and income inequalities. Health promotion should

continue working to reduce health disparities and address the social determinants of

health while considering climate change implications. For example, health promotors

should recognize and integrate the fact that climate change amplifies existing inequities

into health and climate change policies whenever possible. Climate change is a far

reaching, global health problem that can only intensify, thus health promotors should also

advocate for climate mitigation solutions and just economic diversification strategies

where no one is left behind (Healy & Barry, 2017). The way we mitigate and adapt to

climate change must consider the health and wellbeing of all people. Health promotors

must ensure that the determinants of health, including social and ecological determinants,

are integrated into climate solutions to fulfill their goal of promoting health and reducing

health inequities (Dempsey et al., 2011; Health Promotion Canada, 2018). Further, the

voices of women, especially BIPOC women, must be included in climate action.

The health, safety, and security of women should be integrated into all emergency preparedness and response strategy plans. One participant discussed the impacts that single mothers face in their community during hurricane season. This information compounded with the abundance of literature suggesting an increase in GBV worldwide during and after extreme weather points to the need to protect women before, during, and after climate emergencies (Anastario et al., 2009; Boetto & McKinnon, 2013; Meyiwa et al., 2014). In recognizing this disparity, the discipline of health promotion must make sustainable development goals of the United Nations Development Program a priority, especially the goal of achieving gender equality (UNDP, 2015). This goal notes the importance of considering how women continue to be disproportionately impacted by climate change (UNDP, 2015). Health promotion must work towards ensuring women are safe and well protected before climate driven weather events. This includes safe and secure housing built to withstand the stronger weather to come, and social safety nets and surveillance that catch and address GBV (Clayton et al, 2017).

Specifically, the NIMMIWG (2019) report provides 231calls for justice directed at governments, institutions, social service providers, and industries, all of which reach the health promotion discipline. Calls 13.1-13.5 (See Appendix D) specifically target the issues relating to extractive and development industry. Actions include the need for industry to consider the safety of Indigenous women, girls, and 2SLGBTQQIA peoples, input from government to mandate, approve, and evaluate development plans with GBA in mind, and the need to ensure Indigenous women benefit equally from such development projects. Finally, the NIMMIWG (2019) report calls for further research and investigation into the relationship between resource extraction and violence against Indigenous women, girls, and 2LGBTQQIA peoples.

Climate Roots, Responsibility, and Action

Some participants discussed colonization and greed as root causes of climate change, which has been similarly suggested by other authors and activists (Delaney, 2020; Stone et al., 2021; Waldron, 2018). This connection has been made through deconstructing the history of colonization, where European colonists dispossessed Indigenous peoples of their land and used it for profit. Sacred ceremonies meant to keep nature in balance were made illegal by law, languages that had relational knowledge of the natural world embedded in them were forbidden, and gender equality was condemned (Wall Kimmerer, 2013). Care taking responsibilities were severely curtailed, and replaced with polluting industries (Wall Kimmerer, 2013). Some argue colonization is ongoing through pipeline and tar sands development in Canada, which further colonization's goal of genocide against Indigenous peoples (Huseman & Short, 2012).

Participants actively challenged the institutional discourse of individual responsibility recognizing that corporations contribute significantly to climate change and noting that they should be held responsible. The discourse used by companies is often a marketing message that promotes the idea that they are taking action on climate change, and that climate impacts are the same for everyone and thus placing the blame on the individual. For example, Nyberg and Wright (2016) analyzed this discourse, finding company quotes such as: being: '*Climate change is about all of us. Everyone can contribute by changing what we do by one degree, in lots of ways every day. Together these actions will help us change the future of the planet*' (Nyberg & Wright, 2016 p. 14). This type of messaging instills an individualistic duty in people to mitigate climate change, which shifts blame and responsibility from the companies and industry.

Participants were interested in learning more about climate change in general. More specifically, participants were interested in how other women felt about climate change, including women from around the globe. In these parts of the interviews, participants displayed a sense of empowerment, absent from other discussions surrounding climate change. They shared excitement for study results, and thought they should be shared with other women. This finding is congruent with those of Spencer et al. (2018, pg. 132), where participants felt the value of spaces and platforms that allow discussion of gendered experiences and feelings with other young women and girls.

Implications

The discipline of health promotion first recognized healthy and sustainable ecosystems as determinants for human health over 30 years ago (Ottawa Charter, 1986). Hancock (2011, 2017) argues that although ecosystems are the most important determinant of health noted in the Ottawa Charter, they have been the most neglected. Population health promotion and public health professionals today must collaborate with those who attempt to shift all aspects of society towards sustainability and equity (Hancock, 2011). With the recognized importance of planetary health for human health, the health promotion discipline is perfectly situated to advocate for climate mitigation and adaptation. While several institutions have implemented course and programs on planetary health, the field of study should be developed further for students in the health arts and sciences.

Indigenous leadership has, long before the creation of the Ottawa Charter (1986), argued the importance of reciprocal relationships between nature and health. Such relationships are embedded in the culture, knowledge, and language of many Indigenous

nations (Wall Kimmerer, 2013). As is noted by a couple of participants, the climate movement should lend itself to support Indigenous leadership and knowledge. An example of this, as given by one of the participants, would be to include Indigenous leadership, knowledge, and wisdom in climate action documentation, such as the HalifACT 2050 report.

Strengths and Limitations

This study was able to explore the experiences, values, practices, and beliefs of nine participants in respect to mental health, gender, and climate change. Through data collection and analysis, it was possible to achieve the three research objectives of this study: The understanding of how participants perceived their mental health relating to climate change, how their experiences were socially, institutionally, and personally constructed, and finally the change they would like to see to stop global warming. This study provides data on youth who have grown up with the looming threat of climate change, filling a gap in the literature on young people's mental health in the changing climate. As a young woman myself, I was able to relate to participants as someone from their age and gender demographic, potentially creating a comfortable, safe environment to discuss gender and climate change.

My identity as a young woman may have impacted my interpretation of results. My own feelings about women's mental health in the changing climate may have seeped into interviews and analysis. Further, my interest and knowledge of the gendered impacts of climate change had the potential to bias the study's analysis. This bias was mitigated as much as possible by careful supervision of data analysis by supervisors and constant reflection of my own values, beliefs, and practices.

The majority of participants in this study were White. This may have contributed to results of the study being overwhelmingly from the perspective and point of view of the White lens, especially since the analysis and writing has mostly been done by a White researcher. Having this limited worldview may have contributed to a skewed version of the stories told, as the environmental movement, discussed in the Chapter One, has not only been dominated by White people but has been intentionally exclusive of Black, Indigenous, and people of colour. To mitigate this, I have read and cited books, articles, and stories written by BIPOC in attempt to diversify this work and include BIPOC voices as much as possible. One of my supervisors, Dr. Barb Hamilton-Hinch, is a member of the African Nova Scotian community and has been instrumental in developing, overseeing, and providing feedback for this work.

No participants mentioned possessing a Two Spirit or nonbinary identity, which could potentially exclude the experiences of those that are further marginalized and thus further impacted by the climate crisis. Similarly, most participants discussed attending or obtaining a post-secondary education. Participant demographics may have contributed to a limited diversity of the views obtained; however, participants did exhibit some diversity in geographic background, where four out of the nine participants grew up outside of North America.

The COVID-19 pandemic may have limited this study. For example, in-person posters were not utilized at the time of recruitment due to public health restrictions, this there were differences in who was able to access the recruitment materials which were on online platforms only. Further, interviews were conducted online, meaning that participants needed the time, space, internet, and privacy to participate. Further, the implications that physical distancing, social isolation, and quarantine on mental health

may have impacted participants, which could have impacted the way they reported mental health experiences.

Recommendations for Future Research

Future research should explore further the concept the mental health of young women in relation to climate change. This may be done by exploring the mental health of women across the globe, in coastal areas and areas severely impacted by climate change. As suggested by one participant, further research should be conducted with women experiencing climate change in developing countries. Research focused on the mental health impacts of climate change should always employ a sex and gender-based analysis, as it is clear that climate impacts are gendered. Further, research may also consider other intersecting identities that impact climate change experiences such as race, 2SLGTBQIA+ status, (dis) ability, income, education, employment type, and more. Finally, with such interest in holding large corporations and government accountable for their emissions and inaction, future research should consider diving deeper into what this means and how it can be done.

Hayes et al. (2018) recommends that more research be done on psychosocial adaptation. For example, further research could attempt to better understand the ways in which we can mitigate the discourse of hopelessness and provide a counter discourse of hope and action. More research may also consider unpacking the emerging climate renaissance as described by Elizabeth Johnson and Wilkinson (2020), and how to better support the movement as well as how to attract more people to it.

Knowledge Translation

Study results should be translated to disseminate findings to those who may benefit or may have the power to act in ways that may benefit the study population. Following the completion of the study I will produce a community report of the study findings and disseminate it to study participants as a respectful way to thank them for their time. Study participants are welcome to share the document with whomever they wish, which could include other young women who may relate to or see themselves in study findings. Further, federal and provincial public servants in the climate change and health field will be given the community report. Through my previous employment with the federal government, I have made connections to those working in climate change who may find study results useful in informing health promotion policy and programming. This method of knowledge translation ensures study results will be shared with those who may benefit or find this research useful.

In addition to the informal community report, study findings will also be translated into manuscript formats and submitted to peer-reviewed journals, such as the International Journal of Environmental Research and Public Health. Study findings will also be shared at conferences to reach as many researchers as possible. By publishing and presenting study findings in spaces where the academic community is likely to reach them, I will be furthering research knowledge on the topic of climate change and health. Sharing the study's information in this way could spark interest in the field of mental health and climate change and be used as a base to begin more research on the topic.

Conclusion

The current literature revealed a gap, wherein women's mental health relating to climate change had yet to be fully studied. Young women were excluded from all

literature relating to climate change and mental health. This study presents a unique contribution to the literature by exploring young women's mental health in a changing climate. This study adds to the body of research surrounding the health impacts of climate change.

Participants of this study allowed for an in-depth analysis of the ways in which gender interplays with climate change and mental health. Using FPS informed by discourse analysis, participant values, beliefs, practices, and discourses were carefully analyzed to answer the research question and three research objectives. Data revealed that participants embraced a discourse of hopelessness for addressing climate change; they did not see the future as sustainable, but rather were anxious for its climate related issues. This section reveals the need for a switch in discourse in climate news and media, to one focused on solutions, hope, and ways to help. Participants were aware that climate change disproportionately impact women, people of colour, and people with a low SEP, and felt that women's voices are not taken seriously in general. They also recognized the GBV concerns that climate change poses to women, compounded by literature that proposes careful consideration of women's safety throughout the changing climate. Participants then shared their beliefs for what needs to be done to address climate change, overwhelmingly challenging a discourse of individual responsibility, and embracing one of corporate accountability. Finally, participants discussed their desires to share results with other women and learn more about gender and climate change, embracing a discourse of knowledge sharing.

Young women are showing up around the world as potential leaders in the climate movement. Their inclusion in climate change mitigation, adaptation, and justice is not yet fully realized, but integral to our survival. As climate impacts are gendered, the way we

respond to them must be gendered as well. Further, mental health is an inescapable

dimension of the crisis we face that must be part of our response and journey towards

sustainability.

References

Alston M. (2015). Gendered outcomes in post-disaster sites: public policy and resource

distribution. *Simon Fraser University – Engaging the World.*

Aston, M. (2016). Teaching feminist poststructuralism: Founding scholars are still

relevant today. *Creative Education* 7 (15). doi: 10.4236/ce.2016.715220

Anastario, M., Shehab, N., & Lawry, L. (2009). Increased gender-based violence among

women internally displaced in Mississippi 2 years post–Hurricane

Katrina. *Disaster medicine and public health preparedness*, *3*(1), 18-26.

Anthony, T. (2019). *'How dare you': A young activist's moment, praised and criticized*.

The Detroit News.

https://www.detroitnews.com/story/news/world/2019/09/24/greta-thunberg-how-

dare-you-un-general-assembly/40196079/

Arora-Jonsson, S. (2011). Virtue and vulnerability: Discourses on women, gender and

climate change. *Global Environmental Change*, *21*(2), 744–751.

https://doi.org/10.1016/j.gloenvcha.2011.01.005

Ashlee, A. A., Zamora, B., & Karikari, S. N. (2017). We are woke: A collaborative

critical autoethnography of three "womxn" of color graduate students in higher

education. *International Journal of Multicultural Education*, *19*(1), 89-104.

Bhalla, J. (2020, September 24). *How affluent people can end their mindless

overconsumption*. Vox. https://www.vox.com/21450911/climate-change-

coronavirus-greta-thunberg-flying-degrowth

Beaumier MC, Ford JD, Beaumier, M. C., & Ford, J. D. (2010). Food insecurity among

Inuit women exacerbated by socioeconomic stresses and climate change.

Canadian Journal of Public Health, *101*(3), 196–201. c8h.

Berry, Helen L, Waite, Thomas D, Dear, Keith B. G, Capon, Anthony G, and Murray, Virginia. (2018). The Case for Systems Thinking about Climate Change and Mental Health. *Nature Climate Change* 8.4, 282-90.

Black, S. T., Milligan, R. A., & Heynen, N. (2016). Solidarity in Climate/Immigrant Justice Direct Action: Lessons from Movements in the US South. *International Journal of Urban and Regional Research*, *40*(2), 284–298. https://doi.org/10.1111/1468-2427.12341 (Black et al., 2016)

Boetto, H., & McKinnon, J. (2013). Rural Women and Climate Change: A Gender-inclusive Perspective. *Australian Social Work*, *66*(2), 234–247. https://doi.org/10.1080/0312407X.2013.780630

Borish, D., Cunsolo, A., Snook, J., Shiwak, I., Wood, M., HERD Caribou Project Steering Committee, Mauro, I., Dewey, C., & Harper, S. L. (2021). "Caribou was the reason, and everything else happened after": Effects of caribou declines on Inuit in Labrador, Canada. *Global Environmental Change*, *68*, 102268. https://doi.org/10.1016/j.gloenvcha.2021.102268

Boykoff, M. T., & Boykoff, J. M. (2007). Climate change and journalistic norms: A case-study of US mass-media coverage. *Geoforum*, *38*(6), 1190–1204. https://doi.org/10.1016/j.geoforum.2007.01.008

Brunila, K. (2014). The Rise of the Survival Discourse in an Era of Therapisation and Neoliberalism. *Education Inquiry*, *5*(1), 24044. https://doi.org/10.3402/edui.v5.24044

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a Qualitative Description Approach in Health Care Research. *Global Qualitative Nursing Research, 4*. doi: 10.1177/2333393617742282

Boetto, H., & McKinnon, J. (2013). Rural Women and Climate Change: A Gender-

inclusive Perspective. *Australian Social Work*, *66*(2), 234–247.

https://doi.org/10.1080/0312407X.2013.780630

Butler, J. (1992). Contingent Foundations: Feminism and the Question of

"Postmodernism". In J. Butler, & J. Scott (Eds.),Feminists Theorize the Political

(pp. 3). New York and London: Routledge, Chapman and Hall, Inc.

Canada | Factsheets | Youthpolicy.org. (n.d.). Retrieved October 14, 2019, from

https://www.youthpolicy.org/factsheets/country/canada/

CAPE (2019). *Climate change toolkit for health professionals.* Retrieved from:

https://cape.ca/campaigns/climate-health-policy/climate-change-toolkit-for-health-

professionals/

CBC (2019). "We can't eat money or drink oil," Autumn Peltier tells UN | CBC News.

Retrieved October 14, 2019, from CBC website:

https://www.cbc.ca/news/world/canadian-indigenous-water-activist-autumn-

peltier-addresses-un-on-clean-water-1.5301559

Comeau, L., Nunes, D. (2019). *Healthy climate, health New Brunsickers: A proposal for

New Brunswick that cuts pollution and protects health.* Retrieved from:

https://www.conservationcouncil.ca/wp-content/uploads/2019/06/Healthy-

Climate-Healthy-New-Brunswickers-1.pdf

Connelly, L. (2016). Trustworthiness in Qualitative Research. Medsurg Nursing : Official

Journal of the Academy of Medical-Surgical Nurses, 25(6), 435-436.

Costello, A.; Abbas, M.; Allen, A; Ball, S; Bell, s; Bellamy, R;…Patterson, C (2007).

Managing the health effects of climate change. *The Lancet.* Vol. 373(9676),

P1693-1733 doi: 10.1016/S0140-6736(09)60935-1\

Creswell, J. W., and Creswell, J. D. (2018). Research Design: Qualitative, quantitative,

    and mixed methods approaches (5thed.) Thousand Oaks, CA: Sage Publisher

Creswell, J.W. & Poth, C.N. (2018). Qualitative inquiry and research design. Choosing

    among five approaches (4th ed). Thousand Oaks, CA: Sage Publisher

Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black

    Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist

    Politics. *Chicago Unbound*, *1*, 31.

Cunsolo Willow, A., Harper, S.L., Ford, J.D., Landman, K., Houle, K., Edge, V. L. & the

    Rigolet Inuit Commuity Government. (2012). "From this place and of this place":

    Climate change, sense of place and health in Nunatsiavut. *Social Science and*

    Medicine, 75, 538-547. doi: doi.org/10.1016/j.socscimed.2012.03.043

Cunsolo, Ashlee, and Ellis, Neville R. "Ecological Grief as a Mental Health Response to

    Climate Change-related Loss." *Nature Climate Change* 8.4 (2018): 275-81. Web.

Cox, L. (2019, December 6). *Leading scientists condemn political inaction on climate*

    change as Australia "literally burns." The Guardian.

    http://www.theguardian.com/australia-news/2019/dec/07/leading-scientists-

    condemn-political-inaction-on-climate-change-as-australia-literally-burns

Daminger, A. (2019). The Cognitive Dimension of Household Labor. *American*

    Sociological Review, *84*(4), 609–633. https://doi.org/10.1177/0003122419859007

Davis, A. Y. (1981). *Women, Race, & Class*. Knopf Doubleday Publishing Group.

Deacon, L., Baxter, J., & Buzzelli, M. (2015). Environmental justice: An exploratory

    snapshot through the lens of Canada's mainstream news media: Environmental

    justice. *The Canadian Geographer / Le Géographe Canadien*, *59*(4), 419–432.

    https://doi.org/10.1111/cag.12223

Dempsey, C., Battel-Kirk, B., & Barry, P. M. M. (2011). The CompHP Core

Competencies Framework for Health Promotion Handbook. *Executive Agency for

Health and Consumers*, 32.

Dennis, M. K., & Bell, F. M. (2019). Indigenous Women, Water Protectors, and

Reciprocal Responsibilities. *Social Work*, *65*(4), 378–386.

https://doi.org/10.1093/sw/swaa033

Developing Countries 2019. (n.d.). Retrieved October 15, 2019, from

http://worldpopulationreview.com/countries/developing-countries/

du Bray, M., Wutich, A., Larson, K. L., White, D. D., & Brewis, A. (2019). Anger and

Sadness: Gendered Emotional Responses to Climate Threats in Four Island

Nations. *Cross-Cultural Research*, *53*(1), 58–86. aph.

Durkalec, A., Furgal, C., Skinner, M. W., & Sheldon, T. (2015). Climate change

influences on environment as a determinant of Indigenous health: Relationships to

place, sea ice, and health in an Inuit community. *Social science & medicine*, *136*,

17-26.

Frost, K. (2019). First Nations sovereignty, Environmental Justice, and Degrowth in

Northwest BC, Canada. *Ecological Economics*, *162*, 133–142.

https://doi.org/10.1016/j.ecolecon.2019.04.017

Garry, A. (2011). Intersectionality, Metaphors, and the Multiplicity of Gender. Hypatia,

26(4), 826–850.

Gardiner, S., & Hartzell-Nichols, L. (2012). *Ethics and Global Climate Change | Learn

Science at Scitable*. The Nature Education Knowledge Project.

https://www.nature.com/scitable/knowledge/library/ethics-and-global-climate-

change-84226631/

Gavey, N. (1989). FEMINIST POSTSTRUCTURALISM AND DISCOURSE

    ANALYSIS. *Psychology of Women Quarterly, 13*(4), 459-475.doi:

    10.1111/j.1471-6402.1989.tb01014.x

Garnier, J., Savic, S., Boriani, E., Bagnol, B., Häsler, B., & Kock, R. (2020). Helping to

    heal nature and ourselves through human-rights-based and gender-responsive One

    Health. *One Health Outlook*, *2*(1), 22. https://doi.org/10.1186/s42522-020-00029-

    0

Gingerich, E. (2015). "Eco-Friendly" Marketing: Beyond the Label. *Business Faculty*

    Publications, 20.

Gonsalves, K. (2020, June 22). *It's Time To Talk About The Invisible Labor Falling On*

    Women's Shoulders. Mindbodygreen.

    https://www.mindbodygreen.com/articles/what-is-the-mental-load

Gross, S. (2020, August 4). What is the Trump administration's track record on the

    environment? *Brookings*. https://www.brookings.edu/policy2020/votervital/what-

    is-the-trump-administrations-track-record-on-the-environment/

Government of Canada (2019). *Women and climate change, 2019.* Retrieved from

    https://www.canada.ca/en/environment-climate-change/services/climate-

    change/women.html#toc0

Gouldhawke, M. (2020, September October) 100 years of land struggle. *Briarpatch, the*

    Land Back Issue. 49, 5, 9.

Greta's Not the Only One: 7 Other Young Climate Activists to Know By Name. (2019).

    Retrieved October 14, 2019, from InStyle.com website:

    https://www.instyle.com/reviews-coverage/social-media/young-climate-activists-

    who-to-follow

Griscti, O., Aston, M., Warner, G., Martin-Misener, R., & McLeod, D. (2017). Power and
resistance within the hospital's hierarchical system: The experiences of chronically
ill patients. *Journal of Clinical Nursing, 26*(1-2), 238-247. doi:
10.1111/jocn.13382

Gunnarsson, L. (2011). A defence of the category "women." Feminist Theory, 12(1), 23–
37. doi: http://doi.org/10.1177/1464700110390604

Hackman, R. (2015, November 8). *"Women are just better at this stuff": Is emotional
labor feminism's next frontier?* The Guardian.
http://www.theguardian.com/world/2015/nov/08/women-gender-roles-sexism-
emotional-labor-feminism

Hamilton-Hinch, B.-A. G. (2015). *SURVIVING THE IMPACT OF THE EXPERIENCE
OF RACISM ON HEALTH AND WELL-BEING: AN EXPLORATION OF
WOMEN OF AFRICAN ANCESTRY LIVING IN NOVA SCOTIA* [Dalhousie
University].
https://dalspace.library.dal.ca/bitstream/handle/10222/73601/Hamilton-Hinch-
Barbara-Ann-PhD-INTE-December-2015.pdf?sequence=1&isAllowed=y

Hancock, T. (2011). It's the environment, stupid! Declining ecosystem health is THE
threat to health in the 21st century. *Health Promotion International*, *26*(suppl_2),
ii168–ii172. https://doi.org/10.1093/heapro/dar064

Hayes, K. (2019). *Responding to a Changing Climate: An investigation of the
Psychological Consequneces of Climate Change and Community-based Mental
Health Responses in High River*. ProQuest LLC.

Hayes, K., Blashki, G., Wiseman, J., Burke, S., & Reifels, L. (2018). Climate change and

    mental health: Risks, impacts and priority actions. *International Journal of Mental*

    Health Systems, *12*(1), 28. https://doi.org/10.1186/s13033-018-0210-6

Hayes, K., & Poland, B. (2018). Addressing Mental Health in a Changing Climate:

    Incorporating Mental Health Indicators into Climate Change and Health

    Vulnerability and Adaptation Assessments. *International journal of environmental*

    research and public health, *15*(9), 1806. doi:10.3390/ijerph15091806

Health Promotion Canada. (2018). *Vision, Mission, Values | Health Promotion Canada*.

    https://www.healthpromotioncanada.ca/about-us/what-is-hpc/

Healy, N., & Barry, J. (2017). Politicizing energy justice and energy system transitions:

    Fossil fuel divestment and a "just transition." *Energy Policy*, *108*, 451–459.

    https://doi.org/10.1016/j.enpol.2017.06.014

Hill Collins, P., & Bilge, S. (2016). *Intersectionality*. Polity Press.

    http://ebookcentral.proquest.com/lib/dal/detail.action?docID=4698012

Howard, C., Rose, C., & Rivers, N. (2018). *Lancet Countdown 2018 Report: Briefing for*

    Canadian Policymakers. https://storage.googleapis.com/lancet-countdown-

    preprod/2019/10/2018-lancet-countdown-policy-brief-canada.pdf

Hulme, M. (2008). The Conquering of Climate: Discourses of Fear and Their Dissolution.

    The Geographical Journal, *174*. https://www-jstor-

    org.ezproxy.library.dal.ca/stable/30139401

Hulme, M. (2011). *You've been framed: Six new ways to understand climate change*. The

    Conversation. http://theconversation.com/youve-been-framed-six-new-ways-to-

    understand-climate-change-2119

Huseman, J., & Short, D. (2012). 'A slow industrial genocide': Tar sands and the

    indigenous peoples of northern Alberta. *The International Journal of Human*

    Rights, *16*(1), 216–237. https://doi.org/10.1080/13642987.2011.649593

Jacques, Peter J, and Knox, Claire Connolly. "Hurricanes and Hegemony: A Qualitative

    Analysis of Micro-level Climate Change Denial Discourses." *Environmental*

    Politics 25.5 (2016): 831-52. Web.

Jost, C., Kyazze, F., Naab, J., Neelormi, S., Kinyangi, J., Zougmore, R., ... & Nelson, S.

    (2016). Understanding gender dimensions of agriculture and climate change in

    smallholder farming communities. *Climate and Development*, *8*(2), 133-144.

Kaijser, A., & Kronsell, A. (2014). Climate change through the lens of

    intersectionality. *Environmental politics*, *23*(3), 417-433.

Keller, J., Mendes, K., & Ringrose, J. (2018). Speaking 'unspeakable things':

    Documenting digital feminist responses to rape culture. *Journal of Gender*

    Studies, *27*(1), 22–36. https://doi.org/10.1080/09589236.2016.1211511

Khan, K. (2017). Intersectionality in student movements: Black queer womxn and

    nonbinary activists in South Africa's 2015–2016 protests. *Agenda*, *31*(3-4), 110-

    121. https://doi-org.ezproxy.library.dal.ca/10.1080/10130950.2017.1396011

Lambertz, K.-H. (2019, September 23). The world has a moral responsibility to combat

    climate change. *New Europe*. https://www.neweurope.eu/article/the-world-has-a-

    moral-responsibility-to-combat-climate-change/

Levanon, A., England, P., & Allison, P. (2009). Occupational Feminization and Pay:

    Assessing Causal Dynamics Using 1950–2000 U.S. Census Data. *Social Forces*,

    88(2), 865–891. https://doi.org/10.1353/sof.0.0264

Lockyer, S., & Savigny, H. (2020). Rape jokes aren't funny: The mainstreaming of rape jokes in contemporary newspaper discourse. *Feminist Media Studies*, *20*(3), 434–449. https://doi.org/10.1080/14680777.2019.1577285

Lorde, A. (1984). *Sister Outsider: Essays and Speeches* (Vol. 1). Crossing Press.

Howard, C., Lancet Countdown on Health and Climate Change (2018). *Report: Briefing Canadian Policymakers 2018.* Retrieved from http://www.lancetcountdown.org/media/1418/2018-lancet-countdown-policy-brief-canada.pdf

MacConnell, G., Aston, M., Randel, P., & Zwaagstra, N. (2013). Nurses' experiences providing bereavement follow-up: An exploratory study using feminist poststructuralism. *Journal of Clinical Nursing, 22*(7-8), 1094-1102.

Majeed, Haris, and Lee, Jonathan. "The Impact of Climate Change on Youth Depression and Mental Health." *The Lancet. Planetary Health* 1.3 (2017): E94-95. Web.

Mamun, M. A., Huq, N., Papia, Z. F., Tasfina, S., & Gozal, D. (2019). Prevalence of depression among Bangladeshi village women subsequent to a natural disaster: A pilot study. *Psychiatry Research*, *276*, 124–128. https://doi.org/10.1016/j.psychres.2019.05.007

Mandela Gray, B. [@BikoMandelaGray]. (2021, February 20). 1. It's striking how quickly people shift blame. Twitter. https://twitter.com/BikoMandelaGray/status/1361917658015408128

McDaniel, A. (1988). Women's roles and reproduction: The changing picture in Canada in the 1980's. *Atlantis,* 14 (1).

McCarthy, S., & Walsh, M. (2019). *Federal election 2019: Where the four main parties stand on climate policy*. https://www.theglobeandmail.com/politics/article-federal-election-2019-where-the-four-main-parties-stand-on-climate/

Meyiwa, T., Maseti, T., Ngubane, S., Letsekha, T., & Rozani, C. (2014). Women in selected rural municipalities: Resilience and agency against vulnerabilities to climate change. *Agenda*, *28*(3), 102-114.

Messervey, L. (2020, March 7). *Why Climate Deniers Are Sexualizing The Young Women At The Centre Of The Debate*. HuffPost Canada. https://www.huffingtonpost.ca/entry/greta-thunberg-naomi-seibt_ca_5e62b394c5b68d6164543332

Miller, C. C. (2016, March 18). As Women Take Over a Male-Dominated Field, the Pay Drops. *The New York Times*. https://www.nytimes.com/2016/03/20/upshot/as-women-take-over-a-male-dominated-field-the-pay-drops.html

Moser, Susanne C, and Dilling, Lisa. *Creating a Climate for Change*. Cambridge: Cambridge UP, 2007. Web.

Mselle, L., Aston, M., Kohi, T., Mbekenga, C., Macdonald, D., White, M., . . . Jefferies, K. (2017). The Challenges of Providing Postpartum Education in Dar es Salaam, Tanzania: Narratives of Nurse-Midwives and Obstetricians. *Qualitative Health Research, 27*(12), 1792-1803. doi: 10.1177/1049732317717695

Nelson, J. A. (2010). Getting past "rational man/emotional woman": Comments on research programs in happiness economics and interpersonal relations. *International Review of Economics*, *57*(2), 233–253. https://doi.org/10.1007/s12232-010-0096-3

North, A. (2019, October 4). *7 positive changes that have come from the #MeToo movement*. Vox. https://www.vox.com/identities/2019/10/4/20852639/me-too-movement-sexual-harassment-law-2019

Nyberg, D., & Wright, C. (2016). Performative and political: Corporate constructions of climate change risk. *Organization*, *23*(5), 617–638. https://doi.org/10.1177/1350508415572038

Pedregon, Farley, Davis, Wood, & Clark. (2011). Social desirability, personality questionnaires, and the "better than average" effect. *Personality and Individual Differences.* doi**:** 10.1016/j.paid.2011.10.022

Petrasek Macdonald, Cunsolo Willox, Ford, Shiwak, & Wood. (2015). Protective factors for mental health and well-being in a changing climate: Perspectives from Inuit youth in Nunatsiavut, Labrador. *Social Science & Medicine, 141*, 133-141. doi: 10.1016/j.socscimed.2015.07.017

Pearson, K., & Dancey, L. (2011). Elevating Women's Voices in Congress: Speech Participation in the House of Representatives. *Political Research Quarterly*, *64*(4), 910–923.

Pelletier, C. (2010). Book Review: Feminist disruptions: Reflexivity, ignorance and silence in generating knowledge Roisin Ryan-Flood and Rosalind Gill (eds), Secrecy and Silence in the Research Process: feminist reflections, Routledge: London, 2010; 311 pp.: 0415452147. *European Journal of Women's Studies*, *17*(4), 434–436. https://doi.org/10.1177/13505068100170041002

Reynolds, B., & Tyler, M. (2018). Applying a Gendered Lens to the Stay and Defend or Leave Early Approach to Bushfire Safety. *Australian Journal of Public Administration*, *77*(4), 529–541. https://doi.org/10.1111/1467-8500.12268

Riecher-Rössler, A., García-Moreno, Claudia, & S. Karger. (2013). Violence against women and mental health (Key issues in mental health ; v. 178). Basel ; New York: Karger.doi: 10.1159/isbn.978-3-8055-9989-4

Scanlan, Q., & Robinson, A. (2020, November 12) Stacey Abrams says efforts against voter suppression made "the difference" in Georgia. *ABC News.* https://abcnews.go.com/Politics/stacey-abrams-voter-suppression-effort-made-difference-georgia/story?id=74146679

Scott, J. (1992). Experience. In J. Butler, & J. Scott (Eds.), Feminists Theorize the Political (pp. 22-40). London: Routledge, Chapman and Hall Inc.

Shields, S. A. (2007). Passionate men, emotional women: Psychology constructs gender difference in the late 19th century. *History of Psychology*, *10*(2), 92–110. https://doi.org/10.1037/1093-4510.10.2.92

Smith, H. A. (2008). Political Parties and Canadian Climate Change Policy Political Parties & Foreign Policy. *International Journal*, *64*(1), 47–66.

Stecula, D. A., & Merkley, E. (2019). Framing Climate Change: Economics, Ideology, and Uncertainty in American News Media Content From 1988 to 2014. *Frontiers in Communication*, *4*. https://doi.org/10.3389/fcomm.2019.00006

Stone, K. M., Cameron, E. S., Spencer, R., & Hamilton-Hinch, B. (2021). Tackling Gender and Racial Inequities: Climate Solutions for All. *Healthy Populations Journal*, *1*(1), Article 1. https://doi.org/10.15273/hpj.v1i1.10656

Sundblad, E.-L., Biel, A., & Gärling, T. (2007). Cognitive and affective risk judgements related to climate change. *Journal of Environmental Psychology*, *27*(2), 97–106. psyh. https://doi.org/10.1016/j.jenvp.2007.01.003

The Combahee River Collective. (1983). *The Combahee River Collective Statement*.

https://d1wqtxts1xzle7.cloudfront.net/63664556/combahee_river_statement20200

618-38507-xcxt2r.pdf?1592466401=&response-content-

disposition=inline%3B+filename%3DThe_Combahee_River_Collective_Stateme

nt.pdf&Expires=1623589827&Signature=UW1HLxHbTSSHhtQqZ0Omj3ImT0s3

RChj~DFAAPMpSYVCwpPlbzjpBR1vCsYMSItx1v5MvEMNB5guMfd4LZOzB

S9cN5-VMPYAf6po0RoA-

MXhvtKwP9mEmldEuzV2U4haHHCVx8AbObORRMZ92pp8AdW1St7QPVql

WaMAm8Ibn6BFtkQlpcUA6FnwKjCC4KknO1PTI9yuBNPU5Orn0T9lTXN9v0

5ZoEWiu2P7BKV7IUcB9XRGnh1t1yrnGVdE1a-

Y5iHL~Cn35hI7qmbfyAma5P8DM5ni2baagyd0wIfI4bpkLcdwfWqeSKiqqpIgxw

VxtN~j5vni~OJGFvON6ZZIaQ__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Tyler, M., & Fairbrother, P. (2013). Bushfires are "men's business": The importance of

gender and rural hegemonic masculinity. *Journal of Rural Studies*, *30*, 110–119.

https://doi.org/10.1016/j.jrurstud.2013.01.002

Thompson R, Hornigold R, Page L, Waite T. Associations between high ambient

temperatures and heat waves with mental health outcomes: a systematic review.

Public Health 2018;161:171-91.

UNDP. (2015). *Sustainable Development Goals | United Nations Development

Programme*. https://www.undp.org/sustainable-development-goals

United Nations. (2019). *Only 11 Years Left to Prevent Irreversible Damage from Climate

Change, Speakers Warn during General Assembly High-Level Meeting | Meetings

Coverage and Press Releases*. United Nations| Meetings Coverage and Press

Release. https://www.un.org/press/en/2019/ga12131.doc.htm

V. (2021, June 1). *Disaster patriarchy: How the pandemic has unleashed a war on women*. The Guardian.

http://www.theguardian.com/lifeandstyle/2021/jun/01/disaster-patriarchy-how-the-pandemic-has-unleashed-a-war-on-women

Van Der Voo, L. (2020, October 4). *The political theater of climate change: A 62-year history of inaction*. Salon. https://www.salon.com/2020/10/04/the-political-theater-of-climate-change-a-62-year-history-of-inaction/

Van Wijlen, J. E., & Aston, M. (2019). Applying Feminist Poststructuralism as a Framework for Exploring Infant Feeding Interactions in the Neonatal Intensive Care Unit. *Witness: The Canadian Journal of Critical Nursing Discourse*, *1*(1), 59–72. https://doi.org/10.25071/2291-5796.12

Volcovici, V., & Green, M. (2019). *'How dare you': Greta Thunberg gives powerful, emotional speech to the UN*. Global News.

https://globalnews.ca/news/5940258/greta-thunberg-speech-un/

Waldron, I. (2018). Re-thinking waste: Mapping racial geographies of violence on the colonial landscape. *Environmental Sociology*, *4*(1), 36–53.

https://doi.org/10.1080/23251042.2018.1429178

Weedon, C. (1987). *Feminist practice and poststructuralist theory*. (2nd Ed) Blackwell Publishers

Whittaker, J., Eriksen, C., & Haynes, K. (2016). Gendered responses to the 2009 Black Saturday bushfires in Victoria, Australia. *Geographical Research*, *54*(2), 203–215. https://doi.org/10.1111/1745-5871.12162

WHO | Gender and women's mental health. (2013). Retrieved October 14, 2019, from

        WHO website: https://www.who.int/mental_health/prevention/genderwomen/en/

Woods A. More than 90 deaths now linked to heat wave in Quebec. 2018. [cited July 18,

        2018]. Available from: https://www.thestar.com/news/canada/2018/07/18/89-

        deaths-now-linked-to-heatwave-in-quebec.html.

Willox, A. C., Stephenson, E., Allen, J., Bourque, F., Drossos, A., Elgarøy, S., ... &

        MacDonald, J. P. (2015). Examining relationships between climate change and

        mental health in the Circumpolar North. *Regional Environmental Change*, *15*(1),

        169-182

Wilson K. (2003). Therapeutic landscapes and First Nations peoples: An exploration of

        culture, health and place. *Health Place.* 9:83–93.doi.org/10.1016/S1353-

        8292(02)00016-3

Wilson, A. (2020, September October) "Land Back" is more than the sum of its parts.

        Briarpatch, the Land Back Issue. 49, 5, 2.

Xu, Y., Wheeler, S. A., & Zuo, A. (2018). Will boys' mental health fare worse under a

        hotter climate in Australia? *Population and Environment*, *40*(2), 158–181.

        https://doi.org/10.1007/s11111-018-0306-6

Project title: Understanding Young Women's Mental Health in the Changing Climate

Researcher: Kathryn Stone, MA in Health Promotion Candidate, Dalhousie University,

Kathryn.stone@dal.ca, (902)-456-2639

Other researchers: Dr. Barb Hamilton-Hinch (b.hamilton.hinch@dal.ca) and Dr.

Rebecca Spencer (Becky.spencer@dal.ca)

Introduction

We invite you to take part in a study being conducted by Kathryn, a Master of Arts in

Health Promotion student at Dalhousie University. Choosing whether or not to take part

in the study is entirely your choice. There will be no negative impact if you decide not to

take part. The below tells you what is involved in the study, what you will be asked to do

and about any benefit or risk you might experience. You should discuss any questions

you have about this study with Kathryn Stone. Feel free to ask as many questions as you

like, and contact her at any time.

Study purpose and outline

Climate change impacts women disproportionately; however, the mental health impacts

of climate change on women have been understudied. Specifically, there has been no

research to date that focuses on the experiences of young women's mental health in

relation to the changing climate. This study will explore climate change from the

perceptions of young women.

Who can take part in this study

You may take part in this research study if you reside in Halifax, Nova Scotia, and if you

are between the ages of 16 and 28. Additionally, you must identify as a woman, non-

binary femme, or Two-Spirited, and be interested in engaging in the data collection plans

described below. You do not have to have had direct experiences with climate change, such as experiences of extreme weather events such as floods, storms, wildfires, drought, sea-level rise, or ice melting.

What you will be asked to do

If you decided to take part in this study, you will be asked to partake in either a focus group or a one-on-one interview, whichever is more comfortable to you. During your interview or focus group, you will be asked to share your experiences with climate change, specifically, its impacts on your mental health. The definition of mental health for this study is broad, and can include emotional, mental, spiritual, cultural, and social wellbeing. You do not need to have any mental health challenges, psychological diagnoses, or disorders to take part in this study. All interviews and focus groups will be recorded with a recorder, and later transcribed verbatim.

Possible benefits, risks, and discomforts

Participating in this study might not benefit you, but we may learn things from your experiences that could help benefits other young women during this climate crisis. Talking about climate change and its impact may be therapeutic for participants but given the topic sensitivity of mental health it could also evoke strong emotions. You can choose to skip any question in your interview or focus group and are free to stop participating at any time.

How you will be protected

Your name will not be published in any study findings, and only the researchers (Kathryn Stone, Dr. Barb Hamilton-Hinch, Dr. Rebecca Spencer) will have access to the study data. Direct quotes will be used in study findings but will not be associated with any individual name. No information about your participation in this research will be

disclosed to anyone unless compelled to do so by law, such as in the unlikely event that child abuse is suspected and the researchers are required to contact authorities.

If you decide to stop participating

You are free to leave the study and stop participating at any time without any ramifications. If you participated in a one-on-one interview, you can request that your data be removed from the study for up to one week after your interview as after a week your data will have been transcribed.

How to obtain results

The lead researcher, Kathryn Stone, can provide you with a short summary of the study findings when it is finished, as well as updates on future publications or presentations including study findings. To obtain this summary and updates you can include your contact information at the end of the signature page.

Questions

The researchers are happy to talk with you about any questions or concerns you may have about your participation in this study. Please contact Kathryn Stone at 902-456-2639, Kathryn.stone@live.ca, or either of her supervisors Dr. Barb Hamilton-Hinch at b.hamilton.hinch@dal.ca; Dr. Rebecca Spencer at Becky.spencer@dal.ca. If you have any ethical concerns about your participation in this research, you may also contact Research Ethics, Dalhousie University at (902)-494-1462, ethics@dal.ca.
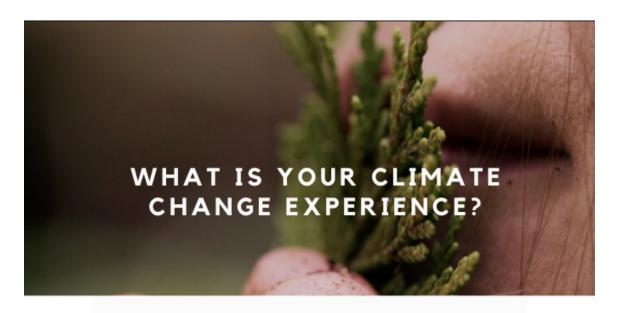
Signature page

Project title: Understanding Young Women's Mental Health in the Changing Climate

Researcher: Kathryn Stone, MA in Health Promotion Candidate, Dalhousie University, Kathryn.stone@dal.ca, (902)-456-2639

I have read the explanation about this study. I have been given the opportunity to discuss it and my questions have been answered to my satisfaction. I understand that I have been asked to take part in a workshop, take photos, and engage in group discussion of those photos. I understand that group discussion will be audio recorded, and direct quotes of things I say may be used without identifying me. I agree to take part in this study. My participation is voluntary and I understand that I am free to withdraw from the study at any time, but that my individual voice cannot be removed from audio-recorded group discussion. I understand that I will be given another opportunity in the future to consent to the use of my photos publicly.

_____   _____   _____
Name   Signature   Date

___ I am over the age of 18.

If participant is under the age of 18, parent/guardian consent is also required:

_____   _____
_____
Parent/Guardian Name   Signature   Date

Provision of Results
___ I would like to receive a copy of a summary of this study's results.
___ I would like to be updated (via email) regarding publications, events, or presentations associated with this study.

If you checked either of the above boxes, please complete:
Name: _____
Email address: _____

Appendix B: Example recruitment material

WHAT IS YOUR CLIMATE CHANGE EXPERIENCE?

The research study "Understanding Women's Mental Health in the Changing Climate in Halifax, Nova Scotia" is looking for young women to share their experiences with climate change and their advice for the future, either in a one-on-one interview or a focus group (your choice!) of 1 hour maximum.

The study is interested in how the change in climate has impacted your mental health. This does not mean that you need to have a mental illness to participate. The study considers mental health broadly, as something that everyone has, which includes cultural, spiritual, emotional, and mental well-being.

To participate in the study you must:

- **Identify as a woman** (women in this study is inclusive of BIPOC, non-binary, queer, Two-Spirited, and trans identities)
- **Be between the ages of 16 and 28**
- **Live in Halifax, Nova Scotia**

If you are interested in participating, contact Kathryn stone at: Kathryn.Stone@dal.ca

DALHOUSIE UNIVERSITY

Appendix C: Semi-structured interview/focus group questions

• Can you tell me a little bit about what you know about climate change?

  • How do you understand climate change?

  • How is climate change talked about?

    • Further probes: with peers, via media, with others

  • How did you learn about climate change?

    • Where do you get information about climate change?

• Can you tell me a little bit about how you, and/or your peers have experienced climate change?

  • How does climate change make you, or your peers, feel?

• Can you tell me about how you think climate change might relate to mental health, if it does?

• Can you tell me about how being a women might impact how we experience climate change?

  • How are women talked about relating to climate change?

  • What gender norms, stereotypes, or experiences might be related to how young women's mental health is impacted by climate change?

    • E.g. Caregiving, abuse/violence

• Can you tell me about how other characteristics might impact how young women experience climate change and mental health?

  • Race

  • Economic position

  • Education

  • Ability

  • Age

• How might mental health and climate change be related for women who live in urban areas, like Halifax?

• What action do you think should be taken to address climate change?

> • Global level

> • Federal level to Community level

> • Different institutions or organizations (schools, recreation spaces, places of worship, etc.)

• Who needs to know more about how climate change impacts women and women's mental health?

• Who might this research most benefit? Who would you want the results of this study to be shared with?

• What do you do to make yourself feel better about climate change?

• What would help you feel better about the changing climate?

Calls for Extractive and Development Industries:

13.1   We call upon all resource-extraction and development industries to consider the safety and security of Indigenous women, girls, and 2SLGBTQQIA people, as well as their equitable benefit from development, at all stages of project planning, assessment, implementation, management, and monitoring.

13.2   We call upon all governments and bodies mandated to evaluate, approve, and/or monitor development projects to complete gender-based socio-economic impact assessments on all proposed projects as part of their decision making and ongoing monitoring of projects. Project proposals must include provisions and plans to mitigate risks and impacts identified in the impact assessments prior to being approved.

13.3   We call upon all parties involved in the negotiations of impact-benefit agreements related to resource-extraction and development projects to include provisions that address the impacts of projects on the safety and security of Indigenous women, girls, and 2SLGBTQQIA people. Provisions must also be included to ensure that Indigenous women and 2SLGBTQQIA people equitably benefit from the projects.

13.4   We call upon the federal, provincial, and territorial governments to fund further inquiries and studies in order to better understand the relationship between resource extraction and other development projects and violence against Indigenous women, girls, and 2SLGBTQQIA people. At a minimum, we support the call of Indigenous women and leaders for a public inquiry into the sexual violence and racism at hydroelectric projects in northern Manitoba.

13.5   We call upon resource-extraction and development industries and all governments and service providers to anticipate and recognize increased demand on social infrastructure because of development projects and resource extraction, and for mitigation measures to be identified as part of the planning and approval process. Social infrastructure must be expanded and service capacity built to meet the anticipated needs of the host communities in advance of the start of projects. This includes but is not limited to ensuring that policing, social services, and health services are adequately staffed and resourced.