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Effects of the COVID-19 Vaccine Mandate on Healthcare Workers' Decisions to Refuse Vaccination and Quit Their Jobs from Canadian Hospitals

Henry Bwang Ewane
Walden University

Walden University

College of Health Sciences and Public Policy

This is to certify that the doctoral dissertation by

Henry Ewane

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Review Committee
Dr. David Segal, Committee Chairperson, Health Services Faculty
Dr. Naomi DeShore-Osborne, Committee Member, Health Services Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2024

Abstract

Effects of the COVID-19 Vaccine Mandate on Healthcare Workers' Decisions to Refuse Vaccination and Quit Their Jobs in Canadian Hospitals

by

Henry Ewane

MBA, Franklin University, 2008

BS, University of Yaoundé I, 1998

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Healthcare Administration

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Fall 2024

Abstract

COVID-19 vaccine uptake and compliance implementation challenges exist among some Canadian healthcare workers (HCWs), including hospital administrators, despite free vaccination as a preventive measure to control the spread. Earlier studies have examined COVID-19 vaccine hesitancy and refusal among Canadian HCWs, but not how the -19 vaccine and vaccine mandates may have influenced their decisions to refuse vaccination and quit their jobs. This qualitative phenomenological study involved exploring how Canadian hospital HCWs' lived experiences with the COVID-19 vaccine and vaccine mandates affected their decisions to refuse COVID-19 vaccination and quit their jobs. The theory of reasoned action was used to guide interview questions to understand this topic. I recruited for Zoom interviews using both the online crowdsourcing Amazon Mechanical Turk (Mturk) platform and snowball sampling. All participants were Canadian HCWs who worked in a hospital with a COVID-19 vaccine mandate policy, between 20 and 60 years, possessed a Mturk verification ID, refused the COVID-19 vaccination, and quit their job due to vaccine mandate policies. Transcribed interviews were coded and analyzed using Quirkos thematic analysis with the following themes: safety, skepticism towards vaccine efficacy, newness of the vaccine, strain variability, public image, uncertainty, autonomy, and personal beliefs against mandated health interventions. These findings may help address ethical dimensions that are involved in mandatory vaccination policies and the importance of respecting individual autonomy and personal medical choices.

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Dedication

In memory of my late parents, with love for my children, in gratitude to my brothers, and in recognition of my strength, I dedicate this work.

To my late parents, whose love and guidance continue to light my path. Of blessed memory, you both instilled in me the values of perseverance, integrity and the pursuit of knowledge. Your unwavering belief in my potential has been my constant source of strength. Though you are no longer here to witness this milestone, your spirit and legacy live on in every word of this dissertation. I dedicate this work to you, with profound gratitude and love.

To my son and daughters, who have been my greatest joy and my most cherished inspiration. Your patience, understanding, and encouragement have sustained me through the many late nights and long days of this journey. I hope my pursuit of this dream serves as a testament to the importance of education and hard work and inspires you to chase your dreams with the same passion and dedication.

To my eldest brother, Dr. Ambrose Ewane, whose constant support and unwavering belief in my abilities have been a guiding light. You have been my mentor, my cheerleader, and my rock. Your wisdom and encouragement have helped me navigate the challenges and obstacles along this path. Your faith in me has never wavered, and for that, I am eternally grateful. This accomplishment is as much yours as it is mine, for without your guidance and inspiration, I would not have reached this point.

To myself, for enduring and overcoming the numerous challenges and adversities that came with this dissertation process, I give God all the glory.

Acknowledgments

I would like to begin this acknowledgment by expressing my deepest gratitude to God for the strength, resilience, and guidance provided throughout this journey. The challenges encountered during this dissertation were numerous and formidable, but with God's unwavering support, I found the courage and perseverance to overcome each one. This dissertation would not have been possible without the divine blessings that have been a constant source of comfort and motivation.

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To my friends who have been eagerly and impatiently awaiting the outcome of this study, I extend my heartfelt thanks. Your unwavering interest, encouragement, and support have been a source of inspiration throughout this process. Your curiosity and enthusiasm kept me motivated, and your belief in my capabilities provided the strength needed to persevere. Thank you for standing by me, for your patience, and for your faith in the successful completion of this work.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Unvaccinated healthcare workers (HCWs) who are professionally trained to care for COVID-19 patients in healthcare settings are at greater risk of COVID-19 infection due to potential lack of immunity to (Shankar et al., 2022). Working tirelessly to care for COVID-19 patients in their efforts to mitigate the spread of SARS-CoV-2, HCWs are risking their lives and patients alike if not vaccinated. Risks are undisputable due to repeated contact with patients as well as colleagues in care settings. In addition to applying recommended infection control measures such as routine handwashing and wearing face masks, a strategic measure to contain the spread of SARS-CoV-2 in hospitals is through mandatory COVID-19 vaccination, which if not implemented, will lead to increased exposure for both HCWs and patients (Juyal et al., 2022). I sought to explore Canadian HCWs' perceptions of the COVID-19 vaccine and mandates and factors that influenced decisions to refuse vaccination at the cost of quitting their jobs. Mandatory COVID-19 vaccination programs for HCWs could boost rates of vaccination and bring about significant decreases in healthcare-associated COVID-19 infections among hospitalized patients as well as HCWs.

This chapter includes a brief description of the COVID-19 vaccine and mandatory vaccination among Canadian HCWs. This is followed by a background section and problem statement that provides evidence for the current problem and relevance of the study. Next, I address the purpose of the study as well as data collection, research questions, theoretical framework, and nature of the study as well as methodology and key

concepts. The chapter also includes definitions of terms, assumptions, scope and delimitations, limitations, significance, and a summary.

Background

During the beginning of the COVID-19 pandemic, Canadian HCWs infected with SARS-CoV-2 were two to three times as likely to be hospitalized with the disease compared to general populations due to increased exposure (Darwish et al., 2022). The first reported case of COVID-19 in Canada was in Toronto on January 20, 2020, after a person returned from Wuhan, China (Urrutia et al., 2021). Transmission results from droplets via close contact with exposed individuals who transmit the disease by coughing, sneezing, talking, or singing, as well as contact with a contaminated object or surface. Darwish et al. (2022) noted most HCWs in direct contact with infected COVID-19 patients reported COVID-19 infection was due to limited access to the right personal protective equipment (PPE) as well as lack of necessary COVID-19-specific infection control training.

Compliance with mass vaccination among HCWs is an important way of becoming artificially immune to SARS-CoV-2 and controlling the pandemic in large proportions (Baeza-Rivera et al., 2021). Going through the process of vaccination leads to the response and creation of antibody production, which is a defense mechanism. The Centers for Disease Control and Prevention (CDC, 2022b) noted COVID-19 vaccination is safe and prevents illnesses that lead to long-term health outcomes, hospitalization, and death. Vaccination helps protect individuals by building immune systems that potentially protect them from infection and illness. However, some HCWs in vaccination programs

have been hesitant and refused due to personal reasons, which has affected vaccination rates in hospital settings.

Mandatory vaccination policies are one of the most powerful interventions to increase vaccination rates. Bardosh et al. (2022) argued hesitant and refusing attitudes of some Canadian HCWs regarding COVID-19 vaccination was challenging to hospital administrative staff in terms of preventing transmission of the disease to patients and coworkers. Bardosh et al. (2022) argued restricting HCWs' access to work based on vaccination status affected their human rights. HCWs are professionally committed to taking care of frail patients because their safety is a primary ethical obligation (Moodley, 2022). Therefore, unvaccinated HCWs expose and compromise the welfare of vulnerable patients, justifying reasons to improve vaccination compliance and implementing COVID-19 vaccine mandates. This study will help explore the knowledge gap concerning lived experiences involving the COVID-19 vaccine and vaccine mandates that influenced some Canadian HCWs' decisions to refuse vaccination and quit their jobs.

Problem Statement

Vaccination against COVID-19 leads to artificial immunity and therefore is a strong protective measure against the illness (CDC, 2022b). Despite proven evidence about the safety and effectiveness of COVID-19 vaccines in terms of reducing its spread and severity in hospital care settings, vaccine uptake rates among Canadian HCWs continue to be low (Karaivanou et al., 2022). This study involved investigating their perceptions of the COVID-19 vaccine and mandates on their decisions to refuse vaccination and quit their jobs. Achieving high vaccination coverage among HCWs in the

care setting is essential for limiting transmission among patients and coworkers. Level of uptake of COVID-19 vaccines across Canadian provinces among HCWs has been problematic due to their perceptions of the vaccine and vaccine mandates. Despite mandatory vaccination policies, some HCWs chose not to participate.

Greyson et al. (2022) noted similar vaccine mandate policies have been implemented in some Canadian provinces. In British Columbia, vaccine mandate policies for children in public and private schools were issued in 2019. Regulations regarding mandate policies warranted vaccination status of children in public and private schools be made known by provincial health authorities and urged proper education of parents regarding the need to vaccinate their children. Following implementation of the mandate and education of parents, records showed an increase in vaccine uptake rates among schoolchildren, and the strategy has proven to be working and ongoing. COVID-19 vaccine hesitancy and refusal have been trending among some HCWs in hospital care settings, despite their professional obligation comply with codes of ethics involving protecting frail patients. These attitudes and behaviors pose challenges to mandates in hospitals.

Different mindsets among HCWs regarding participation rates and uptake of COVID-19 vaccines affect overall rationale for vaccination of HCWs and goal attainment efforts. Flood et al. (2021) noted vaccines provided to HCWs protect both HCWs and patients and eventually reduce overall burden of SARS-CoV-2 transmission while on duty. However, vaccine mandates in hospitals caused many to quit their jobs due to fear and anxiety about the vaccine's adverse effects, vaccine efficacy, and manufacturing

processes. To address the literature gap, I explored perceptions of Canadian HCWs on COVID-19 vaccines and vaccine mandates in terms of their decisions to refuse vaccination and quit their jobs.

Purpose of the Study

The purpose of this qualitative phenomenological study was to explore the Canadian HCWs' perceptions of the COVID-19 vaccine and mandate on their decisions to refuse vaccination and quit their jobs. The study will help identify, analyze, and interpret their perspectives about the -19 vaccine as well as outcomes of perspectives. This will lead to valuable personal insights regarding the complexity of this topic.

Research Questions

RQ1: What are perceived lived experiences of Canadian hospital HCWs regarding COVID-19 vaccines?

RQ2: What are perceived lived experiences of Canadian hospital HCWs Regarding COVID-19 vaccine mandate policies?

RQ3: What experiences influenced Canadian HCWs' decisions to refuse COVID-19 vaccinations and quit their jobs?

Theoretical Framework

The theory of reasoned action (TRA), initially pioneered by Martin Fishbein in 1963 and codeveloped by Icek Ajzen in 1975, is used to provide insights regarding understanding and predicting human behavioral intentions (Ajzen, 2012). The theory is used to explain how human intentions can predict behavior. It is based on the assumption that people behave rationally and always use all information available to them to act. The

TRA emphasizes the fact that the most important factor that influences whether or not a behavior will occur is individual intention. Intentions are thoughtful human habits that come first in a human's mind before any behavior can occur. The greater the probability of one's intention, the more likely behavior will occur, and vice versa.

Intention constitutes attitudes and subjective norms regarding behaviors (Akther & Nur, 2022). Attitudes refer to positive or negative thoughts of individuals that influence behaviors and involve two stages. Firstly, individuals assess consequences associated with performing such behaviors, and second, they evaluate effects of consequences, whether good or bad, before engaging in the behavior. Subjective norms are social pressures individuals experience when performing behaviors that are influenced by normative beliefs and motivation to comply. Normative beliefs are issues involving individuals in terms of what they consider important or not. Motivation to comply involves whether or not issues are relevant for individuals.

Attitudes and subjective norms regarding the COVID-19 vaccine and vaccine mandate affect extent of HCW behaviors in terms of receiving the vaccine (Aydin et al., 2021). A HCW whose intention of is to refuse the vaccine because of concerns involving its safety and manufacture eventually could lead to refusal behaviors. Similarly, HCWs who believe motivation to comply with mandatory vaccination in hospital settings is a potential threat is a type of negative social pressure. This influences behavioral intention, which also potentially leads to vaccination refusal.

Nature of the Study

A phenomenological design with interview questions was used for an in-depth exploration of the COVID-19 vaccine and vaccine mandate as well as HCWs' decisions to refuse vaccination and quit their jobs. I used thematic analysis to address this topic. My goal was to generate themes and subthemes that were necessary to answer research questions. Feelings, perceptions, and beliefs of HCWs were interpreted to understand their lived experiences regarding this topic.

Definitions

COVID-19: An infectious disease caused by SARS-CoV-2. It is primarily transmitted through droplets by coughing, sneezing, talking, singing, or contact through touching contaminated objects (Siegel & Mallow, 2020).

COVID-19 Vaccine: A type of vaccine which helps the body prepare and develop immunity against SARS-CoV-2 (CDC, 2022b).

Healthcare Workers (HCWs): Clinical and nonclinical employees working in hospital care settings, including volunteers and contractors, irrespective of clinical responsibility or patient care (Berry et al., 2018).

Mandatory vaccination: Vaccine requirements for HCWs as a condition for working in care settings (Savulescu, 2021). However, certain exemptions may be allowed, such as religious beliefs or medical reasons.

Vaccine Hesitancy: Reluctance or refusal to be vaccinated due to personal reasons (Dubé et al., 2013).

Vaccine Refusal: The act of refusing to vaccinate despite availability of vaccine services and supporting evidence (Muhajarine et al., 2021).

Variants of concern (VOCs): Changes in the genetic structure of SARS-CoV-2 resulting in new variants that may spread easily between people and become more infectious (Ahmad et al., 2022).

Assumptions

. I assumed that participants were aware of vaccination practices in hospital care settings and measures for controlling infectious diseases. Moreover, I assumed participants were aware of their role in disease prevention and patient safety. I also assumed all hospitals across Canada implemented mandatory vaccination policies for HCWs against COVID-19. These assumptions were important for addressing the COVID-19 vaccine and mandate .

Scope and Delimitations

I focused on participants' decisions to refuse vaccination and quit their jobs without regrets. Participants in this study were Canadian HCWs.

Data collection for the study included all hospitals across Canada.

Limitations

A potential limitation of this study is that participants may not have answered questions truthfully, which may have resulted in transcription errors, so coded transcripts were reviewed with each member for accuracy. Also, political climate of healthcare leadership and media coverage of the COVID-19 vaccine may have influenced participants' attitudes and behaviors regarding acceptance or refusal of the COVID-19

vaccine. Given the online survey prescreening format, the population of HCWs was difficult to describe, and there was the possibility of biases during the recruitment process. As a result, findings from the sample are difficult to generalize to HCWs because this population cannot be described, and biases may have contaminated the sample. Furthermore, there may be unknown conditions or factors at the hospital facility where HCWs exercise their job duties, and this could have an impact on their responses.

Significance

Vaccination against infectious diseases including COVID-19 is recommended as a means of preventing spread of the disease. Ethically and professionally, it is the responsibility of HCWs to reduce risks of infection. HCWs also educate their patients on the importance and benefits of vaccination. Paradoxically, some HCWs have opted out of COVID-19 vaccination in hospital settings, which could promote spread of infection to patients and coworkers.

Increases in vaccine uptake may lower infection rates and prevent serious illness complications. Mandatory vaccination policies are therefore a strategic approach to improve vaccine uptake, minimize disease transmissibility, and prevent COVID-19-related morbidity and mortality. Findings may help raise awareness of health benefits of COVID-19 vaccination programs and assist hospital administrators in terms of developing better and alternative options to educate HCWs on health benefits of COVID-19 vaccination. Understanding health benefits will lead to valuable insights involving vaccination acceptance.

Summary

Unvaccinated Canadian HCWs hospital settings risk both their lives and patients they serve (Shankar et al., 2022). Though these HCWs are ethically and professionally responsible for protecting the lives of vulnerable patients, hesitant and skeptical attitudes regarding the COVID-19 vaccine expose frail patients to increased risks of COVID-19 infection.. No research has been conducted to examine refusal behaviors of Canadian HCWs who lost their job. Findings from this research will be used to address this knowledge gap.

Chapter 2 includes a review of literature involving the history and origin of COVID-19, VOCs, viral modes of transmission and spread, COVID-19 vaccine development and recommendation, efficacy and safety, vaccine hesitancy, ethics of mandatory vaccinations, the TRA, HCWs' attitudes regarding COVID-19 vaccination, COVID-19 containment strategies in Canadian hospitals, and social and economic impacts. The chapter ends with a summary.

Chapter 2: Literature Review

COVID-19 is the world's most recent pandemic, and it has affecting millions across the globe by causing disease complications in vulnerable populations. Those with underlying medical conditions such as chronic respiratory disease, cardiovascular disease, obesity, immunocompromised, diabetes, chronic kidney disease, liver disease, and gastrointestinal organs are more vulnerable (Siegel & Mallow, 2020). Several other groups including HCWs consisting of physicians, nurses, midlevel providers, and allied health professionals also constitute vulnerable populations due to their frequent contact with infected patients.

Transmission of SARS-CoV-2 among human populations occurs primarily through respiratory droplets and aerosol generated from sneezing, coughing, and talking, which may land on the nose, mouth, or eyes, as well as contaminated objects that may be subject to touching (Zhou et al., 2021). Sporadic hand washing, maintaining interpersonal distance, and wearing face masks are encouraged practices and prevention strategies to reduce development and spread of COVID-19. In addition to access to free vaccination, HCWs in Canadian hospitals have been informed of prevention strategies to avoid the spread of COVID-19 in care settings. However, some HCWs have opted out of the free vaccination program in some hospitals at the expense of losing their jobs (Dzieciolowska et al., 2021).

In hospital settings, achieving high COVID-19 immunization rates among HCWs through mandatory vaccination has been part of a range of actions that healthcare administrators implemented to help prevent and limit the spread of COVID-19. As a

result, proof of vaccination has been a policy requirement for employees for continuity of work. However, attitudes of some HCWs regarding vaccine uptake and mandates has been negative. Therefore, the purpose of this qualitative study is to explore Canadian HCWs' perceptions of the COVID-19 vaccine and mandate on their decisions to refuse vaccination and quit their jobs.

This chapter includes literature search strategies, information regarding the TRA, and literature related to the COVID-19 vaccine and vaccine mandates.

Literature Search Strategy

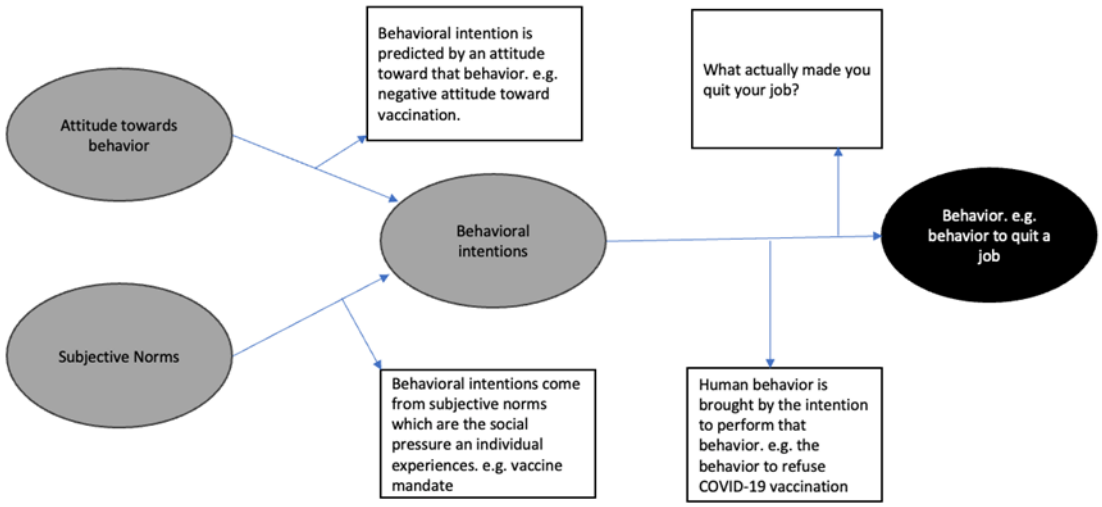
I used the following databases for this study: Academic Search Complete and Google Scholar. I used the following key terms: *COVID-19 pandemic*, *COVID-19 vaccine, variants of concern (VOCs), vaccine mandate, healthcare workers (HCWs), COVID-19 vaccine safety, vaccine hesitancy, vaccine refusal, fear and anxiety, misinformation, losing jobs,* and *theory of reasoned action (TRA).* Sources were published between 2019 and 2024. A total of 51 peer-reviewed articles were retrieved.

Theoretical Foundation

The TRA involves emphasizing the importance of attitudes in terms of predicting behaviors (Ajzen, 2012). According to Fishbein and Ajzen (1975), behaviors of people is result from intentions which are preceded by attitudes and subjective norms. Someone's intention predicts his or her behavior, and attitudes and subjective norms predict intention toward behaviors. Subjective norms are perceived social pressures which lead to performing or refraining from performing target behaviors (see Figure 1).

Figure 1

TRA



Given the effectiveness of vaccines as preventive intervention measures to reduce global disease burdens, hesitancy and refusal are pressing issues for some hospitals where transmissibility of disease is endemic. Some HCWs did not receive the COVID-19 vaccine for personal reasons and did not seem to realize its importance. Accepting or avoiding the COVID-19 vaccine and vaccine mandate depends on individual perceptions of the vaccine and mandates. There exists a gap in literature regarding refusal to vaccinate against the COVID-19 vaccine among some Canadian HCWs who quit their jobs.

Literature Review Related to Key Concepts

COVID-19

Emergence of the SARS-CoV-2 outbreak was reported in China in December 2019 and turned into a global pandemic in 2020 (Iqbal et al., 2020). It may have originated from bats as it shows 96% of bat coronavirus RaTG13 strains (Cui et al., 2022). On March 11, 2020, the World Health Organization (WHO) declared a global pandemic. Currently, 761,071,826 confirmed cases are reported worldwide, including 6,879,677 deaths (WHO, 2023b). SARS-CoV-2 is a complex pathogenic organism with the ability to infect multiple host species and cause a variety of diseases with numerous symptoms. It is a new human coronavirus causing infection in the respiratory and gastrointestinal tract, ranging from mild to severe conditions such as SARS (Diab et al., 2021). Its structure is typical of coronaviruses with a membrane, envelope, and spikes made of proteins. The spike structure has two critical viral infection areas, a receptor-binding domain, and fusion peptide. In order to replicate, both the viral and host cell membrane must fuse, a process that ends up releasing viral RNA into host cells (Diab et al., 2021).

SARS-CoV-2 VOCs

The emergence of SARS-CoV-2 VOCs through mutation has been posing an increased risk to global public health including hospital settings. Rocha et al. (2021) examined that these VOCs have higher evidence of negative impact on testing, therapeutics, and vaccine performance, as well as increased risk of disease transmission and severity. To date, several of the variants that cause COVID-19 have been circulating

globally including the most current VOC, Omicron. The World Health Organization convened a group of scientists from the Technical Advisory Group on Virus Evolution and recommended using the Greek Alphabet to name the VOCs: Alpha, Beta, Gamma, Delta, and Omicron following their onset and subsequent mutations (World Health Organization [WHO], 2023a). In September 2020, the UK identified a variant called B. 1.1.7, also referred to as Alpha, with a large number of mutations. In May 2020, variant B. 1.351 (Beta) emerged in South Africa. In Brazil, variant P.1 (Gamma) emerged in November 2020, and in October 2020, variant B.1.617.2 (Delta) was documented in India. Knowledge and understanding of the COVID-19 variants have been evolving rapidly due to the emergence of new strains. Current evidence suggests that some cause more severe illnesses, such as Delta, which could result in more hospitalization and death.

Pathophysiological Effects on the Human Body

Several organs are noted to be affected by SARS-CoV-2, but the respiratory system is mostly affected. Diab et al. (2021) ascertained that the lungs are primarily affected by COVID-19 infection because of their direct exposure to the SARS-CoV-2 when it enters the respiratory system. Following exposure, symptoms of upper respiratory tract infections such as sore throat, soreness, and coughing begin to manifest in the host. As the disease progression continues into the alveolar, further complications in the system begin to show signs such as acute respiratory distress syndrome in the form of shortness of breath and even respiratory failure. According to Diab et al. (2022), the COVID-19 infection could lead to cardiovascular disorders such as venous

thromboembolism. The impact of SARS-CoV-2 is also reported to have a neurological effect on some patients, including loss of taste and smell, fatigue, and disorientation. Cases of developing protein in the urine, blood in urine, and an increase in creatinine levels are also reported, including acute kidney injury. The functioning of liver enzymes is known to be affected in some patients as well as systematic hyperinflammation of the immune system (cytokine release syndrome [CRS] in its severe case) which could result in end-organ damage and even death. Wang et al. (2020a) ascertained that some patients report diarrhea (10% to 34%), nausea (10%), vomiting (3.6% to 4%), and abdominal pain (2%). These clinical presentations could complicate other comorbidities that may require hospitalization in severe cases.

Viral Modes of Transmission and Spread

Evidence shows that the SARS-CoV-2 that causes COVID-19 is mostly transmitted from one person to another (WHO, 2020b). It is important to understand the different modes of transmission to implement effective infection prevention and control measures in hospitals to mitigate the transmission between HCWs and patients. The COVID-19 infection subjects the host to either be symptomatic or asymptomatic with those with symptoms having primarily respiratory illnesses, ranging from mild disease to severe and even death. Although without symptoms manifestation, asymptomatic individuals can transmit the disease to another individual who may then become symptomatic.

Droplets, contact, airborne, and fomites are modes of transmission. Transmission can occur by coming in direct or close contact with an infected individual (Wu et al.,

2021). This could be through salivary and respiratory secretions or respiratory droplets from coughing, sneezing, and talking. Respiratory aerosol particles can be categorized based on the size of the particles as either respiratory droplets (greater than 5-10 μm in diameter) or aerosols (smaller than 5μm in diameter) (WHO, 2020b). An infected individual who is within one meter of another individual will transmit the disease by respiratory droplets either by coughing or sneezing. An infection will occur when the virus reaches the vulnerable individual's mouth, nose, or eyes. Guo et al. (2020) posited that transmission by indirect contact refers to coming in contact with a susceptible host or contaminated objects or surfaces (fomite transmission). Fomite transmission is caused by respiratory secretions or droplets that contaminate these objects and surfaces. On the other hand, airborne transmission is aerosols produced by an infectious person and remain hanging in the air during medical procedures.

Whether or not the spread of aerosol is absent during aerosol-generating procedures has been an active discussion by the WHO and the scientific community. Interestingly, WHO (2020b) noted that two theories from Physics have put forward the mechanism of SARS-CoV-2 transmission through aerosols. The Physics of exhaled air and Flow Physics suggests that respiratory droplets generate microscopic aerosols (<5 μm) by evaporation, and exhaled aerosols can result during normal breathing and talking. Thus, vulnerable victims who happen to inhale these aerosols while being suspended in the air may become infected if the SARS-CoV-2 is present in a quantity sufficient to cause COVID-19 infection.

Czumbel et al. (2020) examined that SARS-CoV-2 is most abundant in an infectious individual's bronchoalveolar lavage fluid, sputum, and saliva. Transmission is primarily produced via inhalation of aerosols, small droplets of saliva, or discharge from the nose and mouth of an infected individual when coughing, sneezing, talking, singing, or exhaling. Diab et al. (2021) asserted that COVID-19 develops immediately after the SARS-CoV-2 is exposed to its victims and the disease progression passes through three phases. The early infection phase is the onset of symptoms, the pulmonary phase is the onset of shortness of breath and admission in hospitals, and the hyperinflammatory phase consists of the onset of sepsis, acute respiratory distress syndrome, acute kidney injury for non-survivors, and death. The viral load built up in blood takes about four days after exposure and symptoms start to manifest by day five but could start on day one up to day 14. As of 28 February 2023, there were 4,560,962 reported positive test cases in Canada, with 50,629 Canadians dying of the disease (Public Health Infobase, 2023). According to the Centers for Disease Control and Prevention [CDC](2022c), the elderly and those with certain underlying medical conditions such as immunocompromised individuals constitute the prone vulnerable population.

Virus Pathogenicity

The entry of the SARS-CoV-2 into the host cell is easily facilitated by a functional receptive enzyme on the cell surfaces, angiotensin-converting enzyme 2 (ACE2), where its effects are felt in the lungs, heart, and kidneys (Beyerstedt et al., 2021). Zou et al. (2020) associated infection of the SARS-CoV-2 in the different organs of the body with the body's proportion of ACE2 expression. In the nasal and bronchial

epithelial cells, the ACE2 expression is noted to occur in an age-dependent manner and may explain the reason why the infection rates in children of COVID-19 are lesser compared to adults because they exhibit the lowest nasal and bronchial gene expression of ACE2.

Pre-existing comorbidities associated with ACE2 balance disruption increase the body's chances of developing severe forms of COVID-19 and a higher probability of increased death. Beyerstedt et al. (2021) examined that about half of COVID-19 hospitalized patients have pre-existing medical conditions such as pulmonary, cardiovascular, and kidney diseases. These pre-existing comorbidities are associated with chronic endothelial dysfunction such that an infection of SARS-CoV-2 possibly aggravates these conditions. Therefore, SARS-CoV-2 helps accelerate the vascular disease process into a chronic disease condition, triggered by endothelial dysfunction and impaired tissue vascularization. Datta et al. (2022) noted that these chronic conditions could overwhelm the health system with admissions of patients and increase mortality rates. Increased chronic conditions of patients associated with COVID-19 infection and mortality rates underscore the importance of preventive measures and effective hospital care management for the safety of vulnerable patients.

Nosocomial COVID-19 Transmission

While social distancing and infectious disease and prevention measures have reduced the transmission of COVID-19 in hospitals, nosocomial transmissions continue to put vulnerable patients including HCWs at greater risk of infection (Wake et al., 2020). With the constant re-emergent cases of COVID-19 in Canadian hospitals, strategies to

prevent nosocomial transmission are essential within the framework of promoting awareness of vaccination among HCWs. Disease transmission is possible regardless of symptomatic and asymptomatic individuals. Hospital-acquired COVID-19 puts patients with existing medical conditions at greater risk of severe illness and even death. Similarly, HCWs are vulnerable to contracting infection in the hospital environment due to their frequent exposure and contact with potentially infectious patients.

Botan et al. (2022) investigated the modes of transmission and clinical features regarding the nosocomial transmission of COVID-19 in healthcare workers from 16 pediatric intensive care units in Turkey. Most of the HCWs infected by COVID-19 were exposed during patient contact. This explains the significance and importance of discussing nosocomial transmissions among Canadian hospital HCWs in this study and justifies the reason for implementing mandatory vaccination policies.

Social and Economic Impact

At the onset of the spreading of SARS-CoV-2 which began to record a significantly high mortality rate, the health effects of COVID-19 were unknown to a certain degree, causing several countries around the globe including Canada to start implementing precautionary measures (Qeadan et al., 2020). As the effects of the pandemic progressed, enhanced precautionary measures such as wearing a face mask, social distancing, hand washing, surveillance, testing, and isolating, contact tracing and quarantine, teleworking, travel bans, closing businesses, school closures, and lockdowns were the most implementation strategies worldwide (Najmi et al., 2021). While considering similarity during the 1918 flu pandemic, Straka et al. (2021) noted that

effective social distance measures to limit transmission during the pandemic included full lockdown, partial lockdown, quarantine, and keeping distance while in public. Only essential businesses including hospitals, gas stations, banks, and grocery stores were approved for continuous operation.

According to Straka et al. (2021), the reduction of people's mobility across the globe was a significant outcome of the lockdown restrictions and indeed helped to decrease the COVID-19 infection rate but also had a significant impact to drop the gross domestic product in most countries including Canada. In Italy, Bonaccorsi et al. (2020) reported that the economic effects linked to the lockdown reduced both national and state-level fiscal revenues and caused extreme poverty in some low-income communities due to the limited mobility restrictions. Chen et al. (2020) also reported that the mobility restriction influenced an increase in unemployment insurance claims in areas hit by high COVID-19 deaths in both Europe and the US. Although data on the economic effect of the pandemic in multiple countries remains unknown, it is evident that gross domestic product growth is affected because of the pandemic.

COVID-19 Vaccine Development and Recommendation

Traditional vaccine development is noted to take around 10 to 15 years (Kashte et al., 2021). Contrary to the ordinary, the COVID-19 vaccines have been rapidly developed compared to the traditional vaccines and approved via emergency use authorization (EUA) worldwide, triggering several unanswered questions about the accelerated process of the COVID-19 vaccine development. However, the accelerated process of developing the vaccine is historic and represents a breakthrough achievement. Nonetheless,

continuous mutation of the SARS-CoV-2 raises doubts about the efficacy of the vaccines and whether or not they will effectively work against new emerging strains (Kumari et al., 2022). Undoubtedly, vaccines have proven to work well in containing disease outbreaks and the COVID-19 vaccine is not an exception in reducing the impact of SARS-CoV-2. The rapid emergence of viral variants Alpha, Beta, Gamma, Delta, and Omicron urged the increased need for vaccine development for availability around the world even though the quick vaccine development seems to have jeopardized the traditional vaccine development practice. This accelerated pace of vaccine development is one of the factors raising doubts among many including some HCWs about the vaccine's safety, efficacy, and side effects. Kumari et al. (2022) analyzed the different types of WHO-approved vaccines in clinical trials against COVID-19 and the vaccine efficacies. The BNT162b2 vaccine, manufactured by Pfizer-BioNTech is reported to be 94.6 % efficient and has a record of 1,785,619,896 administered doses. The mRNA-1273 vaccine, manufactured by Moderna is 94.1 % efficient, with a record number of 542,622,974 administered doses. And the AZD1222 vaccine, manufactured by AstraZeneca-Oxford is 66.7 % efficient, with at least 200,591,659 administered doses.

The research of vaccine development has always been a promising avenue for humans to overcome the challenges of epidemics and pandemics. Nevertheless, this vaccine development approach has been compressed with the manufacture of the COVID-19 vaccine from the usual 10 to 15 years to a one to two-year period and has seemingly broken the traditional norm (Xiaoni et al., 2021). The WHO granted emergency use authorization for the BNT162b2 vaccine on December 31, 2020.

Following the authorization, the infection rate dropped significantly in the United States from December 2020 to March 2021. According to the [CDC](2022a), COVID-19 vaccines are effective, and getting the vaccine is beneficial. This finding indicates that the vaccine can confer long-lasting protection and remain efficient against mutants.

COVID-19 Vaccine Efficacy and Safety

Morón-Duarte et al. (2022) noted that the impact of the COVID-19 vaccines on controlling the SARS-CoV-2 pandemic depends on several factors including the effectiveness of the vaccines, the possible development of other variants, individual factors, the number of people vaccinated, and the speed of vaccine approval and delivery. These factors make it necessary to evaluate the available evidence of the COVID-19 vaccine's efficacy and safety. The study conducted by Morón-Duarte et al. (2022) showed that Pfizer BioNTech, Moderna, and AstraZeneca vaccines are effective against COVID-19 infection. The evidence suggests that COVID-19 vaccines prevent individuals from getting the disease in its severe form and reduce transmission to others. Thus, compliance with the vaccine uptake will help reduce infections both from symptomatic and asymptomatic individuals and prevent disease transmission.

COVID-19 Vaccination Adherence

Vaccination adherence of HCWs is the best approach to reducing COVID-19 morbidity and mortality in the hospital care setting as they are at increased risk of infection and onward transmission to vulnerable patients (Darwish et al., 2022). However, a study by Biswas et al. (2021) noted that low COVID-19 vaccine uptake and vaccine hesitancy among HCWs are linked to the vaccine's safety, efficacy, and potential

side effects. Biswas et al. (2021) showed that many HCWs are vaccine-hesitant because of the above-mentioned concerns. Also, a poll from the Kaiser Foundation in December 2020 showed that more HCWs across the United States were unwilling to vaccinate compared to individuals in the general population. This is a concern as HCWs are the presumed top priority groups to comply with COVID-19 vaccination across the world. Despite the evidence of the COVID-19 vaccine effectiveness and excess media reports about vaccination, it remains questionable as to why some HCWs refuse vaccination.

COVID-19 Vaccine Hesitancy

COVID-19 vaccine hesitancy is a reluctance or denial behavior to accept vaccination regardless of available vaccination services. Kashte et al. (2021) assessed vaccine hesitancy as a complicated phenomenon as it differs across time, place, and vaccine to vaccine. Affecting factors such as convenience and confidence pose greater significance of vaccine hesitancy. The phenomenon of hesitancy that influences the behavioral decision to accept, delay, or reject the COVID-19 vaccine is based on individual and group as well as perceptions of the vaccine and vaccination. Upon availability and accessibility to reduce the overall burden of COVID-19 by public health officials worldwide, the anti-vaxxer community started posing countering statements from health officials about the vaccines on social media. Skafle et al. (2022) noted that social media misinformation and false claims that the vaccine causes autism spectrum disorder played a role in vaccination hesitancy. This kind of misinformation influences fear and anxiety about the COVID-19 vaccine uptake and results in vaccine hesitancy.

Many individuals including HCWs have refused COVID-19 vaccination, regardless of the increasing number of mortalities, the vaccine's safety and efficacy, and public health or employer mandates. COVID-19 vaccine hesitancy among HCWs has become apparent due to skepticism surrounding the manufacturing of the vaccine (Peterson et al., 2022). Ironically, HCWs' advanced education, clinical experience, and membership in professional agencies are unimpactful on the decision to refuse vaccination. Moreover, their frequent contact with patients exposes them to infection, creating an unthinkable situation and raising surprising questions about why some HCWs have chosen not to receive the COVID-19 vaccine. This behavior is driving controversy in communities where HCWs are viewed as leaders in the field who need to be trusted sources of vaccine-related information.

In Canada, overcoming hesitancy among HCWs is a significant administrative concern in hospital settings, particularly, because HCWs are regarded as a preferred source of information for discussing vaccination with patients (Thaivalappil et al., 2022). A multicenter cross-sectional study by Dzieciolowska et al. (2021) assessed Canadian HCWs' willingness to be vaccinated against COVID-19. The study was conducted at integrated university health and social services centers (CIUSSS) in Montreal Quebec. Among respondents who answered the study's survey questions between (December 15 and December 28, 2020), about 80 % accepted to receive the vaccine and 20% declined. This number of declined HCWs is significant and indicates a potential gap in the literature about their perceptions of COVID-19 vaccines.

COVID-19 and Vaccine Hesitancy in Patient Care

The care of patients with COVID-19 in hospital care settings who are COVID-19 vaccine-hesitant can be challenging and problematic. COVID-19 vaccinations, even though proven efficacious in lowering COVID-19 hospitalized burden, are still avoided by a large population (Caspi et al., 2023). The avoidance of being vaccinated by these vaccine-hesitant individuals presents a challenge during patient care to seeking to know their reasons behind hesitancy and how to care for them with COVID-19 symptoms. Caspi et al. (2023) assessed whether patients with COVID-19 vaccine hesitancy affected hospital care team perceptions from 11 medical centers across Israel during the fourth COVID-19 surge. The findings showed that the care for unvaccinated patients was more frustrating, time-consuming, and less satisfying. The study's outcome showed that patient care for COVID-19 vaccine-hesitant patients had a strong negative effect on the hospital care team's perceptions of these patients. Ideally, establishing a better relationship with these unvaccinated patients was difficult, and were perceived to be responsible for their medical condition.

Essentially, the outcome of the care of COVID-19 vaccine-hesitant patients is based on the initial communication approach of an HCW. A healthcare worker's initial conversation with an unvaccinated patient during patient care regarding COVID-19 may influence hesitant patients' willingness to either take the vaccine or decline it. CDC (2021) recommended a motivational interview approach that should be an evidence-based and culturally sensitive way of communicating with unvaccinated patients about vaccination. The goal of the approach was to help manage mixed perceptions about the

vaccine and vaccination to move forward toward healthy behavior change that is consistent with their needs and values. The application of the motivational interviewing approach suggested that HCWs must embrace an attitude of empathy and collaboration by being compassionate and empathetic about the reasons for patients' feelings. In addition, the HCW should ask permission to discuss the vaccine and be ready to accept either a positive or negative response. Questions asked about the COVID-19 vaccine safety, vaccine risks, and physical or mental health, the HCW should respond within the boundary of their competence, ethics, and scope of practice.

COVID-19 Vaccine and Hesitancy Impact on Healthcare

The non-compliance or rejection of the COVID-19 vaccine by HCWs lessens the possibility of herd immunity in Canadian hospitals and potentially promotes the transmission of the SARS-CoV-2. The American Academy of Family Physicians (2023) ascertained that the vaccine-hesitant behavior of some HCWs may potentially have a powerful influence on their patients' vaccination refusal behavior towards the COVID-19 vaccination. HCWs' positive attitude toward the COVID-19 vaccine uptake provides a good teaching lesson for patients' compliance with future infectious diseases. According to the American Academy of Family Physicians (2023), the impact of COVID-19 vaccine hesitancy on healthcare stems from safety and efficacy concerns. For instance, the uncertainty about the safety of the vaccine due to the vaccine's speedy development and novelty for consumption. Moreover, mistrust in government and health organizations from media misinformation sources creates public doubts about COVID-19 prevention and the vaccine's safety. This disinformation questions the integrity of the authorities

concerned and undermines the goal of COVID-19 vaccination programs. Additionally, HCWs are entitled to personal freedom and the right to autonomy to either accept or refuse COVID-19 vaccination. Before recommending any treatment to patients, clinicians hold to the standard of informed consent which is an acknowledgment to treat or not treat a patient based on their autonomy rights.

HCWs' Attitudes and Perceptions

Healthcare workers are more vulnerable to acquiring and transmitting COVID-19 (Nemr et al., 2022). Serving as role models to educate their patients about the vaccine and vaccination programs, their reluctant behavior sets a poor example of the vaccination implementation policy effort. This attitude of some HCWs toward the COVID-19 vaccine provides the opportunity to study why some HCWs choose to vaccinate against COVID-19 and others are hesitant or refuse (Al-Metwali et al., (2021).

Several studies have examined the predominant themes concerning HCWs' attitudes and perceptions to receive the COVID-19 vaccine and the vaccine's perceived benefits and barriers (misconceptions) have emerged as predominant. Al-Metwali et al. (2021) cross-sectional study on Iraqi HCWs and the general population assessed their attitudes and perceptions towards the COVID-19 vaccine using open-ended questions for thematic analysis. Participants were to write comments regarding their suggestions to increase people's awareness and likelihood of receiving COVID-19 vaccination regardless of the perceived barriers and general perceptions toward the vaccine(s). The findings from the thematic analysis focused on the vaccine's perceived benefits such as HCWs feeling protected if they receive the COVID-19 vaccine, the belief that the family

is protected if they receive the vaccine, and the belief that the vaccine will be effective in preventing the infection. Perceived barriers posed doubts about the efficacy of the vaccines, concerns about the vaccines' potential side effects, and concerns about the vaccines' storage conditions. These barriers may be relevant factors in the outcome of this study.

Similarly, Gogoi et al. (2022) conducted a qualitative study among 164 HCWs in the United Kingdom (UK) to assess COVID-19 attitudes. Online interviews and focus group telephone recordings were the study design approach. Findings from thematic analysis identified four different COVID-19 vaccine attitudes among HCWs: Active Acceptance, Passive Acceptance, Passive Decline, and Active Decline. Content analysis of the transcribed recording showed that female HCWs and those from ethnic minority communities were more likely to either decline (actively/passively) or passively accept vaccination, reflecting hesitancy. Trust, risk perception, social influences, access and equity, and considerations about the future were linked to attitude and behavior. These findings show that multiple factors are linked to the behavior of vaccine hesitancy which has an impact on the implementation and sustainability efforts of the vaccination programs such as boosters. The findings also showed that job role, ethnicity, and sex, play a significant role in the vaccine hesitancy attitude by HCWs. Therefore, building trust and designing inclusive and accessible information is necessary to address hesitancy.

Canadian COVID-19 Containment Strategies in Hospitals

Infection Prevention and Control

The overall aim of IPAC towards COVID-19 is to control and suppress the growth of SARS-CoV-2 and prevent its associated illnesses and death. The IPAC measures are procedures that are implemented to be consistently applied in healthcare settings to prevent or reduce the risk of transmission to healthcare providers, patients, and visitors (Wasilewski et al., 2022). To limit the transmissibility of the SARS-CoV-2, the expectation is that healthcare facilities around the world including Canadian hospitals continuously provide IPAC measures and resources to HCWs. The WHO (2020a) recommended that in countries where IPAC is limited or nonexistent, countries need to apply and enforce IPAC measures both at national and facility levels as a strategic requirement in controlling the spread of COVID-19.

In Canada, the mandate of the IPAC program is equally central to preventing and controlling healthcare-associated infections such as COVID-19 (College of Nurses of Ontario, 2023). IPAC Canada is a multidisciplinary and professional organization engaging in activities of preventing and controlling infectious diseases. Its goal is to provide education about infection control practices and improve patient care standards and the safety of HCWs in healthcare settings.

Mandatory Vaccination Policy for HCWs

COVID-19 vaccination program for HCWs in Canadian hospitals is a strategic recommendation measure for preventing the risks of transmitting the disease to their patients and HCWs alike (Born et al., 2015). However, voluntary COVID-19 vaccination

uptake among HCWs continues to be low in several hospitals, making mandatory vaccination an option for continued practice and a condition for employment in most hospitals. With the approval of vaccines against the disease, the vaccination of Canadian HCWs who come in direct contact with patients became a top priority. Questions began to arise about whether provincial governments, public health organizations, and private healthcare institutions, such as hospitals and long-term care facilities, should mandate vaccine policies against SARS-CoV-2 by regulation or terms of employment (Flood et al., 2021).

In 2012, British Columbia, a province in Canada, was the first in the country to institute a policy of mandatory vaccination as a condition for employment for influenza during patient care. Despite the COVID-19 vaccine's free accessibility in the hospital care setting, voluntary vaccination rates remain low in some hospitals regardless of resources from the administrative staff to increase uptake strategies. Presseau et al. (2021) noted that only about 80% of Ontario HCWs intended to take the COVID-19 vaccine when it was made available, and there were challenges to educating the remaining 20% who doubted the confidence of the vaccine's safety. The findings from this study came up with three essential themes and these included: information is important but not enough, short, and long-term susceptibility and severity of the vaccine side effects, and making it easy and possible for HCWs to get all the required vaccine doses.

Dzieciolowska et al. (2021) assessed COVID-19 acceptance, hesitancy, and refusal among Canadian HCWs. Ideally, their willingness to be vaccinated, reasons

underlying hesitancy for those who preferred to delay vaccination (i.e., vaccine hesitance), and reasons for refusal among those who never intended to be vaccinated (i.e., firm refusers). Among the 2,761 respondents who participated in the study, the HCWs who completely refused vaccination based their refusal on the following reasons: vaccine novelty (82%), waiting for others to take the vaccine first (77%), not sure about the vaccine's information (74%), needed more time to decide (60%), no confidence in pharmaceutical companies (35%) and a lack of trust in experts (27%). Without a medical or religious exemption, these findings show a significant number of Canadian HCWs are COVID-19 vaccine refusers and the noncompliance eventually led to many losing their jobs because of mandatory vaccination policies in hospitals.

Ethics Regarding Mandatory COVID-19 Vaccination

Ethics is an important concept in healthcare in shaping the conduct and professionalism of HCWs which makes it relevant to the issue of mandatory COVID-19 vaccination. Moodley (2022) asserted that the legitimacy of mandatory vaccination policies regarding COVID-19 is underscored by an ethical framework that is enshrined in the principles of limited autonomy, social justice, and the common good. The ethical perspective of the vaccine mandate has been explored from the emergence of new variants and the uncertainties they may cause. Declining vaccination by HCWs doesn't meet the ethical obligation of the common good (benefit of vaccination) as vaccination has been proven to reduce harm. Undoubtedly, without policies such as a vaccine mandate to increase the uptake of vaccination in these hospital environments, more infections, and illnesses among HCWs could have an overburdened impact on the

hospitals' management efforts and affect the overall outcome and functioning of care. In addition, any increases in infection rates, illnesses, and hospitalization by HCWs portray a negative image of the health system's commitment to taking appropriate measures to protect the health of patients.

However, the principle of autonomy which gives HCWs the right to make their own health decisions, including the right to accept or reject a vaccine that could potentially harm them is infringed by the vaccine mandate (Bowen, 2020). Contrarily, the ethical principle of justice supports this notion of the vaccine mandate of HCWs to benefit disadvantaged individuals such as those with immunocompromised systems or those with medical conditions that are not contraindicated to the COVID-19 vaccine. The principle goes beyond prioritizing equal treatment irrespective of any citizen's socioeconomic status. Thus, making vaccination mandatory broadly makes vaccines available to HCWs at no cost. Paradoxically, justice equally supports the right to refuse vaccination because the vaccine mandate may be associated with significant risks.

In response to the COVID-19 pandemic, Moodley (2022) provided in-depth insight into mandatory vaccinations. A vibrant debate on compulsory vaccination of HCWs between ethicists, scientists, and legal experts ensued the pandemic in the context of the emergence of new variants and the need for vaccination. This study alluded that scientists and clinicians expressed fears that vaccine hesitancy and poor vaccine coverage in South Africa have the potential to lead to the development of variants following the emergence of the Omicron that could be resistant to existing vaccines. Such new variants of concerns result in global chaos such as financial markets tumbling, imposed

unjustifiable travel restrictions, and the possibility of health facilities preparing for a new surge of patient admissions.

The high transmissibility of the Omicron variant has been overwhelming to some health systems and putting vulnerable patients who are unvaccinated or partially vaccinated at increased risk of illness or death. The Pfizer, Moderna, and Johnson & Johnson vaccines have proven efficacy in reducing severe illness and death. Moodley (2022) noted that healthcare workers are duty-bound to protect frail patients and prevent harm because patients' safety is a primary ethical obligation. Therefore, unvaccinated HCWs expose and compromise the welfare of these vulnerable patients, compelling reasons to improve vaccine uptake and ethically justifying reasons for implementing vaccine mandates.

Summary and Conclusion

Hesitant attitudes and behaviors of HCWs regarding vaccination against transmission of viral diseases have been an ongoing phenomenon. Despite proven scientific benefits that the COVID-19 vaccine limits risks of transmission of SARS-CoV-2 in care settings, vaccination of some HCWs in Canadian hospitals continues to be problematic. Common reasons HCWs fail to abide by vaccination compliance include fear of the vaccine's side effects, vaccine efficacy, and not trusting in its manufacture. These are the most significant factors associated with COVID-19 vaccine hesitancy behaviors.

Despite positive evidence of the vaccine's effectiveness and ethical obligations involved with vaccination, COVID-19 vaccine uptake among some Canadian HCWs

continues to be challenging. These attitudes and behaviors need improvement, specifically in hospital care settings. . Despite scholarly evidence regarding the effectiveness of COVID-19 vaccines in mitigating the spread of the disease, a knowledge gap still exists about Canadian HCWs' perceptions of this topic. In Chapter 3, I discuss the methodology, research design, and data collection techniques to help answer research questions.

Chapter 3: Research Method

The purpose of this qualitative phenomenological study was to explore Canadian HCWs' perceptions of the COVID-19 vaccine and mandate in terms of their decisions to refuse vaccination and quit their jobs. The phenomenological design was used to examine and better understand this topic. The chapter includes a discussion of the research design and rationale regarding why the approach was appropriate. The chapter includes a discussion of my role as the researcher, applicable methods for research, recruitment of participants, procedures for data collection, instrumentation used for the study, data collection, analysis of data, issues of trustworthiness, and ethical considerations.

Research Design and Rationale

Research Questions

RQ1: What are perceived lived experiences of Canadian hospital HCWs regarding COVID-19 vaccines?

RQ2: What are perceived lived experiences of Canadian hospital HCWs Regarding COVID-19 vaccine mandate policies?

RQ3: What experiences influenced Canadian HCWs' decisions to refuse COVID-19 vaccinations and quit their jobs?

The qualitative phenomenological design was used for this research to help answer research questions. The phenomenological approach was used to understand lived experiences regarding the phenomena under investigation, how participants felt about the phenomena, and to expand knowledge about the phenomena. The qualitative approach was used. Thematic analysis was used to identify themes and subthemes.

Role of the Researcher

As the researcher in this phenomenological study, my goal was to provide a safe and comfortable setting so participants could discuss their lived experiences with the COVID-19 vaccine and mandate. Participants met eligibility criteria through screening to participate in the study. I prescreened candidates with a survey link to assess eligibility criteria so those who met criteria were sent invitations for followup live Zoom semi-structured interviews. My role continued with data collection, coding of data, presentation of findings, and reporting.

Safeguarding interests of participants during interview sessions was my primary responsibility. Research was designed for participants to share their personal lived experiences and raise ethical concerns resulting from potential risks. Their personal information was ethically obtained, coded appropriately to protect their privacy, and stored securely using an electronic device with a password. In addition, I avoided personal relationships with participants that may have influenced and compromised outcome of the study. Also, I recognized and avoided personal biases during the research process. Biases during planning, data collection, and analysis were minimized to ensure honesty and integrity. I ensured this study resulted in positive social change to improve lives of people struggling with similar situations.

Methodology

Participant Selection Logic

This study involved healthcare workers living across Canada who worked or have been working in a hospital care setting. Participants were recruited and screened using the

MTurk online platform and snowball sampling. Recruitment through MTurk was based on participants' membership with Amazon. Amazon MTurk is a crowdsourcing tool that allows researchers to easily hire anonymous members to complete human intelligent tasks for a small payment. I found Mturk a valuable prescreening recruitment tool to address HCWs all across Canada. After launching the survey to assess prescreening and eligibility of participants, Zoom interviews to examine HCWs' perceptions of the COVID-19 vaccine and mandate as well as their decision to refuse vaccination and quit their jobs were conducted for those who were eligible. Web-based survey prescreening included information about participant incentives ($25 gift card) for Zoom interviews. Using the web-based interview approach ruled out the possibility of in-person interviews.

Demographically, the study was delimited to Canadian HCWs working in a hospital environment where they were familiar with vaccination and such as compulsory immunization of hepatitis B before employment. Participants were HCWs who refused the COVID-19 vaccine and quit their jobs due to the vaccine's mandate policy, resided and worked in Canada, between 20 and 60, and could provide MTurk ID verification for participant recruitment. I used purposeful sampling for information gathering and data collection. Purposeful sampling was appropriate for this study to target experiences and specific segments of the population in order to collect in-depth and rich information. The sample size was limited to 10 to 20 participants depending on saturation during the data collection process. Yang et al. (2022) noted saturation signifies the point where further data collection is no longer helpful to researchers to develop a deeper understanding of

the topic. Although both English and French are spoken in Canada, interviews were answered in English.

Instrumentation

The instrument I used was semi-structured interview questions. Semi-structured interviews involved the use of a set of predetermined questions followed by some probing questions to get data from the respondents (Lung & Liu, 2016). The three sets of researcher-developed questions approved by my supervisory committee were appropriately investigated through the semi-structured interview questions followed by probing questions for information gathering. The semi-structured format is more commonly used in healthcare-related qualitative research, where open-ended questions seek to explore the qualitative, in-depth aspects of a particular topic under investigation (Trigueros et al., 2017). Using the semi-structured interview guide for data collection, I was able to investigate the feelings, perceptions, and experiences of HCWs about the topic and uncovered concerns anticipated to be beneficial to answering the research questions. For semi-structured interviews, which typically utilized a blend of open- and close-ended questions, one hour was thought to be the reasonable maximum duration to minimize fatigue for the researcher and respondents (Adams, 2015). Thus, for this study, each interview took approximately one hour for each respondent.

Recruitment, Participation, and Data Collection

Participants were HCWs between 20 to 60 years old who have worked in a hospital clinical environment within Canada and have left their jobs because of the COVID-19 vaccine and vaccine mandate. Recruitment and participation were based on

the study's eligibility requirement and a participant's membership with the Amazon organization for Mturk participants. To avoid threats from web robots and self-misrepresentation, the Mturkers were required to provide their Mturk ID. Secondly, they needed to maintain a database of past participants and used at least two attention checks. Eventually, their data were screened by their self-reporting efforts and answers to the checks. When these eligibility criteria were met about their membership with the Amazon organization, the Mturkers progressed by clicking a survey link in the Mturk platform to start answering the eligibility requirement questions. The reward for the prescreening exercise via the Mturk was one dollar upon completion. Snowball sampling participants were sent invitations and notification letters via emails that also contained a survey link for answering the eligibility requirements questions. The screened and eligible participants were then invited to take part in a one-on-one Zoom interview that included open-ended questions about their refusal of the COVID-19 vaccine and the decision to quit their jobs due to mandatory vaccination. Zoom is an online interviewing platform with access to the Internet where the participants receive a link or numerical ID that gives them access to the interview at a scheduled length of time (Oliffe et al., 2021). However, participants without access to the Internet were not able to participate. Awareness of voluntary and optional participation in the study was made before having access to the eligibility questions and participants who met the eligibility criteria were provided the study timeframe for which they determined whether or not to participate at that time.

Usually, Mturkers work and complete tasks under conditions of anonymity intending to get an incentive in monetary terms. Because of such a financial incentive

approach, clear rules regarding compensation were formulated including a consent form that included details of the compensation rules. For this kind of qualitative study, Adams (2015) recommended about one hour or more of maximum length for participants to answer the research questions. Therefore, the pay of Mturk and snowball participants who progressed to the Zoom interview stage was made based on the time spent and the extent of answering the interview questions and this was a gift card rate of $25. Once a HCW was in acceptance with this pay rate and met the other eligibility criteria, he/she was invited for the Zoom interview to respond to the research questions. The data collection process was scheduled for one month and continuously monitored until the target number for the study was reached at a given point of saturation.

Data Analysis Plan

Findings from the data analysis was a reflection of the outcome of the information provided by the study's participants. Data analysis was clear and objectively stated and required detailed reporting, even unfavorable information regarding the study. Once the data collection period was completed, the responses were separated and grouped by their respective questions. Because the study was interested in gathering themes and subthemes necessary to answer the research questions, this allowed me to write down and gather a significant amount of separate information regarding HCWs' insight into their attitudes and perceptions about the research topic. Usually, data analysis for this kind of qualitative study begins by reading the feedback responses provided by respondents to help generate patterns in the data through a coding process (Lovett et al., 2018). The process of coding permitted the interpretation of large segments of the text necessary for

the data analysis. This was done by attaching codes to the different sections of the text that represented the respective meaning units and was important to identify common trends associated with the topic under investigation.

At the beginning of the study, the focus was looking at preliminary codes that constituted words made up of the purpose study. These included words such as HCWs' perceptions, the COVID-19 vaccine, vaccine mandate, and the decision to refuse vaccination. Subsequently, all data were read and reread to ensure that relevant data were retained, and irrelevant data were discarded for the development of codes. Through the multiple readings, newly emerged codes were found for the identification of themes and subthemes. While there were optional methods to code my data, I determined whether to use manual coding (Structural coding) or Quirkos Web. Structural coding involved labeling passages with terms that are related to the research questions. For example, since my study is to explore HCWs' perceptions of the COVID-19 vaccine and vaccine mandate on their decision to refuse vaccination and quit their jobs, I used code labels such as perceptions of vaccines, vaccination, mandate policies, the decision to refuse vaccination, keep a job, and quit a job. Belotto (2018) noted that the application of this method greatly reduces the number of codes and creates categories of codes or code families that are related to the research questions. Additionally, I also had the option to use software because it is a powerful tool with a wide range of features for managing research projects. Its ability to streamline the data is a plus, including the characteristic of not struggling with complicated software.

Demographic data were collected for the study participants and included basic demographics such as age, race, education, ethnicity, and sex, in addition to occupational demographics, such as the role of occupation, years of work experience, and years working in the current hospital. By collecting these demographic data, I was able to identify patterns or trends within the responses, which helped in recognizing if certain themes or experiences were more prevalent among specific groups, such as age-related differences in workplace experiences. In addition, the collection of demographic data helped ensure diversity in the sample as the aim was to include participants from various demographic groups to capture a more comprehensive range of experiences and perspectives. Moreover, the data was useful in conducting comparative analyses to understand how the different demographic groups experience the same phenomenon, which led to valuable insight into disparities or commonalities in experiences. Each of the study participants was assigned a unique de-identified code to protect anonymity.

Issues of Trustworthiness

The issues surrounding the trustworthiness of this research could not go unaddressed as the quality of the research was a measure of a successful and productive outcome. In qualitative research, Chowdhury (2015) noted that researchers frequently work with participants' subjective views that could shape the research framework and the whole process under investigation. Under such circumstances, the issue of quality became more pertinent as it dealt with people’s everyday reality and subjective explanations. For this research, trustworthiness thus involved transparency of the manner

and conduct of the study to reflect the study's usefulness and integrity of the findings (Connelly, 2016).

Credibility

The concept of the study's credibility relied on confidence and the successful outcome of the study's findings. One of the challenging issues that affected the credibility of the study was Mturker's social desirability bias (Aguinis et al., 2021). Their primary motive for participating in the study was based on monetary compensation rather than to express their perceptions about the phenomena under investigation and that affected their lives. This might have made them provide socially desirable responses compared to another group of participants such as student samples. Also, the vulnerability to web robots (bots) was another challenge. These bots are online software programs characterized by wrongful intentions by their users to benefit from a study (Farouk, 2022). The bots are easy-to-use programs that generate answers to the study's questions in a manner that the researcher may not be able to distinguish between a web robot user and a Mturk user who is responding to the study. Such programs present a feature that could impact the conduct of the research using the platform, therefore, credibility techniques such as regular participant (member) checking and follow-up feedback questions via emails were an essential practice of the study before the continuation of further data collection via Zoom interviews.

Transferability

The concept of transferability of this study was a reflection of the extent the findings would be meaningful and useful to persons in other settings (Stahl & King,

2020). This aspect of the trustworthiness of a qualitative researcher maintained that patterns and descriptions from one context of research might apply to another. Ideally, the transferability concept of this study could invite other research readers to connect with the important themes of the study and link them to their personal experiences. The transfer concept is possible because there are thick descriptions of work to provide rich contextual information about themes and subthemes that are meaningful and useful resources for other researchers.

Dependability

Dependability, as part of trustworthiness, was also an aspect to reckon with during the study. The dependability of the data was demonstrated through personal assurance that the findings were well-established and stable despite any changes during data collection from participants (Connelly, 2016). Essentially, rigorous data collection techniques and procedures including carrying out data audits from process logs (notes and decision aspects of the study) to inspect the data collection process and make judgments concerning the potential for bias or distortion before analysis assured the dependability of the study. The application of the concept of triangulation for this study was possible as it involved two data collection sources to understand the topic under investigation.

Ethical Procedures

In undertaking qualitative research, it is the researcher's responsibility to ensure that the research is conducted under practices that uphold and abide by the integrity of high ethical standards (Kang & Hwang, 2021). The conduct of the researcher must be

under scrutiny due to the probability of mistreatment of the research participants for high-quality and more detailed findings. Although ethicists coin the term ethics as "do good and avoid evil," ethical principles present a set of moral codes and standards when researching because failure to uphold the ethical codes contributes to an ethical dilemma. The expectation is to have clear accountability that safeguards the rights and well-being of the research partakers regardless of the nature of the research. This is justified by the Walden Institutional Review Board (IRB) for ethical compliance during conducting research. Without exception, therefore, this research study complied with the ethical standard as stipulated by the IRB for approval by Walden University, otherwise, no credit would have been granted for the work done.

The core ethical issues surrounding this online format of participants' recruitment face challenges around informed consent, privacy and confidentiality, compensation, and online access to research participation (Newman et al., 2021). For the study, the signing of informed consent was paramount because research ethics have gained overwhelming recognition in all countries of the world. It was therefore compelling that participants were aware of all relevant aspects of the research, especially any potential risks associated with the signing. Therefore, informed signed consent was a pre-condition of providing consent to participate in the study. In this regard, digitally signed consent linked participants to the research questions working site. To avoid the potential risks associated with the Mturk online platforms regarding participants' privacy and confidentiality, the participants were instructed to adopt a code (Mturk ID) known to them and not to use their full names during their responses.

The protection of confidential data was managed by the system's technological digital framework. Digital data security measures were implemented beforehand, such as participants having access to a personal password leading to the survey working site to prevent others from having the same access to their work except for the researcher. By the same token, access to the completed participants' work by me, the researcher, was through a personal password. The collected data are securely stored for five years under a specific file name on a computer so only me, the main researcher, will have access to a password for operation.

The issue of compensation between the researcher and research participants also raised some ethical implications in the context of financially handicapped individuals who were in desperation for money and wanted to consent to participate in the research for financial gain, even if answering the questions was painful to them (Newman et al., 2021). However, for this online study requiring compensation, the ethical obligation under these circumstances was fair compensation that took into account the participants' time and not the loss of income due to quitting the job.

Summary

This chapter contains information about the qualitative phenomenological approach to better understand and answer research questions. Also, I explained my rationale for using the research design as well as my role as the researcher, including instrumentation, procedures for recruitment, and data analysis. Issues regarding trustworthiness and ethical considerations were also addressed. IRB ethical procedures and standards were also addressed in this study. Chapter 4 contains results of this study.

Chapter 4: Results

The purpose of this qualitative phenomenological study was to address subjective experiences and perceptions of Canadian HCWs regarding the COVID-19 vaccine and implementation, particularly factors influencing decisions to refuse vaccination and quit job positions. Through in-depth interviews, I sought to address lived experiences, emotions, and underlying motivations that shaped participants' perspectives, contributing to a nuanced understanding of the complex interplay between personal beliefs, professional obligations, and external influences in the context of the pandemic response. Via the qualitative phenomenological approach, recruited Canadian hospital HCWs who lived these experiences provided insights regarding multifaceted dynamics influencing critical decision-making processes. The study was conducted after receiving IRB approval (#01-03-24-0670185) to answer research questions.

This chapter includes information about the pilot study, participants, setting, data collection, data analysis, issues of trustworthiness, results of findings, and a summary. Findings were based on the following three research questions:

RQ1: What are perceived lived experiences of Canadian hospital HCWs regarding COVID-19 vaccines?

RQ2: What are perceived lived experiences of Canadian hospital HCWs Regarding COVID-19 vaccine mandate policies?

RQ3: What experiences influenced Canadian HCWs' decisions to refuse COVID-19 vaccinations and quit their jobs?

I began the chapter with a description of the pilot study using three participants to test feasibility and effectiveness of methods and procedures during the main study. Subsequently, I recruited of main study participants using MTurk. However, due to limited responses using MTurk, I then used snowball sampling and was able to recruit a wider pool of participants during the main study, where existing participants referred other individuals who met study criteria. Like pilot study participants, snowball sampling participants were sent notification letters to participate. Overall, only two MTurk participants responded through the platform and were recruited for the study, and the remaining 11 participants were recruited via snowball sampling. Data were collected using semi-structured interviews via Zoom, followed by a thematic analysis of data. Thematic analysis was used to provide an in-depth understanding of data by identifying and analyzing patterns, themes, and meanings. Quirkos was used to analyze interview transcripts and develop codes into themes.

Pilot Study

A pilot study was conducted to test data collection procedures to enhance overall effectiveness of the main study. After approval by the IRB to conduct the study, three hospital HCWs within the greater Toronto area were sent invitations and notification letters by email to volunteer and participate in the pilot study. These included a registered nurse, laboratory technician, and social worker. Inside the notification letter was a Qualtrics link with directions to click the link, complete the consent form, and then answer survey questions. The pilot study was officially launched online on January 7, 2024 and included the consent form and survey questions. To avoid data discrepancies,

both pilot and main study participants had similar consent and data collection forms. The only difference between the two forms was additional payment information of two dollars for main study participants who used MTurk. Participants were HCWs who worked in a hospital clinical environment in Canada, resided and worked in Canada, were between 20 and 60, and refused to take the COVID-19 vaccine and quit their job due to COVID-19 vaccine mandate policies. Interviews took place using Zoom.

The purpose of the pilot was to gain insights regarding the phenomenon under investigation on a one-to-one basis before committing to the main study. I ensured data collection methods and interview questions were appropriate for research objectives. The pilot study was useful to refine procedures and methodology as well as assess feasibility of the main study before its full implementation. Notably, it helped to identify potential challenging issues such as poor internet connections among participants , meaning a good internet connection was necessary to ensure Zoom ran smoothly and interviews met research objectives. Data collection was reliable within the timeframe allocated for interviews and warranted no changes. Participants felt safe and comfortable providing their responses via Zoom regarding the COVID-19 vaccine and mandate and decision to refuse vaccination.

Research Setting

Zoom was used for virtual meetings to explore multifaceted factors influencing HCWs' decisions regarding COVID-19 vaccination mandates and their potential impact on workforce dynamics in Canadian hospitals. The platform facilitated in-depth discussions and interviews with HCWs from diverse backgrounds and specialties. It was

a safe and accessible space for participants to share their thoughts, experiences, and concerns regarding the topic under study. This fostered open dialogues, allowing for a comprehensive exploration of the complex interplay between individual beliefs, institutional policies, and broader societal influences shaping HCW decisions.

Purposive sampling was used to ensure diversity in terms of participant demographics and specialties. Purposeful sampling involves focusing on selecting individuals who provide valuable insights or represent important perspectives related to research questions (Kalu, 2019). Sampling enhanced richness and depth of data. Ethical considerations, including informed consent, confidentiality, and data security, were carefully addressed to uphold participants' rights and ensure integrity of the research process. Before conducting interviews, both MTurk and snowball sampling participants had access to a Qualtrics link to read consent forms and understand terms and criteria involved in the study as well as the opportunity to ask questions.

Demographics

Demographic information included age, race, education, sex, ethnicity, occupational role, and duration of time working within the hospital. Participants were recruited across Canada, including Ontario, Quebec, Nova Scotia, Alberta, Newfoundland and Labrador, and British Columbia. They were categorized in terms of their roles or occupations within the hospital healthcare system. Although recruitment procedures were designed to target physicians, nurses, personal support workers, allied health professionals, and administrative staff, I included only nurses, personal support workers, laboratory technicians, and a social worker.

Participants were categorized into age groups (see Table 1). The distribution within each age group was tallied to understand the age makeup of the participants. Race and ethnicity categories of the HCWs included Whites, Blacks, and Asians to evaluate diversity within the workforce and identify any disparities in representation among different racial and ethnic categories. The educational attainment of the participants was based on the highest level of education, including a high school diploma, bachelor's degree, and master's degree. A gender analysis of the participants was equally tallied to differentiate the HCWs by sex and identify gender disparities. Years of work experience and years spent at the current hospital were equally tallied to gain insight into workforce management strategies such as recruitment and retention. After tallying and analyzing the demographic data, I gained valuable insights into the demographic dynamics of the affected workforce due to the non-compliance of COVID-19 vaccination.

Table 1

Demographic Information of Participants

Characteristics	**# of participants**	**Percentages**
HCWs Occupation		
Nurses	7	53.8%
Personal Support workers	3	23.1%
Laboratory Technicians	2	15.4%
Social Worker	1	7.7%
Other HCWs Occupations	0	0%
Age		
20-30	1	7.7%
31-40	4	30.8%
41-50	5	38.5%
51-60	2	15.4%
60+	1	7.7%
Sex		
Male	3	23.1%
Female	7	76.9%

Race and Ethnicity		
White	2	15.4%
Black	7	53.8%
Asians	4	30.8%
Hispanic or Latino	0	0%
Educational Level		
High School diploma	4	30.8%
Bachelors	8	61.5%
Masters	1	7.7%
Years of Work Experience		
1-10	2	15.4%
11-20	6	46.2%
21-30	4	30.8%
30+	1	7.7%
Years in Current Hospital		
1-10	3	23.1%
11-20	8	61.5%
21-30	2	15.4%
30+	0	0%

Data Collection

A total of 15 volunteers showed interest in the study, and only 13 met the inclusion criteria. The focus was on data collection via the Zoom interview platform to gather insights into the perceptions and reasons behind vaccine refusal and job resignations. Zoom provided a convenient and accessible platform for remote participation, considering the distant location of the participants across Canada. I used the Olympus digital voice recorder WS-852 to record the interviews. In-depth interviews via Zoom were conducted separately with each participant and utilizing the Olympus digital voice recorder WS-852 helped to record audio content with high-quality audio. The interviews were conducted within one month, permitting me to collect the data and arrange the information orderly for analysis. Before the start of each interview session,

the participant was reminded of the voluntary nature of the study and the right to stop at any time and to ask questions for clarity. The time range of the interviews was between 35 to 60 minutes and provided the opportunity to examine the research questions, interview questions, and some probing questions.

The semi-structured interview method was used and allowed for flexibility and depth in data collection. The interview process consisted of a set of three research questions and 11 open-ended interview questions, but the format also allowed for nine probing and follow-up questions to explore the topic in greater detail. The research questions guided the conversation and ensured that the topics of the study were addressed and the open-ended questions encouraged participants to share their perspectives, lived experiences, and insights. Following up on participants' responses with probing questions helped to delve deeper into specific areas of interest by seeking clarification and elaboration to enrich the data and provide a more comprehensive understanding of participants' viewpoints. In effect, the goals of the data collection were met as planned and eventually led to the process of transcription.

After conducting and recording the interviews, the transcribing process involved converting the recorded audio into written text for subsequent analysis. Quirkos Web, a qualitative analysis software, was utilized to streamline the transcription process. Before the transcription, I uploaded the audio files onto the platform, and Quirkos Web utilized its transcription capabilities to convert the spoken words into a text format. Quirkos enabled me to integrate coding and analyzing the transcripts simultaneously. This was

done by displaying the coding tools side-by-side with the transcribed on the same interface. Data was organized into bubbles which represented different codes and themes.

Data Analysis

Thematic analysis was applied to analyze the interview data and helped in the identification of patterns, themes, and meanings within the data, as well as variations in the reasons for vaccination refusal among HCWs. The transcripts were coded using inductive text coding which allowed themes and patterns to emerge from the data itself rather than being predetermined by me. The process of inductive coding breaks the data into smaller segments and labels each segment with codes that represent pieces of information. The process continued, grouping the codes into broader themes which helped to organize the data into meaningful clusters that reflected patterns.

Coding Process and Generation of Themes

The application of Quirkos web for coding was immediately performed after transcription. Before the coding process, the transcribed documents were reviewed and edited for clarity. Subsequently, the process continued with a systematic labeling of segments of the data. The software permitted the creation of codes that represented specific themes and were applied to relevant sections of the transcribed text. Table 2 shows a summary of the total number of codes generated by each study participant. In Table 2, the code creation of Participant W represented a total of 10 quotes during the interview process. Table 3 shows a summary of the number of codes generated and associated with each theme. A total number of 130 codes were generated among the 13 participants. Quirkos permitted the merging of these codes into 12 themes which emerged

as recurring patterns, concepts, and ideas across the participants' responses. Figure 2 shows how Quirkos web facilitated the identification and clustering of these codes into broader themes. The software allowed me to merge similar codes or group-related ones under a new theme. This helped to create broader themes by combining multiple related codes, simplifying the process of theme development from a set of detailed codes.

Data saturation was a critical milestone of the code creation and theme generation process as it reached a point to indicate that the creation of codes and generation of themes had sufficiently been explored. It signified the point of data redundancy, where additional data collection provided no further insight and a sufficient amount of data had been collected to thoroughly explore and understand the phenomenon of the COVID-19 vaccination mandate and the decision to refuse vaccination by Canadian HCWs. The generation of these themes was based on the following three research questions.

RQ1: What are perceived lived experiences of Canadian hospital HCWs regarding COVID-19 vaccines?

RQ2: What are perceived lived experiences of Canadian hospital HCWs Regarding COVID-19 vaccine mandate policies?

RQ3: What experiences influenced Canadian HCWs' decisions to refuse COVID-19 vaccinations and quit their jobs?

Table 2

Quirkos Report: Sources Summary

Title	Date and Time	Length	Quotes #

Participant W.docx	Feb 10, 2024, 11:29:55 PM	10308	10
Participant I.docx	Feb 12, 2024, 7:31:21 PM	7012	8
Participant E.docx	Feb 15, 2024, 9:32:02 PM	9571	11
Participant S.docx	Feb 20, 2024, 00:32:35 AM	12348	11
Participant N.docx	Feb 24, 2024, 11:33:59 PM	8331	10
Participant J.docx	Feb 25, 2024, 10:34:26 PM	10762	10
Participant G.docx	Feb 27, 2024, 4:35:08 PM	13400	9
Participant L.docx	Feb 29, 2024, 1:35:44 PM	8905	7
Participant B. dox	Mar 1, 2024, 12:30:48 AM	12432	12
Participant A.docx	Mar 5, 2024, 10:26:56 AM	7774	10
Participant Y.docx	Mar 8, 2024, 7:07:24 AM	5770	9
Participant D.docx	Mar 12, 2024, 7:08:08 AM	6233	14
Participant H.docx	Mar 16, 2024 7:08:55 AM	6331	9

Table 3

Quirks Summary: Total Codes and Themes

Quirk Title: Themes	Date	**Total Codes**
Uncertainty and fear factor	Mar 16, 2024, 7:49:18 AM	18
Confidence in the vaccine effectiveness	Mar 16, 2024, 8:47:33 AM	10
Public Image and Safety	Mar 16, 2024, 8:49:26 AM	3
Mutation and strain variability	Mar 16, 2024, 8:51:32 AM	7
Vaccine mandate due to external influences	Mar 16, 2024, 8:51:48 AM	12
Satisfaction of public expectation	Mar 16, 2024, 8:51:50 AM	4
Newness of approved vaccines	Mar 16, 2024, 8:47:24 AM	12
Trust issues with vaccine information	Mar 16, 2024, 8:47:31 AM	21
Impact of vaccine mandate	Mar 16, 2024, 8:47:47 AM	8
Infringement of autonomy	Mar 16, 2024,8:49:09 AM	11
Vaccine Adverse effects	Mar 16, 2024, 8:51:26 AM	14
Media Influence on Information Spreading	Mar 16, 2024, 8:51:37 AM	10
TOTAL NUMBER OF CODES		**130**
TOTAL NUMBER OF THEMES		**12**

Figure 2

Codes and Broader Themes

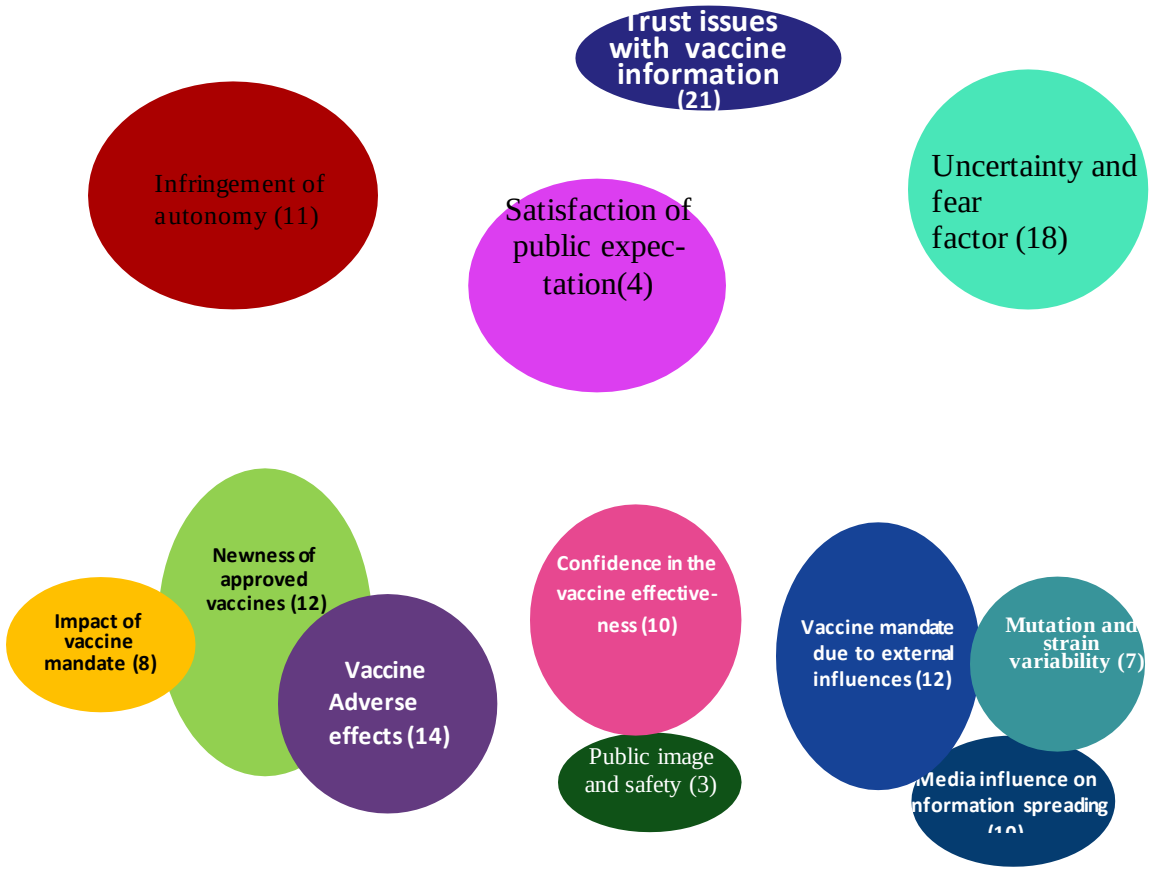


Table 4

Text Sorted by Theme

Uncertainty and fear factor
"Vaccine safety, efficacy, and long-term effects. These are my concerns and they stem from misinformation, historical mistrust in healthcare systems, and personal experiences with adverse reactions to vaccines". Source: *Participant B.docx*

"The time spent to research and make the COVID-19 vaccines was less compared to other vaccines. This makes me question the safety and efficacy of the vaccine in the human body".
Source: *Participant J.docx*

"My primary concern in refusing COVID-19 vaccination is due to the safety of the vaccines".
Source: *Participant W.docx*

"I have always taken vaccines in the past but I'm skeptical about the COVID-19 vaccine due to its newness and pressure on healthcare workers to comply for uptake".
Source: *Participant .docx*

"The field of COVID-19 research, including vaccine development, is rapidly evolving. New studies, data, and recommendations are constantly emerging, making it challenging for me to stay updated with the latest information. This fast-paced environment leads to uncertainty about which sources of information are the most reliable and up-to-date with COVID-19 vaccines".
Source: *Participant N.docx*

"As healthcare workers, we only knew limited information about COVID-19 while caring for COVID-19-positive patients. We were learning live about the virus and therefore it is a valid question to ask about the vaccine that was produced in a short time".
Source: *Participant I.docx*

" I am concerned about the rapid development of the COVID-19 vaccines as opposed to other vaccines and the emergency use authorization because of uncertainty about safety and long-term effects".
Source: *Participant E.docx*

"The accelerated production of COVID-19 vaccines leaves doubts and uncertainty in the minds of healthcare workers about the safety of the

vaccines and effectiveness against mutant strains that are continuously emerging"

Source: *Participant D*

"I am afraid to take the vaccine because of concerns about safety in light of its rapid development, mistrust of government and pharmaceutical companies".
Source: *Participant H.docx*

"I see myself as a role model for vaccination and stand in the position to prioritize and encourage vaccination to set an example for others and promote public confidence in immunization efforts. Nevertheless, the uncertainties and misinformation surrounding the newly made COVID-19 vaccines are a setback for the vaccine uptake".
Source: *Participant A.docx*

"They're claiming that the vaccines are safe and we have all these emerging variants. If they are only promoting the vaccines, they should also be able to tell the public what kind of vaccines will be right for the emerging variant, right?".
Source: *Participant S.docx*

"I feel confident of my natural immunity after that previous experience with COVID-19 infection, including similar experiences of colleagues and some of my patients who recovered from the infection despite no COVID-19 vaccination".
Source: *Participant B.docx*

"In as much as the well-being of patients comes first in the care environment, when it comes to safety and the rights of a healthcare worker, I have to be sure of my safety before I can care for the patient".
Source: *Participant Y.docx*

"From my perspective, there are a lot of uncertainties surrounding COVID-19 vaccine compliance or uptake".
Source: *Participant L.docx*

"I am also concerned about the safety and efficacy of the COVID-19 vaccines, particularly given the speed of development and emergency use authorization".
Source: *Participant W.docx*

"Although the use of fetal cell lines has been successful in other vaccine developments for the treatment of various diseases, I am concerned about the use of in COVID-19 vaccine development".
Source: *Participant G.docx*

"You get protected from the vaccine but also expose yourself prematurely to the virus by getting the vaccine".
Source: *Participant S.docx*

"Although I am a well-educated healthcare worker, claims about the vaccine's ingredients, efficacy, and long-term side effects sow seeds of doubt and skepticism about the vaccine".
Source: *Participant J.docx*

Newness of approved vaccines

"I have safety concerns and am afraid to take the vaccine because it is new and quickly developed for emergency use".
Source: *Participant H.docx*

"I have reservations about the newness and safety of the COVID-19 vaccine due to the speedy nature of the vaccine development that has not taken the normal time frame like other vaccine developments".
Source: *Participant W.docx*

"I am concerned about the rapid development of the COVID-19 vaccines as opposed to other vaccines and the emergency use authorization because of uncertainty about safety and long-term effects".
Source: *Participant E.docx*

"I understand the reason for taking the vaccine but as I said earlier, there are problems in developing the COVID-19 vaccine. It's fairly new and there may be unforeseeable long-term side effects".
Source: *Participant S.docx*

"I have always taken vaccines in the past but am skeptical about the COVID-19 vaccine due to its newness and pressure on healthcare workers to comply for uptake".
Source: *Participant I.docx*

"COVID-19 vaccine, being a new vaccine, I feel that my God-given DNA will be altered by programming RNA transcription and nothing should go into my body to change that".
Source: *Participant G.docx*

"Fear of the vaccine side effects because it is new, misinformation on social media and concerns about the rapid development of the vaccine are causing mistrust about the vaccine uptake".
Source: *Participant Y.docx*

"The speedy nature of the vaccines' production compared to other vaccines makes me feel uncomfortable to comply because of uncertainty and effectiveness in the body".
Source: *Participant D.docx*

"The vaccine is new and I'm trying to understand and process my mind whether or not to take it".
Source: *Participant N.docx*

"Questions surrounding the newness of the vaccines and potential side effects and long-term consequences are disturbing and create uncertainty. Their rapid development and emergency authorization have exacerbated the uncertainty".
Source: *Participant A.docx*

"The unprecedented speed at which COVID-19 vaccines were developed, tested, and authorized for emergency use harbors doubts about their safety in people's bodies". Source: *Participant W.docx*
"The accelerated production of COVID-19 vaccines leaves doubts and uncertainty in the minds of several healthcare workers, including myself, about the safety of the vaccines and their effectiveness against mutant strains that are continuously emerging". Source: *Participant B*
Confidence in the vaccine effectiveness
"I believe that my reservations about the safety and effectiveness of the COVID-19 vaccines are justified by the fact that people have taken the vaccine and still get the virus and some have even died of the disease despite being vaccinated". Source: *Participant E.docx*
"I have refused to take the vaccine because I am concerned about the safety and efficacy due to the speedy nature of the vaccine development that has not taken the timeline like other vaccine developments". Source: *Participant W.docx*
"I feel like we are the Guinea pigs to test or experiment with the effectiveness of the vaccines". Source: *Participant S.docx*
"I am worried about the vaccine's safety, efficacy, and long-term effects. A lot of inaccurate information from the media about the effectiveness and unknown side effects is a discouraging factor". Source: *Participant N.docx*
"Although I'm ethically responsible for prioritizing the well-being of my patients, concerns about the vaccine side effects, effectiveness, newness, and vaccine immunity duration, are prevailing sentiments and discouraging factors regarding the COVID-19 vaccine uptake".

Source: *Participant H.docx*

"I am continuously preoccupied with the uncertainty about the vaccine's effectiveness against the emerging mutant strains".

Source: *Participant B*

"When the vaccines were newly made and authorized for use, the narrative was that the first, second, and third doses were enough to fight infection. Subsequently, they started talking about boosters after the third doses were administered, which questioned the accuracy of the information and effectiveness of the vaccines".

Source: *Participant D.docx*

"I have been concerned about the vaccines' effectiveness against the emerging variants of the virus and whether the ability of the vaccines will be able to confer long-lasting immunity or prevent transmission".

Source: *Participant L.docx*

"Instances of infectious cases of COVID-19 occurring in vaccinated individuals have contributed to doubts about the effectiveness of the vaccines"

Source: *Participant E.docx*

"My friend passed away from COVID-19 even after getting the second dose. This is a personal devastating experience for me and the experience continues to linger in my mind and influences my negative attitude toward the vaccine uptake".

Source: *Participant I.docx*

Vaccine mandate due to external influences

"For many healthcare workers who refused to take the COVID-19 vaccine and later faced the vaccine mandate implementation, mandatory vaccination is from external influences. The mandate raises ethical concerns and questions the right to decision making because imposing a mandate forces them to take the vaccine against their will".

Source: *Participant B*

"I know the hospitals are mandating healthcare workers to take the vaccine because of government and public pressure".
Source: *Participant S.docx*

"There are three vaccines for one virus, each having its side effects and there's the possibility of unknown long-term adverse effects. Yet, pressure comes from government/health authorities to market the vaccine uptake despite evidence of deaths from people who have taken the vaccine".
Source: *Participant I.docx*

"I believe the implementation of the mandate in hospitals raises questions about whether the mandate policies are influenced by the government to gain votes from pro-COVID-19 vaccination individuals".
Source: *Participant J.docx*

"The implementation of the mandate in hospitals raises questions about whether mandate policies were influenced by political agenda".
Source: *Participant D.docx*

"For me, being reserved about the safety and efficacy of the vaccines and mandating it makes me feel forced to comply and this undermines my bodily autonomy and medical freedom".
Source: *Participant H.docx*

"I believe that pressure from relatives and friends surrounding the vaccine uptake, first by healthcare workers, viewing them as guinea pigs for experimentation, influenced most healthcare workers' decision to refuse to be vaccinated to the point of quitting their jobs".
Source: *Participant N*

"The mandate is a form of coercion because the health authorities are making me feel that unless I take the vaccine, I will not be able to meet my livelihood expectations of paying my rent, paying my bills, car loan with insurance, and affording food for my kids".
Source: *Participant G.docx*

"I feel skeptical about information surrounding the COVID-19 vaccine. Politics fueled my skepticism about the vaccine's safety and efficacy as some political leaders disseminated conflicting information about the vaccine. This has created doubts about the transparency and integrity of the vaccine approval process".
Source: *Participant H.docx*

"Most of the information about COVID-19 vaccines is being influenced by political agendas or ideological biases, rather than based on scientific evidence and public health principles".
Source: *Participant A.docx*

"I think that there's some level of politics involving the issue of the COVID-19 vaccine. I also think that the politics of COVID-19 vaccines by government officials and public health experts erodes trust in vaccination efforts and hinders efforts to promote vaccine acceptance".
Source: *Participant D.docx*

"I had a choice, and I made my choice. Of course, there was no way I would keep the job that required me to inject myself with a vaccine I was not sure about, especially for this mRNA which I have seen experimented with animals, mRNA type vaccines, and have never survived, so why would I bring this to myself just to please the government and health officials".
Source: *Participant G.docx*

Infringement of autonomy

"I understand that refusing the COVID-19 vaccine sends a conflicting message about the importance of vaccination and could discourage others from getting vaccinated. However, I also understand that I'm entitled to the autonomy rights that give me leverage to personal decision-making to refuse COVID-19 vaccination".
Source: *Participant N.docx*

"The mandates compel healthcare workers to receive vaccination against their will or face consequences such as termination of employment, which to me, is viewed as a violation of freedom to make personal medical decisions".
Source: *Participant W.docx*

"My autonomy rights limit the notion of accepting vaccination for the benefit and protection of others, it is a shield against the mandate".
Source: *Participant Y.docx*

"Mandatory vaccination raises ethical concerns and questions my right to medical decision-making because imposing the mandate on me forces me to take the vaccine against my wish".
Source: *Participant B*

"The mandate compels healthcare workers who are unwilling to vaccinate to forcefully comply and this is an infringement on personal autonomy for a healthcare worker who holds strong beliefs about bodily autonomy and medical freedom".
Source: *Participant A.docx*

"I made my choice not to vaccinate for a vaccine that could potentially change my DNA through mRNA transcription".
Source: *Participant G.docx*

"I believe that the autonomy of every healthcare worker should be respected and that vaccination may not be appropriate for everyone. Some healthcare workers may not be inclined to vaccination due to religious reasons, mandating vaccination is, therefore, a bad policy".
Source: *Participant J.docx*

"Implementing a mandate when unsure about what's entering my body infringes on personal autonomy and individual rights".
Source: *Participant E.docx*

"I think some healthcare workers refuse to comply with COVID-19 vaccine mandates because they are deeply held in personal beliefs and commitment to individual autonomy".
Source: *Participant D.docx*

"The mandate is not about healthcare workers because they can decide what's good for them. Making it mandatory just to satisfy the public is against their right to autonomy".
Source: *Participant S.docx*

"A sense of duty is necessary when it comes to vaccination and can influence anyone's decision to get vaccinated or not. Also, a sense of personal freedom of medical choice is a human right that should not be ignored".
Source: *Participant A.docx*

Vaccine Adverse effects

"Despite the rigorous clinical trials and regulatory approval, I still harbor doubts about the potential short-term and long-term effects of the vaccines".
Source: *Participant W.docx*

"I don't think the mandate was a good thing because I think there were a lot of the vaccine side effects. I think people are still experiencing side effects from taking the vaccine".
Source: *Participant G.docx*

"COVID-19 vaccine is a product of an RNA-based vaccine with risks for thrombosis with thrombocytopenia. There have been reports of serious side effects associated with the AstraZeneca vaccine, particularly regarding thrombosis with thrombocytopenia syndrome in the formation of blood clots".
Source: *Participant B.docx*

"Concerns associated with side effects such as pain on the injection site, redness, body aches, and fatigue after the vaccine have been administered is causing her anxiety".
Source: *Participant H.docx*

"Concerns about the vaccine's potential side effects and long-term consequences remained a major problem for the vaccine uptake".
Source: *Participant A.docx*

"Complicated issues of severe adverse effects such as blood clots have been reported and there could be more unknown short and long-term adverse effects"
Source: *Participant E.docx*

"I am skeptical about the long-term adverse effects due to a lot of the inaccurate misinformation from the media".
Source: *Participant N.docx*

"I think that the benefit of the COVID-19 vaccine doesn't outweigh the potential harm of receiving the vaccine due to the circumstances and myths surrounding the vaccine consumption".
Source: *Participant J.docx*

"There have been reports of serious side effects associated with the AstraZeneca vaccine, particularly regarding the formation of blood clots".
Source: *Participant D.docx*

"My friend got sick for weeks after the first dose. She felt soreness, joint pain, chest pain, headache, body aches, and fever, and had to go to the hospital to get an ECG and echo done due to chest pain".
Source: *Participant I.docx*

"I am always reluctant with vaccinations because my health condition is in bad shape which makes me think properly before deciding to get vaccinated. Concerns about allergy reactions and side effects could exacerbate my health condition".
Source: *Participant L.docx*

"Inflammatory disease of the heart has occurred after vaccination according to some reports to cause myocarditis and pericarditis. This is scary information for a newly developed vaccine they are encouraging healthcare workers to take".
Source: *Participant Y.docx*

"Social media has been projecting the narrative that blood clot is a major side effect of one of the vaccines. The vaccines are new and the producers are unable to tell whether or not there are long-term side effects. People are concerned that what if they get the vaccine and develop the same health problem or a heart condition like myocardial infarction due to the blood clot?"
Source: *Participant S.docx*

"Personal experience and perceptions gathered from other people is that some of the COVID-19 vaccines cause side effects. All three approved vaccines are new and a discouraging factor towards the vaccine uptake".
Source: *Participant J.docx*

Media Influence on Information Spreading

"I have never been under the influence of misinformation and conspiracy theories circulating within communities and social networks about the outcome of a vaccine product like this one that I may have to consume as a healthcare worker, this sows seeds of doubt and skepticism about getting vaccinated".
Source: *Participant H.docx*

"Media outlets with sensationalist reporting are a concern. Some media outlets have been reporting on the COVID-19 vaccines and vaccination with misleading headlines, exaggerated claims, and fear-based narratives that distort the facts and contribute to distrust in vaccination efforts".
Source: *Participant D.docx*

"The spread of misinformation online also impacted healthcare workers' attitudes towards vaccination, particularly among black and Asian

communities, many of whom had trust and confidence issues about the vaccine and vaccination program".
Source: *Participant B*

"Blood clot is a major side effect of social media information sharing. Some people are worried about such a significant and severe side effect".
Source: *Participant A.docx*

"To me, personal health information is to remain confidential. So why were the media and people making such a big deal of it and spreading information about taking the vaccine? People had taken the vaccine and still became sick and a good number of the population got infected and recovered without the vaccine".
Source: *Participant G.docx*

"Some media misinformation has created uncertainties about these new vaccines and is a concern about my hesitant behavior".
Source: *Participant D.docx*

"Media coverage of COVID-19 vaccines has been varying in accuracy, tone, and emphasis, and this has been influencing my perceptions and attitudes towards their information".
Source: *Participant I.docx*

"The media and news reporting of the side effects also affect my compliance of the vaccine uptake".
Source: *Participant E.docx*

"Social media platforms provide a vast majority of misinformation. The misinformation spread on social media harms vaccine uptake".
Source: *Participant Y.docx*

"Most of the information that I perceive, the negative ones, is people from social media. Also, the mass media, where it is reported that people had issues with the COVID-19 vaccine after they took it".

Source: *Participant S.docx*

Trust issues with vaccine information

"I think the hospital workplace culture lacked transparency from the mandated policy point of view. I believe that the vaccine mandates were imposed on the healthcare workers and there was no meaningful consultation or consideration of their perspectives".
Source: *Participant J.docx*

"Personal beliefs and values played a significant role in my decision to refuse the COVID-19 vaccination. First of all, the implementation of the mandate policies is an objection and influences my perspectives on vaccination due to the myths and misconceptions surrounding the COVID-19 vaccines"
Source: *Participant B.docx*

"Conflicting messages about COVID-19 vaccines from different sources, including government agencies, public health organizations, and media outlets are confusing the minds of the population and affecting the vaccine uptake".
Source: *Participant W.docx*

"The vaccines were made so quickly and I feel like the clinical trials were shortened. It usually takes 10 years or more to approve a vaccine but this one took a lesser time to approve and that's why I do not want to take it".
Source: *Participant A.docx*

"My perceived lived experiences regarding the COVID-19 vaccine are surrounded by the widespread misinformation and conspiracy theories that exist in the general population and are influenced by social media and news outlets".
Source: *Participant D.docx*

"Public perception and misinformation influence the way I view the COVID-19 vaccines. COVID-19 vaccines have been subject to intense public scrutiny and misinformation campaigns, leading to my distrust of the vaccine uptake".
Source: *Participant E.docx*

"I do not trust pharmaceutical companies, neither do I trust public health authority. I trust my intuition and what I have personally witnessed, if something does not resonate with me, I'm not risking to take it into my own body".
Source: *Participant G.docx*

"Vaccination is a significant issue in the professional and work ethics of healthcare workers, therefore, there's a need to address the healthcare workers' concern about vaccination through effective communication, education, and respectful dialogue, aiming to build trust and confidence in vaccination as a safe and effective public health measure".
Source: *Participant L.docx*

"Institutional mistrust and misinformation are impacting and mitigating the vaccine uptake and are a concern for me and some healthcare workers who equally are refusing the COVID-19 vaccination".
Source: *Participant N.docx*

"Politics have exacerbated the distrust and skepticism surrounding the vaccine and helped to undermine my confidence in the vaccine uptake".
Source: *Participant J.docx*

"Both pharmaceutical companies and the government are bent on selling their products despite the uncertainties surrounding them. I feel they are not to be trusted and should not be trustworthy in any other vaccines".
Source: *Participant G.docx*

"I am afraid to take the vaccine because of mistrust of government and pharmaceutical companies".
Source: *Participant H.docx*

"A distrust in government institutions, pharmaceutical companies, or regulatory agencies involved in the COVID-19 vaccine development, approval,

and distribution influences skepticism toward vaccination efforts and erodes trust in the integrity of vaccine-related policies and recommendations".
Source: *Participant Y.docx*

"The politics involved in the COVID-19 vaccination by government officials erodes trust in vaccination efforts and hinders efforts to promote vaccine acceptance".
Source: *Participant D.docx*

"I think the media lied about how much uptake there was in terms of people taking the vaccine".
Source: *Participant I.docx*

"My least trusted source of information is social media because their information sources are not scientifically and evidence-based".
Source: *Participant S.docx*

"There have been fewer efforts to provide accurate information and transparent communication which are essential for building trust on the COVID-19 vaccine uptake".
Source: *Participant N.docx*

"Media influence has played a significant role in my decision not to vaccinate. A wide range of exposed information and perspectives about COVID-19 vaccination through media channels, including news outlets, social media platforms, and online forums are most times negative. Media reporting has influenced my perceptions about the risk of blood clots associated with AstraZeneca".
Source: *Participant J.docx*

"Some misinformation in a way raises questions about trust in health authorities and scientific institutions and is increasingly challenging my COVID-19 vaccination uptake".
Source: *Participant Y.docx*

"The rapid COVID-19 vaccine development and the intervention of the government's role in influencing people to comply with uptake raise trust and integrity questions about the vaccine's safety. I think that influencing compliance with the vaccine uptake without following the traditional timeline of vaccine production raises doubt of government intervention".
Source: *Participant E.docx*

"The imposition of the vaccination mandate without respectful dialogue with healthcare workers questions trust and confidence in the vaccine".
Source: *Participant L.docx*

Mutation and strain variability

"The emergence of new variants of the virus questions the effectiveness of existing COVID-19 vaccines against these variants. I have been worried about the fact that the vaccines may be less effective at preventing infection or severe illness caused by variant strains, leading to doubts about the overall effectiveness of the vaccination efforts".
Source: *Participant J.docx*

"I am preoccupied with the uncertainty in the adaptation of COVID-19 vaccines to emerging variants. The vaccines' adaptability in response to new variants of concerns and evolving understandings of the vaccine effectiveness and duration of protection is yet to be known".
Source: *Participant L.docx*

"I'm concerned about the emergence of new strains. The emergence of new variants of the virus leaves doubtful questions about the effectiveness of existing COVID-19 vaccines against evolving strains".
Source: *Participant E.docx*

"I started to doubt and question the effectiveness of the COVID-19 vaccines when new variants started to emerge and this particular skepticism influenced my decision to refuse vaccination".
Source: *Participant N.docx*

"They shouldn't be saying that the vaccine is safe and effective with all these different emerging variants. Are the vaccines made for yet-to-be-discovered variant strains?"
Source: *Participant S.docx*

"Newly developed variants occur with COVID-19 through an ongoing process of mutation. This creates skepticism about the effectiveness of the vaccines as opposed to other vaccines".
Source: *Participant Y.docx*

"A newly created vaccine surrounded by controversies about emerging variants is imposed on healthcare workers".
Source: *Participant B.docx*

Public Image and Safety

"Some healthcare workers' view on abiding by COVID-19 vaccine mandate policies aligns with the principle of prioritizing the well-being and safety of others. It is to protect patients, colleagues, and the broader community from COVID-19. However, it is a personal choice in this particular case of COVID-19".
Source: *Participant W.docx*

"COVID-19 vaccination mandate is justified if the virus existence and infection rates are a threat to public health and there's assurance in the safety of the vaccine uptake".
Source: *Participant Y.docx*

" For these hospitals, promoting the policy means to the public that the hospital is following public health guidelines".
Source: *Participant S.docx*

Satisfaction of public expectation

"I believe that the implementation of the mandate policy is to satisfy the public to build trust due to continuous monitoring of public sentiments regarding the infection rate".
Source: *Participant D.docx*

"As a healthcare worker, I recognize the role of vaccines in preventing severe illness, hospitalizations, and deaths, for the patients being served, colleagues, and the broader community. But the COVID-19 vaccine is surrounded by uncertainties".
Source: *Participant A.docx*

"My view about vaccine mandates is that public health authorities are taking necessary measures to protect the public and mitigate the spread of COVID-19".
Source: *Participant W.docx*

"The hospitals are not implementing the mandates for themselves, rather, they are doing it so that they can show that hay, our hospital is promoting this mandate policy so that the public is aware that the hospital is a safe environment to enter against COVID-19".
Source: *Participant S.docx*

Impact of vaccine mandate

"I have worked for over 30 years in my nursing career and have made investments and saved sufficient money for my retirement. I care less about quitting my job".
Source: *Participant L.docx*

"Well, some healthcare workers have also been forced to face consequences such as termination of employment for refusing to be vaccinated and this has a devastating economic impact on their lives".
Source: *Participant H.docx*

"The healthcare setting was already strained by the demands of the pandemic and implementing the mandate subjected the health institution to losing experienced staff due to the mandate implementation".
Source: *Participant A.docx*

"There was this feeling of resentment and betrayal by some healthcare workers imposing the mandate on them without adequately addressing their concerns".

Source: *Participant I.docx*

"I believe that there are legitimate concerns about the impact of vaccine mandates on healthcare workers such as staffing shortages and workforce morale".
Source: *Participant J.docx*

"The mandate has a significant impact on the workforce morale of some healthcare workers. The extent of staffing shortages and the hospital losing experienced staff due to the mandate has been alarming".
Source: *Participant D.docx*

"The mandate is a violation of my autonomy and medical rights because it is compelling me to take the vaccine when I am not ready".
Source: *Participant N.docx*

"The economic impact such as losing your job because of the non-compliance with the vaccination mandates is affecting several families and this is disturbing".
Source: *Participant E.docx*

Analysis of Themes

The thematic analysis resulted in 12 themes to answer the research questions. The themes provided rich, detailed insights into the experiences, perspectives, and meaning embedded in the data and helped answer the research questions about the HCWs' perceptions of COVID-19 vaccination and the reasons for the refusal and abandonment of jobs. Below is the thematic analysis of the three research questions.

Theme 1: Trust in Vaccine Safety and Efficacy

Several participants harbored doubts and concerns about the rapid development process of the COVID-19 vaccines, potential side effects, or long-term implications,

reflecting the degree of their skepticism to comply with the vaccine uptake. A range of psychological and emotional feelings associated with a newly created vaccine, such as anxiety and vaccine-related stressors created uncertainty about the safety and vaccine efficacy, fear of adverse reactions, and moral distress surrounding the vaccine's uptake decisions. This contributed to psychological strain among some HCWs. Participant A mentioned to me " The vaccines were made so quickly and I feel like the clinical trials were shortened. It usually takes 10 years or more to approve a vaccine but COVID-19 vaccines took a lesser time to approve and that's why I do not want to take it". Participant B expressed his perceptions and experiences about the COVID-19 vaccine and stated, " I have always trusted my natural immunity to fight infection". He believed in natural immunity with the feeling that his natural immunity kept him safe. Unsure about the safety and efficacy of the new COVID-19 vaccines, the mindset of his natural immunity was based on a previous infection by COVID-19 during the early months of the pandemic which he recovered from the infection. Participant W stated, "I do have reservations about the safety and efficacy of the COVID-19 vaccine due to the speedy nature of the vaccine development that has not taken the normal time frame like other vaccine developments". Participant S expressed concerns about emerging variants and doubted the claims that the vaccines are safe from all these emerging variants. Alluded that the responsible health authorities should be able to tell the public what kinds of vaccines will be right for the emerging variants. Participant J stated, "Although I am a well-educated HCW and understand the objectives regarding vaccination programs, claims about the COVID-19 vaccine's ingredients, efficacy, and long-term side effects sow seeds of doubt

and skepticism about the vaccination". Accordingly, these perspectives are a challenge to the COVID-19 vaccination uptake and played a pivotal role in vaccination refusal.

Theme 2: Concerns about Adverse Effects and Long-Term Implications

Some HCWs voiced concerns regarding potential side effects and long-term health implications associated with COVID-19 vaccines. Disturbing concerns about adverse reactions to the vaccines, including mild symptoms such as pain at the injection site or fatigue, as well as more serious complications like allergic reactions and clotting disorders, were mentioned. Participant W stated, "Despite the clinical trials and regulatory approval, I still harbor doubts about the potential short-term and long-term effects of the vaccines". This was associated with worries that the vaccines were rushed to the market without adequate testing and later found to have some disturbing adverse effects, consequently a distrust in the vaccination. Participant D asserted that the COVID-19 vaccine is associated with risks for thrombosis with thrombocytopenia. Stated, "There have been reports of serious side effects associated with the AstraZeneca vaccine, particularly regarding the formation of blood clots". Additionally, she provided further insights that noticeable blood clotting events in some individuals showed that vigorous testing for safety before authorization for use was not done and is a call for safety concerns. Participant L stated "I am always reluctant with vaccinations because my health condition is in bad shape which makes me think properly before deciding to get vaccinated. Concerns about allergy reactions and side effects of COVID-19 could exacerbate my health condition, therefore, I'm cautiously assessing the risks and benefits of the vaccine before determining to take it". Participant A expressed concerns about the

vaccine's potential side effects and long-term consequences which remain uncertain and exacerbated by the vaccine's rapid development and emergency use authorization. For Participant Y, inflammatory disease of the heart may occur according to reports after vaccination to cause myocarditis and pericarditis and is scary. Participant H stated "Concerns associated with side effects such as soreness on the injection site, redness, body aches, and fatigue after the vaccine have been administered is causing me anxiety". Most of these participants shared their experiences with emotions and frustrations and linked them to the uncertainty of the vaccines' potential unknown side effects and being urged to take them as frontline HCWs.

Theme 3: Newness of Approved Vaccine

Some HCWs raised concerns due to the unprecedented speed at which COVID-19 vaccines were developed, tested, and authorized for emergency use and uptake. Participant I stated, "I have always taken vaccines in the past but I'm skeptical about the COVID-19 vaccine due to its newness and pressure on HCWs to comply for uptake". Both participants D and E were worried about the rapid development of the vaccines. Participant D expressed concern about the speedy nature of the vaccines' production compared to other vaccines which made her feel uncomfortable to comply and linked it to potential uncertainty in the body. Participant E stated "I am concerned about the rapid development of the COVID-19 vaccines as opposed to other vaccines and the urgent uptake enforced on HCWs because of uncertainty about safety and long-term effects". For Participant B, the accelerated production of COVID-19 vaccines leaves doubts, and uncertainty, in the minds of many about the safety of the vaccines and efficacy against

mutant strains that are continuously emerging. Participant G stated, “COVID-19 vaccine being a new vaccine, I feel that my God-given DNA will be altered by programming RNA transcription and nothing should go into my body that may change that”. Participant N stated, “The vaccine is new and I’m trying to understand and process my mind whether or not to take it”. Regardless of the proven clinical trials, participants demonstrated uncertainty, fear, and anxiety, about the vaccine’s safety and based their argument on potential unknown and unforeseeable adverse effects.

Theme 4: Confidence in Vaccine Effectiveness

Questions about the effectiveness of a new vaccine lingered in the mindsets of some HCWs. Participant D stated, “There is a level of politics involved in COVID-19 vaccination. When the vaccines were newly made and authorized for use, the narrative was that the first, second, and third doses were enough to fight infection. Subsequently, they started talking about boosters after the third doses were administered, which questioned the accuracy of the information and effectiveness of the vaccines”. Participant S stated, “I feel like the HCWs are the Guinea pigs to test or experiment with the effectiveness of the vaccines”. For Participant N, inaccurate information from the media about the effectiveness and unknown side effects is a discouraging factor. Participant L stated, “I have been concerned about the vaccines’ effectiveness against the emerging variants of the virus and whether the ability of the vaccines will be able to confer long-lasting immunity or prevent transmission”. Participant D lamented the negative experience of instances of breakthrough infectious cases of COVID-19 re-occurring in vaccinated individuals and expressed doubts about the effectiveness of the vaccines.

Participant I mentioned to me, “My friend passed away from COVID-19 even after getting the second dose. This is a personal devastating experience for me and the experience continues to linger in my mind and influences my negative attitude toward the vaccine uptake”. The emergence of new variants of COVID-19 raised questions about whether existing vaccines will remain effective against them, leading some participants to question the long-term efficacy of the vaccination efforts.

Theme 5: Media Influence on Vaccine Perception

The impact of news from the media on vaccine uptake induced fear and anxiety in most participants due to their influence on information spreading. Some participants raised concerns that information from the press, broadcasting corporations, and social media, influenced their vaccination decision refusal such as the risk of blood clots associated with the AstraZeneca vaccine. Participant S stated, “Most of the information I perceive, the negative ones, is people from social media. Also, the mass media, where it was reported that people had issues with the COVID-19 vaccine after they took it”. Participant B reported that the spread of misinformation online had an impact on HCWs’ attitudes towards vaccination, particularly among black and Asian communities, where many HCWs had trust and confidence issues about the vaccine and vaccination program. For Participant G, personal health information is to remain confidential and the media shouldn’t be spreading people’s health information about taking the vaccine. Beyond that, she stated “People had taken the vaccine and still became sick, and a good number of the population got infected and recovered without the vaccine”. Participant H felt that the influence of misinformation and conspiracy theories circulating within communities

and social networks about the outcome of COVID-19 vaccines, different from previously made vaccines, sows seeds of doubt and skepticism about getting vaccinated. Additionally, she felt that politics fueled her skepticism about the vaccine's safety and efficacy as some political leaders disseminated conflicting information about the vaccine. This created doubts about the transparency and integrity of the vaccine approval process. Participant D raised concerns about the politicization of public measures, including the COVID-19 vaccines, and felt that it has exacerbated her distrust and skepticism. Additionally, she felt that the polarization of public discourse surrounding the COVID-19 vaccine and vaccination has led to the spread of misinformation and conspiracy theories, and has undermined confidence in the COVID-19 vaccines and the institutions promoting them. For non-verified scientific information, she alluded that "there is something now called the internet where bloggers and other online users display inaccurate information". Incredibly, these are some of the issues affecting trust and confidence in the COVID-19 vaccination process for most HCWs who are refusing to be vaccinated.

Theme 6: Infringement of Autonomy

Most HCWs perceived the mandate implementation policy as a violation of their freedom to make medical decisions for themselves and an infringement of personal autonomy and individual rights. For some, particularly those who had reservations about the safety and efficacy of the vaccine, being forced to comply with the mandate feels coercive and undermines their sense of agency over their bodies. Participant J stated, " I believe that the autonomy of every HCW should be respected and that vaccination may not be appropriate for everyone". Participant W stated, "The mandates compel HCWs to

receive vaccination against their will or face consequences such as termination of employment, which to me, is viewed as a violation of freedom to make personal medical decisions". Participant B expressed a disgruntled feeling that mandating vaccination raises ethical concerns and questions HCWs' right to decision-making because imposing a mandate forces them to take the vaccine against their will. Participant A stated, "The mandate compels HCWs who are unwilling to vaccinate to forcefully comply and this is perceived as a violation of bodily autonomy right". Participant S was sentimental in her expression of feelings in that the mandate was not meant for HCWs because they had a choice to decide what was good for them or not, but rather, the mandate was imposed to satisfy the public and is against the right to autonomy. Participant N stated, "I understand that refusing the COVID-19 vaccine sends a conflicting message about the importance of vaccination and could discourage others from getting vaccinated. However, I also understand that I'm entitled to the autonomy rights that give me leverage to personal decision-making to refuse COVID-19 vaccination". Participant H reported that several co-workers unwilling to comply with the vaccination mandate took the vaccine because they did not want to lose their jobs. She continued working despite the mandate implementation until she was fired. For some of these participants, the vaccine mandates were viewed as a policy for protecting both patients and HCWs but an imperfect tool in the larger effort to combat the pandemic due to the circumstances surrounding the safety of the vaccines.

Theme 7: External Pressures and Mandate Implementation

Insights from most participants insinuated that pressure from government policy recommendations and the public for a mandate on HCWs to get vaccinated due to their increased risk of exposure to COVID-19 and their role in protecting the public influenced authorities in hospitals in promoting mandates for patients' safety rather than considering their autonomy. Participant I noted that there are three vaccines for one virus with each having its side effects and there's the possibility of unknown long-term adverse effects. Yet, pressure comes from government/health authorities to market the vaccine uptake despite evidence of deaths from people who have taken the vaccine. Participant J expressed the feeling that implementation of the mandate in hospitals raises questions about whether the mandate policies are influenced by the government to gain votes from pro-COVID-19 vaccination individuals. Participant A thought that most of the information about COVID-19 vaccination compliance is being influenced by political agendas or ideological biases, rather than based on scientific evidence and public health principles. Participant W stated, "I do not trust politically motivated sources because they are influenced by partisan agendas". For Participant G, the mandate is a form of coercion because the hospital authorities are making her feel that unless she takes the vaccine, she will not be able to meet her livelihood expectations of paying rent, utility bills, car loan with insurance, and food for her kids. For most of these participants, there's a feeling of politicization of the vaccine which has fueled skepticism among them. Mixed messaging from political leaders and conflicting information disseminated through media channels also contributed to doubts about the transparency and integrity of the vaccination process.

Theme 8: Satisfaction of Public Expectation

The decision to mandate vaccinations for HCWs was viewed by some participants as meeting societal demands for proactive measures to address the COVID-19 pandemic. Public expectations by hospitals that implemented vaccination mandates for HCWs hinged on several critical factors, including building trust, fulfilling ethical obligations, and aligning with public health goals (Sprengholz et al., 2022). For some participants, public confidence in the institution was crucial and by implementing vaccination mandates, the hospitals signaled their commitment to mitigating the spread of COVID-19. The objective was to bolster public confidence in the institution's ability to prioritize safety and respond effectively to the public health challenge.

Participant S explained that the mandate implementation by hospitals is a measure to appease the public and stated that " The hospitals are not implementing the mandates for themselves, rather, they are doing it so that they can show that hey, our hospital is promoting this mandate policy so that the public is aware that the hospital is a safe environment to enter against COVID-19". For Participant D, promoting the mandate policy is a way to show the public that the hospital is following or adhering to public health guidelines to reduce the spread of COVID-19. An action indicating that the hospital is taking proactive steps to ensure that their staff members are vaccinated and reassuring the public that the institution is taking the pandemic seriously and following best practices to mitigate its impact.

Theme 9: Public Image and Safety

Given the highly contagious nature of COVID-19 and the critical role HCWs played in patient care, the vaccination mandate was seen by hospital administrative authorities as a proactive measure to protect against transmission and safeguard public health. Implementing the mandate signaled a commitment to prioritizing safety and enhancing public trust in the institution's ability to manage public health crises effectively (Smiths et al., 2022). However, the effectiveness of the vaccination mandates in ensuring workplace safety depends on achieving high levels of compliance among HCWs because non-compliance undermines the intended benefits of the mandate and compromises patient care. Eventually, the enforcement of the mandate provoked a backlash from some HCWs who perceived it as coercive or infringing on personal freedoms. Participant S viewed the mandate policy as bolstering the institution's image from a public image perspective and stated, that "promoting the policy of the mandate means that the hospital is abiding by public health guidelines". Further questioned whether there is a balance between promoting such a mandate policy and respecting individual autonomy. Participant Y perceived the mandates as a way for hospitals to demonstrate their commitment to public health and safety, rather than focusing on the well-being of their employees. Participants who reacted to this theme raised concerns about motive with the belief that hospitals are prioritizing their reputation or interests over individual rights and autonomy.

Theme 10: Uncertainty and Fear

Some participants raised genuine concerns about the safety and efficacy of the vaccines, including misinformation, rumors that COVID-19 is man-made, and a lack of clear communication that contributed to uncertainty, fear, and anxiety. Additionally, the rapid development and approval of the vaccines raised doubts about their long-term effects. Fears of severe side effects and allergic reactions deterred some participants from getting vaccinated, particularly those who perceived themselves to be at low risk of severe illness from COVID-19. Participant H stated, "I am afraid to take the vaccine because of concerns about the vaccine's safety and efficacy". The mindset was based on concerns about the vaccines' rapid development, and mistrust of government and pharmaceutical companies. Participant Y harbored doubts about being unsure of a new vaccine that has been speedily developed and expressed risk feelings of the vaccination. He stated, "Nobody can force me to take the vaccine when my instinct tells me not to and that's why I left the job". Participant N noted that misleading information and false claims about the vaccine's ingredients and alleged side effects played a role in his skepticism of the vaccine uptake and contributed to the refusal of vaccination. Safety surrounded by controversies about the vaccines contributed to the decision of the participants who reacted to this theme to quit their jobs due to refusing to comply with the vaccine uptake.

Theme 11: Mutation and Strain Variability

The ability of COVID-19 to mutate and the emergence of variants with different characteristics such as increased transmissibility or ability to evade immunity conferred

by previous infection played a crucial role in some HCWs' vaccination refusal decisions (Islam et al., 2022). The demonstrability to mutate was a disturbing factor for most participants as they questioned the vaccine's efficacy against the mutants and strains. Participant E noted that a newly created vaccine surrounded by uncertainties about emerging variants is now imposed on HCWs. Participant L stated, "I started to doubt and question the efficacy of the vaccines when new variants started to emerge and this particular skepticism influenced my decision to refuse vaccination". For participant J, the emergence of new variants raised questions about the effectiveness of existing COVID-19 vaccines against these variants. Worries about the fact that the vaccines may be less effective at preventing infection or severe illness caused by variant strains, led to doubts about the overall efficacy of the vaccination efforts.

Theme 12: Impact of the Vaccine Mandate

The decision to refuse vaccination and quit jobs by most participants was linked to skepticism driven by vaccine safety, efficacy, and long-term effects. These concerns were amplified by the novelty of the COVID-19 vaccines and the accelerated pace of their development and approval. The introduction of the mandates heightened anxieties and reinforced preexisting doubts about the vaccines, leading some participants to view the mandates as coercive measures rather than tools for safety and protecting health. Participant E stated, " I refused to comply with the COVID-19 vaccine uptake because of doubts and skepticism surrounding the approval that differs from previously produced vaccines". Mandating it with a compliance policy heightened her anxiety and reinforced the preexisting doubts and skepticism surrounding the vaccine's safety.

Some participants viewed the vaccine mandates as a significant shift in policy and practice within the healthcare settings. For some, the imposition of the mandates was perceived as a top-down imposition that infringed upon their autonomy and personal freedom. It led to feelings of resentment, frustration, and a sense of being unfairly targeted because the sudden imposition of the mandates without sufficient consultation or consideration of individual concerns exacerbated these feelings. Participant B states, "The mandate raises ethical concerns and questions the right to decision-making because imposing a mandate forces us to take the vaccine against our will". Thus, the imposition of the vaccination mandates had a profound impact on influencing many to quit their jobs rather than comply with the requirements.

Moreover, financial considerations also played a role in some participant's decisions to quit their jobs over vaccine mandates. Some had financial stability due to past investments and savings, and others found alternative employment opportunities. Participant L expressed her feelings on the economic impact associated with non-compliance with the vaccination mandates, specifically, termination of employment, which outweighed the perceived benefits of remaining in the current job position. She stated, "I have worked for close to 30 years in my nursing career and I have made sufficient investments and saved enough money for my retirement". This statement simply insinuated that her resignation from the job did not have any significant financial regrets about quitting.

Evidence of Trustworthiness

Credibility

In the realm of this qualitative study, credibility stood as a key aspect for exploring the perceptions of HCWs' refusal of the COVID-19 vaccination. This study delves into the methods through which credibility was meticulously woven into the fabric of the research, ensuring trustworthiness and validity. Focusing on Zoom interviews with the participants, I ensured that credibility was a cornerstone of the study's academic integrity by being transparent and began the iterative process with transparency by acknowledging personal potential biases, assumptions, and conflicts of interest. Transparency was enforced and achieved by providing a detailed account of my research background, motivations, and methodological approach (Elo et al., 2014). On the other hand, I got involved in the concept of reflexivity for continuous self-awareness and critical examination of my role in shaping the research process and interpretations. Goldblatt & Band-Winterstein (2016) noted that reflexivity in qualitative research involves a continuous process of self-examination and critical reflection on the researcher's role, potential biases, and influence on the research process and outcomes. Through reflexive awareness and transparency, I ensured that my personal biases did not unduly influence data interpretation by continuously reflecting on personal experiences and beliefs that may affect the research process and outcomes.

Moreover, the use of open-ended questions and probes enhanced the study's methodological rigor for rich data collection into participants' perceptions and experiences. Open-ended and probe questions allowed participants to express their

thoughts, feelings, and experiences in their own words which provided a deeper understanding of the perceptions and experiences about the COVID-19 vaccination mandate (Paradis et al., 2016). Member checking equally fostered collaboration with the participants and enhanced the credibility of the study. The checking was an ongoing process during data collection, where participants provided feedback on the data as it was being gathered. After conducting Zoom interviews, participants were also invited to review transcripts and summaries of their interviews, which provided an opportunity to confirm accuracy and offer additional insights. The iterative process validated the credibility of findings and empowered participants to contribute to the interpretation of results, ensuring their voices were accurately represented.

Building trust with participants was fundamental to the credibility of the qualitative study. The trust was ensured through transparent communication, confidentiality assurances, and empathetic engagement. Before interviews, participants received detailed information about the study's purpose, procedures, and potential risks and benefits. Confidentiality measures, such as secure data storage, reassured participants of their privacy rights. Furthermore, I adopted a non-judgmental stance by avoiding making judgments or showing bias during the interview and demonstrated empathy and respect by acknowledging participants' emotions and experiences, regardless of their vaccination decisions. Ethical considerations were also integral to maintaining the credibility and trustworthiness of the research. Informed consent, voluntary participation, and protection of participant confidentiality were paramount. Informed consent was obtained from all participants, clearly outlining their rights, responsibilities, and the

voluntary nature of their involvement. Additionally, ethical approval from the institutional review board ensured compliance with ethical standards and guidelines.

Transferability

In exploring the perceptions and experiences of HCWs who refused COVID-19 vaccination, transferability was crucial for extrapolating insights that provided broader strategies and interventions for the study. Through in-depth interviews and thematic analysis, I identified several key factors that contributed to vaccination refusal and evaluated whether the identified factors could be applicable and relevant beyond Canadian hospital settings where the research was conducted. Several considerations helped determine the transferability of the findings.

Transferability was enhanced by providing rich contextual descriptions of the research, such as the characteristics of the hospital and the prevailing socio-cultural factors influencing vaccination refusal. These contextual nuances were essential to assess the relevance of the findings to other healthcare settings. Contextual nuances such as cultural beliefs, organizational culture, policy, communication, population demographic, and health education, ensured that the qualitative findings were relevant, applicable, and actionable in different settings (Stalmeijer et al., 2024). Additionally, rich and detailed descriptions of the participants' experiences, beliefs, and motivations helped to enhance the transferability of the findings. For instance, direct quotes and anecdotes from the participants could allow readers to contextualize the findings within their own experiences. The diversity of the study participants such as HCWs' roles and demographic backgrounds captured a range of perspectives and experiences and helped

to enhance the transferability of the findings. By considering these factors, transferability served as a guiding principle for ensuring that the insights were not only contextually rich but applicable and relevant beyond the specific setting.

Confirmability

Confirmability played a critical role in ensuring the integrity and trustworthiness of the study because the findings of the study were based on participants' perspectives and experiences rather than biases or preconceptions from me, the researcher. In this context of vaccination refusal, I established and adopted rigorous methods to confirm that the data collected, analyzed, and interpreted were credible while acknowledging and mitigating potential sources of bias. I also applied the concept of reflexivity to my background and experiences as a strategy to fight against any potential biases enhancing the credibility of the research process and findings. Moreover, data collection for the study continued until saturation was reached where no new themes or insights emerged ensuring that the findings were comprehensive and representative of participants' experiences rather than selective or biased.

Dependability

The concept of dependability was equally examined to help understand the reasons behind HCWs' decision about vaccination refusal and how it might have affected their ability to provide consistent and reliable patient care. Some HCWs expressed concerns about the trust and dependability of the COVID-19 vaccines, questioning their safety, efficacy, and long-term effects. Examining these concerns sheds light on their perceptions of the reliability of vaccination as a preventive measure. The potential impact

of patient care and safety associated with vaccination refusal was further examined. The goal was to explore participants' perspectives on how their decision to refuse vaccination may have impacted the dependability of healthcare delivery within the hospital setting. This provided valuable insight into their perceived trade-offs between personal autonomy and professional responsibility. After the exploration of participants' perceptions and experiences, the concept of dependability provided valuable insights into the complex interplay of individual beliefs and institutional factors shaping healthcare delivery practices in the hospitals.

Summary

Chapter 4 included insights from semi-structured interviews regarding lived experiences and perceptions influencing COVID-19 vaccine refusal among some Canadian HCWs who represent a paradoxical subset due to their noncompliance with vaccine mandates. By elucidating their lived experiences and perceptions regarding COVID-19 vaccines and vaccine mandates, this study resulted in generation of themes that may be useful to a broader discourse about COVID-19 vaccination refusal in Canadian hospital care settings. In-depth semi-structured interview questions were used for this phenomenological study for participants to express their experiences in their own words. I identified a total of 12 themes, including five themes for RQ1, four themes for RQ2, and three themes for RQ3.

Participants' views differed about their perceptions and lived experiences regarding the COVID-19 vaccine. Findings led to the generation of the following five themes: trust in vaccine safety and efficacy, concerns about side effects and long-term

implications, newness of approved vaccines, confidence in vaccine effectiveness, and media influence on vaccine perceptions. While some participants expressed concerns about the unprecedented speed of vaccine development, others harbored reservations regarding safety, efficacy, and long-term effects. Some were worried about serious side effects such as anaphylaxis, myocarditis, and blood clots, which heightened their anxiety about possible unknown side effects. Notably, misinformation and conspiracy theories permeated discussions and influenced attitudes of some participants regarding vaccination acceptance. Some participants said there were still unsubstantiated theories about vaccine safety which led to doubts in terms of vaccine compliance.

RQ2 led to the generation of the following themes: infringement of autonomy, external pressures and mandate implementation, satisfaction of public expectation, and public image and safety. While most participants viewed mandates as measures by hospital authorities to ensure workplace safety and patient welfare, they equally perceived mandates as encroachments on personal autonomy and rights. This resentment toward mandates often related to a broader distrust of governmental and institutional authorities.

Three broad themes emerged in terms of understanding perspectives and experiences of Canadian HCWs who refused COVID-19 vaccinations and quit their jobs. These included uncertainty and fear, concerns about vaccine efficacy, and negative information about vaccines and mandates. Fear of adverse reactions and mistrust towards pharmaceutical companies were significant deterrents. Sentiments about the uncertainty of a major side effect associated with the AstraZeneca vaccine and questions about the

efficacy of the vaccine against emerging mutations and strains raised concerns and skepticism about vaccine uptake. Some participants raised trust issues concerning pharmaceutical companies in terms of the timeframe and thoroughness of the COVID-19 vaccine production as opposed to other vaccines and questioned their confidence in the vaccine. Uncertainty and confidence issues involving vaccines were further exacerbated by distrust and skepticism of pharmaceutical companies, which some participants thought were intended to make money because they did not follow normal timeframes of vaccine production and consequently led to COVID-19 vaccination refusal.

Chapter 5: Discussion, Conclusions, and Recommendations

Since the inception of COVID-19, Canadian HCWs have been at the forefront of the battle against the -pandemic in hospitals, witnessing firsthand its devastating effects on individuals (Wilbiks et al., 2021). As development and deployment of COVID-19 vaccines became a reality, these HCWs found themselves in a unique position to play a pivotal role in shaping public perceptions and uptake of these newly created vaccines. Choi et al. (2022) ascertained HCWs had frustrations regarding uptake based on lack of confidence in the vaccine.

The purpose of this qualitative phenomenological study was to explore Canadian HCWs' perceptions of the COVID-19 vaccine and mandate on their decisions to refuse vaccination and quit their hospital clinical jobs. The study was conducted to understand their lived experiences and perceptions and gain subjective insights regarding thoughts, feelings, and motivations. The decision to refuse vaccination and quit hospital clinical jobs is multifaceted and involves personal beliefs, values, concerns, and external factors such as workplace policies and societal influences. Using semi-structured interview questions, I was able to explore their lived experiences regarding this topic. Through qualitative analysis, I could identify common patterns, themes, and variations in terms of participants' experiences and perceptions. This helped address underlying reasons for vaccination refusal and job resignation, as well as barriers to vaccine acceptance. Insights gained from the study could help in development of targeted interventions, policies, and support mechanisms to address vaccination refusal and workforce retention within

hospital settings. Understanding HCWs', policymakers, and leadership within hospital care settings could lead to better tailored strategies to meet their needs and concerns.

12 themes emerged from thematic analysis. These were trust in vaccine safety and efficacy, concerns about side effects and long-term implications, newness of approved vaccine, confidence in vaccine effectiveness, media influence on vaccine perception, infringement of autonomy, external pressure and mandate implementation, satisfaction of public expectation, public image and safety, uncertainty and fear, concerns about vaccine efficacy, and negative information about vaccines and mandates. The phenomenological qualitative design was used for rich exploration during semi-structured interviews and helped in terms of contextual understanding of factors that influenced their perceptions and decisions regarding vaccination and job status.

. As valuable frontline workers whose services were needed during the pandemic, participants expressed their sincere lived experiences leading to vaccination refusal and explained how their decisions may have impacted their professional roles in hospitals, interactions with colleagues and patients, and personal wellbeing. In addition, they addressed their beliefs, concerns, and attitudes toward vaccination in general and the COVID-19 vaccine specifically and expressed their unique concerns about it.

Theoretical Implications

The TRA was used for analysis of the study. Analysis of findings revealed a range of attitudes toward the vaccine among HCWs, including perceptions about its efficacy, safety, and necessity. HCWs who refused vaccination held negative attitudes toward the vaccine, such as concerns about potential side effects and doubts about its effectiveness

in terms of preventing COVID-19. I addressed the influence of subjective norms within hospital environments, including pressure from supervisors and hospital administrators to comply with the vaccine mandate. HCWs who choose to refuse vaccination despite social pressure prioritize personal beliefs over institutional or societal expectations.

Key Findings

Study findings confirm and extend existing knowledge about factors contributing to vaccine refusal among HCWs, including concerns about safety, efficacy, and distrust in the healthcare system. It exposed challenges faced by healthcare institutions in terms of implementing vaccine mandates and retaining staff in the face of vaccine refusal. I addressed novel insights and perspectives that had not been previously explored in literature as well as fresh perspectives on COVID-19 vaccine refusal within hospital settings. I also addressed nuanced differences involving experiences of HCWs from diverse backgrounds, disciplines, and geographic regions, highlighting the need for tailored interventions. Moreover, findings expanded knowledge and understanding regarding the complex interplay of personal, professional, and societal factors influencing vaccine refusal among HCWs. This icnluded broader implications of vaccine mandates on workforce dynamics, including issues related to workplace culture, job satisfaction, and retention. Findings have practical implications for policymakers in hospital institutions in the context of strategies to address vaccine refusal among HCWs in order to mitigate their impact on patient care and workforce stability. It could lead to recommendations for supportive measures aimed at promoting vaccine confidence,

enhancing communication strategies, and fostering cultures of trust and collaboration within hospital settings.

Interpretation of the Findings

Interpretations of key findings added depth and understanding to the study in order to answer the three research questions, draw meaningful conclusions, and contribute to practical applications for the study. This involved understanding participants' attitudes and beliefs in the context of their perceptions and lived experiences regarding COVID-19 vaccines. Perceptions and lived experiences of participants who chose to forgo vaccination and subsequently resigned led to information regarding broader demographic implications of vaccine refusal. Participants in some demographic groups and backgrounds are disproportionately represented among vaccine refusers, reflecting underlying disparities in terms of access to health education. This study revealed intersecting factors including sex, race, ethnicity, and education that influenced some participants' vaccination decision-making and access to hospital clinical environments.

Findings for RQ1 highlighted a variety of factors contributing to vaccination refusal among participants. By exploring perceptions of these participants, I was able to gain insights regarding specific beliefs and attitudes shaping vaccination refusal.

Trust in Vaccine Safety and Efficacy

Despite extensive scientific evidence supporting the safety and efficacy of COVID-19 vaccines, almost all participants expressed deep-seated concerns and skepticism about the vaccines' safety and efficacy. These concerns stemmed from a

variety of sources, including unforeseeable side effects, confidence in the vaccine's effectiveness, misinformation on social media, historical mistrust of medical authorities, and distrust in the vaccine associated with the unprecedented speed of development and authorization for emergency use (Trogen et al., 2020). Concerns about vaccine safety were compounded by the emergence of adverse events following vaccination. Reports of rare but serious side effects, such as anaphylaxis and myocarditis, heightened participants' anxiety about the potential risks associated with vaccination (Rabail et al., 2022). Even though some of these severe side effects were noticeably rare, they had garnered significant media attention and contributed to participants' decision to refuse vaccination who were exposed to these reports almost daily. Ahmed et al. (2021) noted that misinformation and rumors reflected the impact of vaccination on personal and professional life. Some participants expressed that the vaccine misinformation affected them personally because it created a feeling of stress, anxiety, and frustration, as well as changes in behavior for compliance with the vaccine uptake. Moreover, some HCWs questioned or doubted the effectiveness of the COVID-19 vaccines against emerging variants thought that the variants could potentially impact vaccine effectiveness, and wanted more information or assurances about the vaccines' ability to protect against these new strains. Other factors such as past experiences with vaccination, knowledge and information sources, and personal beliefs and values, deterred compliance with the vaccination program. Furthermore, trust issues emerged as a central theme intertwining with perceptions of vaccine safety and efficacy, institutional trust in healthcare organizations and government agencies, and interpersonal trust within professional

networks. Most participants based their decision to refuse the COVID-19 vaccine associated with the mandate because of deficits in trust and skepticism or doubts about the motives of policymakers, and a sense of betrayal with the healthcare system.

Perceived Infringement of Autonomy and Individual Rights

The findings of this research question provide valuable insights into the experiences and perceptions of Canadian HCWs who resigned from their positions due to the COVID-19 vaccine mandate policy. This theme prevailed and was more significant among participants as they perceived that the mandate policies infringed on their autonomy and individual rights. Many expressed a deep-seated belief in personal freedom and bodily autonomy and viewed the imposition of vaccination requirements as a violation of their fundamental rights. For these individuals, the decision to resign was driven by a steadfast commitment to the principles of self-determination and freedom of choice. Additionally, the decision to resign, for some participants, was guided by ethical and professional considerations inherent to their role as HCWs. Some participants expressed feelings of conflicting obligations to prioritize patient safety and well-being while also upholding their own moral and ethical principles. In this situation where participants perceived a misalignment between institutional mandates and their professional values, the resignation was deemed a necessary course of action to maintain integrity and authenticity in their practice. Additionally, some participants highlighted the impact of workplace dynamics and support systems on their decision-making process. Many described feeling marginalized, ostracized, or unsupported within their healthcare institutions due to their stance on vaccination. Pressure from supervisors and

administrative authorities further exacerbated feelings of isolation and alienation and contributed to their sense of disenchantment with their workplace environment. The absence of flexibility in the implementation of the vaccine mandate policies left many feeling unheard and undervalued and prompted their resignation as a means of self-preservation.

Furthermore, the findings illuminated some sort of ineffectiveness and implementation of vaccine mandate policies within hospital healthcare organizations. Mandates are intended to promote vaccination uptake and protect both patients and staff from COVID-19 (Holthof & Luedi, 2021). The decision of some HCWs to quit rather than comply raised questions about enforcement, communication, and support mechanisms surrounding these policies. Exploring their perceptions and experiences, this study also identified challenges and barriers to implementation, as well as strategies for addressing them in future policy development.

Philosophical Beliefs About COVID-19 Vaccines and Inflexible Mandate Implementation

For many participants, the decision to refuse vaccination and quit their jobs was influenced by personal and philosophical beliefs. The findings of this research question illuminated the challenges faced by hospital healthcare organizations in managing vaccine refusal among their staff. Hospitals and other healthcare facilities rely on a vaccinated workforce to ensure the safety of both patients and employees, making vaccine refusal a critical issue for staffing and operational planning (Holthof & Luedi,

2021). Exploring the perceptions and lived experiences of participants who chose to resign rather than comply with vaccination mandates provided valuable insights into the socioeconomic impacts of such policies. For some participants, leaving their jobs had significant consequences for their livelihoods and financial stability such as socioeconomic status and employment conditions. For others, the implementation of vaccine mandates had a significant impact on individual medical autonomy and personal freedom. For many who chose to quit rather than comply with the mandates, the decision involved weighing personal beliefs and values against institutional requirements. Examining their perceptions and experiences, this study gained insight into the complex interplay between policy-making within hospital care settings and individual rights, triggering a debate around the appropriate balance between these competing interests in the context of COVID-19 pandemic emergencies.

Moreover, the findings of this research question have broader implications for public health policy and pandemic response efforts. Vaccine mandates represent a key tool in controlling the spread of COVID-19 and preventing healthcare-associated outbreaks (Giubilini et al, 2023). However, the decision of some HCWs to quit rather than comply underscores the need for comprehensive approaches to addressing vaccine refusal and promoting vaccine uptake. Vaccine refusal among HCWs not only undermines efforts to control the spread of COVID-19 but also erodes public trust in vaccination and scientific expertise. Understanding the perspectives and experiences of HCWs who chose to resign rather than be vaccinated, policymakers can develop more

targeted and effective strategies for promoting vaccine uptake and thereby safeguarding the health and well-being of both HCWs and the general population.

Additionally, the decision to refuse vaccination of some participants and quit their healthcare jobs was influenced to a broader extent by the systemic issues within the healthcare system. Some interviewees cited concerns about workplace culture that was violated via the mandate implementation and linked it to distrust in the healthcare system with government intervention as a contributing factor to their decision to quit their jobs. Others raised concerns about the safety and efficacy of COVID-19 vaccines, fueled by misinformation and uncertainty about the rapid development and approval process that differs from the traditional vaccine developments.

Limitations of the Study

Conducting this qualitative phenomenological study on the perceptions and lived experiences of Canadian HCWs who refused COVID-19 vaccination has several limitations. Firstly, the small sample size of 13 participants limits the generalizability of the findings because the experiences and perceptions of these individuals may not fully represent the diversity of perspectives among HCWs who refuse vaccination across Canada. Also, the limited geographic scope involving only six Canadian provinces out of ten provinces and three territories may not capture the full range of regional differences in healthcare systems, cultural contexts, and policies related to vaccination refusal. The findings may not apply to HCWs in these other provinces or territories. Moreover, the study included HCWs from various roles but only nurses, personal support workers, laboratory technicians, and a social worker participated. This indicates that participation

by other HCWs' professions is not fully represented and the distribution does not accurately reflect the proportions of these occupations within the healthcare workforce which affects the comprehensiveness of the insights gained. In addition, the study relied heavily on participants' subjective experiences and interpretations. Accordingly, the participants' own biases and motivations may have influenced the data collected and analysis of the data. Furthermore, the study's findings are time-bound and may not capture changes in attitudes, perceptions, or behaviors among HCWs who refuse vaccination over time. The COVID-19 pandemic and the geographic distribution of HCWs across Canada limited this study only to an online format, which limited the study to only individuals who have access to online and emails.

Recommendations

The outcome of this study about the perceptions and lived experiences of Canadian HCWs who refused COVID-19 vaccination and quit their clinical jobs has made significant strides in understanding the complexities of COVID-19 vaccination within the workforce in hospitals. Building on the strengths and addressing the limitations of this study, some key recommendations have surfaced that future scholars may adopt during their research including longitudinal, mixed-methods, comparative, intersectional, and organizational approaches to 3

generate actionable insights for addressing COVID-19 vaccine refusal and promoting vaccine acceptance among HCWs in Canada and beyond. Advancing knowledge of these recommendations in the context of COVID-19 vaccine refusal within the healthcare workforce, the research would contribute to the development of strategies

to protect patients and staff in hospital clinical environments and strengthen the healthcare system in the face of the ongoing threats from COVID-19.

The current study provides a cross-sectional snapshot of HCWs' perceptions and experiences at a single point in time. Longitudinal studies could be needed to track changes in vaccine attitudes and behaviors over time, as well as allow the researchers to identify trends and patterns in vaccine refusal and job resignation among HCWs. Also, the application of mixed-methods approaches that integrate qualitative and quantitative methodologies would give a comprehensive understanding of vaccine refusal among HCWs. Quantitative surveys would provide insights into the prevalence and distribution of vaccine refusal across different demographic and occupational groups, while qualitative interviews would illuminate the underlying motivations and experiences of vaccine-refusal individuals. Moreover, comparative studies may be needed to explore variations in vaccine refusal and job resignation among HCWs across different healthcare settings, regions, and demographic groups in Canada. The comparative research would enable researchers to identify contextual factors that may contribute to differences in vaccine attitudes and behaviors, informing targeted interventions to address vaccination refusal in specific populations. Furthermore, future scholars are encouraged to apply intersectional analysis to examine how multiple social issues, such as gender, ethnicity, socioeconomic status, and professional status, intersect to shape HCWs' experiences of vaccine refusal and job resignation. The intersectional analysis would highlight the unique challenges faced by marginalized or underrepresented groups within the healthcare workforce and inform strategies to promote vaccine acceptance and

compliance. Additionally, organizational factors could be investigated because these may have influenced vaccine refusal and job resignation among HCWs, including institutional policies, workplace culture, leadership practices, and peer dynamics. These investigations could provide insights into the role of hospital institutions in supporting or hindering vaccine uptake among staff and inform organizational interventions to promote vaccine acceptance and compliance.

Implications for Positive Social Change

A multifaceted analysis was required to understand the implications and potential positive social change resulting from this qualitative phenomenological study on the perceptions and lived experiences of Canadian hospital healthcare workers who refused the COVID-19 vaccine and vaccination mandate and subsequently quit their clinical jobs. This study has significant positive social change implications for enhancing workforce retention strategies, highlighting ethical and personal autonomy issues, promoting open dialogue and trust, and contributing to academic and public discourse.

From the point of view of enhancing workforce retention strategies, the findings can help healthcare institutions develop better strategies for workforce retention and management during public health crises. By understanding the factors that led to these HCWs' decisions to quit their jobs, hospitals can create more supportive and resilient work environments that might prevent similar outcomes in the future, such as involving HCWs in the policy-making process to ensure that their perspectives are heard, considered, and addressed. Such an approach may help retain HCWs in the face of challenging times with mandates and health crises. Besides, considering ethical and

personal autonomy issues resulting from this study, the study draws attention to the ethical dimensions of mandatory vaccination policies and the importance of respecting individual autonomy and personal medical choices. A discussion of these two issues may lead to better policy development that balances public health concerns with individual rights. In addition, promoting open dialogue and trust between HCWs, hospital administrators, and policymakers, with clear and transparent communication that includes HCWs' voices in decision-making processes, can foster trust and collaboration, which is essential for effective public health responses. Moreover, the research can add valuable data and perspectives to academic and public discourse on public health, vaccination mandates, and employment law. It can also serve as a basis for further studies and discussions, enriching the collective understanding of these complex issues.

Conclusion

Through in-depth interviews and analysis grounded in phenomenological principles, this study delves into the lived realities of Canadian HCWs who refused the COVID-19 vaccination mandate and quit their hospital clinical job positions and highlights the impact within the healthcare workforce. The study reveals that the decision by participants to refuse the COVID-19 vaccine is deeply personal and influenced by a myriad of factors. For some, concerns about the safety and efficacy of the vaccine loom large, driven by a sense of mistrust in the healthcare system or apprehensions about potential side effects. For others, balancing their commitment to patient care with their autonomy and personal beliefs was grappled with ethical dilemmas of COVID-19 vaccination compliance.

Despite the diverse array of experiences uncovered in the study, several overarching themes emerge and illuminate common threads that bind the narratives of vaccine-refusing HCWs. These include a call to address the COVID-19 vaccine concerns and uncertainties, a desire for autonomy and informed decision-making, and a need for open and respectful dialogue surrounding vaccination. Importantly, the study underscores the importance of recognizing and validating the perspectives of vaccine-refusing healthcare workers, fostering empathy and understanding within the healthcare community.

The findings of the study hold profound implications for healthcare organizations and policymakers alike. Hospitals and healthcare institutions are urged to take a proactive approach to addressing vaccine refusal among their workforce where they need to cultivate a culture of trust, transparency, and inclusivity. This may involve providing comprehensive education and resources on vaccination, implementing tailored support mechanisms for vaccine-refusing employees, and fostering an environment that values diversity of perspectives while prioritizing patient safety. Similarly, policymakers are called upon to heed the voices of vaccine-refusing HCWs and integrate their insights into broader public health strategies. This entails developing evidence-based interventions aimed at addressing vaccine refusal, promoting vaccine acceptance, and safeguarding the health and well-being of both healthcare workers and the communities they serve. Importantly, any policy responses must be grounded in principles of equity, fairness, and respect for individual autonomy, striking a delicate balance between public health imperatives and individual rights.

In essence, this phenomenological research study is one of empathy, understanding, and dialogue. By explaining the lived experiences and perspectives of Canadian hospital HCWs who refuse the COVID-19 vaccine, the study is an invitation to engage in meaningful conversations, challenge assumptions, and bridge divides within the healthcare community. It recognizes the inherent complexity of COVID-19 vaccine refusal and the importance of addressing it with compassion, respect, and evidence-based approaches. While navigating the challenges of the COVID-19 pandemic and beyond, the lessons learned from this study are a good example of working together towards a future where HCWs feel supported, empowered, and valued in their choices, and where the health and well-being of all are prioritized and protected.

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Appendix A: Interview Protocol

You are invited to complete pre-screening survey questions via Amazon Mechanical Turk (Mturk) with a Walden University student working toward a doctoral degree. Participants who meet the pre-screening eligibility criteria will later be invited to participate in a Zoom interview.

Create | Requester | Amazon Mechanical Turk (Mturk.com)

Project: Ewane Ph.D. Dissertation pre-screening survey link invitation (Not displayed to participants)

Title: Pre-screening for a Zoom interview.

Description: The pre-screening survey questions qualify eligible participants to answer semi-structured questions through Zoom interviews about the perceptions of the COVID-19 vaccine and COVID-19 vaccine mandate on HCWs' decision to refuse vaccination and quit their jobs in Canadian hospitals.

Requester: Henry Ewane

Reward: $1.0 Task Available 0 Duration 10 minutes

Location: Canada

Survey link instructions: Click a link to complete the survey. At the end of the survey, eligible participants will receive a code to be pasted into a provided box to receive credit for taking the survey and moving forward with the Zoom interview session.

Study title: Effects of the COVID-19 Vaccine Mandate on Healthcare Workers' (HCWs') Decision to Refuse Vaccination and Quit their Jobs from Canadian Hospitals.

Doctoral student name: Henry Ewane

Doctoral student contact information: henry.ewane@waldenu.edu or XXX-XXX-XXXX

Number of volunteers needed: 10 to 20.

Number of minutes needed for interview: 1 hour.

Participants must:

- Be a healthcare worker who has resided in Canada from the start of COVID-19 to the present and worked in a hospital clinical environment.
- Be between 20 to 60 years of age.

- Have a Mturk verification ID.
- Have refused the COVID-19 vaccine and quit their hospital clinical healthcare job due to the vaccine's mandate policy.

Your role:

- Can withdraw from the study at any time you wish.
- Involves no more risk than daily life. However, any potential feelings noticed will be empathetically acknowledged, and support will be provided to ensure you feel safe and cared for.
- Involves a payment.

Privacy:

To protect your privacy, I will not collect, track, or store your identity or contact info. In place of a consent signature, your completion of the survey will indicate that you consent to your responses being analyzed in the study.

Data will be kept secure by using password-protected devices and platforms. Data will be kept for at least 5 years, as required by the university.

Use of your responses:

Your survey responses will be used for academic research purposes only. Once I graduate, the study results will be posted online in Scholarworks (a searchable publication of Walden University research).

Protecting You

If you want to talk privately about your rights as a participant or any negative parts of the study, you can call Walden University's Research Participant Advocate at 612-312-1210 or email IRB@mail.waldenu.edu. Walden University's approval number for this study is- ---------- and it expires ----------.

You might wish to retain this consent form for your records. You may ask me or Walden University for a copy at any time using the contact information above.

Appendix B: Consent Form

You are invited to take part in a research study about the perceptions of the COVID-19 vaccines and vaccine mandate and the decision to refuse vaccination at the cost of quitting your job. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study seeks 10 to 20 volunteers who are:

- Healthcare workers resided in Canada from the start of COVID-19 to the present and worked in a hospital clinical environment.
- Healthcare workers work in a hospital clinical environment.
- 20 to 60 years of age.
- Healthcare workers who have refused COVID-19 vaccination and quit their hospital clinical healthcare jobs due to the vaccine's mandate policy.
- Mturk users with a verification ID.

This study is being conducted by a researcher named Henry Ewane, who is a Ph.D. student at Walden University in Health Sciences.

Study Purpose:

The purpose of this study is to explore the Canadian hospital HCWs' perceptions of the COVID-19 vaccine and vaccine mandate on their decision to refuse vaccination and quit their hospital clinical healthcare jobs.

Procedures:

Your participation will include the following steps:

- Answer prescreening questions.
- Respond to the research questions.
- Follow up the responses to the research questions by answering probing questions.

Here are sample questions: **The Study's Prescreening Tools**

Are you a healthcare worker who worked or works in a hospital clinical environment?

□ Yes

□ No

Have you resided and worked in Canada?

□ Yes

□ No

Are you between the ages of 20 to 60?

□ Yes

□ No

Do you have a Mturk verification ID?

□ Yes

□ No

Have you refused to take the COVID-19 vaccine and quit your hospital clinical healthcare job due vaccine mandate policy?

□ Yes

□ No

Attend a Zoom interview for a $25 gift certificate.

I am Henry Ewane, a Ph.D. candidate in Health Sciences at Walden University. Currently seeking Canadian HCWs (between the ages of 20 to 60) who have quit their jobs due to COVID-19 vaccination and COVID-19 vaccine mandate. Participants will take part in a one-on-one Zoom interview with three open-ended questions followed by 11 probing questions about their perceptions of the COVID-19 vaccine and vaccine mandate and the decision to refuse vaccination at the cost of quitting their hospital clinical healthcare job.

Research Questions

RQ1: What are the perceived lived experiences of Canadian hospital HCWs toward the COVID-19 vaccines?

RQ2: What are the perceived lived experiences of Canadian hospital HCWs toward the COVID-19 vaccine mandate policy?

RQ3: What experiences influenced the Canadian HCWs' decision to refuse the COVID-19 vaccination and quit their hospital clinical healthcare job?

Open-ended interview questions

1. What are your personal experiences with vaccination?
2. What is your understanding of the COVID-19 vaccine?
3. What are your general thoughts and perspectives about the COVID-19 vaccination for HCWs?
4. Do you have any unique concerns about the COVID-19 vaccines as opposed to other vaccines? If so, explain.
5. Do you have trustworthy issues surrounding information on the COVID-19 vaccination?
6. Who do you trust most or least for general information about vaccines and vaccination?
7. Are there any contributing factors such as other peoples' opinions, religious beliefs, or the media, which have played a role in your decision not to vaccinate?
8. What are your views on promoting vaccine mandates as a policy strategy to limit the spread of COVID-19?
9. Some HCWs abide by vaccine mandate policies because they want to protect others. What is your view?
10. Did a lack of confidence in the effectiveness of the COVID-19 vaccine influence your decision to refuse vaccination? Please elaborate.
11. Tell me what significant issue(s) prompted your decision to refuse vaccination at the cost of quitting your job.

Probing questions

1. Are there specific safety concerns or side affects you worry about regarding the COVID-19 vaccines?
2. What are your thoughts on the effectiveness of the COVID-19 vaccines in preventing the spread of the SARS-CoV-2?
3. Where do you get your information about COVID-19 vaccines, and do you feel that the information is reliable?
4. Have you had any negative experiences with vaccines in the past that might influence your decision?

5. Do concerns about the healthcare system or pharmaceutical companies influence your decision regarding COVID-19 vaccination?
6. Did you have any concerns about the vaccine mandate itself, apart from the COVID-19 vaccine?
7. Were there specific aspects of the mandate that you found challenging or disagreeable?
8. Did you explore alternative options or accommodations to meet the mandate without getting vaccinated?
9. Do you have any regrets about your decision to quit your job, or do you feel it was the right thing to do?

Voluntary Nature of the Study:

Research should only be done with those who freely volunteer so everyone involved will respect your decision to join or not.

If you decide to join the study now, you can still change your mind later. You may stop at any time during the study.

Transcribed and coded information collected during the interview will be shared with participants to ensure accuracy.

Risks and Benefits of Being in the Study:

Being in this study could involve some risk of minor discomforts that can be encountered in daily life such as sharing sensitive information. With protections in place, this study could pose minimal risk to your well-being that could be a trigger for distress or depression. Your information will be securely protected and only I, the researcher, will have access to it. If any potential emotions are noticed, empathetic support will be provided to ensure that you feel safe and cared for.

This study offers no direct benefits to individual participants. This study aims to benefit society by raising awareness of the impact of vaccine mandates on HCWs' decision to refuse the COVID-19 vaccine uptake even at the expense of quitting their hospital clinical healthcare jobs and how this can limit the effectiveness of vaccination

program implementation. Once the analysis is complete, I will share the overall results by emailing you a summary.

Privacy:

I am required to protect your privacy. Your identity will be kept confidential or anonymous within the limits of the law. I will not include your name or any details that could identify you in the study reports. If I were to share this dataset with another researcher in the future, the dataset would contain no identifiers so this would not involve another round of obtaining informed consent. Data will be kept secure in a password-protected computer that only I, the researcher, have access to. Data will be kept for at least 5 years, as required by the university. I will not use your personal information for any purposes outside of this research project.

Contacts and Questions:

You can ask any further questions by contacting me at henry.ewane@waldenu.edu or XXX-XXX-XXXX. If you want to talk privately about your rights as a participant or any negative parts of the study, you can call Walden University's Research Participant Advocate at 612-312-1210. Walden University's approval number for this study is ----------. It expires on----------

You might wish to retain this consent form for your records. You may ask me or Walden University for a copy at any time using the contact info above.

Obtaining Your Consent

If you feel you understand the study and wish to volunteer, please indicate your consent by clicking the interview link.

Printed Name of Participant----------

Date of consent----------

Participant Mturk ID #----------

Researcher's Signature----------