Perspectives of Respiratory Therapists on Trust in Healthcare Leadership Amid the COVID-19 Pandemic

by
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Abstract

The COVID-19 pandemic created massive amounts of stress for frontline healthcare providers. The purpose of this study was to examine perspectives of respiratory therapists, student respiratory therapists, and respiratory therapy managers on trust in leadership during the COVID-19 pandemic. The United States' healthcare and government systems were not prepared for the burden caused by the SARS-CoV-2 virus. High levels of prolonged stress, along with significant amounts of death, can cause burnout and moral injury for frontline healthcare providers. Healthcare leaders must provide effective communication, support, and proper amounts of personal protective equipment to help diminish the effects of burnout and moral injury. This study used Q-methodology, which is a mixed-methods research design, that included 203 staff respiratory therapists, student respiratory therapists, and respiratory therapy managers in the state of Ohio who worked the frontlines, or managed respiratory therapists working the frontlines, during the COVID-19 pandemic. Five distinct groups emerged from perspectives of participants: *I'll be There for You, Won't You Please, Please Help Me?, I'll Get You There, What's Going On?, and Show Must Go On*. The quality of the leader has profound effect on participants' perspective of how their institution handled the COVID-19 pandemic. The more daily contact and communication with their leaders, the less guilt the participants felt during the COVID-19 pandemic. Harold Kelley's covariation model conceptualizes the entity and circumstance of the COVID-19 pandemic by sharing perceptions of frontline respiratory therapists. Though the United States government considers the COVID-19 pandemic over, frontline respiratory therapists will endure the effects of the COVID-19 virus for years to come.

Keywords: COVID-19, COVID-19 pandemic, SARS-CoV-2, frontline healthcare providers, respiratory therapist, trust in healthcare, politicization, crisis, leadership, covariation model of attribution, Harold Kelley's covariation model

We've got heroes on the front line

Working 100-hour weeks

That run towards the danger

Saving strangers like me

There's no more beds

In the hospital wings

Where loved ones fly away

No last goodbye as they leave

~ Zak Brown Band, *The Comeback* (2021)

Dedication/Acknowledgements

This dissertation is dedicated to my husband, Joe, and two daughters, Rosie and Gracie. Thank you for your unwavering support and understanding throughout this entire process. From working the frontlines during the COVID-19 pandemic to late-night writings, you were with me, always. You inspired me to do better and to be better. Thank you for believing in me. I share this achievement with you. I love you.

This dissertation is also dedicated in memory of my grandmother, Josephine Scalzo. Her support, encouragement, and unconditional love throughout my life has enabled me to follow my dreams.

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Thank you to all the COVID-19 frontline healthcare providers, especially the respiratory therapists. You were truly the unsung heroes throughout the pandemic. I hope this study provides the necessary evidence to help better prepare future leaders to support their staff through establishing trust.

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Chapter One

Introduction

Caused by the virus known as SARS-CoV-2, the COVID-19 pandemic has affected the lives of individuals worldwide. The virus, which mimics viral pneumonia and can lead to severe respiratory failure, was discovered in Wuhan, China on December 31, 2019 (WHO, 2021). Less than a month later, the COVID-19 virus was found in the United States, and by March of 2020, over 160,000 confirmed cases in the United States alone (Taylor, 2020; WHO, 2021). From the social unrest and political divide to the rise and fall of healthcare heroes, over the course of two years, the United States found itself in turmoil from the COVID-19 virus. Creating a perfect storm for United States politicians, these events permeated local and national news, as well as social media sites. As of November 7, 2022, there had been a total of 628,694,934 cases worldwide and 6,576,088 deaths. Leading the world in cases and deaths, the United States of America has had 97,604,763 positive COVID-19 cases and 1,068,667 deaths (WHO, 2022).

In March of 2020, President Donald Trump declared the COVID-19 pandemic a national emergency, after months of downplaying the severity of the virus. The United States entered a brief national shutdown, which prompted stay-at-home orders and mask mandates. Compliance with these orders was directly related to individuals' trust in policy and health officials (Brodeur et al., 2021). According to Vardavas et al. (2021), the United States had a 52.9% approval of the government response to the COVID-19 pandemic, which was second to Japan in low approval ratings (p. 2). This indicated a lack of trust in the U.S. government.

Rather than relying on medical advice from medical professionals throughout the United States, many Americans relied on their local and state politicians, as well as social media sites; they even questioned the integrity of Dr. Anthony Fauci, the Chief Medical Advisor to the President and Director of the National Institute of Allergy and Infectious Diseases (Agley, 2020; Baum et al., 2020; Brodeur et al., 2021; Latkin et al., 2021; Vardavas et al., 2021). Accurate information and statistics about the COVID-19 virus are crucial when social media platforms rapidly spread information. Trust in public health has been altered by politicizing the COVID-19 pandemic through conspiracy theories and misinformation shared on social media (Carley, 2020; Goel & Sharma, 2021).

In early 2021, the United States approved the use of two COVID-19 vaccines (Chen et al., 2022); however, the United States was still in the middle of a public health crisis which could have hindered vaccine acceptance. According to Larson et al. (2018), to obtain vaccine acceptance, there must be trust in the product (i.e., vaccine), trust in the provider (i.e., healthcare professionals), and trust in the policy (i.e., healthcare system, government, and scientists). Vaccine acceptance in the United States has been damaged by the politicization of the COVID-19 pandemic, the prevalence of misinformation, and the lack of trust in policy and health officials (Hitlin & Shutava, 2022).

Research has verified the COVID-19 pandemic's influence on the public's trust in the healthcare system. Yet, there is limited research on the pandemic's impact on healthcare workers' trust of the healthcare system. During the initial spike of the COVID-19 pandemic, while the United States was placed on a temporary shutdown, healthcare workers battled the COVID-19 virus on the frontlines. The uncertainty of the COVID-19 pandemic created significant stress for healthcare workers, primarily frontline providers

such as physicians, respiratory therapists, and nurses (Ness et al., 2021; Trachtenberg et al., 2022).

This review aims to establish a timeline for the onset of the COVID-19 pandemic and the politicization of the pandemic in the United States. The influence that the COVID-19 pandemic has created for respiratory therapists (RTs), and other frontline healthcare workers, students, and managers, as well as their trust in leadership within their institutions, is examined. Though much research has been established for frontline healthcare workers (e.g., physicians and nurses), there is limited research for RTs. Evolving throughout the past seven decades, research on the RT profession has gained much attention over the last two years due to the pandemic.

Statement of the Problem

The COVID-19 pandemic has created significant stress for frontline healthcare providers, such as physicians, nurses, and respiratory therapists (Ness et al., 2021). The increased level of stress is caused by high levels of fear due to the unknown factors surrounding the COVID-19 virus (Trachtenberg et al., 2022). The rising level of stress during the initial spike of the pandemic, combined with the staggering death toll, generated a significant increase in prolonged stress levels for frontline providers. The results have been burnout and moral injury (MI). Burnout has been found to decrease the quality of patient care and employee productivity, as well as increase the number of medical errors and rates of staff turnover (Ward et al., 2022). Prior to the COVID-19 pandemic, workplace burnout had been recognized as a diagnosable condition by the ICD-11 (International Classification of Diseases, 11th revision) (Kopacz et al., 2019). While caring for critically ill patients, intensive care providers dealt with burnout and

stress from high-pressure situations for years before the pandemic. In fact, Omar et al. (2022) shared that roughly 25% of all critical care providers suffered from burnout while working in intensive care units (ICU) before the current pandemic; the prevalence of burnout in critical care providers since the start of the pandemic has increased to 64.5%. Burnout can eventually lead to moral injury. Moral injury can be described as individuals experiencing shame, guilt, emotional distress, weakened trust, reduced self-forgiveness, and suicide (Dale et al., 2021). Strong leaders in healthcare departments can provide support and build trust within their unit.

Ward et al. (2022) surveyed 345 respiratory therapists working on the frontlines in Canada during the COVID-19 pandemic and found that over 84% of respondents had been required to reuse N-95 masks; over 66% of respiratory therapists were not receiving proper communication within their department. To ensure trust during a crisis, especially a global pandemic, frontline healthcare providers need to feel safe and protected. This requires constant communication from leaders and proper personal protective equipment (PPE). Exposure to the COVID-19 virus can harm an individual's well-being; however, direct contact with the COVID-19 virus can cause fear and anxiety for frontline providers (Jankelová & Joniaková, 2021). Developing trust with employees is considered an important task for leaders. Motivating employees using speech is an example of building a relationship through trust. Establishing trust within a team of frontline healthcare workers can decrease stress, burnout, and MI.

Purpose Statement

This mixed-methods study aimed to examine how the COVID-19 pandemic changed the perspectives of respiratory therapists' trust in healthcare leadership. An

electronic survey was delivered to RTs, student RTs, and RT managers working in the state of Ohio. The data from this study determined how RTs' trust of healthcare leadership was influenced by numerous factors related to the COVID-19 pandemic, including age, race, gender, political party affiliation, geographical region, and their institutions' leadership involvement during the pandemic. Motivational language theory determined the most effective form of communication and support during the COVID-19 pandemic. Though decisions made during a crisis need to be made quickly, leaders must also have patience to manage and follow through with their set plans (Al-Dabbagh, 2020). Data from this study can assist in developing a crisis management plan for healthcare leaders by providing appropriate support for frontline workers during future crises (e.g., healthcare pandemics).

Research Questions

1. What are the differences between respiratory therapists', respiratory therapy managers', and student respiratory therapists' level of trust in healthcare leadership?
2. How has the COVID-19 pandemic altered the trust of respiratory therapists?
    a. What is the relationship between age and level of trust in healthcare leadership?
    b. What is the relationship between gender and level of trust in healthcare leadership?
    c. What is the relationship between education level and trust in healthcare leadership?

   d. What is the relationship between race and level of trust in healthcare leadership?
   e. What is the relationship between political party affiliation and level of trust in healthcare leadership?
   f. What is the relationship between the geographical region in Ohio and level of trust in healthcare leadership?
3. What is the perspective of respiratory therapy professionals regarding their work experience during and since the COVID-19 pandemic?

Research Design

The study surveyed staff respiratory therapists (RTs), student respiratory therapists (SRTs), and respiratory therapy (RT) managers in the state of Ohio who worked the frontlines, or managed respiratory therapists working the frontlines, during the COVID-19 pandemic. An electronic survey was delivered to RTs, SRTs, and RT managers working with COVID-19 patients in Ohio during 2020-2023 using Q-methodology software.

The survey did not collect any identifiable information from participants; therefore, anonymity was upheld throughout the entire process. Following consent, demographic information was collected from participants prior to their completion of the Q-sort. Demographic information included age, gender, race/ethnicity, education, region, category of hospital (i.e., urban, rural, suburban), and length of employment. Demographic information helped to analyze relationships with trust in leadership.

Participants were directed to complete a pre-sort, Q-sort, post-sort, follow up demographic questions, and an open-ended question. Participants' perspectives were

illustrated by Q-sort statements as well as an open-ended question following the Q-sort. Factor analysis and chi-square were utilized for data analysis of this study.

Significance of the Study

The purpose of this study was to gain perspectives of respiratory therapists, student respiratory therapists (SRTs), and respiratory therapy managers' levels of trust in the healthcare system amid the COVID-19 pandemic. Much research has been done studying physicians and nurses; however, little research existed on respiratory therapists.

The study surveyed respiratory therapists in the state of Ohio and gathered relevant information from RTs, SRTs, and RT managers who worked the frontlines, or managed RTs working the frontlines, during the COVID-19 pandemic. The survey used a mixed-methods approach and a Q-sort for data. Motivational language theory was used to identify the best forms of communication and motivation of leaders. This included the managers and their staff, as well as the managers' leaders.

The aim was to find generalizability within the study to use it for future studies, as well as a reference in future pandemic leadership training. As a frontline healthcare provider who battled the COVID-19 virus and witnessed leadership at its greatest and its worst, it is important to find what worked for leaders in order to help better prepare future leaders to support their staff through establishing trust.

Limitations of the Study

The goal of this study was to establish how respiratory therapists' trust in healthcare leadership changed due to their experiences during the COVID-19 pandemic. In addition to determining how trust in leadership has changed as a result of the

pandemic, this study also identifies the qualities and behaviors of effective healthcare leaders. The findings from this research will guide future training for healthcare leaders.

Q-methodology consists of a collection of statements, known as a concourse, which are then consolidated to 40 to 50 statements called a Q sample (Ramlo, 2016). The Q sample for this study was distributed using purposive sampling which could be considered researcher bias; however, purposive sampling allows for specific demographics or characteristics to be sampled. For this study, only RTs, student RTs, and RT managers who worked with COVID-19 patients were included. The researcher is relying on participants to be honest and truthful in their responses, yet bias cannot be eliminated.

Frontline healthcare providers consist of nurses, physicians, physical therapists, respiratory therapists, pharmacists, nurse practitioners, and physician assistants; however, participants were limited to respiratory therapists for this study. The researcher served as a frontline healthcare provider and experienced the pandemic firsthand. The researcher attempted to limit any bias in this study. The researcher's opinions and personal experiences with the COVID-19 pandemic were not discussed, as to not allow participants to be swayed by the researcher's own opinions or experiences.

Definition of Terms

Centers for Disease Control (CDC): The nation's leading science-based, data-driven, service organization that protects the public's health (CDC, n.d.).

Coronavirus: Broad term that refers to over 40 varieties of the virus that can infect humans' respiratory system (Park et al., 2021).

COVID-19 pandemic: The COVID-19 virus was declared a global pandemic on March 11, 2020, by the World Health Organization (WHO, 2020).

COVID-19 virus: A virus that mimics viral pneumonia and can lead to severe respiratory failure; also referred to as SARS-CoV-2 (WHO, 2021).

Frontline healthcare provider: Professionals in organizations dedicated to the assessment, quarantine, isolation, and treatment of established COVID-19 cases (Jahrami et al., 2021).

Herd immunity: "When a critical proportion of a population is immunized, the circulation of the pathogen decreases, and unvaccinated persons incur a lower risk of infection" (Wynen et al., 2022, p.3).

Leadership: The capacity to lead (Merriam-Webster, n.d.).

Motivational Language Theory: Theory that provides a foundation for communication and motivation between leaders and employees through the leaders' use of speech (Men et al., 2022; Tao et al., 2022).

Politicization: emphasizing controversy, scientific uncertainty, and prevalent partisan political cues (Fowler et al., 2022).

Respiratory Therapist: Healthcare professional who provides aerosolized breathing treatments, oxygen, inserts breathing tubes, and manages patients' breathing through a mechanical ventilator (Myers, 2013).

Spanish Flu (1918): Deadliest pandemic in recent history, caused by a rapidly spreading virus that claimed up to 100 million lives worldwide (Aassve et al., 2021; Ewing et al., 2020; Park et al., 2021).

Trust: Assured reliance on the character, ability, strength, or truth of someone or something; one in which confidence is placed (Merriam-Webster, n.d.).

World Health Organization (WHO): The United Nations agency that connects nations, partners, and people to promote health, keep the world safe and serve the vulnerable (WHO, 2021).

Organization of the Dissertation

The study is organized in a way for the reader to establish a comprehensive understanding of the COVID-19 virus, timeline of the pandemic, and total cases and deaths in the United States. The number of cases, rapid spread of the virus, increased death toll, and politicization of the COVID-19 virus generated a major concern for trust, or lack thereof, with the American people. This research specifically studied how the COVID-19 pandemic affected the trust of frontline respiratory therapists.

Following the establishment of the need to study frontline respiratory therapists, the methodology of the research is discussed by describing the Q concourse and the final Q sample used in the study. Data from the Q-methodology is discussed in detail, followed by a discussion of the study's results. The final section concludes with a summary of the study and the need for future research.

Chapter Two

Review of Literature

This review aims to establish a timeline for the onset of the COVID-19 pandemic and the politicization of the pandemic in the United States. The impact that the COVID-19 pandemic had on RTs and other frontline healthcare workers, students, and managers and their trust in leadership within their institution is examined. Although much research has been established for frontline healthcare workers such as physicians and nurses, there is limited research for RTs. More research is needed about the RT profession, as the COVID-19 virus hindered patients' ability to breathe effectively, and respiratory therapists were needed to assist patients on a daily basis.

COVID-19

The COVID-19 virus wreaked havoc on the world. Countless individuals lost their lives; many of those who survived will never be the same. COVID-19 continues to affect individuals of all races, gender, sexual orientations, and political parties across the globe. On December 31, 2019, healthcare professionals notified government officials in Wuhan, China, of a possible viral pneumonia outbreak (WHO, 2021). Less than a month later, the SARS-CoV-2 virus was confirmed in the United States. By March 31, 2020, over 160,000 cases of SARS-CoV-2 were confirmed in America (Taylor, 2020; WHO, 2021).

The SARS-CoV-2, more commonly known as COVID-19, was named by the WHO. Coronavirus is a broad term that refers to over 40 varieties of the virus that can infect an individual’s respiratory system (Park et al., 2021). SARS-CoV-2, like the severe acute respiratory syndrome (SARS-CoV) epidemic of 2003 and the middle east

respiratory syndrome (MERS-CoV) epidemic of 2012, mimics viral pneumonia in infected individuals (Ness et al., 2021; Park et al., 2021; Velavan & Meyer, 2020).

Velavan & Meyer (2020) report that symptoms include fever, cough, congestion, shortness of breath, muscle aches, headache, fatigue, and loss of taste and smell. In addition, more severe clinical signs of the virus have been linked to decreased oxygen saturation, tachypnea (i.e., increased respiratory rate), tachycardia (i.e., increased heart rate), systemic blood clots, acute onset of respiratory distress (ARDS), respiratory failure, and multiple organ failure (Hester et al., 2020; Ness et al., 2021; Simonelli et al., 2020; Velavan & Meyer, 2020).

The origin of the SARS-CoV-2 virus comes with many theories. However, there is minimal evidence to support such speculations. One theory has been supported with evidence of SARS-CoV-2 antibodies found in bats that links the origination of the virus to bats; the link to human transmission has yet to be proven (Park et al., 2021; Rothan & Byrareddy, 2020; Velavan & Meyer, 2020).

COVID-19 Management in the United States

A crisis is made up of three components: great danger that threatens individuals' lives, unknown/unrest in the situation, and acting with haste (Rosenthal et al., 1989). Decisions made during a crisis, such as the COVID-19 pandemic, need to be made quickly; however, leaders and policymakers must also have the patience to manage and follow through with their plans (Al-Dabbagh, 2020). Transparency and proper communication with accurate information are needed to gain the public's trust (Brodeur et al., 2021). Trust is defined as "assured reliance on the character, ability, strength, or

truth of someone or something; one in which confidence is placed; dependence on something future or contingent: HOPE" (Merriam-Webster, n.d., para. 1).

The COVID-19 virus was confirmed in the United States in late January of 2020, a month after the virus was discovered in China. During this time, President Donald Trump made numerous statements alluding to the assumption that Americans were safe from the "China Virus." On February 2, 2020, President Trump stated, "We pretty much shut it down coming in from China" (Keith & Gharib, 2020, p. 506). He tweeted on February 24, 2020, "The Coronavirus is very much under control in the USA" (Rutledge, 2020, p. 506). The diminished sense of urgency from the United States government made a huge impact on the public's perception of the COVID-19 pandemic. All of this was done while disregarding the recommendations and data from the CDC, WHO, and his chief medical advisor, Dr. Fauci.

Less than a month later, President Trump declared the COVID-19 pandemic a national emergency, prompting a nationwide shutdown in the United States. However, his public recognition of the severity of COVID-19 in the United States was brief. Shortly following, President Trump continually downplayed the COVID-19 pandemic and further provoked a divide among the American people by encouraging the politicization of the pandemic.

The politicization of the COVID-19 pandemic further divided Americans. Traditionally, Republicans and Conservatives are less likely to trust the government, whereas Democrats and Liberals are more likely to trust the government. Kerr et al. (2021) concluded that Conservatives and Republicans were more likely to approve the of government's response and management of COVID-19, had lower trust in scientists, and

took fewer precautions (e.g., social distancing, hand washing, and wearing masks). Whereas Liberals and Democrats had less trust in the government's response and management of COVID-19, had trust in scientists, and took more precautions (Kerr et al., 2021). These findings further supported the lack of bipartisanship in the United States government's response to COVID-19. Hitlin & Shutava (2022) surveyed U.S. citizens and found that 60% of Democrats trusted the government, compared to only 27% of Republicans. This supports the claim that the COVID-19 pandemic added to the significant dichotomy between Democrats and Republicans. However, trust in government should not be a partisan issue.

According to Rosenfeld (2020), most cities with Republican leaders were slower in their response to combating the initial wave of the virus, leading to increased COVID-19 infections. One study monitored patterns of social distancing using GPS locations and found much of the U.S. population did not participate in appropriate social distancing. This was connected to increased cases of COVID-19 and increased costs in healthcare throughout the United States (Allcott et al., 2020). These major political divisions are linked to the current public health crisis, which impacts the safety of Americans, and it could take the United States decades to heal.

Stay-at-home orders and mask mandates were implemented during the national shutdown in March of 2020; however, the public's compliance with the orders was directly dependent on their trust in policymakers and health officials (Brodeur et al., 2021). According to Vardavas et al. (2020), the United States had 52.9% approval of governmental response to the COVID-19 pandemic, 64.6% approval of governmental communication during the COVID-19 pandemic, and 59.9% approval of trusting

decisions made by governmental officials during the COVID-19 pandemic (p. 2). Indicating a lack of trust with the United States government's response to COVID-19 pandemic, these low approval ratings were second to Japan in the G7.

Amid the COVID-19 pandemic, the United States experienced a rapid onset of social unrest that further split the country. On May 25, 2020, George Floyd, a Black American man, was arrested and murdered in Minneapolis while a crowd of onlookers pleaded for his life. Following his murder, peaceful and violent protests erupted in the streets of America and across the globe, casting the COVID-19 global pandemic into the shadows.

Ignoring public health officials' recommendations of social distancing, the protests encouraged large gatherings. This lack of social distancing and public safety measures may have led to an increase in COVID-19 cases. According to Dave et al. (2020), a key concern with protests was the potential for spreading COVID-19 from individuals who were joining protests in communities with high transmission rates and then traveling back home to potentially spread the virus.

Accurate information regarding the COVID-19 virus is crucial when social media platforms rapidly spread information. The Secretary General of the United Nations recognized that social media platforms and misinformation spread by leaders has created a secondary crisis related to the COVID-19 pandemic. This secondary crisis is known as an infodemic which is the spread of accurate and inaccurate information using social media (Goel & Sharma, 2021). The COVID-19 pandemic created a significant dichotomy among the American people when political leaders began spreading misinformation about the COVID-19 pandemic, and the public started trusting political leaders over scientists,

medical professionals, and public health officials (Agley, 2020). Hitlin & Shutava (2022) found people who distrusted the government were less likely to follow public health guidelines, citing 46% of the people who said they were vaccinated against the COVID trusted the government compared with only 29% of those who had not been vaccinated. This led to individuals placing their trust in other influencers who were more likely to be indifferent or against the COVID-19 vaccine (Larson, 2018).

The 2020 global pandemic, paired with the murder of George Floyd, gave power to the American politicians. This divide of American citizens generated the politicization of COVID-19 (Reny & Newman, 2021). At this moment, the lives of the American people were thrust into the hands of politicians. Since the inception of online social media, misinformation posted to social media sites by politicians, celebrities, and influencers are considered a secondary crisis produced by the COVID-19 pandemic (Goel & Sharma, 2021).

COVID-19 Vaccines

Vaccines have been utilized to help eradicate diseases such as polio, measles, and pertussis. According to Mesch & Schwirian (2015), trust in government and public health officials is directly related to an individual's willingness to vaccinate, in addition to the individual's political, social, and religious views. Throughout the world, vaccines were presumed to be the answer to ending the COVID-19 pandemic (Wynen et al., 2022).

In February 2021, nearly a year after the inception of the COVID-19 pandemic, two vaccines were approved for use in the United States (Chen et al., 2022). At that point, the United States and other nations needed to join to stop the spread of COVID-19. Trust in healthcare, policymakers, and scientists were essential. However, the United States

was still in the middle of a public health crisis. Due to the politicization of the COVID-19 pandemic, the prevalence of misinformation, and the lack of trust in health officials, vaccine acceptance may have been strained (Hitlin & Shutava, 2022).

As of August 5, 2021, 165.6 million people in the United States were fully vaccinated (CDC, 2021b). This equated to 49.9% of the total population and 58.4% of the population over 12 years of age. To achieve herd immunity, roughly 80% of the population must be vaccinated. Herd immunity is defined as "a critical proportion of a population is immunized, the circulation of the pathogen decreases, and unvaccinated persons incur a lower risk of infection" (Wynen et al., 2022, p.3).

According to Chen et al., (2022), herd immunity in the United States was predicted to be achieved by July 2021; however, nearly a year after the launch of the COVID-19 vaccine in the United States, roughly 222.1 million Americans (66.9%) were fully vaccinated (CDC, n.d.). At this point, it seems the United States is in a deadlock. The individuals who have refused the COVID-19 vaccine will continue to do so, and the individuals who have opted to receive the COVID-19 vaccine also received their booster(s). The dichotomous divide in the United States and the world has risked the lives of many individuals. Distrust in the healthcare system and vaccine hesitancy continues to threathen global health (Ahmed et al., 2021; Sallam, 2021; Wynen et al., 2022). Due to the lack of trust, the United States is currently dealing with major consequences such as lack of confidence in public health officials and vaccine acceptance (Hitlin & Shutava, 2022).

Surveys and studies have been prevalent in recent history to gauge the worldwide acceptance of the COVID-19 vaccine. Older individuals (i.e., over 55 years old), men,

graduate degree holders, and individuals with chronic illnesses are more likely to accept and advocate for the vaccine (Ahmed et al., 2021; Laxminarayan et al., 2020; Sallam, 2021). In contrast, women and young individuals (i.e., less than 55 years old) are less likely to accept or advocate for the vaccine (Ahmed et al., 2021; Laxminarayan et al., 2020; Sallam, 2021). These results indicate a lack of trust in healthcare by women and younger individuals which, in turn, places a risk for adults under the age of 55, as well as children. If trust is lost in the COVID-19 vaccine, trust is also lost in healthcare and public health officials. Individuals who do not trust the federal government are less likely to listen to public health officials.

The 1918 Influenza Pandemic

Resembling COVID-19, the 1918 Influenza pandemic's first wave of the virus was discovered in the United States a century earlier, indicating history may repeated itself (Aassve et al., 2021; Ewing et al., 2020). About 100 years ago, the United States and the world fell victim to the 1918 Influenza pandemic, more commonly known as the Spanish Flu, which claimed up to 100 million lives worldwide (Aassve et al., 2021; Ewing et al., 2020; Park et al., 2021).

During the start of the 1918 Influenza pandemic, health authorities made similar recommendations to U.S. citizens like those that the CDC recommended for COVID-19 (i.e., practice good hygiene, cover coughs and sneezes, avoid crowded spaces, and wear masks) (Ewing et al., 2020). The health authorities were publicly debated, challenged, and ignored, similar to the current crisis that the CDC and local health departments have experienced (Aassve et al., 2021; Ewing et al., 2020). It is imperative that governing

bodies, policymakers, and public health authorities are transparent and provide communication with reliable information to the public.

A vaccine for the 1918 Influenza was made available in 1919. Newspapers claimed the vaccine would protect individuals from influenza; however, the effectiveness was inconclusive since the specific cause of influenza had yet to be discovered (Zheng & Chen, 2012). The Surgeon General of the United States, the American Public Health Association, and editors of the Journal of the American Medical Association made a public announcement declaring there was no cure or vaccine to protect against influenza and all information provided by newspapers were unofficial and merely experimental (Park et al., 2021, p. 19). This led to distrust in the local health authorities and newspapers, prompting a protest to the health authorities' recommendations of masks and social distancing.

Although the 1918 Influenza pandemic did not result in a useful vaccine, genomes from the century-old virus were utilized to develop a vaccine in 2005, which was used to combat the mutated Spanish Flu virus, more commonly known as H1N1, or the Bird Flu (Park et al., 2021). With this said, all influenza-A pandemics since 1918 are direct successors of the Spanish Flu virus (Aassve et al., 2021).

Trust

Trust in healthcare is critical. Excellent patient care directly depends on trust between patients and their healthcare providers; this relationship will yield positive patient satisfaction, experiences, and outcomes (Gregory et al., 2021). Any disruption to the relationship between patients and their healthcare providers can directly affect

patients' outcomes. Trust in healthcare professionals and public health officials is necessary during a deadly global pandemic.

In the United States, the COVID-19 global pandemic was politicized from the inception of its first case. This led to public health recommendations and government responses at the local, state, and federal levels to also be lobbied as a political ploy. The politicization of the COVID-19 virus has led to a significant decrease in trust in public health, in addition to conspiracy theories and misinformation on social media (Goel & Sharma, 2021; Latkin et al., 2021).

Brodeur et al. (2021) found that stay-at-home orders were more likely implemented in counties with a Democratic governor. In contrast, Republican counties were slower to implement the stay-at-home order, and in counties with higher numbers of religious people, they were less likely to execute stay-at-home orders. In addition to stay-at-home orders, mask mandates were more greatly supported by Liberals, whereas Conservatives opposed mask-wearing and mandates, and this prompted a change in the level of trust in healthcare professionals (Mallinas et al., 2021). In modern societies, trust must be established between government officials and the community to ensure public safety (Mizrahi et al., 2021).

Trust in Healthcare by Minority and Ethnic Groups

The underprivileged, including minority and ethnic groups, such as Black Americans, Native Americans, and Latin Americans, were impacted by the COVID-19 virus at disproportionate rates; rates are comparable to the disparities present during the Spanish Flu in 1918 (Cerise et al., 2021). According to Larson et al. (2018), minority groups are disproportionately affected by chronic medical conditions and lack of access

to healthcare, which could have led to worse COVID-19 outcomes. Chronic medical conditions (e.g., obesity, diabetes, hypertension, and heart disease) are common medical conditions for minority populations.

In addition to chronic medical conditions, uninsured individuals were, and can still be, at a greater risk of developing COVID-19 and lack access to appropriate care (Larson et al., 2018). Tai et al. (2021) stated that in 2020, Native Americans were the greatest uninsured minority at 22%, followed by Latin Americans (19%), African Americans (12%), and White Caucasians (8%). Individuals who lack affordable healthcare most likely also live in poverty. In 2020, nearly 24% of Native Americans lived in poverty, followed by African Americans (22%), Latin Americans (19%), and White Caucasians (9%) (Tai et al., 2021).

In Arizona, Native Americans make up roughly 5.3% of the population; however, the state reported 13% of their COVID-19 cases in 2020 were Native Americans. More shockingly, they accounted for 18% of all deaths (Arizona Health Status and Vital Statistics, 2020; Tai et al., 2021). Roughly 2.6 million Native Americans are currently insured by the Indian Health Service (IHS) which is provided by the U.S. government and built through past treaty agreements (Van Dorn et al., 2020). However, the IHS has less than 1500 beds nationwide. This lack of hospital bed availability is problematic, especially during the crisis of COVID-19, considering the insurance covers only hospitals associated with the IHS.

According to the CDC (2021b), hospitalization rates for Black Americans are the highest of any race and ethnicity in the United States and is more than twice as high as rates for White Americans. Tai et al. (2021) stated nearly 75% of all frontline workers in

New York City are African Americans, which placed them at a higher risk of contracting the COVID-19 virus. As many racial and ethnic groups tend not to trust 'White systems', it is imperative to develop and sustain trust with African Americans and other minority and ethnic populations (Quintero, 2020).

African Americans, Native Americans, Latin Americans, and other ethnic groups have lost trust in the healthcare system and healthcare professionals (Bergstresser, 2015). Focusing on re-establishing the trust of racial and ethnic minorities is especially important, as there are lasting impacts on individuals with generalized mistrust (Aassve et al., 2021). With this said, mistrust could be due to neglect and mistreatment throughout history.

Historical Mistreatment of Ethnic Minorities. Mistreatment of minority populations in the United States dates to the discovery of America and the lack of respect and mistreatment of both Black and Native Americans (Goodkind et al., 2011). The historical significance of mistrust in the healthcare and government systems likely explains the disparity between COVID-19 hospital admissions and deaths within minorities populations.

According to Goodkind et al. (2011), as the British and Americans embarked on colonialization in the new world in the late 15th century so did the mistreatment of Native Americans. Over the past 500 years, Native American mistreatment has ranged from the forced removal from their lands known as the Trail of Tears, deculturization to assimilate in Western culture, and massacres through many battles and wars (Goodkind et al., 2011).

The mistreatment of Black Americans also began during the British colonialization in America. James Miron Sims is known as the *father of genealogy* and performed numerous surgical procedures on enslaved women and children, depriving these individuals of pain medication or anesthesia (Holland, 2017). Henrietta Lacks, a black woman diagnosed with cervical cancer in the 1950s, was a patient at Johns Hopkins Medical Center. Without her knowledge, cervical cells were removed and have been involved in numerous experiments. One of the most well-known unethical experiments, the Tuskegee Syphilis Study, was an experiment involving 600 Black American men. The experiment resulted in the deaths of over 100 individuals, including men and their wives, and it caused numerous congenital issues in black children because of researchers withholding the cure (CDC, 2021b).

The historical mistreatment of minority and ethnic people feeds into the current healthcare crisis. Black Americans, Native Americans, and other ethnic groups lack trust in healthcare, policymakers, and the government. The decreased levels of trust in these three entities could prove certain misinformation and redirect affirmation to leaders of the religious sector and not of public health.

Healthcare Workers

Healthcare is a fluid environment, as it is always changing, improving, and developing through innovative technologies and advancements in research. Individuals need to trust their healthcare providers; however, it is crucial to ensure there is trust within the healthcare team itself. Well before the COVID-19 pandemic, nurses, respiratory therapists, and physicians have worked within interprofessional teams to care for patients.

Respiratory Therapists

Respiratory therapists have been caring for critically ill adult, pediatric, and neonatal patients for roughly seven decades. The profession is relatively young in comparison to other healthcare professions like nursing and pharmacy. The RT profession has grown from its inception of inhalation therapy to critical care therapy. The profession has evolved from aerosolized breathing treatments and oxygen therapy to inserting breathing tubes, managing a mechanical ventilator, and inserting and managing arterial line catheters (Myers, 2013).

According to Myers (2013), several studies support RTs as experts with inhaled medications, including accurate training and education with medication device techniques. Due to their unique clinical skills of airway management and operating mechanical ventilators, RTs are a valuable part of the healthcare team. As the baby boomer generation continues to age and retire, as well as the increased need for the management of chronic illnesses, RTs will be in great demand (Myers, 2013). Prior to the COVID-19 pandemic, a shortage of physicians prompted the use of RTs as leaders in pulmonary disease management teams due to their in-depth knowledge of the cardiopulmonary system (Ward et al, 2022). According to Myers (2013) and Ward et al. (2022), respiratory therapists can be found in the following healthcare areas:

- Acute care hospitals
- Skilled nursing facilities
- Long-term acute care facilities
- Physician offices
- Life-flight

- Primary and secondary schools
- Public health
- Post-secondary education centers
- Asthma clinics
- Smoking cessation programs
- Pulmonary and cardiac rehab
- Homecare
- Administration
- Research

Respiratory Therapy during the COVID-19 Pandemic. During the first spike of COVID-19, frontline healthcare workers, such as nurses and respiratory therapists, experienced high levels of fear due to the unknown (Trachtenberg et al., 2022). The COVID-19 pandemic has created a wave of patients who require advanced care, including airway management through mechanical ventilation that is overseen by respiratory therapists. According to Hester et al. (2020), the need for RTs will exceed the number of trained available RTs who can appropriately manage critically ill patients requiring mechanical ventilation. Due to the lack of critical care RTs, the University of Michigan deployed 25 medical students that served as respiratory therapists' extenders (Hester et al., 2020).

Healthcare workers who work in the ICU are constantly placed in high stress situations that deal with life and death. Due to the nature of the job, burnout has been a risk for critical care nurses, respiratory therapists, and physicians even prior to the COVID-19 pandemic. According to Ness et al. (2021), healthcare workers who cared for

COVID-19 patients were concerned about contracting the virus; however, they continued to work throughout the pandemic due to moral and ethical obligations stemming from the duty to care.

Motivational Language Theory

Motivational language theory (MLT) was used in this study to establish effective communication strategies and trust of healthcare leadership during the COVID-19 pandemic. MLT provides a foundation for communication and motivation between leaders and employees through leaders' use of speech (Men et al., 2022; Tao et al., 2022). MLT is composed of three main forms of motiving language:

- direction-giving
- empathetic
- meaning-making (Tao et al., 2022, p.1)

Conclusion

Have individuals not learned anything from the past? A century ago, the 1918 Influenza pandemic, or Spanish Flu, ripped through the world and killed nearly 100 million people. Like the current pandemic, decision-makers, health authorities, and politics played major roles during the 1918 pandemic.

As of June 2022, there were 537,591,764 cases of COVID-19 and 6,319,395 deaths worldwide; the United States has surpassed all countries with over six million deaths from the COVID-19 virus (WHO, 2022). Each number represents an individual, a mother, father, grandparent, or child. Scientific knowledge is the foundation of prevention, management, and treatment of world-wide outbreaks (Berger et al., 2021).

In addition to the conspiracy theories and misinformation on social media transforming the United States into a battleground for local and state politics, the politicization of the COVID-19 virus has led to a significant decrease of trust in public health (Latkin et al., 2021). The politicization of the COVID-19 pandemic negated the supporting evidence for masks. This led officials to base their decisions to mandate masks on politics rather than on scientific evidence, placing Americans in potential harm (Gatter & Mohapatra, 2020).

While much of the United States lay stagnant during the emergence of the COVID-19 pandemic, healthcare workers began the fight of their lives. The uncertainty of the COVID-19 pandemic created significant stress for healthcare workers, primarily frontline providers (Ness et al., 2021; Trachtenberg et al., 2022). The COVID-19 pandemic wreaked havoc on the worldwide healthcare system, causing a major disruption of care (Ness et al., 2021).

Based on current research, it was imperative to investigate the effects of the COVID-19 pandemic on frontline respiratory therapists. Previous research on the public's trust in healthcare has shown a negative response due to the COVID-19 pandemic; however, research is needed to establish how trust in healthcare has been affected by frontline workers, specifically respiratory therapists. As stated above, much research has been done in healthcare with a focus on nurses and physicians, but current research lacks in the profession of respiratory therapy.

One's character and moral fiber is shaped by their personal experiences and continues to develop throughout the course of an individual's life. Political alliances, much like one's social and intellectual perspective, as well as one's value system, are

dependent on those experiences. As an individual endures certain challenges, such as the COVID-19 pandemic, the reaction to political platforms, social norms, and trust often changes and erodes what was once rigidly defended. Foremost among those who were caught in the crossfire of the politicization of the COVID-19 pandemic were the frontline healthcare workers.

Chapter Three

Methodology

This study examined how the COVID-19 pandemic affected the level of trust for frontline RTs, SRTs, and RT managers. The rising level of stress during the initial spike of the pandemic, combined with the staggering death toll, generated a significant increase in prolonged stress levels for frontline providers. To ensure trust during a crisis, especially a global pandemic, frontline healthcare providers need to feel safe and protected which requires constant communication from leaders and proper PPE. Developing trust with employees is considered an essential task for leaders. Motivating employees using speech is an example of building a relationship through trust. This study establishes how the COVID-19 pandemic altered healthcare workers' trust within the healthcare system. Additionally, the investigation examines the influence that a good leader has on establishing trust with their team and how trust is perceived by frontline RTs, SRTs, and RT managers.

The study was informed by the following research questions:

1. What are the differences between respiratory therapists', respiratory therapy managers', and student respiratory therapists' level of trust in healthcare leadership?
2. How has the COVID-19 pandemic altered the trust of respiratory therapists?
    a. What is the relationship between age and level of trust in healthcare leadership?
    b. What is the relationship between gender and level of trust in healthcare leadership?

c. What is the relationship between education level and trust in healthcare leadership?

d. What is the relationship between race and level of trust in healthcare leadership?

e. What is the relationship between political party affiliation and level of trust in healthcare leadership?

f. What is the relationship between the geographical region in Ohio and level of trust in healthcare leadership?

3. What is the perspective of respiratory therapy professionals regarding their work experience during and since the COVID-19 pandemic?

Participants

The study surveyed RTs, SRTs, and RT managers in the state of Ohio who worked the frontlines, or managed RTs working the frontlines, during the COVID-19 pandemic. Establishing a diverse group of participants is known as purposive sampling (Ramlo, 2016). An electronic survey was delivered to RTs, SRTs, and RT managers working in Ohio. RTs, SRTs, and RT managers currently working, or who worked with COVID-19 patients during 2020-2023, were invited to participate in this study via electronic communication methods such as email, text messages, and social media sites (e.g., LinkedIn, Facebook).

Electronic communications included a general description of the study along with a direct link to the Q-Method software program. The survey did not collect any identifiable information from participants; therefore, anonymity was upheld throughout the entire process. Anonymity was upheld, as the link was not related to the Q-sort.

Participants could leave the Q-sort any time and discontinue their involvement in the study.

Following consent, demographic information was collected from participants prior to their completion of the Q-sort. Demographic information included age, gender, race/ethnicity, education, region, category of hospital (i.e., urban, rural, suburban), and length of employment. Demographic information helped to analyze relationships with trust in leadership.

Instrumentation: Developing the Concourse

Q-methodology is initially established with a concourse, which is a collection of statements representing the topic (Ramlo, 2016). The concourse is then filtered into a smaller set of statements, referred to as the Q sample, which consists of 40-50 items (Ramlo, 2016). The final set of statements should not show bias to any specific viewpoint (Watts & Stenner, 2012). The sample size is represented by the number of items in the Q sample (Ramlo, 2016).

The original concourse consisted of 30 statements with two guiding questions, *Prior to the COVID-19 Pandemic…* which was used for seven statements and *During the COVID-19 pandemic…* which was used for 23 statements (see Appendix A). The goal was to have a concourse with no more than 30 statements, approximately 10 words each, with an equal amount of positive, neutral, and negative worded statements (K. H. Larwin, personal communication, November 30, 2022). The initial concourse had 22 positive statements, six neutral statements, and two negative statements that had statements pertaining to experiences before and during the pandemic.

The initial concourse was edited before the pilot study and resulted in 27 statements with equal amounts in each category (i.e., nine positive, nine neutral, nine negative) and a single guiding question: *During the COVID-19 pandemic…*

1. I trust my supervisor to keep our department safe. - Positive
2. I have witnessed things that are morally wrong. – Negative
3. I trust health organizations such as the CDC and WHO. – Positive
4. My supervisor provides proper communication. – Positive
5. My supervisor doesn't care about my professional well-being. – Negative
6. Misinformation is a problem for healthcare workers. – Negative
7. My supervisor shows me encouragement for my work. – Positive
8. My supervisor shows concern for my job satisfaction. – Positive
9. I have daily contact with my supervisor. - Neutral
10. My supervisor has helped provide patient care. – Neutral
11. I do NOT rely on my fellow RTs, RNs, and physicians. – Negative
12. I can NOT rely on the healthcare organization leadership. – Negative
13. Masks do NOT protect against the COVID-19 virus. – Negative
14. I feel guilty for not being able to save patients. – Negative
15. I do not think about work when I am home. - Neutral
16. My hospital tests all patients for COVID-19. - Neutral
17. I receive information about health through social media. - Neutral
18. I have had to reuse PPE due to lack of adequate supply. – Negative
19. My hospital has enough beds for each admitted patient. - Neutral
20. The COVID-19 virus has no effect on my daily life. - Neutral

21. I have or plan to leave the respiratory care profession. – Negative

22. I feel my supervisor cares about me as a person. – Positive

23. I feel my supervisor is a good leader. – Positive

24. I receive health information from FOX News. - Neutral

25. I receive health information from CNN. - Neutral

26. I trust that COVID-19 vaccines are effective. – Positive

27. I trust that COVID-19 vaccines are safe. - Positive

The guiding statement, *Prior to the COVID-19 pandemic…,* was removed from the Q-sort. Twelve statements were worded as survey questions with a seven-point Likert scale (i.e., strongly disagree; disagree; somewhat disagree; either agree or disagree; somewhat agree; agree; strongly agree). Additionally, there were six demographic questions followed the 12 seven-point Likert scale statements covering the following information: testing positive for COVID-19, receiving COVID-19 vaccines/boosters, political affiliation, and supervisor's gender and race/ethnicity. The final question was an open-ended question, *Reflecting on the COVID-19 pandemic, how did your organization respond to the unknown virus?* This question allowed participants to share any experiences or information that was not answered or covered by the Q-sort or Likert scale statements.

Pilot Study

For the pilot study, three individuals (two RTs and one educator) were selected to complete the pilot study via the Q-sort software. The following feedback was received from the pilot study (M. Mittwede & Z. Yurchisin, personal communications, January 28, 2022):

1. *Issues viewing/glitches on smart phone*:
    a. "It started out ok on mobile device, but right before sorting, I could not click begin."
    b. "I was unable to view survey on phone properly, but laptop worked fine."
2. *Detailed instructions for Q-sort portion*:
    a. "I was very confused on what to do with the sorting part. Is it possible to add more description for this?"
    b. "I had no idea what I was doing with the sorting portion. The pyramid sorting does not have clear instructions on how to put the statements on the pyramid according to your beliefs."
    c. "I don't understand the section on positive and negative then arranging them on in the pyramid."

Following the pilot study, additional resources were added to the Q-sort to assist with participants' questions about the Q-sort (K. H. Larwin, personal communication, February 2, 2023). In addition to the pilot study, the dissertation committee provided feedback. One committee member noted that the researcher should consider adding an option for *Prefer not to disclose identity* for gender and include a link to a map of counties for the Ohio region question (S. Sanders, personal communication, February 7, 2023). Another committee member shared *there is a typo on the opening – should say winning* and found the question about who people vote for out of place (K. Colwell, personal communication, February 1, 2023).

Procedure

Following approval from Youngstown State University's Institutional Review Board (IRB), invitations to participate in the study were sent via email, text message, and social media sites (e.g., LinkedIn, Facebook). Purposive sampling was used to ensure Ohio RTs and SRTs were participating in the study. A link to the Q-sort was attached to the electronic communication invitation. Information provided in the email and consent form stated the study would take approximately 30 minutes to complete. Please see Appendix B for the IRB approval letter.

The goal of this study was to gain perspectives of RTs, SRTs, and RT managers' levels of trust in healthcare leadership during the COVID-19 pandemic. Demographic information such as gender, race/ethnicity, geographical region in Ohio, education level, political affiliation, and age were collected, but no personal identifying information was collected for this study.

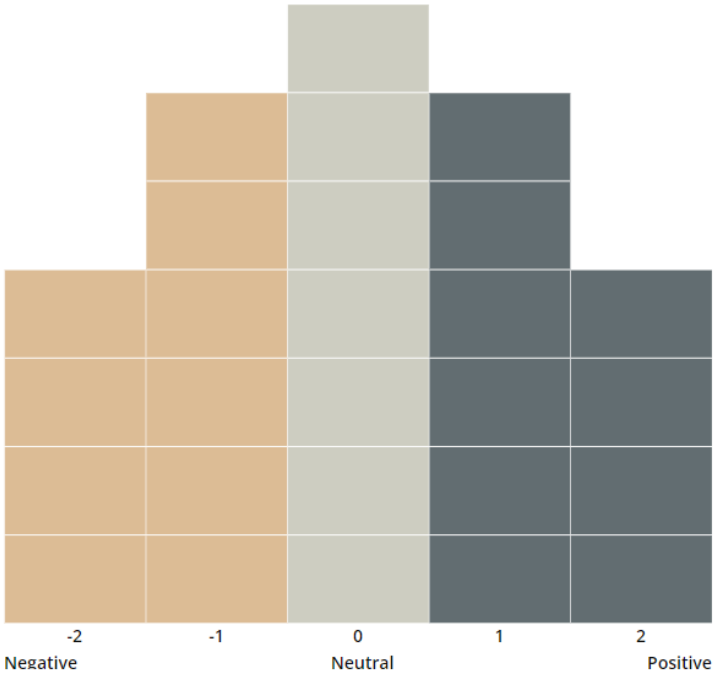
Participants were not exposed to probable harm for this study, other than possible discomfort with answering questions. The Q-sort was administered by the Q-Method Software and participation was on an individual basis. Participant consent was obtained in the opening statement of the study, including the ability to terminate the study at time. The study remained open for two weeks.

Q-Method Software allowed participants to access the Q-sort from any device, at any time, without the hassle of downloading additional software or apps. Q-Method Software recorded the data of each participant, therefore removing the possibility of human error. A Q-sort reflects the personal views of each participant (Herrington & Coogan, 2011).

During the Q-sort, participants were given the standing prompt, *During the COVID-19 Pandemic…,* and statements to follow in which participants picked one of the following: True for me 👍, Neutral for me ❓, Not True for me 👎. Participants were to read each statement first, then decide which icon best fit each statement for them. Following the pre-sort of the statements, participants were prompted to sort the statements again by dragging the statement cards to the appropriate location on the distribution grid of the Q-sort that most reflected their views. They arranged statements in order of -2 (Strongly Disagree) to +2 (Strongly Agree) on the grid shown in Figure 1 to reflect their own perspective on each topic (Herrington & Coogan, 2011).

Figure 1

Q-sort Grid



After participants completed the Q-sort on the grid, a survey asked additional questions (i.e., political affiliation, supervisor sex, supervisor gender, COVID-19 vaccine

status), and participants had the ability to answer an open-ended question about their experience with the COVID-19 pandemic. The final question was the only item that required coding by the researcher for this study. Answers were reviewed, coded, and grouped as deemed necessary by the researcher.

Following completion of the Q-sort, a link took participants to a Google form. The form allowed them to enter their name, email, and phone number (optional) for a change to win one of eight $25 Starbucks gift cards. Participation in the Starbucks gift card raffle was completely optional, and information gathered on this site was not traceable to Q-sort participation. An online number generator was used to select the eight winners. The researcher contacted winners.

Summary

Q-methodology was used for this study to gain personal accounts of participants' experiences with their leaders during the COVID-19 pandemic. Q-methodology is a mixed-method of research using both qualitative and quantitative techniques (Ramlo, 2016). This study required an initial concourse of statements, a pilot study, and a final concourse of 27 statements.

The purpose of this study was to gain perspectives of RTs, SRTs, and RT managers in the state of Ohio regarding their trust in healthcare leadership during the COVID-19 pandemic. Information gathered during this study did not include personal identifiable information, so anonymity was ensured. Information from this study will help with future training of healthcare leaders on effective leadership. The data collected from this study is discussed in Chapter Four.

Chapter Four

Results

This investigation aimed to examine the perspectives of respiratory therapists, student respiratory therapists, and respiratory therapy managers on trust in healthcare leadership amid the COVID-19 pandemic. Both quantitative and qualitative data were collected and examined share perspectives of frontline healthcare providers who cared for COVID-19 patients between 2020 – 2023 in the state of Ohio. Results of this data will be used to answer the following research questions for this study:

1. What are the differences between respiratory therapists', respiratory therapist managers', and student respiratory therapists' levels of trust in healthcare leadership?
2. How has the COVID-19 pandemic altered the trust of respiratory therapists?
    a. What is the relationship between age and level of trust in healthcare leadership?
    b. What is the relationship between gender and level of trust in healthcare leadership?
    c. What is the relationship between education level and trust in healthcare leadership?
    d. What is the relationship between race and level of trust in healthcare leadership?

e. What is the relationship between political party affiliation and level of trust in healthcare leadership?

f. What is the relationship between the geographical region in Ohio and level of trust in healthcare leadership?

3. What is the perspective of respiratory therapy professionals regarding their work experience during and since the COVID-19 pandemic?

Participants

Participants were provided with a link to complete this study. The survey was initiated by 278 participants; however, 75 individuals (27%) were excluded from the study for either not working with COVID-19 patients or not completing the Q-sort. This generated a total of 203 participants, with a completion rate of 73%.

Of the participants, 101 were between the ages of 25-34 (50%); 49 were between the ages of 35-44 (24%); 29 were between the ages of 18-24 (14%); 13 were between the ages of 55-64 (6%); and 11 were between the ages of 45-54 (5%). One hundred and four participants were female (51%); 86 participants were male (42%); nine participants were transgender male (4%); one participant was transgender female (0.5%); one participant was non-binary (0.5%); and two individuals chose not to answer (1%). One hundred forty-six participants were White/Caucasian (72%); 22 participants were Asian/Asian American (11%); Black/African American, Native American, and Middle Eastern/Arab American ethnicities each had nine participants (4%, encompassing 12% total); six participants were Hispanic/Latinx (3%); and two participants did not answer (1%).

One hundred seventeen participants were staff respiratory therapists (58%); 48 participants were student respiratory therapists (24%); 35 participants were respiratory

therapy managers (17%); and three individuals (1%) did not fit in any of the job titles listed. Seventy-eight participants had bachelor's degrees (38%); 34 had master's degrees (17%); 33 had associate degrees (16%); 17 had a high school diploma or the equivalent (8%); 11 had doctoral degrees (5%); and six participants chose not to answer (3%).

Ninety-eight participants had worked at their current employer for between 1-3 years (48%); 48 between 4-6 years (24%); 28 for more than 10 years (14%); 16 for less than a year (8%); 12 for 7-9 years (6%); and one individual did not answer (0.5%). One hundred eighty-four participants (91%) are still employed by the hospital in which they worked during the COVID-19 pandemic; 17 (8%) are not employed by the hospital in which they worked during the COVID-19 pandemic; and two participants did not answer (1%).

Six-nine participants spent most of their time during 2020-2023 in hospitals located in Northeastern Ohio (34%); 65 in Southeastern Ohio (32%); 32 in Northwestern Ohio (16%); 18 in Central and Southwestern Ohio (9%); and one participant did not answer (0.5%). Ninety-two participants worked in an urban hospital (45%); 56 in a suburban hospital (28%); 48 in a rural hospital (24%); and six participants did not answer (3%).

Preliminary Analysis

The chi-square *t*-test was performed to compare and find a relationship between two categorical variables. This study only used categorical variables, therefore, the chi-squared *t*-test was the only reliable statistical analysis to be performed. The chi-squared *t*-test was run using SPSS to find the relationship between the following variables and trust: political affiliation, gender, age, level of education, ethnicity, Ohio region, and job

title. Of the variables listed, three chi-squared *t*-tests were found to be statistically significant when compared to trust. Those variables were gender, age, and ethnicity.

Table 1

Crosstabulation of Gender and Trust in Supervisor

Gender	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Female	7	5	13	15	21	32	10
Male	2	3	7	11	19	19	24
Transgender	2	1	1	2	2	2	1

Table 1 reflects the crosstabulation of gender and trust in the supervisor. The data was found to be statistically significant at X^2 (df =12) = .04, $p < 0.05$. Female participants had the greatest number of responses regarding trust in their supervisor with 10 (10%) strongly agreeing and 32 (31%) agreeing. This represents a combined 42% of females who trusted their supervisor. Male participants had fewer total; however, a greater number of males trusted their supervisor with 24 (28%) strongly agreeing and 19 (22%) agreeing, which represents a combined 50% of males who trusted their supervisor. The crosstabulation of age and trust in the supervisor is reflected in Table 2.

Table 2

Crosstabulation of Age and Trust in Supervisor

Age	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
18-24	2	4	2	4	9	4	3
25-34	3	1	10	15	23	27	20
35-44	3	1	8	9	10	10	7
45-54	2	0	0	0	1	5	3
55-64	1	3	1	0	1	5	2

The data shown in Table 2 was found to be statistically significant at X^2 (df = 24) = .01 $p < 0.05$. Individuals between the ages of 25-34 had the greatest number of participants who identified trust in their supervisor with 20 (20%) strongly agreeing and 27 (27%) agreeing, with a combined 47% of participants between the ages of 25-34 trusting their supervisors. Though participants between the ages of 45-54 and 55-64 had a total of 11 and 13 participants respectively, data shows the majority of the participants trusted their supervisor. Three participants (27%) strongly agreed, and five (45%) participants agreed, with a combined 72% of participants between the ages of 45-54 identifying trust in their supervisor. Additionally, two participants (15%) strongly agreed, and five participants (38%) agreed, with a combined total of 53% of participants between the ages of 55-64 showing trust in their supervisor. Table 3 reflects the crosstabulation of ethnicity and trust in the supervisor.

Table 3

Crosstabulation of Ethnicity and Trust in Supervisor

Race	SD	D	SWD	N	SWA	A	SA
Asian American	0	0	2	4	9	4	3
Black/African American	2	0	1	2	2	1	0
Hispanic/LatinX	0	2	0	2	2	0	0
Middle Eastern	2	0	0	1	1	5	0
Native American	1	0	0	0	2	5	1
White/Caucasian	6	7	18	19	27	36	31

**Note*: SD=strongly disagree, D = disagree, SWD = Somewhat Disagree, N = Neutral, SWA = Somewhat Agree, A = Agree, and SA = Strongly Agree

The data in Table 3 was found to be statistically significant at X^2 (df = 30) = .01 p <0.05. White/Caucasians had the greatest number of participants who identified trust in their supervisor, with 31 participants (22%) strongly agreeing and 35 participants (24%)

agreeing, with a combined total of 46% of White/Caucasian trusting their supervisor. Though Native Americans had a total of nine participants, one participant (11%) strongly agreed, and five participants (56%) agreed, with a combined 67% of Native Americans identifying trust in their supervisor.

Refer to Appendix C for descriptive data and factor loading information for each participant.

Q-Sort Results

Correlation Matrix

The correlation matrix is a comparison or intercorrelation between each Q-sort (Watts & Stenner, 2012). The correlations are reported on a scale ranging from -1.00 to +1.00. As the numbers move closer to ± 1.00, the strength of the correlation increases. Positive correlations, or numbers closer to +1.00, reflect similarities between participants. Negative correlations, or numbers closer to -1.00, reflect differences between participants. Table 4 provides the correlations between factor scores. The five factors were identified as:

- Factor 1: *I'll be There for You*
- Factor 2: *Won't You Please, Please Help Me?*
- Factor 3: *I'll Get You There*
- Factor 4: *What's Going On*
- Factor 5: *Show Must Go On*

Table 4

Correlation Between Factors 1-5 Scores

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Factor 1	1.00	0.07	0.30	-0.02	0.34
Factor 2	-	1.00	0.23	0.35	0.14
Factor 3	-	-	1.00	0.05	0.14
Factor 4	-	-	-	1.00	0.06
Factor 5	-	-	-	-	1.00

The 203 Q-sorts were analyzed through extraction of five factors with a varimax rotation of the factors. Factor extraction is the process of sorting and grouping similar Q-sorts (Watts & Stenner, 2012). Auto-flagging was set to $p < 0.05$. All five factors revealed a low correlation, upholding discriminating viewpoints from the participants' Q-sorts.

Factor analysis was run three separate times to ensure the optimal number of factors to participants with Q-sort extraction. Initially, a five-factor model was used, resulting in 38% of variance captured with 89 participants not loading on one of the factors. A four-factor model was then used, resulting in a 32% variance captured with 110 participants not loading on one of the factors. A six-factor model was evaluated resulting in 41% of variance captured with 82 participants not loading on one of the factors. The comparison between the models revealed the five-factor model to be the most parsimonious and best fit for this study. The five-factor model resulted in 41 defining variables in Factor 1; 25 defining variables in Factor 2; 23 defining variables in Factor 3; 21 defining variables in Factor 4; and 11 defining variables in Factor 5, which can be viewed in Table 5. Additional Q-sort data can be found in Appendix D.

Table 5

Correlation Between Defining Variables and Factors 1-5

Heading	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
No. of Defining Variables	41	25	23	21	11
Avg. Rel. Coef.	0.8	0.8	0.8	0.8	0.8
Composite Reliability	0.99	0.99	0.99	0.99	0.98
S.E of Factor Z-Scores	0.08	0.10	0.10	0.11	0.15

Table 6 reveals eigenvalues ranging from the highest levels of 25.54 to the lowest level of 10.25. A 37.8% of variance was indicated in this analysis by identifying five factors. These five factors represent individuals with similar perspectives and experiences during the COVID-19 pandemic. The five factors exceeded the acceptable 1.0 cutoff with eigenvalues of 25.54, 17.30, 13.31, 10.91, and 10.25. This supported the five-factor model as the most parsimonious in representing the participants' experiences and perspectives during the COVID-19 pandemic.

Table 6

Eigenvalues

Eigenvalues	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Eigenvalues	25.54	17.30	13.31	10.91	10.25
% Explained Variance	12	8	6	5	5
Cumulative % Explained Variance	12	20	27	32	37
Humphrey's Rule	0.64	0.46	0.38	0.28	0.38
Standard Error	0.05	0.05	0.05	0.05	0.05

Varimax Rotation

This study used factor rotation by varimax rotation, and it was done automatically in the software. Varimax rotation rotates the factors to ensure the Q-sort has maximum factor loading, resulting in a fit of only one factor (Watts & Stenner, 2012). Table 7 represents the Q-sort associated with each participant following the varimax rotation. Factor extraction is indicated by an X in the appropriate factor column.

Table 7

Participant Factor Loadings indicated with X

Participant	Factor 1		Factor 2		Factor 3		Factor 4		Factor 5
4580	0		0.1		0.65	X	-0.24		0.41
07GF	0.36		0.03		0.77	X	-0.11		0.03
0NG7	0.26		0.17		-0.01		-0.17		-0.26
0NNE	0.35		0.08		0.57	X	-0.09		0.23
0W1N	-0.3		0.28		0.59	X	0.19		-0.17
11DW	0.8	X	-0.07		0.29		-0.02		-0.03
14SI	-0.07		0.22		-0.27		-0.49	X	0.05
14XI	-0.05		0.24		0.57	X	-0.03		0.11
17UH	-0.09		-0.05		0.32		-0.39	X	0.04
1DGS	0.14		0.68	X	0.2		0.29		-0.01
1H7J	0.03		0.09		0.16		-0.36		0.14
1J6C	0.02		0.05		0.16		0.04		0.24
1XZQ	0.2		0.59	X	-0.01		-0.09		-0.1
215E	0.18		0.22		-0.18		0.15		0.27
25BT	0.47		0.23		0.45		0.26		0.44
26C4	-0.29		0.44		-0.06		0.57	X	-0.2
289V	0.01		0.23		-0.16		-0.07		0.1
2H96	-0.15		-0.42	X	-0.08		-0.11		0.33
2LR5	0.52	X	0.15		-0.17		0.1		-0.18

2PM5	0.07		0.38	X	0.05		0.12		0.18	
31P4	0.25		0.57	X	-0.3		0.15		0.05	
39FN	0.28		0.04		0.04		-0.09		-0.25	
3BG0	-0.09		0.27		-0.19		-0.28		-0.43	
3CZ4	0.23		-0.27		0.01		-0.24		-0.09	
404S	-0.56		0.35		-0.44		0.34		-0.19	
446H	0.25		-0.16		0.11		0.11		0.33	
448P	0.01		0.06		-0.5	X	-0.15		0.03	
4FDC	-0.11		-0.32		-0.12		-0.18		0.37	
4G81	0.54	X	0.1		-0.11		0.17		0.01	
4HHF	0.47	X	0.16		0.13		-0.33		0.06	X
4S22	-0.07		0.35		0		0.74	X	-0.12	
574I	-0.03		0.15		0.13		-0.17		-0.09	
59ZS	-0.13		0.2		-0.44	X	0.14		-0.31	
5QBT	0.22		0.18		0.53	X	0.09		-0.08	
5UV2	0.02		0.52	X	-0.18		0.06		0.34	
5V93	0.01		-0.11		-0.03		0.28		-0.16	
618K	0.13		0.81	X	0.3		0.18		-0.27	
6KVH	0.4		0.03		0.09		0.48	X	-0.05	
6S29	0.14		0.48		0.37		0.32		0.13	
6YPB	0.31		-0.36		0.14		0.25		0.05	
71TP	0.03		-0.17		-0.5	X	0.25		0.06	
76Z2	0.09		0.41	X	0.01		-0.05		0.04	
7A2F	-0.23		-0.12		0.69	X	0.16		-0.29	
7BVK	0.44	X	0.26		-0.15		-0.24		0.12	
7GNA	0.13		0.04		-0.38		0.23		0.36	
7J45	-0.16		-0.29		-0.08		0.26		-0.08	
7VIQ	-0.38		0.43		0.17		0.42		0.02	
7YZI	0.27		0.04		-0.11		-0.06		0.03	
8M2V	0.75	X	0.06		0.03		0.11		0.29	
8SV8	0.07		-0.2		-0.02		-0.03		0.52	

8YD4	0.63	X	0.36		0.07	0.1		0.16		
96LT	0.44		0.48		0.39	0.16		0.19		
9MFC	0.08		0.21		0.52	0		0.52		
9PCB	0.18		-0.12		0.17	0.12		-0.36		
9TAG	-0.36		0.23		0.14	0.69	X	0.03		
9V0J	-0.23		-0.43		0.24	0.31		0.05		
9WCZ	0.73	X	-0.08		0.37	-0.11		-0.01		
A18L	0.49		-0.08		-0.02	0.59	X	0.17		
AEX8	-0.24		0.46	X	-0.02	0.18		-0.18		
AOAE	-0.01		-0.43	X	-0.07	0.12		-0.03		
AURB	-0.01		0.01		-0.07	-0.43	X	-0.23		
AWWQ	0.77	X	-0.03		0.22	-0.11		0.01		
B204	-0.27		-0.3		0.16	0.25		0.15		
B9N1	0.16		0.52	X	0.29	0.27		-0.15		
BKI8	0		-0.14		0.24	0.25		0.3		
BNPC	-0.47		0.48		-0.13	-0.34		0.07		
BVXN	-0.01		0.38		0.14	-0.14		0.32		
C1UP	0.01		0.07		0.2	-0.49	X	-0.17		
C4W0	0.31		0.15		0.25	0.39		0.41		
CFVL	0.25		0.13		-0.04	0.19		-0.05		
CGXH	0.63	X	0.13		0.31	-0.11		0.08		
CMT3	-0.05		0.5	X	0.04	-0.03		-0.05		
CVH2	0		0.16		0.22	-0.39	X	0.17		
D4PE	0.03		-0.26		-0.18	0.39	X	0.17		
D8AQ	-0.06		0.02		0.02	0.42	X	0.14		
DBYO	0.47		0.08		0.46	0.05		0.33		
DC0E	-0.02		0.12		-0.02	0.63	X	0.04		
DD0T	0.39	X	0.28		0.04	-0.07		0.13		
DIXT	0.5	X	0.22		-0.03	0.07		0.34		
DNDF	0.06		0.02		-0.09	-0.01		0.31		
DRBL	-0.3		0.13		0.22	-0.36		-0.08	X	

E6M0	0.63	X	0.01		0.03		0.08		0.13
E7A4	0.51	X	0.29		-0.22		-0.17		-0.09
EJHJ	-0.23		-0.41		0.3		0.12		0.5
ELBA	0.31		0.1		0.6	X	-0.13		-0.17
EOPD	-0.04		-0.02		-0.23		0.01		0.04
EQPY	0.48		-0.19		0.29		0.42		0
EZGP	0.76	X	-0.05		0.24		-0.14		-0.02
F140	-0.44	X	-0.14		0.14		-0.08		-0.15
F258	0.03		-0.44	X	0.38		-0.04		0.14
F8QU	0.41		-0.44		0.38		0.04		0.22
FG15	0.01		0.26		0.55	X	-0.19		0.35
FPSA	-0.06		0.1		0.31		0.22		0.2
G1M4	0.14		0.13		-0.18		0.14		0.39
G7ZG	-0.54	X	-0.05		0.21		-0.23		-0.36
GCIK	-0.16		0.53	X	0.14		0.23		-0.04
GDTU	-0.26		0.29		0.69	X	0.38		-0.08
GH1E	0.57	X	0.08		0.49		-0.25		0.1
GIAS	0.17		-0.05		-0.07		0.18		-0.04
GJ92	0.02		0.37		0.02		0.09		0.06
GJQD	0.01		-0.05		-0.41	X	-0.15		-0.22
H86P	0.45	X	-0.01		-0.15		-0.08		-0.02
HBCO	0.23		-0.23		-0.39		-0.56	X	-0.06
HET0	-0.33		0.07		-0.05		-0.08		0.18
HF6O	-0.44	X	0.25		0.08		0.19		-0.27
HJP5	-0.03		-0.11		0.15		-0.65	X	0.21
HMMZ	0.73	X	-0.09		0.28		-0.13		0.1
HQMH	0.54	X	0.08		0.12		0.23		0.45
HZJU	0.48		0.01		-0.13		0.49		0.06
I2JQ	0.07		-0.22		-0.17		0		-0.24
I5JK	0.46	X	-0.13		0.21		-0.27		0.27
I98C	-0.1		0.44	X	0.41		0.11		-0.03

IHRA	0.58	X	0.1		0.09		0.15		-0.08		
INQB	0.29		-0.12		0.19		0.23		-0.08	X	
J341	0.25		-0.14		0.54	X	-0.07		0.14		
J80O	-0.11		0.42	X	0.12		-0.04		0.04		
JBG7	0.11		0.17		0.33		0.04		-0.21		
JDVQ	0.54	X	0.16		0.2		0.28		0.06		
JGQH	0.15		0.09		-0.1		0.07		0.19		
JHWU	0.24		0.22		0.13		0.47	X	0.08		
JJ8L	0.38		0		-0.06		0.03		0.01		
JN8R	0.29		-0.56	X	-0.13		0		0		
JTF8	0.19		0.35		0.31		0.34		0.03		
JUVG	0.16		0.14		0.01		-0.06		0.52		
K2FW	0.61	X	-0.19		-0.06		0.04		-0.11	X	
K856	0.05		-0.05		0.18		0.32		0.22		
KIR6	0.7	X	0.03		0.43		-0.06		-0.04		
KNRZ	0.75	X	0.09		0.39		-0.12		0.05		
KU5D	0.13		-0.04		0.66	X	-0.22		-0.06		
L8LP	-0.16		-0.06		0.5	X	-0.13		0.39		
LE15	-0.02		0.37		0.27		0.08		0.28		
M95Y	0.72	X	-0.15		0.4		0.03		0.08	X	
M9Z7	0.32		-0.01		0.26		0.08		0.54		
MBO3	-0.22		0.2		0.11		-0.15		0.05		
MM46	0.45	X	0.01		0.1		0		0.27		
MZVC	-0.04		-0.74	X	0.07		-0.02		-0.32		
N1FA	-0.38		-0.09		0.45	X	0.11		-0.05		
N386	0.2		-0.45		0.36		0.19		0.12		
N4P9	-0.16		-0.15		-0.05		0.02		-0.18		
N623	-0.01		0.51		0.01		0.04		0.6		
NAD6	0.15		-0.43	X	-0.16		-0.13		0.15		
NC0S	0.38		-0.17		0.38		0.15		0		
NC17	0.13		0.01		0.3		-0.03		-0.09		

NF33	0.14		0.08		0.03		0.28		-0.31	
NNBR	0.31		-0.17		-0.27		-0.1		0.12	
NPAV	-0.01		-0.57	X	-0.09		-0.07		-0.05	
NVXL	0.62	X	-0.14		0.05		0.27		-0.11	
NXNS	0.31		0.11		0.54	X	0.03		0.32	
O8DJ	0.27		-0.16		-0.06		0.02		-0.26	
OUL0	-0.6	X	0.18		-0.03		-0.1		-0.17	
P0ZL	-0.09		0.48	X	0.25		-0.17		0.22	
PBBG	0.25		0.15		0.55		-0.12		0.52	
PDVJ	0.4		0.24		0.32		0.2		0.15	
PFA9	0.45	X	-0.09		-0.22		-0.02		-0.08	
PR0E	0.14		0.35		0.01		-0.16		-0.36	
PUAH	0.34		-0.15		-0.08		-0.19		-0.31	
PW8U	0		-0.13		-0.17		0.32		0.37	
Q0G3	0.28		0.47	X	-0.26		-0.1		-0.02	
Q2PG	-0.26		0.38	X	0.05		0.23		-0.13	
QGRY	0.46		0.16		0.09		-0.4		0.29	
QLNB	0.34		0.2		0.04		0.25		0.26	
QM2R	-0.02		0.06		0.32		0.47	X	0.03	
QNTH	0.1		0.02		0.49	X	-0.1		-0.33	
QOI0	0.59	X	0.14		0.25		-0.04		0.25	
QWR3	0.13		0.06		0.27		0.22		-0.09	
QYVS	-0.23		-0.15		0.4	X	0.17		-0.05	
RCSJ	0.17		0.42		-0.19		0.35		0.12	
RCY8	-0.22		0.44		0.12		0.49		0.18	
RK3E	-0.28		-0.06		0.27		-0.42		-0.27	
RKKN	-0.12		-0.21		0.2		0.37		0.24	
RQ2V	0.73	X	-0.1		0.02		-0.14		-0.06	
RUG0	-0.29		0.05		-0.35		0.25		-0.16	X
RZ70	0.36		0.31		0.02		-0.16		-0.11	
S9ST	-0.04		0.02		0.06		0.09		-0.46	

SCGL	0.45	X	-0.06		0.16		0.01		0.35		
SFV5	-0.16		0.36		0.22		-0.22		0.3		
SK6D	-0.49	X	0.05		-0.3		0.11		0		
STUO	0.28		0.42		0.49		0.44		0.03		
SXUK	-0.04		-0.06		0.15		-0.12		-0.02		
T2Y7	-0.3		-0.24		-0.29		-0.16		0.23		
THWV	0.2		0		-0.05		0.47	X	-0.2		
TNUF	0.13		-0.13		0.07		-0.19		-0.05	X	
TSV0	0.44	X	-0.29		0.11		0.13		-0.21		
U154	0.33		-0.05		0.01		0.08		0.5		
U20N	0.15		0.07		0.58	X	0.13		-0.02		
U908	0.21		0.17		-0.1		-0.32		0.29		
UE94	0.27		-0.17		-0.06		-0.01		-0.2		
UYA1	-0.05		0.19		0.02		0.42	X	0.09		
V7U3	-0.13		0.54	X	0.14		0.37		-0.3		
VD8C	0.24		-0.07		-0.4	X	0.19		-0.11		
VED6	-0.41	X	0.13		0.08		-0.08		0.08		
VSGD	-0.1		-0.09		-0.04		-0.02		0.23		
VSYL	-0.11		0.2		0.01		-0.19		0.07		
W3BN	0		0.07		0.29		0.11		0.33		
WGSB	0.44	X	0.09		0.4		0.01		0.01		
WK2C	0.57	X	0.04		-0.16		0.14		0.42		
WWPC	-0.21		-0.04		0.33		0.36		0.22		
X6RN	0.3		-0.05		-0.03		0.12		-0.21	X	
X8V5	0.27		0.06		0.34		0.15		0.66		
XDEY	-0.15		-0.07		0.02		0		-0.09		
XEQD	-0.07		-0.23		-0.12		-0.46	X	-0.07		
XLF8	-0.18		0.23		0.05		0.48	X	-0.37		
XO3N	0		0.36		-0.05		0.17		-0.25	X	
Y6J3	0.08		-0.16		0.03		-0.15		0.38		
YB6Z	-0.22		-0.46	X	-0.21		0.02		-0.11		

YV2A	0.23	0.13	0.45	0.26	0.39	
ZMHX	-0.04	0.43	-0.11	-0.1	0.52	X
ZNKL	-0.12	0.1	0.22	-0.29	-0.4	X
ZRR2	-0.04	0.24	0.32	-0.05	-0.14	

Of the 203 participants, 114 loaded significantly on one of the five factors. Combined, Factors 1, 2, 3, 4, and 5 account for 38% of the study's variance. Eighty-nine participants did not load significantly on one of the five factors. This indicates that the participants did not fit well with the five main factors that were extracted from the study.

Factor Arrays, Identification, and Interpretation

Q-methodology is reflection of participants' viewpoints. Specifically in this study, it is a reflection of their experiences with the COVID-19 pandemic. Thus, a factor array is a visual tool of the participants' collective viewpoints without any specific individual's comments, statements, or views; rather, it is group of individuals with similar viewpoints. The following section provides arrays for each of the five factor models along with the factor's identification and interpretation of participants' viewpoints.

Factor 1: I'll be There for You

I'll be there for you
(When the rain starts to pour)
I'll be there for you
(Like I've been there before)
I'll be there for you
('Cause you're there for me too)
- The Rembrandts (1995)

Figure 2 depicts the factor array for *I'll be There for You* which had 41 statistically-loading participants, accounted for 12% of the study variance, and had an eigenvalue of 25.54. Table 8 lists the distinguishing factors for *I'll be There for You*.

Figure 2

Model Sort for RTs Who Loaded Significantly on Factor 1, I'll be There for You

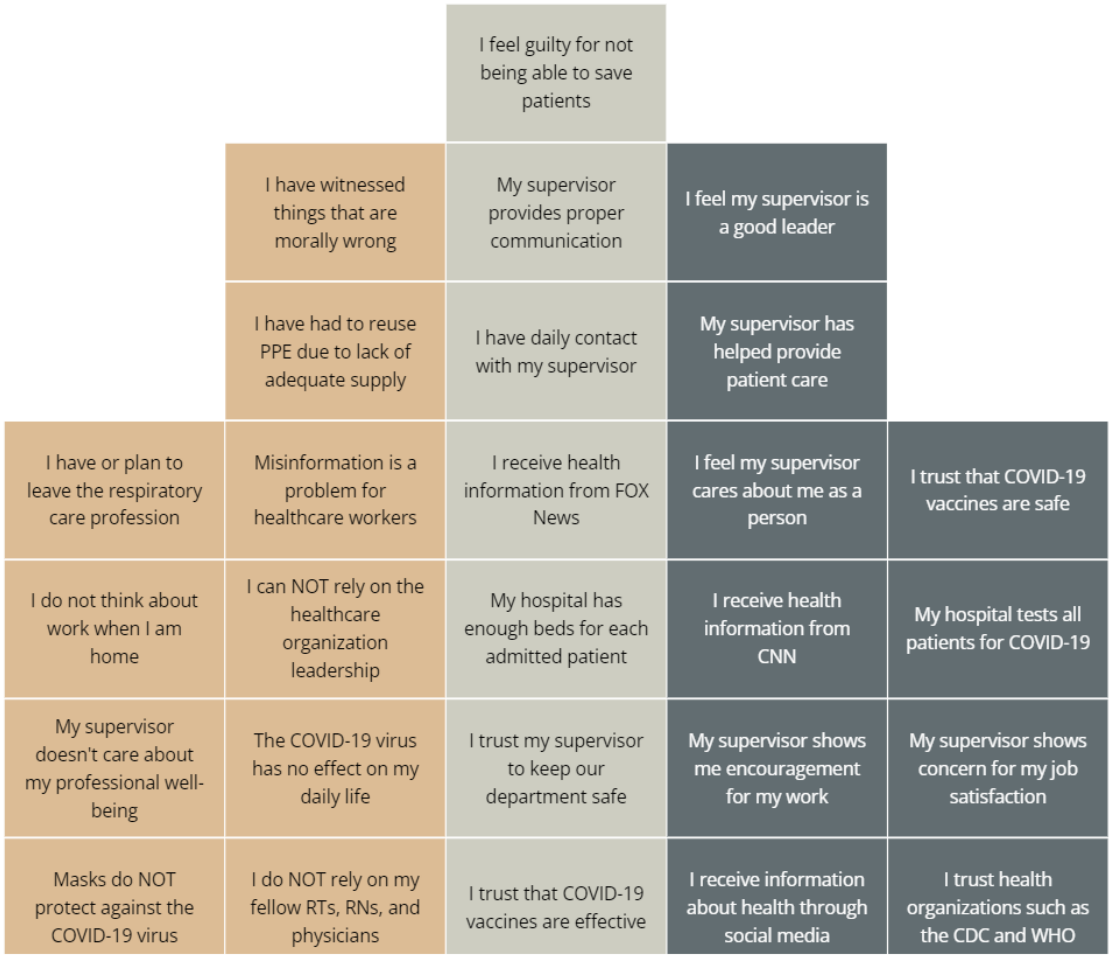


Table 8

Distinguishing Statements for Factor 1, *I'll be There for You*

Statement Number	Statement	Endorsement
16	My hospital tests all patients for COVID-19	+
17	I receive information about health through social media	+
25	I receive health information from CNN	+
10	My supervisor has helped provide patient care	+
24	I receive health information from FOX News	^
20	The COVID-19 virus has no effect on my daily life	-
6	Misinformation is a problem for healthcare workers	-
18	I have had to reuse PPE due to lack of adequate supply	-
2	I have witnessed things that are morally wrong	-
5	My supervisor doesn't care about my professional well-being	-
15	I do not think about work when I am home	-
21	I have or plan to leave the respiratory care profession	-

**Note:* Endorsement indicated as positive (+), neutral (^), or negative (-).

The participants ranged in age from 25-54, with most participants being between the ages of 25-34 (70%). This factor had the highest percentage of male participants (51%), White/Caucasian participants represented 73% of *I'll be There for You*. Participants were comprised of 50% staff respiratory therapists, 25% student respiratory therapists, and 25% respiratory therapy managers. When compared to the other factors in this study, participants in *I'll be There for You* had the highest number of respiratory therapy managers. *I'll be There for You* generated the highest percentage of participants who agreed or strongly agreed (68%) with the statement, *I trust my supervisor to keep our department safe*.

The *I'll be There for You* General Viewpoint. *I'll be There for You* was empowered by information provided by their institutions and was generally content with

the institution's handling of the COVID-19 pandemic. *I'll be There for You* stated the hospital tests all patients for COVID-19, their supervisor helped provide patient care, and they received information about health through social media and CNN. Participants 85119, 85124, 85160, 85161, 85163, 85167, 85174, 85192, 85282, and 85330 all stated their institutions took "*precautions*" in advance. 85197 stated that the institution responded to the COVID-19 pandemic "*as well as it could in retrospect*."

I'll be There for You did not have to reuse PPE, and they did not feel as though they witnessed things that were morally wrong. However, they do believe the COVID-19 virus effected their daily lives and that their supervisor cared about their professional well-being. 84963 stated:

> *A lot of times, peers/coworkers were what kept our line of defense stand still, with encouragement, ears to listen, shoulders to cry on, vent to each other, learning from each other on any new implements with new equipment/care to the patients, and emotional support.*

Overall, those in *I'll be There for You* did not think about work when they were home.

Factor 2: Won't You Please, Please Help Me?

Help me if you can, I'm feeling down
And I do appreciate you being 'round
Help me get my feet back on the ground
Won't you please, please help me?
-The Beatles (1965)

Figure 3 represents the factor array for *Won't You Please, Please Help Me?* which had 25 statistically-loading participants, accounted for 8% of the study variance, and had an eigenvalue of 17.30. Table 9 states the distinguishing factors for *Won't You Please, Please Help Me?*

Figure 3

Model Sort for RTs Who Loaded Significantly on Factor 2, Won't You Please, Please Help Me?

Table 9

Distinguishing Statements for Factor 2, Won't You Please, Please Help Me?

Statement Number	Statement	Endorsement
18	I have had to reuse PPE due to lack of adequate supply	+
2	I have witnessed things that are morally wrong	+
14	I feel guilty for not being able to save patients	+
12	I can NOT rely on the healthcare organization leadership	+
23	I feel my supervisor is a good leader	^
1	I trust my supervisor to keep our department safe	-
13	Masks do NOT protect against the COVID-19 virus	-
9	I have daily contact with my supervisor	-
19	My hospital has enough beds for each admitted patient	-
25	I receive health information from CNN	-
15	I do not think about work when I am home	-

**Note:* Endorsement indicated as positive (+), neutral (^), or negative (-).

The participants ranged in age from 25-64, with the highest number of participants between the ages of 25-34 (52%). Participants in *Won't You Please, Please Help Me?* were 64% female participants; 80% of participants were staff respiratory therapists; and 72% of participants were White/Caucasian. At 60%, the majority of *Won't You Please, Please Help Me?* somewhat agreed/either agreed or disagreed/somewhat disagreed with the statement, *I trust my supervisor to keep our department safe,* whereas 25% agreed and 16% disagreed or strongly disagreed.

The *Won't You Please, Please Help Me?* General Viewpoint. *Won't You Please, Please Help Me? g*enerally felt unsupported, frustrated, and disenfranchised during the COVID-19 pandemic. *Won't You Please, Please Help Me?* stated they had to reuse PPE due to lack of adequate supply, their hospital did not have enough beds for admitted patients, and they could not rely on the healthcare organization leadership. Participant 85276 stated the organization's response to the COVID-19 pandemic was done so "*Horribly and not enough PPE*." 85214 commented, "*...departmental management was very poor and did not support frontline therapists*." Additionally, 84970 noted that the organization "*talked money way too much and put unnecessary burden on the staff."* These statements directly reflect the frustration and lack of support for *Won't You Please, Please Help Me?*

Won't You Please, Please Help Me? stated they witnessed things that were morally wrong and felt guilty for not being able to save patients during the COVID-19 pandemic. They thought about work when they were home. Additionally, this factor did not have daily contact with their supervisor and did not trust their supervisor to keep the department safe. Participant 85276 supports these statements with the comment, "*Management was nowhere to be found*."

Factor 3: I'll Get You There

Now some of you
Might still be in that place
If you're tryin' to get out
Just follow me
I'll get you there
-Eminem (2010)

Figure 4 signifies the factor array for *I'll Get You There* which had 23 statistically-loading participants, accounted for 6% of the study variance, and had an eigenvalue of 13.31. Table 10 lists the distinguishing factors for *I'll Get You There*.

Figure 4

Model Sort for RTs Who Loaded Significantly on Factor 3, I'll Get You There

Table 10

Distinguishing Statements for Factor 3, I'll Get You There

Statement Number	Statement	Endorsement
1	I trust my supervisor to keep our department safe	+
9	I have daily contact with my supervisor	+
23	I feel my supervisor is a good leader	+
7	My supervisor shows me encouragement for my work	+
4	My supervisor provides proper communication	+
18	I have had to reuse PPE due to lack of adequate supply	+
8	My supervisor shows concern for my job satisfaction	^
3	I trust health organizations such as the CDC and WHO	^
2	I have witnessed things that are morally wrong	^
15	I do not think about work when I am home	^
21	I have or plan to leave the respiratory care profession	-
24	I receive health information from FOX News	-
17	I receive information about health through social media	-
25	I receive health information from CNN	-

**Note:* Endorsement indicated as positive (+), neutral (^), or negative (-).

The participants ranged in age from 18-64, with no defining majority age bracket. Participants were mainly staff respiratory therapists (43%) and student respiratory therapists (39%). *I'll Get You There* had 48% male and 48% female participants, as well as 70% of participants identified as White/Caucasian. *I'll Get You There* generated a split between participants who agreed or strongly agreed (50%) and somewhat agreed/either agreed or disagreed/somewhat disagreed (50%) with the statement, *I trust my supervisor to keep our department safe*.

The *I'll Get You There* General Viewpoint. *I'll Get You There* was optimistic and confident in their supervisors. *I'll Get You There* stated they trusted their supervisor to keep the department safe, had daily contact with supervisor, felt the supervisor was a good leader, and their supervisor showed encouragement and provided proper communication. Participant 84977 supported these statements with the comment that their organization "*strengthened supervision and protection*" to frontline workers.

85700 noted their institution supported frontline workers with a "*combination of active research and treatment*," and 85864 added a similar comment that their institution's response was "*very cautiously with recommendations of all PPE and no nebulizer treatments to covid positive patients. There was also a limiting of personnel when able and modified intubation techniques*." With *I'll Get You* There, the institution and supervisor provided support and confidence through "*active cooperation*" (85391).

I'll Get You There mentioned they had to reuse PPE due to lack of adequate supply. Though PPE supply was inadequate, 84969 stated their supervisor "*looked forward to what supplies were needed and tried to supply…and focus on providing for employees*." Additionally, *I'll Get You There* did not receive health information from FOX NEWS, CNN, or social media and did not plan to leave the respiratory care profession.

Factor 4: What's Going On?

And so I wake in the morning and I step outside
And I take a deep breath and I get real high
And I scream from the top of the my lungs
What's going on?
- 4 Non Blondes (1989)

Figure 5 depicts the factor array for *What's Going On?* which had 21 statistically-loading participants, accounted for 5% of the study variance, and had an eigenvalue of 10.91. Table 11 lists the distinguishing factors for *What's Going On?*

Figure 5

Model Sort for RTs Who Loaded Significantly on Factor 4, What's Going On?

		I have had to reuse PPE due to lack of adequate supply		
	I receive health information from CNN	I feel my supervisor is a good leader	My supervisor shows me encouragement for my work	
	My hospital has enough beds for each admitted patient	My hospital tests all patients for COVID-19	I feel my supervisor cares about me as a person	
My supervisor has helped provide patient care	I receive health information from FOX News	My supervisor provides proper communication	I receive information about health through social media	I do not think about work when I am home
I have or plan to leave the respiratory care profession	My supervisor shows concern for my job satisfaction	The COVID-19 virus has no effect on my daily life	I have witnessed things that are morally wrong	I trust that COVID-19 vaccines are safe
I have daily contact with my supervisor	I do NOT rely on my fellow RTs, RNs, and physicians	I can NOT rely on the healthcare organization leadership	Misinformation is a problem for healthcare workers	I trust that COVID-19 vaccines are effective
I trust my supervisor to keep our department safe	My supervisor doesn't care about my professional well-being	Masks do NOT protect against the COVID-19 virus	I trust health organizations such as the CDC and WHO	I feel guilty for not being able to save patients

Table 11

Distinguishing Statements for Factor 4, What's Going On?

Statement Number	Statement	Endorsement
14	I feel guilty for not being able to save patients	+
26	I trust that COVID-19 vaccines are effective	+
27	I trust that COVID-19 vaccines are safe	+
15	I do not think about work when I am home	+
2	I have witnessed things that are morally wrong	+
13	Masks do NOT protect against the COVID-19 virus	^
12	I can NOT rely on the healthcare organization leadership	^
16	My hospital tests all patients for COVID-19	^
23	I feel my supervisor is a good leader	^
18	I have had to reuse PPE due to lack of adequate supply	^
24	I receive health information from FOX News	-
19	My hospital has enough beds for each admitted patient	-
25	I receive health information from CNN	-
1	I trust my supervisor to keep our department safe	-
9	I have daily contact with my supervisor	-
10	My supervisor has helped provide patient care	-

**Note:* Endorsement indicated as positive (+), neutral (^), or negative (-).

Participants ranged in age from 18-44, with the highest number of participants between the ages of 25-34 (55%). This factor had 60% staff respiratory therapists, 60% male participants, and 70% of participants were White/Caucasian. When asked, *I trust my*

supervisor to keep our department safe, *What's Going On?* had a majority response of somewhat agree/either agree or disagree/somewhat disagree (85%), with 10% of participants who agreed or strongly agreed and 5% who disagreed.

The *What's Going On?* General Viewpoint. *What's Going On*? felt protected against the COVID-19 pandemic; however, they did not feel physically or emotionally supported. *What's Going On?* felt guilty for not being able to save patients, witnessed things that were morally wrong, but they stated that they did not think about work outside of work. Though *What's Going On?* seemed to be bothered by the inability to help and also by the situations during the pandemic, they seemed to be mentally or emotionally detached from their work due to stress, confusion, and exhaustion. 85039 sums up these feelings perfectly with their comment:

> *There was a lot of confusion on how we were treating some of these patients. It was hard on us healthcare workers because we didn't know the proper line of treatment to follow. It was a very hectic few years.*

What's Going On? did not receive health information from FOX News or CNN, but they did believe the COVID-19 vaccines were safe and effective. However, *What's Going On?* did not trust their supervisor to keep their department safe, did not have daily contact with their supervisor, nor did their supervisor help provide patient care during the COVID-19 pandemic. Additionally, they stated their hospital did not have enough beds for each admitted patient. These statements are supported by 85244's comment, *"[we] worked effortlessly though exhaustion, staff shortages and used critical thinking in ways we never felt we would need to.*" Participant 84927 simply stated, "*all was unknown*."

Factor 5: *Show Must Go On*

I'll top the bill
I'll overkill
I have to find the will to carry on
On with the show
Show must go on
Show must go on
- Queen (1991)

Figure 6 portrays the factor array for *Show Must Go On* which had 11 statistically-loading participants, accounted for 5% of the study variance, and had an eigenvalue of 10.25. Table 12 lists the distinguishing factors for *Show Must Go On*.

Figure 6

Model Sort for RTs Who Loaded Significantly on Factor 5, Show Must Go On

		I receive information about health through social media		
	I do not think about work when I am home	I trust that COVID-19 vaccines are safe	I trust that COVID-19 vaccines are effective	
	I have had to reuse PPE due to lack of adequate supply	I receive health information from FOX News	I feel my supervisor is a good leader	
My hospital tests all patients for COVID-19	I do NOT rely on my fellow RTs, RNs, and physicians	I receive health information from CNN	My supervisor shows me encouragement for my work	I feel my supervisor cares about me as a person
My hospital has enough beds for each admitted patient	I can NOT rely on the healthcare organization leadership	I have daily contact with my supervisor	I trust health organizations such as the CDC and WHO	Masks do NOT protect against the COVID-19 virus
I have witnessed things that are morally wrong	My supervisor doesn't care about my professional well-being	My supervisor provides proper communication	I feel guilty for not being able to save patients	My supervisor has helped provide patient care
The COVID-19 virus has no effect on my daily life	I have or plan to leave the respiratory care profession	I trust my supervisor to keep our department safe	Misinformation is a problem for healthcare workers	My supervisor shows concern for my job satisfaction

Table 12

Distinguishing Statements for Factor 5, Show Must Go On

Statement Number	Statement	Endorsement
10	My supervisor has helped provide patient care	+
13	Masks do NOT protect against the COVID-19 virus	+
14	I feel guilty for not being able to save patients	+
3	I trust health organizations such as the CDC and WHO	+
4	My supervisor provides proper communication	^
25	I receive health information from CNN	^
17	I receive information about health through social media	^
21	I have or plan to leave the respiratory care profession	-
18	I have had to reuse PPE due to lack of adequate supply	-
15	I do not think about work when I am home	-
2	I have witnessed things that are morally wrong	-
19	My hospital has enough beds for each admitted patient	-
16	My hospital tests all patients for COVID-19	-

**Note:* Endorsement indicated as positive (+), neutral (^), or negative (-).

The participants ranged in age from 18-54, with most participants between the ages of 25-34 (64%). Participants were 73% staff respiratory therapists and 27% student respiratory therapists, as well as mainly White/Caucasian (82%). *Show Must Go On* had 45% of participants agree/strongly agree and 36% of participants somewhat agree/either agree or disagree/somewhat disagree with the statement, *I trust my supervisor to keep our department safe*.

The *Show Must Go On* General Viewpoint. *Show Must Go On* realized the COVID-19 pandemic was not their supervisor's or institution's fault; however, they believe the situation was horrible. They did not place blame, yet they were doing the best

they could given the circumstances they had to deal with during the COVID-19 pandemic. *Show Must Go On* had the fewest positive statements that were agreed upon between participants. They agreed that their supervisor helped provide patient care during the COVID-19 pandemic, felt guilty for not being able to save patients, did not believe masks protected against the COVID-19 pandemic, but they trusted the CDC and WHO. Participant 85068 stated their institution took the route of reducing contact with COVID-19 patients, "*increase scientific research, and strengthen self-protection awareness*" to help frontline providers during the pandemic.

Show Must Go On did not have to reuse PPE or witness things that were morally wrong; however, they stated their hospital did not have enough beds for each admitted patient, did not test all patients for COVID-19, and they thought about work when at home. Participant 85385 summed up their experience as "*panic and fear*," which tied into the *Show Must Go On* thinking about work at home and feeling guilty for not being able to save patients.

Additional Analysis Across Variables

Following the factor analysis, a Chi-square t-test was performed to compare the five factors with each variable. Age was found to be statistically significant with Factor 1, *I'll be There for You*. Table 13 reflects the crosstabulation of age and Factors 1-5. The data was found to be statistically significant at X^2 (df=16) = .004, $p < 0.05$. Participants between the ages of 25-34 were statistically significant with Factor 1, *I'll be There for You.*

Table 13

Crosstabulation of Age and Factors 1-5

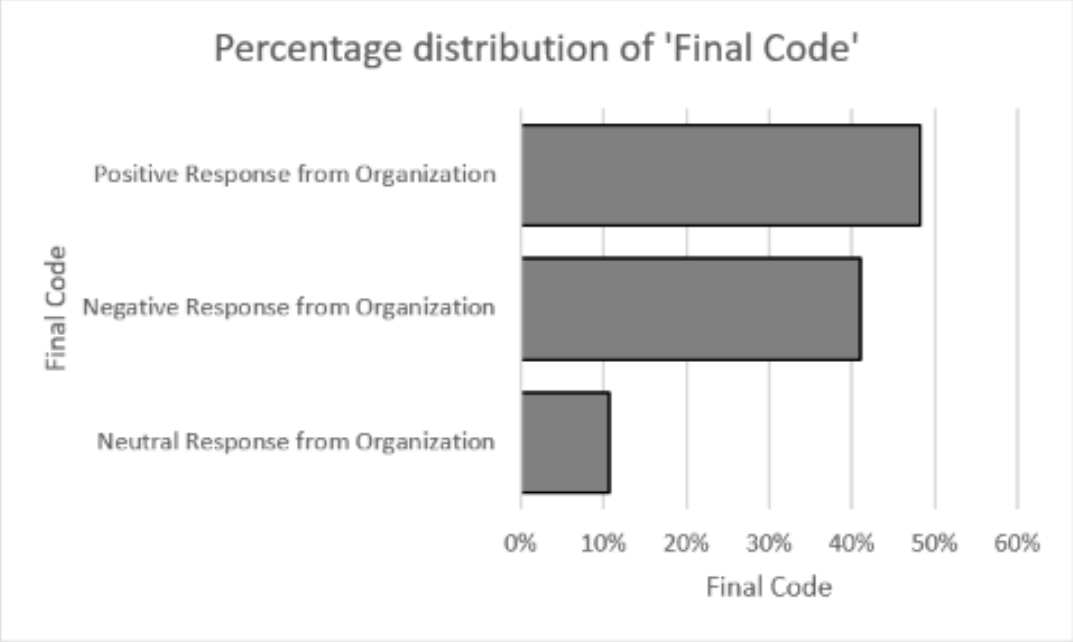
Age	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
18-24	0	4	4	5	2
25-34	28	13	5	11	7
35-44	10	6	7	4	1
45-54	2	1	1	0	1
55-64	0	1	5	0	0

Post Q-Sort Reflection Analysis

Following the Q-sort, participants were asked an open-ended question, *reflecting on the COVID-19 pandemic, how did your organization respond to the unknown virus...* This single open-ended question was provided to allow participants to share their experience or opinion, in their own words, on how their hospital handled the COVID-19 pandemic. Figure 7 represents the final code from participants.

Figure 7

Bar Graph for Percentage of Distribution of Final Code



Participants' answers were initially coded with words/phrases that summarized their responses. The initial codes were then grouped together to find common themes which were distributed into a second code. The second code was then reevaluated and categorized into the following final codes: positive response (31%), neutral response (7%), and negative response (27%). Sixty-one statements (35%) were removed, as they did not fit the question because they were either a recommendation from the participant, left blank, or unable to be read. Table 14 reflects the final coding from the study. Please see Appendix E for a complete list of participants' responses.

Table 14

Table Distribution of 'Secondary Code' for each 'Final Code'

Final Code	Secondary Code	Count of Secondary Code
Remove Total		61
Positive Response from Organization	Good	11
	Increased Support	1
	Mandate PPE	7
	Proactive Measures	26
	Proper Cleaning	4
	Provided Supplies/Equipment	4
	Provided Support	1
Positive Response from Organization Total		54
Neutral Response from Organization	PPE	5
	Research	3
	Teamwork	2
	Vaccines	2
Neutral Response from Organization Total		12
Negative Response from Organization	Concerned About Money	1

	Did Not Test for COVID	3
	Fear/Stress	6
	Lack of Communication	3
	Lack of Leadership	4
	Lack of Proper Information	1
	Lack of Supplies/Equipment	2
	Lack of Support	8
	Lack PPE	3
	Lack Support	1
	Overreact	2
	Poor	5
	Unprepared	7
Negative Response from Organization Total		46
Grand Total		173

Summary

Q-methodology was used to portray the experiences of respiratory therapists during the COVID-19 pandemic. Of the 203 participants, 114 loaded significantly into one of the five factors which indicated similar viewpoints. Factor 1, *I'll be There for You*, had 41 statistically-loading participants and accounted for 12% of the study variance. *I'll be There for You* was empowered by information provided by their institutions and was generally content with the institution's handling of the COVID-19 pandemic. *I'll be There for You* stated the hospital tested all patients for COVID-19, their supervisor helped provide patient care, and they received information about health through social media and CNN. *I'll be There for You* did not have to reuse PPE or witness things that

were morally wrong. However, they did believe the COVID-19 virus had an effect on their daily life and their supervisor cared about their professional well-being.

Factor 2, *Won't You Please, Please Help Me?*, had 25 statistically-loading participants and accounted for 8% of the study variance. *Won't You Please, Please Help Me? g*enerally felt unsupported, frustrated, and disenfranchised during the COVID-19 pandemic. *Won't You Please, Please Help Me?* stated they had to reuse PPE due to lack of adequate supply, their hospital did not have enough beds for admitted patients, and they could not rely on the healthcare organization leadership. *Won't You Please, Please Help Me?* stated they witnessed things that were morally wrong and felt guilty for not being able to save patients during the COVID-19 pandemic. They also thought about work when they were home. Additionally, this factor did not have daily contact with their supervisor and did not trust their supervisor to keep the department safe.

Factor 3, *I'll Get You There*, had 23 statistically-loading participants and accounted for 6% of the study variance. *I'll Get You There* was optimistic and confident in their supervisors. *I'll Get You There* stated they trusted their supervisor to keep the department safe, had daily contact with supervisor, felt the supervisor was a good leader, and their supervisor showed encouragement and provided proper communication. *I'll Get You There* did mention they had to reuse PPE due to lack of adequate supply. Additionally, *I'll Get You There* did not receive health information from FOX NEWS, CNN, or social media, and they did not plan to leave the respiratory care profession.

Factor 4, *What's Going On?*, had 21 statistically-loading participants and accounted for 5% of the study variance. *What's Going On*? felt protected against the COVID-19 pandemic; however, they did not feel physically or emotionally supported.

What's Going On? felt guilty for not being able to save patients and witnessed things that were morally wrong; however, they stated they did not think about work outside of work. *What's Going On?* seemed to be bothered by the inability to help save patients; however, they seemed to be mentally or emotionally detached from their work due to stress, confusion, and exhaustion. *What's Going On?* did not receive health information from FOX News or CNN but did believe the COVID-19 vaccines were safe and effective. However, *What's Going On?* did not trust their supervisor to keep their department safe, did not have daily contact with their supervisor, nor did their supervisor help provide patient care during the COVID-19 pandemic. Additionally, they stated their hospital did not have enough beds for each admitted patient.

Factor 5, *Show Must Go On*, had 11 statistically-loading participants and accounted for 5% of the study variance. *Show Must Go On* realized the COVID-19 pandemic was not their supervisor's or institution's fault, however, believed the situation was horrible. They did not place blame, yet they were doing the best they could given the circumstances they had to deal with during the COVID-19 pandemic. *Show Must Go On* had the fewest positive statements that were agreed upon between participants. They agreed that their supervisor helped provide patient care during the COVID-19 pandemic, felt guilty for not being able to save patients, and did not believe masks protected against the COVID-19 pandemic, but they trusted the CDC and WHO. *Show Must Go On* did not have to reuse PPE, did not witness things that were morally wrong; however, they stated their hospital did not have enough beds for each admitted patient, did not test all patients for COVID-19, and thought about work when at home.

Each of the five factors varied in viewpoints, producing distinguishing noteworthy findings that can help address the study's research questions. Chapter Five provides a detailed discussion of the findings and how they align with existing research as well as the study's research questions, limitations of the study, recommendations for future research, and the study's conclusion.

Chapter Five

Discussion

Summary of Findings

SARS-CoV-2, the virus that caused the COVID-19 pandemic, was discovered in Wuhan, China, on December 31, 2019. Less than a month later, it spread to the United States with over 160,000 confirmed cases (Taylor, 2020; WHO, 2021). This study was generated from a personal observation as a frontline respiratory therapist during the COVID-19 pandemic. This exposure sparked an interest in investigating and sharing the experiences and viewpoints of other respiratory therapists who endured the COVID-19 pandemic from the front lines.

The uncertainty of the COVID-19 pandemic created significant stress for healthcare workers, specifically frontline providers (e.g., physicians, respiratory therapists, and nurses) (Ness et al., 2022; Trachtenberg et al., 2022). Though research has confirmed the COVID-19 pandemic's influence on the public's trust in the healthcare system, there was limited research on the pandemic's impact on frontline providers' trust of leadership within the healthcare system. Additionally, little research existed on respiratory therapists, let alone the impact of the COVID-19 pandemic. Therefore, this study shared the experiences and viewpoints of frontline respiratory therapists and respiratory therapy students, along with the managers who led them (or did not) during the COVID-19 pandemic.

Research Question One

What are the differences between respiratory therapists', respiratory therapist managers', and student respiratory therapists' level of trust in healthcare leadership?

Summary of Findings

Staff respiratory therapists were the majority of participants, followed by student respiratory therapists and respiratory therapy managers. The study revealed respiratory therapy managers trusted their supervisors more than both student and staff respiratory therapists. The greatest number of respiratory therapy managers and student respiratory therapists were statistically loaded on the *I'll be There for You* factor. Staff respiratory therapists had the greatest number of participants equally loaded on the *I'll be There for You* and the *Won't You Please, Please Help Me?* factors.

I'll be There for You is empowered by information provided by their institutions and is generally content with the institution's handling of the COVID-19 pandemic. This could be attributed to managers being supported by the hospital administration and or the institution. Additionally, not all respiratory therapy managers helped staff provide direct patient care on the frontlines during the COVID-19 pandemic. Student respiratory therapists may have worked a limited number of hours during the COVID-19 pandemic or may have only had exposure to the pandemic during clinical, not as a working limited permit holder or newly graduated respiratory therapist.

Staff respiratory therapists were equally divided in number between two contrasting factors: *I'll be There for You* and *Won't You Please, Please Help Me?* As mentioned above, *I'll be There for You* was generally content with their institution's

handling of the COVID-19 pandemic and mentioned their supervisor helped provide patient care during the pandemic. Additionally, they did not have to reuse PPE and did not witness things that were morally wrong.

Yet, the same number of staff respiratory therapists loaded on the *Won't You Please, Please Help Me?* factor. These individuals generally felt unsupported, frustrated, and disenfranchised during the COVID-19 pandemic. The *Won't You Please, Please Help Me?* factor participants overwhelmingly stated they had to reuse PPE due to a lack of adequate supply, they witnessed things that were morally wrong, felt guilt for not being able to save patients, and could not rely on their healthcare organization leadership during the COVID-19 pandemic. This contrasted the *I'll be There for You* and *Won't You Please, Please Help Me?* factors which had far less student respiratory therapists and respiratory therapy managers loaded to this factor.

Research Question Two

How has the COVID-19 pandemic altered the trust of respiratory therapists?

Summary of Findings

This study included a Q-sort and post-sort survey that addressed the participants' levels of trust during the COVID-19 pandemic (Q-sort) and prior to the COVID-19 pandemic (post-sort survey). The post-sort survey had a standing statement, "*Prior to the COVID-19 pandemic*." A chi-squared analysis was conducted to examine if a relationship existed between the following variables and trust: political affiliation, gender, age, level of education, ethnicity, Ohio region, and job title. Of the variables listed, gender, age, and ethnicity were found to be statistically significant with regards to trust. However, age was

the only variable that was statistically significant with trust and significantly different across factor loadings.

Gender was found to be statistically significant in terms of trust in leadership. Females were found to trust their leaders more than males, transgender males, or transgender females. According to researchers, men are more likely to accept information about their health and advocate for the COVID-19 vaccine than women (Ahmed et al., 2021; Laxminarayan et al., 2021; and Sallam, 2021). Males tend to be more trusting regarding their health and vaccine status, which was also expected for the outcome in this study. However, this study found the opposite. Though men did not show distrust, women were statistically more likely to trust their supervisor than men or transgender males and females.

Ethnicity was also found to be statistically significant. As expected, White/Caucasians had the greatest trust in their leaders, more than Native Americans, Middle Easterners, Hispanic/Latinx, Black/African Americans, or Asian Americans. According to Bergstresser (2015), African Americans, Native Americans, Latin Americans, and other ethnic groups have lost trust in the healthcare system and healthcare professionals. This study found Asian Americans were slightly more likely to trust their leaders than their counterpart minority ethnicities.

Ethnic groups, such as Black Americans, Native Americans, and Latin Americans, were impacted by the COVID-19 virus at disproportionate rates (Cerise et al., 2021). This study suggests healthcare professionals from minority ethnicities share a lack of trust in their leaders. Focusing on re-establishing the trust of racial and ethnic minorities is especially important, as there is a lasting impact on individuals with

generalized mistrust, which has also seemed to affect healthcare professionals' trust in leaders (Aassve et al., 2021).

Age was found to be statistically significant with trust in their supervisor. In addition, age was also statistically significant with the number of participants loaded on Factor 1: *I'll be There for You* factor. Participants between the ages of 25-34 were found to trust their supervisor more than any other age group in this study. These results were not expected since individuals under the age of 55 are less likely to trust healthcare, public health officials, and the COVID-19 vaccine (Ahmed et al., 2021; Laxminarayan et al., 2020; Sallam, 2021).

I'll be There for You had a total of 40 participants statistically loaded to this factor. Of the 40 participants loading on this factor, 28 were between the ages of 25-34. The *I'll be There for You* factor had the highest number of respiratory therapy managers compared to the other factors in this study. *I'll be There for You* states the hospital tested all patients for COVID-19, their supervisor helped provide patient care, and they received information about health through social media and CNN. A common theme with the *I'll be There for You* factor is that institutions took "precautions" in advance to help protect and support frontline respiratory therapists. Participant #85197 stated the institution responded to the COVID-19 pandemic "*as well as it could in retrospect*" considering the unknown.

The *I'll be There for You* factor did not indicate that they had to reuse PPE or that they witnessed things that were morally wrong. They also did not they think about work when they were home; however, participants believed the COVID-19 virus influenced their daily life. Participant #84963 stated:

> *A lot of times, peers/coworkers were what kept our line of defense stand still, with encouragement, ears to listen, shoulders to cry on, vent to each other, learning from each other on any new implements with new equipment/care to the patients, and emotional support.*

Overall, the majority of participants between the ages of 25-34 felt supported and empowered by information provided by their organizations and were generally content with the institution's handling of the COVID-19 pandemic.

Research Question Three

> What is the perspective of respiratory therapy professionals regarding their work experience during and since the COVID-19 pandemic?

Summary of Findings

During the COVID-19 pandemic, frontline providers needed to feel safe and protected. This required constant communication from leaders and proper PPE. The *I'll be There for You*, *Won't You Please, Please Help Me?*, *I'll Get You There*, *What's Going On,* and *Show Must Go On* factors each presented a different perspective from frontline respiratory therapists. Overall, leaders needed to establish trust with frontline respiratory therapists to help support their team and to reduce stress, guilt, and burnout.

I'll be There for You felt the most support from their leaders. Overall, *I'll be There for You* had precautions in place by their institutions that provided protection for their employees. Participant #85192 commented that their organization was on the front of the pandemic by focusing on "*prevention*," and participant #85330 added their institution responded by strengthening their "*protective measures*." The *I'll be There for You* factor

did not have to reuse PPE since their institutions were prepared and focused on prevention rather than reacting to the COVID-19 pandemic.

Overall, the *I'll be There for You* felt their leaders and institution did a good job responding to the COVID-19 pandemic. Participant #84973 stated their institution was "*raising people's awareness of safety and health*" which created less stress for frontline providers. When asked how their institution responded to the COVID-19 pandemic, 85163 declared, "*About an 8/10*", participant #85174 said "*appropriately*," and participant #86197 added, "*as well as it could in retrospect*."

Similar to the *I'll be There for You*, the *I'll Get You There* factor was confident with their leaders' ability to provide support during the COVID-19 pandemic. Participant #85864 said their institution's reaction to the COVID-19 pandemic was "*Very cautious with recommendations of all PPE and no nebulizer treatments to covid positive patients. There were also limiting of personnel when able and modified intubation techniques…*" which limited unnecessary exposures to the SARS-CoV-2 virus for frontline respiratory therapists. The *I'll Get You There* factor stated their supervisors provided them with daily contact, effective communication, and offered encouragement during the pandemic.

Participant #84977 stated their institution "*strengthened supervision and protection*" during the pandemic, and #85700 specified their organization showed support through "*a combination of active research and treatment*." Though the *I'll Get You There* factor had to reuse PPE, participant #84969 assured their supervisor "*looked forward to what supplies were needed and tried to supply…and focus on providing for employees*." Ultimately, the *I'll Get You There* factor felt their supervisors were good leaders.

Contrary to the *I'll be There for You and I'll Get You There* factors, the *Won't You Please, Please Help Me?* factor generally felt unsupported and frustrated with their leaders and institutions during the COVID-19 pandemic. They did not have daily contact with their supervisors; therefore, they did not trust their supervisors to keep their department safe. Participant # 85214 stated "*Unfortunately, departmental management was very poor and did not support frontline therapists*" and #85276 added "*Management was nowhere to be found*." The *Won't You Please, Please Help Me?* factor stated that they witnessed things that were morally wrong, felt guilty for not being able to save patients, and regularly thought about work when at home.

The *Won't You Please, Please Help Me?* factor reported that they had to reuse PPE during the COVID-19 pandemic, as participant #85276 stated, "*Not enough PPE*." Additionally, they could not rely on healthcare organization leadership. Participant #84970 detailed their organization "*talked money way too much and put unnecessary burden on the staff.*" The *Won't You Please, Please Help Me?* factor was not provided with adequate support from leaders at their institutions, which created more stress and confusion for the respiratory therapists.

The *What's Going On?* factor felt protected during the COVID-19 pandemic; however, they did not feel supported by their leaders. When asked to share their institution's response to the COVID-19 pandemic, participant #85079 stated their institution took "*precautions in advance*," and participant #85273 added their institution responded "*very well*." However, the *What's Going On?* factor did not have daily contact with their supervisor, nor did their supervisor help provide patient care during the pandemic. Because of those experiences, they did not trust their supervisor to keep their

department safe. Participant #85244 commented that front line respiratory therapists "*worked effortlessly through exhaustion, staff shortages and used critical thinking in ways they never felt they would need to*."

The lack of trust and support from their leaders also created confusion for the *What's Going On?* factor, with participant #85039 adding:

> *There was a lot of confusion on how we were treating some of these patients. It was hard on us Healthcare workers because we didn't know the proper line of treatment to follow. It was a very hectic few years.*

Participant #84927 stated "*all was unknown*." Lack of trust and lack of communication with their supervisor exacerbated stress experienced from the COVID-19 pandemic. The *What's Going On* factor felt guilty for not being able to save patients and stated they witnessed things that were morally wrong. However, they did not think about work when at home, which is rather interesting and could possibly be attributed to burnout or moral injury. According to Dale et al. (2021), moral injury is described as individuals experiencing shame, guilt, emotional distress, weakened trust, and reduced self-forgiveness.

The *Show Must Go On* factor did not place blame on the supervisor or institution, however, collectively agreed the situation was horrible. Participant #85063 stated their institution took "*precautions in advance*," participant #85120 added that their institution "*increased prevent and treatment equipment*," and participant #85084 simply stated their institution responded "*well*" to the COVID-19 pandemic.

The *Show Must Go On* factor did experience guilt from not being able to save patients and thought about work when they were home. Though participant #85385 stated

there was much "*panic and fear*" during the COVID-19 pandemic, the *Show Must Go On* factor had their supervisors help provide patient care during the pandemic. Supervisors supported respiratory therapists by working alongside them. By doing so, the *Show Must Go On* factor felt less stress and did not experience things that were morally wrong.

Interpretation of Findings

This study provides perspectives of frontline respiratory therapists in Ohio during the COVID-19 pandemic. When leaders provided daily contact and effective communication, individuals felt supported. In addition to communication and daily contact, respiratory leaders who assisted their staff on the frontline generated more respect and trust from their staff. There was less guilt, fear, and confusion amongst frontline respiratory therapists when supported by their leaders. Individuals who had such leaders during the COVID-19 pandemic felt they could not only trust their supervisor to keep their department safe, but also felt their supervisor was an overall good leader who cared about their well-being.

In contrast, when leaders were not present to provide encouragement and support, individuals reported higher incidence of guilt, bearing witness to things that were morally wrong, and thinking about work while at home. Participant #85276 specified, "*Management was nowhere to be found*." This lack of presence and support led to lack of trust, as participant #85521 stated, "*There was no communication from management, and I felt that the higher ups and management would not do themselves what they were asking staff to do.*" Many leaders did not uphold their responsibility to advocate and assist their staff, as participant #85214 added, "*Unfortunately, departmental management was very poor and did not support frontline therapists*."

People need engaged leaders who are determined to support and encourage their staff to continue to fight against the COVID-19 virus. Not only did these leaders let their staff down, but they were also perceived to have not cared about their staff's health because of their inability to lead, as participant #85087 shared, their leaders "*never cared about our lives we were just bodies*." Participant #85058 added, "*After dealing with staffing shortages due to illness, our wellbeing became much less of a concern than staffing.*" Though department leaders lacked communication and support, individuals found comfort from their peers, as participant #84963 detailed:

> *A lot of times, peers/co workers were the what kept our line of defense stand still, with encouragement, ears to listen, shoulders to cry on, vent to each other, learning from each other on any new implements with new equipment/care to the patients, emotional support.*

Individuals who participated in this study were from the state of Ohio, which has been known to be a swing state, however, more recently recognized as a "red" state (Milligan, 2020). While the COVID-19 pandemic was politicized in the United States, political affiliation was not found to be statistically significant within healthcare leadership. Participant #85071 stated:

> *There were a lot of unknowns and some misleading information… I believe my organization did an outstanding job being proactive in preparation…The government let politics interfere with doing what's best and the mainstream media blindly supported the agenda for the government.*

With regards to local government, participant #85127 stated, "*Locally no one actually seemed to be in charge.*" Though politicization of the COVID-19 pandemic and vaccine

were widespread, frontline workers did not report politicization of the pandemic or vaccine within healthcare.

Motivational language theory was originally discussed to establish trust and communication of healthcare leaders during the COVID-19 pandemic. However, after further assessment, motivation language theory was not supported. Instead, Harold Kelley's covariation model was used to explain the perspectives of frontline healthcare providers during the pandemic.

The covariation model is based on three main ideas: consensus, distinctiveness, and consistency (Practical Psychology, 2022). Consensus is disparity of behavior for different individuals. The behavior of individuals in a specific situation is referred to distinctiveness. The disparity of behavior for different individuals across time is consistency (Norcia & Colì, 2023; Practical Psychology, 2022). The covariation model conceptualizes the entity (e.g., healthcare organization, supervisor, leader) and circumstance (i.e., COVID-19) of the COVID-19 pandemic by sharing perceptions of frontline respiratory therapists.

According to Practical Psychology (2022), the covariation model has two main conclusions: dispositional attribution and situation attribution. Dispositional attribution is defined as *low consensus, low distinctiveness, and high consistency*, which determines that an individual's behavior is attributed to their character/persona (i.e., internal factor). Situation attribution is defined *by high consensus, high distinctiveness, and low consistency*, which attributes an individual's behavior to an external factor, such as the COVID-19 pandemic (Practical Psychology, 2022).

Kelley's covariation model of attribution supports the five factors in this study. The experiences and perspectives of frontline respiratory therapists are solely based on the circumstances of their organization's response to the COVID-19 pandemic and the support of their leaders.

The *I'll be There for You* and *I'll Get You There* factors shared similar situations of support and trust; therefore, the individuals who were exposed to these circumstances had a better perspective of their experience. *Won't You Please, Please Help Me?* and *What's Going On* factors shared similar experiences with of lack of support, whereas *I'll be There for You* and *I'll Get You There* factors shared similar perspectives in their experiences with having support. The *Show Must Go On* factor was different from the other four factors, though most similar in perspectives to the *I'll be There for You* and *I'll Get You There* factors.

Individuals' behaviors were attributed to external factors, such as supportive leadership (or lack of), effective organizational response to the pandemic (or not), and an appropriate amount of PPE (or not). These external factors affected the individuals' perspectives and experiences, while they saved lives on the front lines of the COVID-19 pandemic. The participants' individual characters/personas were not examined in this study; however, their viewpoints of their institutions' leadership and the lens through which they viewed them were exposed.

Context of Findings

The findings from this study help fill the research gap related to respiratory therapists and COVID-19 frontline healthcare providers' viewpoints of leadership during the COVID-19 pandemic. Previous research on healthcare providers was predominantly

focused on nursing and physicians. Extant research also focused on the public's trust in public health officials, not specific to healthcare workers, let alone frontline respiratory therapists.

This study established a relationship between trust and leadership with frontline respiratory therapists' and their experiences during the COVID-19 pandemic. Leaders who provide guidance, supervision, and communication create a safer working environment along with better emotional and mental outcomes for their employees. Prior to the COVID-19 pandemic, roughly 25% of all critical-care providers suffered from burnout due to the increased stress from high-pressure situations. Following the start of the COVID-19 pandemic, burnout rates have increased by 40% (Omar et al., 2022).

This study also found many respiratory therapists had to reuse PPE and did not have proper communication with their leaders. This supported previous research that reported 84% of respiratory therapists had to reuse PPE, and over 66% were not receiving proper communication with their supervisor during the COVID-19 pandemic (Ward et al., 2022). Exposure to the COVID-19 virus can harm an individual's well-being; however, direct contact with the COVID-19 virus can cause fear and anxiety for frontline providers (Jankelová & Joniaková, 2021). Frontline providers who had strong leaders that created a safe environment for their staff were able to reduce fear and anxiety by providing support. To ensure trust during a crisis, especially a global pandemic, frontline healthcare providers need to feel safe and protected. This requires constant communication from leaders and proper PPE.

Respiratory therapists who participated in this study were only represented by the state of Ohio. With this said, there was limited political data, as the state of Ohio is

currently recognized as a "red," or Republican, state (Milligan, 2020). In addition to the limited political data, according to Milligan (2020), the state of Ohio is predominately White/Caucasians at 79%, which is relatively similar to the White/Caucasian demographic of this study (72%).

Implications of Findings

Trust in healthcare leadership is directly dependent on the leader's ability to communicate and support their staff. Proper communication and support leads to greater trust and less guilt and stress of frontline respiratory therapists, as seen with the *I'll be There for You* and *I'll Get You There* factors. However, leaders who lack effective communication and support of their staff cause less trust and more guilt and stress of frontline respiratory therapists, as seen with the *Won't You Please, Please Help Me?* and *What's Going On?* factors.

The use of social media should be used to help provide evidenced-based recommendations and health information that limits misinformation for future pandemics (Alsaeed et al., 2023; Morganstein, 2022; Norcia & Colì, 2023). Though misinformation was not found to be an issue with frontline respiratory therapists, misinformation was an issue within the public (Goel & Sharma, 2021). Public health officials, healthcare professionals, and the media have the potential to create public statements that could potentially lower the public's worry and stress in future pandemics (Morganstein, 2022).

The 1918 Spanish Flu pandemic claimed nearly 100 million lives worldwide (Aassve et al., 2021; Ewing et al., 2020; Park et al., 2021). According to Aassve et al. (2021) and Ewing et al. (2020), health authorities during the 1918 pandemic were

publicly debated, challenged, and ignored. This is comparable to the crisis the CDC and local health authorities experienced during the COVID-19 pandemic.

Though the COVID-19 pandemic was not as deadly as the 1918 pandemic, the healthcare system and public health authorities should have been more prepared for this pandemic considering the medical advancements over the past 100 years. It is imperative that governing bodies, policymakers, and public health authorities are transparent and provide communication with reliable information. Issues with proper communication were found to be a major stressor between both healthcare and policymakers (Alsaeed et al., 2023). Communication is a common thread between public health leaders, political leaders, and healthcare leaders in ensuring individuals' trust during a time of crisis.

Learning nothing from the previous deadly pandemic, the United States was not prepared for the COVID-19 pandemic. Is the United States prepared for the next? No, not at this time. However, with current research, healthcare leaders have the evidence needed to provide support and encouragement to reduce stress and burnout of their staff. According to Alsaeed et al. (2023), to prepare for future pandemics, organizations must provide better resources, such as proper amounts of PPE, to limit healthcare providers' fear and ensure support from organizational and departmental leaders. In addition, healthcare leaders should develop ways to promote a feeling of hope to ensure quicker recovery of frontline healthcare providers during times of uncertainty, such as the COVID-19 pandemic (Morganstein, 2022).

Limitations of Study

Q-methodology was used to capture perspectives of participants and does not result in generalization to other populations of individuals, which can be seen as a

limitation. The study's participants represented a variety of variables (e.g., political affiliation, gender, ethnicity), but geographic location was not distributed equally. The sample was mainly White/Caucasian females from Ohio. As previously stated, Ohio is considered a "red" state and 78% White/Caucasian, which limits the political affiliation of participants.

Though Q-methodology via the Q-Method Software recorded all responses and kept anonymity, technology issues were noted when participants used smart phones versus a laptop or tablet. In addition, with the use of Q-Method Software, participants' only form of support was an online help button. Though a video with informative text was available for participants who needed help, there was no assurance that they understood the directions and task at hand. This could have generated confusion and misunderstanding on how to complete the Q-sort and possibly affected the results of some participants.

This study relied on participants loading statistically to one of five factors. Though there were 203 participants who completed the Q-sort, 80 participants did not load statistically to one of the five factors. This could be attributed to the lack of mental capacity for the length of the study involving the pre-sort and Q-sort. In addition, open-ended responses from participants were analyzed and coded by the researcher, which could potentially be coded differently by another individual's perspective.

Future Directions

Future research studies should explore perspectives of other frontline healthcare providers from Ohio during the COVID-19 pandemic. The findings of these studies could be compared for contrasting and comparable perspectives. Expanding this study to

compare Ohio, “red” state, with a known “blue” state would be interesting to see the differences in perspectives of frontline respiratory therapists, if any. In addition, exploring the perspectives of respiratory therapists’ trust in leadership throughout the country would have great value for healthcare leaders in preparation for the next pandemic.

Future studies could also explore data beyond this research. Investigating the leadership styles of organizational and/or departmental leaders from the *I’ll be There for You* and *I’ll Get You There* factors would establish valuable characteristics and skills of effective leadership during the COVID-19 pandemic.

Conclusion

The SARS-CoV-2 virus is transitioning from pandemic to endemic. On May 11, 2023, the United States COVID-19 national emergency ended (Carvajal, 2023). Though the pandemic ceased as an active threat, the lasting impacts will remain. Respiratory therapists battled an invisible enemy for years. Though the United States government considered the end of the pandemic in May, frontline respiratory therapists will endure the effects of the COVID-19 virus for years to come.

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Appendix A

Original List of Concourse Statements

Prior to the COVID-19 Pandemic…

1. I trusted my manager/director.
2. I trusted my manager/director to ensure a safe workplace through staffing.
3. I trusted health organizations such as the CDC, WHO, local health authorities.
4. I felt my manager/director cared about my professional well-being.
5. My manager/director provided me with proper communication regarding helpful information about work-related changes.
6. I could rely on my coworkers.
7. I receive information about health/healthcare by watching national news stations (FOX news, CNN).

During the COVID-19 Pandemic…

8. I trust my manger/director.
9. I trust my manager/director to ensure a safe workplace through staffing.
10. I trust health organizations such as the CDC, WHO, local health authorities.
11. My manager/director provides me with proper communication regarding helpful information about work-related changes due to COVID-19.
12. I feel my manager/director cares about my professional well-being.
13. My manager/director provides me with proper communication regarding updates on COVID-19 and safety.
14. My manager/director shows me encouragement for my work.
15. My manager/director shows concern for my job satisfaction.

16. My manager/director treats me with respect.
17. I can rely on my manager/director to help when needed.
18. I can rely on my coworkers.
19. I can rely on the healthcare organization leadership.
20. I trust that COVID-19 vaccines are effective.
21. I trust that COVID-19 vaccines are safe.
22. I receive information about health/healthcare by regularly reading medical journals/online medical information services.
23. I receive information about health/healthcare by watching national news stations (FOX news, CNN).
24. I receive information about health/healthcare through social media.
25. I have had to reuse PPE due to lack of adequate supply.
26. My hospital ran out of beds due to the surge of COVID-19 patients.
27. I have not been affected by the COVID-19 pandemic.
28. I have/plan to leave the respiratory therapy profession.
29. I feel my manager/director cares about me as a person.
30. I feel my manager/director is a good leader.

Appendix B

Feb 10, 2023 9:20:02 AM EST

Karen Larwin
Teacher Ed and Leadership St

Re: Exempt - Initial - 2023-199 Perspectives of Respiratory Therapists on Trust in Healthcare Leadership Amid the COVID-19 Pandemic

Dear Dr. Karen Larwin:

Youngstown State University Human Subjects Review Board has rendered the decision below for Perspectives of Respiratory Therapists on Trust in Healthcare Leadership Amid the COVID-19 Pandemic

Decision: Exempt

Selected Category: Category 3.(i)(A). Research involving benign behavioral interventions in conjunction with the collection of information from an adult subject through verbal or written responses (including data entry) or audiovisual recording if the subject prospectively agrees to the intervention and information collection. The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

Any changes in your research activity should be promptly reported to the Institutional Review Board and may not be initiated without IRB approval except where necessary to eliminate hazard to human subjects. Any unanticipated problems involving risks to subjects should also be promptly
reported to the IRB.

The IRB would like to extend its best wishes to you in the conduct of this study.

Sincerely,
Youngstown State University Human Subjects Review Board

Appendix C

Instance ID	Study Code	Factor	During the years of 2020-2023 did you care for COVID-19 patients	In which area of respiratory care do you spend most of your time	During the years of 2020-2023 which of the following best describes your job title	Age	Gender	Ethnicity	Highest level of education completed	Ohio region in which you spent most of your time during 2020-2023:	Which best describes the location of the hospital in which you spent most of your time during 2020-2023	How long have your worked at the hospital in which you spent most of your during 2020-2023	Are you still employed at the hospital in which you spent most of your time during 2020-2023
85160	K2FW	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	Native American	Doctoral degree	Central	Urban	1-3 years	Yes
85102	4HHF	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Southeast	Suburban	1-3 years	Yes
85124	MM46	1	Yes	Clinical practice	Respiratory Therapy Manager	25-34	Female	White/ Caucasian	Bachelor's degree	Southwest	Suburban	1-3 years	Yes
85156	DIXT	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Master's degree	Northeast	Urban	1-3 years	Yes
85168	KIR6	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Central	Urban	1-3 years	Yes
85169	M95Y	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Central	Urban	1-3 years	Yes
85171	GH1E	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Southwest	Urban	1-3 years	Yes
85215	DD0T	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
84965	TSV0	1	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Master's degree	Northwest	Suburban	1-3 years	Yes
85047	SK6D	1	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	High school diploma or equivalent	Southeast	Rural	1-3 years	Yes
85119	2LR5	1	Yes	Research	Student Respiratory Therapist	25-34	Female	White/ Caucasian	Master's degree	Southeast	Suburban	1-3 years	Yes
85178	EZGP	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	Asian/Asian American	Some college, no degree	Northeast	Urban	4-6 years	Yes

85179	AWW Q	1	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	Asian/Asian American	Some college, no degree	Southeast	Suburban	1-3 years	Yes
85282	H86P	1	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	Asian/Asian American	Associate degree	Northwest	Urban	1-3 years	No
84973	QOI0	1	Yes	Research	Student Respiratory Therapist	25-34	Male	Native American	Bachelor's degree	Central	Urban	> 10 years	Yes
84959	8YD4	1	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Associate degree	Central	Suburban	1-3 years	Yes
85046	IHRA	1	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Associate degree			4-6 years	Yes
85131	WK2C	1	Yes	Clinical practice	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Master's degree	Southeast	Suburban	1-3 years	Yes
85167	11DW	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85170	9WCZ	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Southeast	Urban	1-3 years	Yes
85175	CGXH	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Southeast	Urban	1-3 years	Yes
85176	KNRZ	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Northwest	Urban	1-3 years	Yes
85116	4G81	1	Yes	Research	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Northwest	Suburban	1-3 years	Yes
85125	F140	1	Yes	Research	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Bachelor's degree	Southeast	Urban	4-6 years	Yes
85166	8M2V	1	Yes	Research	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Some college, no degree	Southwest	Suburban	1-3 years	Yes
85128	OUL0	1	Yes	Administr ation	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Northwest	Urban	7-9 years	Yes
85192	7BVK	1	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Transgender Female	White/ Caucasian	Associate degree	Southeast	Suburban	1-3 years	Yes
85073	HF6O	1	Yes	Research	Respiratory Therapy Manager	25-34	Transgender Male	Black/African American	Associate degree	Southeast	Suburban	4-6 years	Yes

85161	RQ2V	1	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	Asian/Asian American	Doctoral degree	Central	Urban	1-3 years	Yes
85177	HMMZ	1	Yes	Research	Respiratory Therapy Manager	35-44	Female	Asian/Asian American	Master's degree	Central	Urban	> 10 years	Yes
85174	HQMH	1	Yes	Clinical practice	Respiratory Therapy Manager	35-44	Female	White/ Caucasian	Bachelor's degree	Northwest	Urban	7-9 years	Yes
85197	E7A4	1	Yes	Clinical practice	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Associate degree	Southwest	Urban	> 10 years	Yes
85290	WGSB	1	Yes	Clinical practice	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Urban	4-6 years	Yes
85165	SCGL	1	Yes	Education	Staff Respiratory Therapist	35-44	Male	Native American	Some college, no degree	Southeast	Urban	4-6 years	Yes
85330	G7ZG	1	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Male	White/ Caucasian	Associate degree	Northeast	Rural	1-3 years	Yes
85204	E6M0	1	Yes	Research	Respiratory Therapy Manager	35-44	Male	White/ Caucasian	Master's degree	Southwest	Urban	4-6 years	Yes
84963	PFA9	1	Yes	Education	Respiratory Therapy Manager	35-44	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85180	VED6	1	Yes	Research	Staff Respiratory Therapist	35-44		White/ Caucasian	Master's degree	Southeast	Suburban	7-9 years	Yes
85163	NVXL	1	Yes	Research	Respiratory Therapy Manager	45-54	Female	Native American	Doctoral degree	Central	Urban	4-6 years	Yes
85158	I5JK	1	Yes	Research	Respiratory Therapy Manager	45-54	Male	Native American	Doctoral degree	Northwest	Urban	1-3 years	Yes
85028	GCIK	2	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85034	V7U3	2	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85089	P0ZL	2	Yes	Research	Student Respiratory Therapist	18-24	Male	White/ Caucasian	Some college, no degree	Southeast	Urban	< 1 year	No
85525	AOAE	2	Yes	Education	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	High school diploma or equivalent	Southeast	Suburban	1-3 years	Yes

85274	AEX8	2	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	Asian/Asian American	Bachelor's degree	Northeast	Rural	1-3 years	Yes
85151	JN8R	2	Yes	Research	Staff Respiratory Therapist	25-34	Female	Asian/Asian American		Southwest	Rural	4-6 years	Yes
85392	2H96	2	Yes	Administration	Staff Respiratory Therapist	25-34	Female	Asian/Asian American	Master's degree	Southeast	Suburban	1-3 years	Yes
85045	1DGS	2	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	1-3 years	Yes
85214	2PM5	2	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85852	618K	2	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Rural	4-6 years	Yes
84961	31P4	2	Yes	Research	Student Respiratory Therapist	25-34	Female	White/ Caucasian	Some college, no degree	Northwest	Rural	< 1 year	Yes
85276	NPAV	2	Yes	Education	Staff Respiratory Therapist	25-34	Male	Asian/Asian American		Northeast	Rural	1-3 years	Yes
85145	5UV2	2	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	Native American	Some college, no degree	Southeast	Urban	4-6 years	Yes
84962	1XZQ	2	Yes	Research	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Associate degree	Southeast	Suburban	< 1 year	Yes
85049	B9N1	2	Yes	Research	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Associate degree	Southeast	Rural	4-6 years	Yes
85101	CMT3	2	Yes	Administration	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Master's degree	Southwest	Urban	4-6 years	Yes
85152	NAD6	2	Yes	Clinical practice	Respiratory Therapy Manager	25-34	Transgender Male	Asian/Asian American	High school diploma or equivalent	Southwest	Suburban	1-3 years	Yes
85012	76Z2	2	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Northwest	Suburban	1-3 years	Yes
85024	I98C	2	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	> 10 years	Yes
85291	Q0G3	2	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Northwest	Urban	7-9 years	Yes

85007	F258	2	Yes	Research	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Northeast	Rural	4-6 years	Yes
85014	MZVC	2	Yes	Research	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Northwest	Suburban	4-6 years	Yes
85388	YB6Z	2	Yes	Administration	Staff Respiratory Therapist	35-44	Transgender Male	Black/African American	Associate degree	Southeast	Suburban	7-9 years	Yes
86120	J80O	2	Yes	Other	Staff Respiratory Therapist	45-54	Female	White/ Caucasian	Associate degree	Northeast	Rural	1-3 years	Yes
84971	Q2PG	2	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Associate degree	Northeast	Urban	> 10 years	Yes
85864	0W1N	3	Yes	Clinical practice	Student Respiratory Therapist	18-24	Female	Middle Eastern/Arab American	Bachelor's degree	Central	Urban	1-3 years	No
85155	NXNS	3	Yes	Research	Student Respiratory Therapist	18-24	Female	Middle Eastern/Arab American	High school diploma or equivalent	Northeast	Urban	< 1 year	Yes
85096	7A2F	3	Yes	Education	Student Respiratory Therapist	18-24	Male	White/ Caucasian	High school diploma or equivalent	Northeast	Suburban	< 1 year	Yes
85521	59ZS	3	Yes	Education	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	High school diploma or equivalent	Southeast	Suburban	1-3 years	Yes
85075	U20N	3	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Associate degree	Northeast	Rural	1-3 years	Yes
85040	J341	3	Yes	Education	Student Respiratory Therapist	25-34	Female	White/ Caucasian	Associate degree	Southeast	Rural	< 1 year	Yes
85093	VD8C	3	Yes	Research	Student Respiratory Therapist	25-34	Male	Asian/Asian American	Master's degree	Northwest	Rural	< 1 year	Yes
85196	5QBT	3	Yes	Research	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Master's degree	Northeast	Rural	4-6 years	Yes
85383	448P	3	Yes	Administration	Student Respiratory Therapist	25-34	Transgender Male	Black/African American	Some college, no degree	Northeast	Rural	1-3 years	Yes
84950	ELBA	3	Yes	Research	Student Respiratory Therapist	35-44	Female	Black/African American	Doctoral degree	Northwest	Urban	4-6 years	Yes

85387	GJQD	3	Yes	Administration	Staff Respiratory Therapist	35-44	Female	Black/African American	High school diploma or equivalent	Southeast	Rural	1-3 years	Yes
84969	QNTH	3	Yes	Clinical practice	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Suburban	4-6 years	Yes
85312	14XI	3	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Associate degree	Northeast	Suburban	7-9 years	Yes
85008	71TP	3	Yes	Research	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Rural	4-6 years	Yes
85391	QYVS	3	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Male	Hispanic/Latinx	Doctoral degree	Southwest	Urban	1-3 years	Yes
84928	07GF	3	Yes	Administration	Respiratory Therapy Manager	35-44	Male	White/ Caucasian	Master's degree	Northeast	Urban	> 10 years	Yes
85241	KU5D	3	Yes	Clinical practice	Staff Respiratory Therapist	45-54	Male	White/ Caucasian	Associate degree	Northeast	Rural	4-6 years	Yes
84977	N1FA	3	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	> 10 years	Yes
85058	L8LP	3	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Master's degree	Northeast	Rural	1-3 years	Yes
84930	FG15	3	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	> 10 years	Yes
85700	GDTU	3	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Male	White/ Caucasian	Bachelor's degree	Northeast	Suburban	> 10 years	Yes
85562	4580	3	Yes	Administration	Respiratory Therapy Manager	55-64	Male	White/ Caucasian	Bachelor's degree	Southwest	Urban	> 10 years	Yes
85681	0NNE	3	Yes	Administration	Respiratory Therapy Manager	55-64	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	> 10 years	Yes
84952	4S22	4	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Female	White/ Caucasian	Master's degree	Northeast	Suburban	1-3 years	Yes
85065	14SI	4	Yes	Clinical practice	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Associate degree	Southeast	Rural	1-3 years	No
85244	JHWU	4	Yes	Education	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Some college, no degree	Southwest	Suburban	< 1 year	Yes

85121	D8AQ	4	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	Associate degree	Southeast	Suburban	1-3 years	Yes
85114	HJP5	4	Yes	Research	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	Some college, no degree	Northwest	Urban	1-3 years	No
85039	XLF8	4	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	Middle Eastern/Arab American	Master's degree	Northeast	Urban	4-6 years	Yes
84927	26C4	4	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85273	DC0E	4	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Master's degree	Northeast	Urban	7-9 years	Yes
85198	HBCO	4	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	Asian/Asian American	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85147	UYA1	4	Yes	Research	Staff Respiratory Therapist	25-34	Male	Asian/Asian American	High school diploma or equivalent	Southeast	Rural	4-6 years	Yes
85210	THWV	4	Yes	Education	Student Respiratory Therapist	25-34	Male	Asian/Asian American	Master's degree	Southeast	Suburban	4-6 years	Yes
85098	6KVH	4	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	Middle Eastern/Arab American	Master's degree	Northwest	Rural	1-3 years	Yes
85051	A18L	4	Yes	Clinical practice	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	4-6 years	Yes
85079	QM2R	4	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Master's degree	Southeast	Urban	1-3 years	Yes
85130	AURB	4	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85126	XEQD	4	Yes	Education	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Bachelor's degree	Central	Urban	4-6 years	Yes
85013	17UH	4	Yes	Research	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Associate degree	Southeast	Suburban	4-6 years	Yes
84970	9TAG	4	Yes	Education	None of the above	35-44	Female	White/ Caucasian	Master's degree	Northeast	Urban	1-3 years	No

85150	C1UP	4	Yes	Research	Staff Respiratory Therapist	35-44	Male	Hispanic/Latinx		Southeast	Rural	7-9 years	Yes
84958	CVH2	4	Yes	Research	Student Respiratory Therapist	35-44	Male	White/ Caucasian	Bachelor's degree	Northeast	Urban	1-3 years	Yes
85138	M9Z7	5	Yes	Administration	Staff Respiratory Therapist	18-24	Female	Asian/Asian American	Some college, no degree	Northeast	Rural	1-3 years	No
84931	ZMHX	5	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Female	White/ Caucasian	Bachelor's degree	Northeast	Rural	4-6 years	Yes
85009	N623	5	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Rural	1-3 years	No
85193	X8V5	5	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Southeast	Urban	> 10 years	Yes
85068	Y6J3	5	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Associate degree	Southeast	Suburban	1-3 years	Yes
85084	S9ST	5	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Master's degree	Southeast	Urban	1-3 years	Yes
85120	U154	5	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Master's degree	Northwest	Urban	4-6 years	Yes
85016	ZNKL	5	Yes	Education	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Master's degree	Southeast	Urban	1-3 years	Yes
85153	G1M4	5	Yes	Clinical practice	Staff Respiratory Therapist	25-34		Asian/Asian American		Southeast	Urban	1-3 years	Yes
85385	8SV8	5	Yes	Research	Staff Respiratory Therapist	35-44	Transgender Male	White/ Caucasian	Some college, no degree	Southeast	Suburban	7-9 years	Yes
85380	JUVG	5	Yes	Clinical practice	Staff Respiratory Therapist	45-54	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	> 10 years	Yes
84957	YV2A	x	Yes	Clinical practice	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Some college, no degree	Northeast	Suburban	< 1 year	Yes
85044	BKI8	x	Yes	Clinical practice	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Some college, no degree	Northeast	Suburban	< 1 year	Yes
85798	LE15	x	Yes	Clinical practice	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Some college, no degree	Northeast	Rural	< 1 year	No

85059	F8QU	x	Yes	Research	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Some college, no degree	Southeast	Suburban	1-3 years	Yes
85448	VSGD	x	Yes	Research	Student Respiratory Therapist	18-24	Female	White/ Caucasian	Some college, no degree	Southeast	Rural	< 1 year	Yes
85088	SXUK	x	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Male	Asian/Asian American	Associate degree	Southeast	Urban	1-3 years	Yes
85091	UE94	x	Yes	Research	Staff Respiratory Therapist	18-24	Male	Hispanic/Latinx	Associate degree	Northwest		4-6 years	Yes
84955	QGRY	x	Yes	Clinical practice	Respiratory Therapy Manager	18-24	Male	White/ Caucasian	Bachelor's degree	Southeast	Urban	1-3 years	Yes
85090	QWR3	x	Yes	Clinical practice	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	High school diploma or equivalent	Southeast	Suburban	1-3 years	Yes
85122	3BG0	x	Yes	Clinical practice	Respiratory Therapy Manager	18-24	Male	White/ Caucasian		Southwest	Suburban	1-3 years	Yes
85449	B204	x	Yes	Research	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	Bachelor's degree	Northeast	Suburban	1-3 years	No
85043	96LT	x	Yes	Education	Student Respiratory Therapist	18-24	Male	White/ Caucasian	Some college, no degree	Northeast	Urban	< 1 year	No
85526	MBO3	x	Yes	Education	Staff Respiratory Therapist	18-24	Male	White/ Caucasian	High school diploma or equivalent	Southeast	Suburban	1-3 years	Yes
85199	XDEY	x	Yes	Research	Student Respiratory Therapist	18-24	Non-binary	White/ Caucasian	Master's degree	Northwest	Rural	4-6 years	No
85139	ZRR2	x	Yes	Education	Respiratory Therapy Manager	25-34	Female	Asian/Asian American	Some college, no degree	Central	Rural	1-3 years	Yes
85136	HZJU	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	Hispanic/Latinx	Bachelor's degree	Southeast	Urban	4-6 years	Yes
85159	446H	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	Middle Eastern/Arab American	Doctoral degree	Central	Urban	1-3 years	Yes
84964	CFVL	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	1-3 years	Yes

85018	N386	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	4-6 years	Yes
85071	NC0S	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Some college, no degree	Central	Urban	4-6 years	Yes
85127	7GNA	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northwest	Urban	4-6 years	Yes
85162	9MFC	x	Yes	Clinical practice	Student Respiratory Therapist	25-34	Female	White/ Caucasian	Associate degree	Southwest	Urban	< 1 year	Yes
85582	6S29	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	1-3 years	No
85066	INQB	x	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Associate degree	Southwest	Rural	4-6 years	Yes
85117	EQPY	x	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Master's degree	Southeast	Urban	1-3 years	Yes
85123	1H7J	x	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Southeast	Suburban	4-6 years	Yes
85129	DNDF	x	Yes	Research	Respiratory Therapy Manager	25-34	Female	White/ Caucasian	Master's degree	Northwest	Suburban	4-6 years	Yes
85188	1J6C	x	Yes	Research	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Southeast	Urban	> 10 years	Yes
84966	NC17	x	Yes	Education	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	Bachelor's degree	Southwest	Suburban	1-3 years	Yes
85522	PW8U	x	Yes	Education	Staff Respiratory Therapist	25-34	Female	White/ Caucasian	High school diploma or equivalent	Southeast	Suburban	1-3 years	Yes
84947	9V0J	x	Yes	Research	Staff Respiratory Therapist	25-34	Male	Asian/Asian American	Bachelor's degree	Northwest			
85094	T2Y7	x	Yes	Research	Staff Respiratory Therapist	25-34	Male	Black/African American	Bachelor's degree	Northeast	Rural	1-3 years	Yes
85173	3351	x	Yes	Research	Respiratory Therapy Manager	25-34	Male	Black/African American	Associate degree	Northeast	Rural	1-3 years	Yes
85394	GJ92	x	Yes	Administration	Respiratory Therapy Manager	25-34	Male	Hispanic/Latinx	Bachelor's degree	Northwest	Suburban	1-3 years	Yes

85236	STUO	x	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	Middle Eastern/Arab American	High school diploma or equivalent	Southeast	Suburban	< 1 year	No
85144	289V	x	Yes	Research	Student Respiratory Therapist	25-34	Male	Native American	Associate degree	Central	Urban	7-9 years	Yes
84960	PDVJ	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Some college, no degree	Southwest	Rural	< 1 year	Yes
85100	I2JQ	x	Yes	Clinical practice	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Master's degree	Southeast	Urban	4-6 years	Yes
85115	X6RN	x	Yes	Clinical practice	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	High school diploma or equivalent	Northeast	Suburban	1-3 years	Yes
85143	25BT	x	Yes	Clinical practice	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Southeast	Rural	1-3 years	No
85103	K856	x	Yes	Research	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Bachelor's degree	Northwest	Urban	1-3 years	Yes
85118	QLNB	x	Yes	Research	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Master's degree	Central	Urban	4-6 years	Yes
85074	9PCB	x	Yes	Administr ation	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Northwest	Urban	1-3 years	Yes
85565	JTF8	x	Yes	Administr ation	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Associate degree	Northwest	Rural	> 10 years	Yes
85095	NNBR	x	Yes	Education	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Southeast	Urban	1-3 years	Yes
85099	PR0E	x	Yes	Education	Student Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Central	Rural	4-6 years	Yes
85104	39FN	x	Yes	Education	Respiratory Therapy Manager	25-34	Male	White/ Caucasian	Bachelor's degree	Northeast	Rural	4-6 years	Yes
85078	O8DJ	x	Yes	Other	Staff Respiratory Therapist	25-34	Male	White/ Caucasian	Bachelor's degree	Southeast	Suburban	1-3 years	Yes
85386	0NG7	x	Yes	Education	Staff Respiratory Therapist	25-34	Transgender Male	Black/African American	Some college, no degree	Northwest	Rural	4-6 years	Yes

85113	215E	x	Yes	Administration	Student Respiratory Therapist	25-34	Transgender Male		High school diploma or equivalent	Southeast		1-3 years	Yes
85384	JBG7	x	Yes	Administration	Respiratory Therapy Manager	25-34	Transgender Male		Some college, no degree	Southeast	Rural	1-3 years	Yes
85146	TNUF	x	Yes	Research	Staff Respiratory Therapist	35-44	Female	Asian/Asian American	High school diploma or equivalent	Southeast	Suburban	7-9 years	Yes
85301	XO3N	x	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	Black/African American	Associate degree	Northeast	Urban	1-3 years	Yes
85200	HET0	x	Yes	Education	Staff Respiratory Therapist	35-44	Female	Hispanic/Latinx	Bachelor's degree	Southwest	Suburban	4-6 years	Yes
84972	RKKN	x	Yes	Research	Respiratory Therapy Manager	35-44	Female	Middle Eastern/Arab American	Master's degree	Central	Urban	> 10 years	Yes
85636	RCSJ	x	Yes	Other	Staff Respiratory Therapist	35-44	Female	Middle Eastern/Arab American	Master's degree	Northwest	Urban	1-3 years	Yes
85157	PUAH	x	Yes	Clinical practice	Respiratory Therapy Manager	35-44	Female	Native American	Doctoral degree	Central	Urban	1-3 years	Yes
85017	EJHJ	x	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Associate degree	Northeast	Urban	1-3 years	Yes
85069	RZ70	x	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Associate degree	Northeast	Rural	4-6 years	Yes
85697	SFV5	x	Yes	Clinical practice	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Associate degree	Northeast	Urban	1-3 years	Yes
84967	574I	x	Yes	Research	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Urban	1-3 years	Yes
84968	EOPD	x	Yes	Research	Student Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Urban	4-6 years	Yes
85006	4FDC	x	Yes	Research	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Rural	4-6 years	Yes
85011	5V93	x	Yes	Research	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast		1-3 years	Yes

85148	RK3E	x	Yes	Research	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Some college, no degree	Northwest	Urban	4-6 years	
85183	3CZ4	x	Yes	Research	Respiratory Therapy Manager	35-44	Female	White/ Caucasian	Doctoral degree	Southeast	Rural	> 10 years	Yes
85206	N4P9	x	Yes	Research	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	Bachelor's degree	Southeast	Rural	1-3 years	Yes
85381	JJ8L	x	Yes	Administr ation	Staff Respiratory Therapist	35-44	Female	White/ Caucasian	High school diploma or equivalent	Northwest	Rural	4-6 years	Yes
85097	7J45	x	Yes	Research	Staff Respiratory Therapist	35-44	Male	Asian/Asian American	Doctoral degree	Southeast	Urban	> 10 years	Yes
85087	VSYL	x	Yes	Clinical practice	Respiratory Therapy Manager	35-44	Male	Middle Eastern/Arab American	Master's degree	Northwest	Urban	1-3 years	Yes
85080	JGQH	x	Yes	Research	Staff Respiratory Therapist	35-44	Male	White/ Caucasian	Bachelor's degree	Northwest	Urban	1-3 years	Yes
85149	U908	x	Yes	Education	Student Respiratory Therapist	35-44	Transgender Male	Asian/Asian American		Northeast	Urban	7-9 years	Yes
85579	404S	x	Yes	Clinical practice	Staff Respiratory Therapist	45-54	Female	White/ Caucasian	Master's degree	Northeast	Rural	> 10 years	Yes
85733	BVXN	x	Yes	Clinical practice	Staff Respiratory Therapist	45-54	Female	White/ Caucasian	Bachelor's degree	Northeast	Suburban	> 10 years	Yes
85029	BNPC	x	Yes	Education	None of the above	45-54	Female	White/ Caucasian	Master's degree	Southwest	Urban	> 10 years	No
85333	PBBG	x	Yes	Education	None of the above	45-54	Female	White/ Caucasian	Bachelor's degree	Southeast	Rural	1-3 years	Yes
85211	NF33	x	Yes	Clinical practice	Respiratory Therapy Manager	45-54	Male	White/ Caucasian	Master's degree	Northwest	Urban	> 10 years	Yes
85003	DBYO	x	Yes	Administr ation	Respiratory Therapy Manager	45-54	Male	White/ Caucasian	High school diploma or equivalent	Northeast	Suburban	> 10 years	Yes
84929	RCY8	x	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Associate degree	Northeast	Urban	> 10 years	Yes

85035	6YPB	x	Yes	Clinical practice	Respiratory Therapy Manager	55-64	Female	White/ Caucasian	Bachelor's degree	Northeast	Rural	1-3 years	Yes
85539	WWPC	x	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Bachelor's degree	Northeast	Urban	> 10 years	Yes
85566	GIAS	x	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Associate degree	Northeast	Urban	> 10 years	Yes
85602	7VIQ	x	Yes	Clinical practice	Staff Respiratory Therapist	55-64	Female	White/ Caucasian	Bachelor's degree	Northeast		> 10 years	Yes
85042	FPSA	x	Yes	Administr ation	Staff Respiratory Therapist	55-64	Male	Native American	Doctoral degree	Northeast	Rural	> 10 years	No

Appendix D

Q-sort Data

Part.	s1	s2	s3	s4	s5	s6	s7	s8	s9	s10	s11	s12	s13	s14	s15	s16	s17	s18	s19	s20	s21	s22	s23	s24	s25	s26	s27
26C4	-1	2	0	0	0	1	0	-1	-2	-2	-1	1	0	2	1	-1	1	2	0	0	-2	-1	-1	2	-2	1	1
07GF	2	-1	0	1	-1	0	1	1	0	1	-2	-1	-2	-1	-2	0	-1	0	2	0	0	1	2	-1	-2	1	2
RCY8	1	1	0	-1	0	2	1	0	-1	-2	-1	0	-1	1	2	-2	0	2	-2	-1	-2	2	-1	0	0	1	1
FG15	1	1	-2	2	-2	0	1	2	2	1	0	-1	-2	0	0	-1	-1	1	-1	-1	-1	2	1	0	-2	0	0
ZMHX	-1	-1	0	0	0	2	0	1	1	2	-2	0	1	2	-2	-2	1	2	-2	-1	-1	-1	-1	1	1	0	0
9V0J	0	-1	-1	1	1	-1	2	-2	0	0	0	0	2	1	1	1	-2	-1	-1	0	1	-2	0	-2	-1	2	2
ELBA	1	0	0	0	-2	0	2	2	1	0	-1	1	-2	-2	-1	1	0	1	0	1	-2	-1	2	-1	-1	-1	2
4S22	-1	2	2	0	0	1	-1	0	-2	-2	-2	0	1	1	1	-1	1	1	-1	0	-2	-1	0	-1	0	2	2
QGRY	0	-1	2	1	-1	-2	-1	0	2	2	0	0	-1	-1	-2	0	-2	1	0	-2	-1	1	1	1	2	1	0
YV2A	2	1	0	2	-1	0	1	0	1	1	-2	-2	0	2	0	1	-1	-2	-2	-1	-1	1	0	-1	-1	2	0
CVH2	1	-1	0	1	-1	2	0	2	1	0	2	1	0	-1	-2	0	0	2	1	-1	-2	-1	1	-2	0	-1	-2
8YD4	2	1	1	-1	-2	-2	0	1	1	1	-1	-1	0	2	-1	0	2	-1	-1	-2	-2	2	0	0	0	0	1
PDVJ	1	1	0	0	-1	0	2	0	-1	1	-2	-1	0	2	-2	1	-2	-1	1	-2	-1	1	-1	0	0	2	2
31P4	0	1	2	-2	-1	0	-1	-2	-2	1	0	-1	0	2	-1	0	1	2	-1	-2	-1	0	1	2	1	1	0
1XZQ	0	2	1	1	0	-1	1	-2	-1	1	-2	0	-1	1	-1	2	1	2	-1	-1	-2	0	0	2	0	0	-2
PFA9	2	0	2	-2	-1	-1	-2	1	1	0	1	-1	0	1	-1	0	0	-2	-1	1	-1	0	0	1	2	-2	2
CFVL	0	0	1	-1	1	-1	2	0	-2	0	-2	-1	1	1	-1	2	1	-1	0	-2	2	1	-2	0	-1	2	0
TSV0	2	-2	0	-2	0	-1	2	2	-1	-2	0	1	-1	0	0	1	0	-1	1	0	-2	-1	1	1	1	-1	2
NC17	0	-1	2	1	-2	-2	-2	-2	1	0	-1	-1	0	-1	0	0	-1	2	1	2	0	1	2	0	-1	1	1
574I	1	1	-2	0	2	-1	-1	2	1	1	-1	-2	-2	2	0	2	0	1	-1	0	0	0	-1	-1	0	1	-2
EOPD	2	1	0	-1	0	1	1	1	-2	-2	2	2	1	-2	0	-1	-1	-2	0	-1	0	2	-1	1	0	0	-1
QNTH	2	0	0	0	-2	0	1	0	1	-1	2	1	-1	-1	-2	2	-1	1	0	1	-1	-2	1	-1	-2	0	2
9TAG	0	1	1	0	-1	2	0	-2	-1	-2	0	1	0	2	1	-2	-1	0	-1	2	-1	1	0	-1	-2	1	2
Q2PG	0	1	0	0	1	1	0	0	-2	-2	-1	1	-1	1	-2	-1	-1	2	0	-1	2	1	-2	-1	0	2	2
RKKN	0	1	-2	-1	-2	1	2	-1	1	-1	0	0	-1	2	1	-2	0	-2	1	1	0	-1	2	-1	0	2	0
QOI0	0	-2	2	-1	-1	1	1	0	2	1	-2	-2	-1	0	-2	2	0	0	-1	-1	-1	0	0	1	2	1	1
N1FA	1	0	-1	2	0	0	2	-1	1	-2	-1	2	1	0	1	-1	-1	1	1	2	-2	0	0	-2	-2	-1	0
DBYO	2	-2	2	0	-2	0	0	1	1	1	-1	0	1	-1	-1	0	-1	-1	0	-2	-1	2	1	0	-2	1	2
4FDC	0	-2	0	0	2	-1	0	-1	2	2	1	-1	0	2	1	-1	-2	-1	1	-1	1	0	-2	1	0	1	-2
F258	2	-2	-1	1	-1	1	0	1	2	-1	-2	0	-1	1	0	0	-2	-1	2	1	0	-2	-1	0	2	0	1
71TP	-2	-1	0	0	0	2	0	-1	-2	1	1	0	-1	1	1	1	2	-2	-1	-1	2	-2	-1	1	2	0	0
N623	2	-1	1	0	-1	2	0	1	-2	1	-1	0	1	2	-1	-2	0	1	-2	-2	0	2	1	0	-1	0	-1

5V93	-2	1	-2	2	1	-1	-1	-1	0	-1	0	-2	1	2	1	0	1	-1	2	0	-2	2	0	0	0	-1	1
76Z2	-1	2	1	1	-1	-1	0	-2	2	0	0	2	1	1	-2	1	1	0	-1	-1	-2	0	2	0	-1	0	-2
17UH	1	-1	-1	1	1	2	1	-2	2	2	-2	1	-1	-2	-1	1	0	0	0	0	0	-1	0	2	-1	-2	0
MZVC	2	0	-1	-1	0	-1	1	-2	1	-1	1	-1	0	-2	2	0	0	-2	2	2	1	-2	-1	0	1	0	1
ZNKL	1	2	0	1	-1	-2	0	-1	1	-2	0	1	0	1	-1	2	-1	2	2	0	0	-2	1	-1	0	-1	-2
EJHJ	1	-2	-1	1	0	2	1	-2	1	0	0	-2	2	1	0	-1	-1	-2	0	-1	2	0	2	-1	-1	1	0
N386	1	-1	2	1	-2	-1	1	0	1	0	-1	-2	0	-2	2	-1	0	-2	0	1	2	0	0	-1	-1	1	2
I98C	2	2	-1	-2	-2	1	1	1	0	0	0	-2	-1	2	0	0	-1	2	-1	1	-1	1	0	-1	-2	0	1
GCIK	-1	2	2	1	1	1	2	0	-1	-2	0	0	0	1	-2	-1	0	1	-1	1	-1	2	0	-2	-2	0	-1
BNPC	1	2	-2	-1	0	1	0	-1	-1	2	0	2	1	1	0	0	0	2	-1	-2	1	1	0	-1	-1	-2	-2
V7U3	-1	2	1	-1	0	2	-2	-1	0	-2	0	1	-2	1	0	2	-1	2	-1	-1	-2	0	1	0	0	1	1
6YPB	0	-1	1	0	-1	-1	1	0	0	0	-2	-2	2	-2	2	-1	2	-2	1	2	-1	1	1	0	-1	0	1
XLF8	0	1	1	-1	0	0	0	-1	-2	-2	2	0	-1	2	1	0	1	2	1	-1	0	-1	-1	-2	-2	2	1
J341	2	-1	1	1	0	-1	1	0	1	1	-1	-1	0	0	0	2	-2	-2	0	1	-1	2	2	-2	-2	0	-1
FPSA	2	0	1	0	-2	-1	2	1	0	-1	-1	0	-1	1	2	-1	0	1	-2	-2	2	-1	0	0	-2	1	1
96LT	1	0	1	1	-2	1	0	0	-1	2	-2	-2	-2	0	-1	0	2	1	0	-1	-1	2	0	-1	-1	2	1
BKI8	2	0	-2	2	0	1	1	0	0	1	-1	0	-1	-1	2	-1	2	-2	-2	1	-2	0	1	-1	-1	1	0
1DGS	-1	2	1	1	0	0	-1	-1	0	1	-2	1	-2	2	-2	0	0	1	-1	-2	-1	1	0	0	-1	2	2
IHRA	0	1	1	1	-1	-2	0	-1	0	0	-1	0	-1	-2	0	2	2	-2	-1	-2	-1	2	2	1	0	1	1
SK6D	0	1	1	2	1	-1	-1	1	-1	-2	0	2	0	1	2	-1	-1	1	-2	0	2	-1	-2	0	0	0	-2
D4PE	-1	-2	0	0	-2	0	-1	-1	0	-2	-2	1	2	2	1	1	-1	-1	1	1	0	0	-1	1	2	2	0
B9N1	0	1	2	-1	-1	1	2	-2	0	0	0	0	-1	1	-1	2	2	1	-2	-1	-1	0	1	-2	-2	0	1
A18L	-1	-2	2	-1	-1	0	1	2	-2	-1	1	-1	-2	2	1	0	0	-2	0	0	-1	1	1	0	0	2	1
JDVQ	1	1	2	-1	0	-1	0	1	-1	0	-2	-1	-1	0	0	1	-2	-2	0	-1	-2	2	1	2	0	2	1
L8LP	0	-2	1	2	0	1	1	0	2	1	-1	0	-1	-2	2	-2	-1	1	0	-1	0	2	1	-1	-2	-1	0
F8QU	1	-1	-1	2	-1	-1	2	0	1	1	-2	-2	0	0	1	0	0	-2	2	-2	-1	-1	0	1	1	0	2
14SI	0	2	-2	1	0	-1	0	0	0	1	0	-1	-1	-1	-2	-2	2	1	-1	2	1	1	0	2	1	-1	-2
INQB	0	0	-1	1	-2	-1	2	1	1	-1	0	0	-1	2	0	2	2	-2	1	-1	0	-2	-1	1	-2	1	0
Y6J3	0	-2	2	2	0	0	0	1	1	0	-1	1	1	1	-2	-2	-1	-1	0	1	0	-1	2	-2	2	-1	-1
RZ70	1	2	1	-2	-2	-1	1	0	0	2	-2	0	-1	0	0	1	2	1	-1	-1	-1	-2	1	0	2	-1	0
NC0S	0	0	0	2	-2	-1	0	1	1	-1	-2	-2	2	1	-1	2	0	-2	1	0	-1	-1	2	1	-1	0	1
HF6O	1	2	-2	-2	1	1	-2	-1	0	-1	0	2	1	-1	1	0	-1	1	-1	0	-1	2	0	0	-2	0	2
9PCB	2	1	2	0	1	-1	0	0	-1	0	1	-1	1	-2	1	2	2	-1	0	-1	-1	-2	1	-2	-2	0	0
U20N	1	1	2	0	0	-1	1	1	2	-2	-1	-2	-1	1	0	2	-2	0	0	-1	0	0	1	-2	-1	2	-1
O8DJ	0	1	2	-2	1	-2	1	2	0	-1	2	-2	-2	1	0	-1	1	-1	2	1	0	-1	0	-1	0	0	-1
QM2R	-1	1	2	0	-2	1	1	2	-1	-2	0	-1	0	1	2	-1	-2	0	1	-1	0	1	0	-2	-1	0	2
JGQH	-1	1	-1	0	-2	1	0	-2	1	0	1	0	-1	-1	0	1	2	-2	-1	-1	0	1	2	2	0	2	-2
S9ST	-1	1	-2	0	0	-2	0	0	-1	-1	0	1	-2	-1	2	1	0	2	2	2	-2	1	-1	1	-1	1	0

DRBL	2	0	1	0	1	1	1	0	2	-2	0	2	-2	-1	-1	-1	-1	2	1	0	1	0	-2	-1	0	-1	-2
VSYL	0	1	-1	-1	-1	1	-1	0	-2	2	1	-2	-2	0	0	-1	-2	2	1	-1	2	0	1	2	0	1	0
SXUK	2	-1	1	1	0	2	-2	1	0	1	2	-1	-1	-2	1	0	2	1	0	-1	0	-2	0	-2	-1	-1	0
P0ZL	1	1	0	1	-1	2	2	-2	2	-1	-2	1	-1	0	-2	0	1	2	-1	-1	-1	0	0	0	1	0	-2
QWR3	2	0	1	-1	1	2	0	-2	0	-1	0	0	0	-1	-2	-1	1	-1	2	0	-2	-1	1	1	-2	2	1
UE94	-2	1	-1	1	0	-1	0	0	2	0	1	-1	-1	-1	0	0	1	-2	1	1	-2	2	-1	2	0	-2	2
7YZI	2	0	1	0	-1	-2	0	1	1	1	1	2	-1	2	0	0	1	0	-1	-1	-2	-2	-1	-2	2	-1	0
VD8C	-1	1	-1	0	1	-2	-2	2	0	0	0	1	1	2	-1	-1	2	-2	0	1	-2	-1	0	-1	2	0	1
T2Y7	-1	0	-2	-1	0	0	2	-2	1	1	2	2	2	-1	0	-1	0	-1	-1	1	0	-2	1	1	0	1	-2
NNBR	-1	-2	2	1	-2	-1	-2	1	-2	2	0	0	1	0	-1	-1	0	0	2	1	1	-1	0	-1	2	1	0
7A2F	1	1	0	0	1	0	2	-1	1	-2	-2	-1	-1	-1	2	2	-1	1	0	0	0	-2	2	-1	-2	1	0
7J45	1	-2	0	0	1	0	-2	-2	1	-1	-2	0	0	2	1	-1	2	-1	0	1	2	-1	-1	1	0	-1	2
6KVH	1	0	2	1	1	-1	2	1	-2	-2	-1	-1	0	2	0	2	0	-2	-1	-2	-1	0	-1	0	0	1	1
PR0E	1	2	2	2	2	0	-1	0	-2	1	-2	1	-1	-1	-2	1	1	0	0	0	-1	-1	0	1	-1	-2	0
I2JQ	0	2	0	2	1	-2	0	0	-2	0	2	-1	2	-2	1	0	0	-1	1	-1	-1	1	-1	-2	1	-1	1
CMT3	1	0	-1	-2	1	0	-1	0	-1	1	-2	2	-1	2	-2	-1	0	2	1	0	-1	1	0	2	-2	1	0
4HHF	0	0	2	-1	-2	-1	1	1	0	2	0	-1	1	-2	-2	-1	1	1	2	1	-2	0	2	-1	0	0	-1
K856	-2	-1	2	1	-1	0	-1	2	0	1	1	-1	-2	0	2	-2	-1	0	0	1	0	0	1	-1	-2	2	1
39FN	1	-1	2	-2	1	-2	2	0	-2	1	-1	-1	-1	-2	0	0	1	2	-1	1	0	-1	0	1	0	0	2
215E	0	1	1	0	-1	1	1	1	-2	2	2	0	2	2	-2	0	-1	-2	-1	-1	-1	0	-1	-2	0	1	0
HJP5	1	0	-1	1	-1	0	-1	1	2	1	0	1	-1	-1	-2	-2	-2	0	2	0	1	0	2	0	2	-2	-1
X6RN	-2	0	2	-1	-2	-2	1	1	1	0	0	2	0	-1	2	2	1	-1	-1	0	-1	0	1	0	-1	-2	1
4G81	-1	-1	0	-1	-1	-1	1	1	0	0	-2	0	0	1	-2	2	2	-2	-2	2	-1	1	1	2	0	0	1
EQPY	2	-2	1	0	-1	-1	-1	0	0	-1	-2	1	-1	0	2	2	0	-2	1	-1	-2	1	1	0	0	2	1
QLNB	1	-2	1	0	-1	-1	0	-1	-2	1	-1	2	-1	1	-1	-2	0	0	0	1	-2	2	2	0	0	2	1
2LR5	-1	0	1	0	-2	1	-1	0	-2	1	2	1	-2	-1	-1	2	0	-1	1	-1	-2	1	0	0	2	0	2
U154	1	-2	2	2	-1	-1	1	1	0	0	2	1	1	0	-1	-1	-2	-1	-1	-2	-2	0	0	1	0	2	0
D8AQ	-1	0	-1	1	1	2	-1	2	0	-2	2	-2	-1	2	0	0	-1	-1	-2	1	-2	1	0	0	0	1	1
3BG0	-1	2	0	-2	1	1	0	0	-1	-1	1	2	0	-2	-2	2	-1	0	0	1	0	1	1	2	-1	-2	-1
1H7J	2	0	0	-2	0	0	0	2	2	1	-1	-2	-2	-1	1	-1	1	1	-1	1	1	2	0	-1	0	-1	-2
MM46	0	-1	0	1	-2	0	2	1	-1	1	1	-2	-2	0	1	2	-1	0	0	-2	-1	1	-1	0	2	2	-1
F140	-1	0	-2	2	1	1	1	-1	-2	0	-1	0	0	-1	2	0	-2	2	1	2	-1	-1	1	1	0	-2	0
XEQD	2	-1	0	-2	0	-1	-2	2	1	1	-1	0	1	-2	1	0	-1	0	0	2	2	1	-1	1	0	-2	-1
7GNA	-1	-1	0	-1	-1	2	-1	0	0	2	1	1	-1	0	2	0	2	-2	-2	1	-2	1	0	0	1	1	-2
OUL0	2	2	-1	0	1	1	-1	-2	-1	-1	0	2	1	-2	0	-1	0	1	-2	0	2	0	1	1	-2	-1	0
DNDF	0	-1	1	1	0	0	2	-1	-2	2	1	-1	1	0	0	1	-2	-1	-2	-2	2	2	-1	-1	0	1	0
AURB	0	1	2	0	0	-1	-1	-1	1	2	0	-1	0	0	-1	1	-2	0	1	2	2	1	-2	-2	1	-2	-1
WK2C	1	-2	1	0	-2	-1	0	1	-1	2	2	0	-2	0	1	-1	1	-1	-1	-1	-2	2	0	0	1	2	0

HZJU	-1	-1	1	-1	0	0	1	1	-2	1	-1	0	0	0	1	2	2	-2	-2	-2	-1	-1	0	1	0	2	2
M9Z7	1	-2	0	0	-1	-1	1	1	0	2	-2	-1	0	1	0	-1	-2	-1	-2	-1	0	2	2	1	0	1	2
ZRR2	1	2	0	1	1	-1	-1	0	2	-1	-1	2	-2	-1	0	1	-2	0	0	-2	-1	1	0	2	-2	1	0
25BT	1	-1	2	2	-1	1	2	0	0	1	-2	-1	-2	1	-1	0	0	-1	-2	-1	-2	0	2	0	0	1	1
289V	-1	2	1	-1	-2	-2	1	0	0	2	-1	1	2	2	1	1	-1	0	-1	0	0	1	0	-2	0	-1	-2
5UV2	1	0	1	-1	0	0	1	-1	0	0	-1	2	2	2	-1	0	0	1	-2	-2	-2	1	-1	2	-1	1	-2
TNUF	2	-1	1	0	0	-1	0	1	-1	0	2	-2	2	-1	-2	1	0	0	-1	-1	2	-2	1	1	-2	0	1
UYA1	0	-1	2	-2	-1	2	2	-1	-1	-2	0	1	1	-1	2	0	0	1	-2	0	-2	1	0	1	-1	0	1
RK3E	2	2	-1	1	2	-1	0	0	2	1	0	1	0	-1	-2	0	-2	0	0	1	1	-1	-2	-2	-1	-1	1
U908	-2	0	2	0	0	0	1	-2	1	2	-1	0	1	-1	-2	-1	-1	0	2	-1	-1	1	1	2	1	0	-2
C1UP	2	1	0	0	-2	1	0	1	1	1	2	2	-1	-2	-2	2	-1	0	0	0	1	-2	0	-1	-1	-1	-1
JN8R	1	-2	0	-1	0	-2	0	-2	0	2	2	-1	1	0	2	0	1	-2	1	0	-1	-1	2	-1	1	-1	1
NAD6	2	-1	0	-1	0	-1	2	0	-2	2	1	0	1	-2	1	-1	-2	-1	0	0	0	-2	-1	1	2	1	1
G1M4	0	1	1	0	-2	1	-1	2	2	0	-1	0	0	2	-1	-2	1	-2	-1	1	0	0	-2	-1	2	1	-1
NXNS	0	-1	1	2	-1	2	2	1	1	2	0	0	-1	-2	-1	0	0	-1	0	-1	-2	1	0	-2	-2	1	1
DIXT	1	-2	2	-1	-1	0	2	-2	0	1	-2	0	-1	1	-1	-1	2	0	-1	0	-2	1	1	1	2	0	0
PUAH	1	0	1	2	-1	-1	-2	-1	-1	1	-1	-1	0	-2	0	1	1	0	2	0	0	0	-2	1	2	-2	2
I5JK	2	-2	-1	1	-2	-1	1	2	0	2	0	1	-2	1	-2	-1	0	-1	2	0	-1	-1	1	1	0	0	0
446H	-1	-2	1	1	-2	2	2	0	1	1	0	1	1	0	-1	-1	2	-2	2	-1	-1	-2	0	0	-1	0	0
K2FW	-1	-2	2	0	-2	-2	2	0	-1	0	2	1	-2	0	-1	2	0	-1	1	1	-1	-1	1	0	1	1	0
RQ2V	0	-2	1	-1	-2	-1	1	1	0	2	0	0	-1	-1	-1	2	1	0	1	-1	-2	-2	0	1	2	0	2
9MFC	0	0	0	1	0	2	1	1	2	2	-2	-1	0	1	0	-1	-1	-1	1	-2	-2	2	1	-1	-2	0	-1
NVXL	0	-1	1	0	-2	-2	1	2	0	-1	1	0	-1	1	-1	1	2	-2	1	2	-2	-1	0	0	-1	2	0
C4W0	0	-1	0	0	-2	2	2	1	-1	1	-2	0	-1	2	-1	0	-1	-2	-2	1	-1	1	1	0	0	1	2
SCGL	0	-2	0	0	-2	2	0	0	2	1	1	-1	-1	0	-2	0	-1	-2	1	-1	-1	2	-1	1	1	1	2
8M2V	1	-2	1	0	-2	-2	0	2	-1	1	0	-1	-1	0	0	0	1	-1	-1	-1	-2	2	2	2	0	1	1
11DW	0	-2	2	0	-1	-2	2	0	1	0	-1	-1	-2	-1	-2	2	0	-1	0	0	-1	1	1	1	1	1	2
KIR6	1	-1	0	0	-2	-1	1	0	2	0	-1	-2	-1	-1	-2	1	2	0	2	-1	-2	1	0	1	0	1	2
M95Y	2	-1	0	1	-1	-2	2	2	0	0	-2	-1	-1	-1	0	1	1	-2	1	-1	-2	2	1	0	0	0	1
9WCZ	1	-1	0	1	-1	0	1	2	0	0	-2	-2	-1	-1	-2	2	1	-1	2	-1	-2	0	1	0	2	0	1
GH1E	2	-2	1	1	-1	-1	2	1	0	0	-2	-2	-1	-2	-1	2	0	1	0	-1	-1	2	1	1	0	0	0
3351	1	-1	-2	1	-1	0	1	0	1	-2	0	-1	2	-1	0	0	1	2	-2	0	-1	2	-2	1	0	2	-1
HQMH	-1	-1	0	0	-1	1	1	2	1	0	-2	-1	-1	0	0	0	2	-2	-1	-2	-2	1	2	2	1	1	0
CGXH	2	-2	1	1	-1	-1	0	0	0	2	-1	-1	-2	-1	-2	0	2	1	0	0	-2	0	1	-1	1	1	2
KNRZ	1	-1	2	0	-1	-2	0	1	1	0	-2	-1	-1	-1	-2	1	0	0	2	-1	-2	1	2	0	1	2	0
HMMZ	1	0	1	0	-1	-1	0	2	0	2	-1	-2	-1	-2	-1	0	1	-2	2	-2	-1	0	2	1	0	1	1
EZGP	2	-1	2	-2	-2	-1	2	1	1	0	0	0	-1	-1	-2	1	0	-2	2	-1	-1	1	0	1	0	0	1
AWWQ	0	-1	1	1	0	-1	0	2	0	1	-1	-2	-1	-2	-2	1	2	-2	1	-1	-1	2	2	0	0	0	1

VED6	-2	2	-2	0	-2	1	-1	2	2	0	0	1	2	-1	1	0	-1	1	-1	-1	1	-1	0	1	-2	0	0
3CZ4	2	-1	-1	0	2	-2	2	0	0	0	1	1	-2	-1	0	1	-1	-2	-1	1	-1	2	1	0	1	-2	0
1J6C	2	-1	-1	0	-1	0	1	1	-1	-2	-1	-1	0	-2	0	-2	1	2	-2	1	0	1	2	0	1	2	0
7BVK	2	1	1	-1	-1	0	-2	0	0	2	1	0	-1	0	-1	2	-1	-1	0	-2	-2	1	0	1	2	1	-2
X8V5	1	-2	0	1	-2	1	2	2	0	0	-1	-2	1	-1	0	-2	1	0	-1	-1	-1	2	1	0	-1	2	0
5QBT	1	-1	0	0	0	1	1	1	2	-1	-2	-2	-2	1	0	2	0	1	0	-1	-1	2	-2	0	-1	-1	2
E7A4	1	0	2	0	0	1	-2	2	-1	1	2	-1	-1	-1	-2	1	2	0	0	-2	-2	0	-1	1	1	-1	0
HBCO	1	0	-1	1	0	-2	-1	1	-2	2	1	1	0	-2	-1	0	-1	-1	2	1	0	0	0	2	2	-1	-2
XDEY	-1	0	0	-1	1	1	0	-1	1	-2	0	1	-1	0	-2	0	-2	-1	-1	2	2	1	2	-2	2	0	1
HET0	-1	1	0	2	2	1	-1	-1	2	0	1	1	-1	1	1	0	-1	-1	-2	-2	0	0	2	0	0	-2	-2
E6M0	-1	-1	2	2	-1	0	2	-1	0	1	1	-1	-2	0	-2	1	1	-2	1	0	-2	0	-1	2	0	1	0
N4P9	-2	1	-1	-1	1	-2	-1	0	0	1	0	0	-2	0	2	-1	-1	1	0	-1	2	-2	2	0	1	1	2
THWV	-1	1	-1	0	-2	-1	-1	-1	0	-2	-1	0	-2	2	1	2	1	-2	0	0	1	1	0	2	0	2	1
NF33	-2	0	0	1	-1	1	-2	-2	-1	1	2	-1	-1	0	0	2	1	0	2	0	-1	1	-1	0	-2	1	2
2PM5	0	2	0	1	-1	-1	0	0	0	1	-1	-1	1	1	-2	-2	1	2	-2	-1	-1	-2	0	1	0	2	2
DD0T	0	1	0	2	-1	-2	0	2	-1	1	1	-2	-2	1	-1	0	0	1	-1	-1	-1	2	0	-2	2	1	0
W3BN	1	1	0	1	-1	2	-2	0	2	1	0	-1	-2	-1	2	0	-2	-1	-1	-2	-1	1	0	1	0	2	0
STUO	0	2	2	1	-2	2	1	0	-1	0	-1	-1	-2	0	0	1	0	-1	-1	0	-2	1	2	-1	-2	1	1
RUG0	0	0	1	-2	2	2	-2	-2	-1	-1	0	2	1	0	0	1	-1	-1	-1	-1	2	0	-2	1	0	1	1
KU5D	2	0	0	1	0	-1	1	-2	2	1	-2	-1	-1	-1	0	1	-2	2	2	-1	-2	-1	0	0	0	1	1
JHWU	0	2	2	2	-1	1	-2	0	-1	1	-1	-1	0	0	0	-1	1	-2	0	1	-2	1	0	-2	-1	2	1
DC0E	0	2	1	0	-1	1	0	-2	0	-1	-1	2	-1	2	2	-1	0	-2	0	0	-2	1	-1	-2	1	1	1
AEX8	-1	2	0	-1	1	1	0	0	-1	0	0	1	0	1	-2	-1	2	2	-1	-2	1	-2	0	-2	-1	1	2
NPAV	0	0	-1	0	2	-2	0	1	1	0	1	-2	-1	1	2	-1	1	-2	2	-1	2	-2	0	-1	1	0	-1
H86P	0	1	2	0	0	-2	2	2	-1	1	-1	2	0	-2	-2	-1	0	-2	-1	1	-1	-1	0	1	1	0	1
WGSB	0	0	0	1	0	1	1	1	0	2	-1	-1	-2	1	-1	2	-1	-2	2	-1	-2	2	0	-2	0	-1	1
Q0G3	-1	1	2	-1	0	-1	0	-1	-2	2	1	0	-1	1	0	1	-1	1	1	-2	-2	2	0	2	0	0	-2
XO3N	-2	1	1	-2	0	0	1	1	-1	-2	-1	0	0	2	1	2	-1	2	0	-1	-1	2	0	-1	1	-2	0
14XI	0	1	0	1	-2	1	1	1	2	-2	-1	0	-1	0	-1	-2	-1	1	2	0	-1	2	2	0	-2	-1	0
G7ZG	0	2	-2	0	0	2	0	-1	0	-1	1	-1	1	-1	1	2	-1	1	2	1	1	0	0	-1	-2	-2	-2
PBBG	0	-2	1	1	-1	2	2	1	2	1	-2	0	-1	-1	-2	-1	-1	0	0	0	-1	2	1	-2	0	1	0
JUVG	-1	0	1	0	0	1	2	2	2	1	-1	0	0	2	0	-1	0	-2	-1	-2	-1	1	1	-1	1	-2	-2
JJ8L	1	-1	2	-1	2	0	-2	1	1	1	0	-1	-1	0	-1	0	2	-2	1	-1	0	2	-2	-2	0	1	0
448P	-2	0	-2	1	0	-2	0	-1	-1	1	2	0	2	-1	-1	0	2	1	-1	-1	1	2	-2	0	1	1	0
JBG7	-1	2	-1	1	-2	0	0	1	1	1	-2	-1	-2	-1	1	2	0	0	0	0	1	2	-2	-1	-1	0	2
8SV8	1	-2	-1	1	2	0	0	-1	0	2	0	-1	2	0	-2	-2	-1	-2	-1	-1	0	1	1	1	0	2	1
0NG7	0	0	1	-1	-2	0	-1	0	1	-1	2	-1	-2	-1	-2	2	2	1	0	0	2	1	-1	-2	1	1	0
GJQD	-1	0	1	-1	1	0	0	2	-2	-1	1	1	0	1	-1	0	-1	0	2	-2	2	-1	-2	1	2	-2	0

YB6Z	2	-1	-1	0	2	-1	-1	-2	0	0	2	1	0	-1	1	0	0	-1	-2	1	1	-2	0	-2	2	1	1
QYVS	2	0	1	1	1	2	-1	-1	0	0	-2	-1	2	-1	1	-1	1	0	2	-1	0	-2	0	-2	-2	0	1
2H96	1	-2	-1	-1	1	0	0	0	2	0	2	1	1	-2	2	-1	-1	-1	-2	-1	0	1	1	-2	2	0	0
GJ92	-2	0	0	-1	-2	1	-2	0	1	1	-1	2	0	0	-2	-1	-1	1	0	2	-1	2	0	1	-1	1	2
VSGD	1	0	-2	1	-2	0	2	-1	0	0	1	-2	1	0	2	-1	0	1	-1	1	-1	2	-2	-1	2	-1	0
B204	-1	-2	-1	2	1	0	-2	1	0	-1	-1	-2	0	2	2	-1	-2	1	0	0	1	-1	1	1	0	0	2
59ZS	-2	2	1	-1	2	0	0	-2	-1	0	0	1	1	-1	1	0	2	0	-1	1	-1	2	-1	-2	1	-2	0
PW8U	-2	0	1	2	1	0	-2	0	0	-1	-1	-1	1	1	1	-2	-1	-2	0	0	-1	2	2	0	2	1	-1
AOAE	0	-2	-1	0	1	0	1	1	-1	-1	2	1	-1	0	1	-1	-2	-1	2	0	0	1	-2	-2	2	0	2
MBO3	2	0	0	-2	-1	1	1	1	0	0	-2	2	-1	1	-1	-2	-1	2	0	0	2	-2	-1	1	0	-1	1
WWPC	-1	1	0	1	2	1	0	1	1	-1	-2	0	0	1	2	-1	-2	-2	0	-1	-1	2	2	-2	-1	0	0
4580	1	-2	-1	2	0	1	1	2	2	1	-1	-2	-1	0	-1	-1	-1	2	0	-2	0	1	0	0	-2	0	1
JTF8	1	2	0	1	-1	2	1	1	-2	-1	-2	-1	0	2	-1	1	0	-2	1	-1	-1	2	0	0	-2	0	0
GIAS	0	-1	0	-2	0	2	1	1	0	-2	1	2	0	-1	-2	0	0	-1	1	-1	-1	-1	-2	1	1	2	2
404S	-1	2	0	-1	1	1	-1	-2	-2	-2	2	1	1	2	1	-1	-1	2	-1	0	0	1	-2	0	0	0	0
6S29	2	0	1	0	0	2	-1	0	-1	1	-2	-1	-2	2	0	0	2	1	-1	-2	-1	0	1	-2	-1	1	1
7VIQ	-1	1	1	0	0	2	-1	0	0	-2	1	1	-1	1	2	-1	-2	2	-1	-1	-2	2	0	0	-2	0	1
RCSJ	-1	1	1	-2	-1	1	-2	2	0	0	-1	1	-1	1	0	-1	0	0	-1	-2	0	2	-2	0	1	2	2
0NNE	0	-2	0	1	-1	1	2	2	1	1	-1	-2	-1	0	-1	0	2	1	2	-2	-1	0	1	-1	-2	0	0
SFV5	-1	1	-1	0	0	2	1	1	2	1	-1	0	0	2	-2	1	-2	0	-1	-2	1	2	0	-2	0	-1	-1
GDTU	1	1	1	1	0	2	0	-2	1	-1	-2	0	-2	0	1	0	-1	2	0	-1	-1	-1	0	-1	-2	2	2
BVXN	2	0	0	0	1	1	2	1	-2	0	-2	-2	1	1	-2	-1	-1	2	-1	-1	0	2	0	-1	1	0	-1
LE15	0	1	1	2	-1	2	0	-2	1	1	-1	-2	1	2	-1	0	-1	1	0	-2	-2	-1	0	2	-1	0	0
618K	1	2	2	0	0	1	0	0	-1	-1	-2	1	-1	1	-2	2	1	2	-1	-1	-2	1	0	-1	-2	0	0
0W1N	1	2	-2	0	0	2	-1	-1	0	0	-1	0	-1	1	-1	1	-2	1	1	-1	0	0	1	-2	-2	2	2
J80O	2	2	2	0	-1	0	0	-1	-2	1	0	-1	1	-1	-1	-2	0	2	-2	0	1	1	1	-2	-1	0	1

Appendix E

Instance ID	Factor	Reflecting on the COVID-19 pandemic, how did your organization respond to the unknown virus?
85160	1	no
85102	1	
85124	1	
85156	1	Wash your hands regularly with alcohol-based hand sanitizer or with soap and water
85168	1	æ—
85169	1	
85171	1	Containment strategy and suppression strategy. The choice of strategies depends on many factors, including the feasibility of interrupting transmission, the estimation of the severity of the disease, the socio-economic impact of the disease itself and its response strategies, public acceptance and willingness, and the determination and capacity of the government. These two strategies
85215	1	è¿…é€Ÿåšå‡ºåº”æ€¥æ–¹æ¡ˆï¼Œæ´§æ€¥å‘å¸ƒéšçŸ¥æ€Žä¹ˆé¢„é˜²æœªçŸ¥çš…æ¯’
84965	1	Change masks frequently, wash hands frequently, open Windows for ventilation
85047	1	none
85119	1	Take precautions in advance
85178	1	Maintain air circulation
85179	1	
85282	1	
84973	1	
84959	1	We are required to wear masks for disinfection, etc., to ensure our safety.
85046	1	They probably triedâ€¦ but fell way short.. reusing Ppeâ€¦ emergency not testing or wearing proper gear.. the government agencies werenâ€™t sure.. constant change in what was happening.. didnâ€™t take care of us that got sick.. lack of compassion.. lack of financial assistance..they were just disgustingly careless and lack of integrity and character. ..
85131	1	Face up to
85167	1	ake precautions in advance
85170	1	Open Windows for ventilation, do not share washbasins or towels with others, or simply rinse with water
85175	1	none

85176	1	
85116	1	Avoid enclosed, crowded, or Spaces that involve close contact. Meet people outside. Outdoor parties are safer than indoor ones, especially if the space is small and no outdoor air is coming in. If you cannot avoid crowded or indoor environments, take the following precautions: Open Windows when indoors to increase indoor natural ventilation.
85125	1	é‡ç,¹å…³æ³¨
85166	1	Panic and fear
85128	1	with information and knowledge/discovery on the virus that happening/changing every single day, im sure responding to the virus was like never ending fighting the unknown. But new protocols/new equipments to implement, our organizations especially in our department, i wish we were kept in a loop,with more detailed communication, feedbacks and advisory. When needed the most, there were not any meeting/online meeting to share or voice concerns, listen to others. A lot of times, peers/co workers were the what kept our line of defense stand still, with encouragement, ears to listen, shoulders to cry on, vent to each other, learning from each other on any new implements with new equipments/care to the patients, emotional support.
85192	1	Prevention
85073	1	Appropriately
85161	1	Initially it was very overwhelming but we worked as a team to get through the challenging times.
85177	1	YTSE RMJN
85174	1	æˆ´å£ç½©
85197	1	
85290	1	
85165	1	
85330	1	
85204	1	æå‰‰åšå¥½é˜²æŠ¤æŽªæ–½ï¼å¹¶ä¸”åŠ å¼ºç®¡ç†
84963	1	There was a lot of confusion on how we were treating some of these patients. It was hard on us Healthcare workers because we didn't know the proper line of treatment to follow. It was a very hectic few years.
85180	1	Take good protection. Protective clothing, hats and masks
85163	1	
85158	1	
85028	2	Active research and treatment
85034	2	
85089	2	For one thing, don't panic over unknown viruses. Unknown viruses are not to be feared, because human abilities are very limited, we don't know a lot of things. It's better to be cool with the unknown than to panic about it.
85525	2	Develop and implement programs for specific research related to social determinants of health to expand the knowledge base, contextualize health disparities, and reduce stigma and bias

85274	2	
85151	2	
85392	2	
85045	2	Abide by the state system, reduce contact with people, open Windows regularly for ventilation
85214	2	Departmental supervision changed during the pandemic. In the early stages of the pandemic, the organization provided RTs maximum support. Unfortunately, departmental management was very poor and did not support front-line therapists.
85852	2	Receive health information from foxnews
84961	2	
85276	2	å‹¤æ´—æ‰‹
85145	2	Limited visitors, mandated masks, required vaccines when available
84962	2	Maintain social distancing and good hand hygiene
85049	2	Wear protective clothing and a mask
85101	2	
85152	2	Disinfect regularly, wash hands frequently, and change masks frequently
85012	2	å‹‡æ•¢é¢å¯¹
85024	2	Face up to
85291	2	Take precautions in advance
85007	2	Do a good job of health monitoring, food hygiene, daily cleaning and disinfection
85014	2	
85388	2	
86120	2	I believe the organization responded to the pandemic with the most appropriate course of undertaking with knowledge that was provided.
84971	2	looked forward to what supplies were needed and tried to supply what was needed and focus on providing for the employees.
85864	3	Very cautiously with reccomendations of all PPE and no nebulizer treatments to covid positive patients. There were also limiting of personel when able and modified intubation techniques.
85155	3	Will do nucleic acid to ensure safety.
85096	3	Be sure to wear a mask when you go out. Be sure to completely cover your mouth, nose and chin, and change it in time when it is soiled or deformed
85521	3	I felt our organization was very unprepared. There was no communication from management and I felt that the higher ups and management would not do themselves what they were asking staff to do.
85075	3	Collect and report testing, incidence, vaccination, and severe outcome data based on timely, complete, and representative collection of detailed racial and ethnic categories
85040	3	worked effortlessly through exhaustion, staff shortages and used critical thinking in ways they never felt they would need to.
85093	3	
85196	3	Wear a mask and wash your hands frequently with soap
85383	3	Improving ventilation and filtration can help protect you from getting infected with and spreading the virus that causes COVID-19. Spending time outside when possible instead of inside can also help: Viral particles spread between people more readily indoors than outdoors.
84950	3	none
85387	3	At present, we have successfully developed all kinds of molecular enzymes, especially in vitro diagnosis (IVD) related raw materials, and won the recognition of our customers
84969	3	Advance prevention

85312	3	
85008	3	
85391	3	
84928	3	
85241	3	
84977	3	Take precautions in advance
85058	3	Pretty good
84930	3	Strengthen protective measures
85700	3	Every patient was placed in droplet plus isolation. Everyone used to be tested. But now, not everyone is tested.
85562	3	Take protective measures
85681	3	Take protective measures in advance and strengthen management
84952	4	The novel coronavirus pneumonia (COVID-19) continues to ravage the world, with clusters of acute respiratory infections rapidly evolving into a public health emergency of international concern
85065	4	
85244	4	Take timely measures to isolate patients, reasonably arrange the functions that hospitals can provide, and treat patients.
85121	4	very well
85114	4	
85039	4	
84927	4	all was unknown
85273	4	å‹¤æ´—æ‰‹
85198	4	The World Health Organization has given an update on the global pandemic of COVID-19, caused by the novel coronavirus, and called on global health agencies to escalate their emergency response.
85147	4	Poorly, never cared about our lives we were just bodies
85210	4	Arrange for our medical staff to be quarantined in batches to ensure no second infection
85098	4	
85051	4	
85079	4	Active cooperation
85130	4	Keep a distance of at least one meter
85126	4	Cover your mouth and nose with your elbow or a tissue when coughing or sneezing. Keep both inside and outside clean and tidy
85013	4	
84970	4	Wear a mask and spray disinfectant
85150	4	
84958	4	
85138	5	Strengthen supervision and protection
84931	5	

85009	5	Always take good personal protection and carry a mask with you when you go out.
85193	5	Do not worry and panic, and do not create, spread or believe unsubstantiated claims
85068	5	As well as they could. It was a difficult time for healthcare
85084	5	Take precautions in advance
85120	5	
85016	5	
85153	5	Combination of active research and treatment
85385	5	Develop key principles and resources for collecting, analyzing, reporting, and disseminating data related to health equity to inform action during acute public health emergencies
85380	5	Enhance physical fitness, immunity, and keep the environment clean and ventilated
84957	x	
85044	x	Develop and implement plans to collect and report testing, incidence, vaccination and severe outcome data for other key populations in a timely, complete and representative manner
85798	x	Drastic measures due to everything being unknown
85059	x	We are not allowed to go to serious places, we are required to stay at home, temporarily stop working
85448	x	Minimize activity in crowded places and watch for symptoms
85088	x	Increase prevention and treatment equipment.
85091	x	Pay attention to personal hygiene and ventilation at home
84955	x	Raising people's awareness of safety and health
85090	x	
85122	x	
85449	x	1. Try to reduce outdoor activities, try not to go to crowded places, and pay attention to personal protection. If you need to go outside, wear a surgical mask or mask. 2, to ensure hand hygiene, try not to touch public goods, to wash hands frequently. 3, to monitor the health of individuals. If you develop fever, dry cough, diarrhea, breathing difficulties and other symptoms, it is recommended to go to the hospital. 4, do not spit, it is recommended to use tissue wrap personal oral and nasal secretions. 5, in daily life to eat more fruits, vegetables, more to the body to supplement nutrients.
85043	x	Don't go abroad unless necessary
85526	x	Reduce contact, increase scientific research, and strengthen self-protection awareness
85199	x	strain every nerve
85139	x	
85136	x	
85159	x	Face up to
84964	x	Develop and implement a plan for literature review and analysis using data available from CDC and/or non-CDC sources to assess the disproportionate impact of COVID-19
85018	x	I believe my organization did an outstanding job being proactive in preparation, then reacting to all the supply shortages. There were a lot of unknowns and some misleading information coming out of the Asian & European countries. Our organization, while not perfect, did everything humanly possible to help patients and keep staff as safe as possible. The government let politics interfere with doing what's best and the mainstream media blindly supported the agenda for the government.
85071	x	Horribly. Not enough PPE. Management was nowhere to be found.
85127	x	In the beginning our leadership were very indirect. They would yell at us to not wear n95 masks with our patients especially when they knew that it could easily transmit via aerosol rxâ€™s. Our Hospital Mercy Health is a large organization and I. Elise that information was slow to get us properly informed about our protection. Locally no one actually seemed to be in charge. As time went on response was improved but in the beginning it seemed you really had to be a advocate for yourself

85162	x	Strengthen the awareness of personal protection, pay attention to personal hygiene
85582	x	
85066	x	Have good hygiene Keep your body clean and take precautions
85117	x	I started working after the pandemic ...N/A
85123	x	
85129	x	all well as it could in retrspect
85188	x	æˆ´å£ç½©
84966	x	About an 8 out of 10
85522	x	
84947	x	
85094	x	æ—
85173	x	
85394	x	
85236	x	
85144	x	SRMSRTHN
84960	x	to wear a mask
85100	x	
85115	x	ake precautions in advance
85143	x	
85103	x	With an abundance of caution, initially. After dealing with staffing shortages due to illness, our wellbeing became much less of a concern than staffing.
85118	x	Avoid gathering in confined Spaces
85074	x	Over-reacted. We admitted people we never would have before it or should have. We talked money way too much and put unecessary bursen on the staff.
85565	x	Take protective measures in advance and strengthen management
85095	x	disappointed in patients not being tested, proper equipment unavailable, as time progressed patients were transferred to the floors without being tested which contaminated that whole floor, 2 covid patients would be placed into the same rooms, eventually in pft/clinic patients no longer needed to be tested and really should have ....considering how high risk that area was
85099	x	The first time to disinfect the treatment.
85104	x	none
85078	x	Good personal protection
85386	x	
85113	x	At ordinary times, prepare protective masks, etc., and be vigilant, keep a good attitude, if you have a positive face
85384	x	
85146	x	
85301	x	Cover coughs and sneezes
85200	x	
84972	x	Disinfect promptly, pay attention to personal hygiene, and wear a mask at all times
85636	x	Take protection. Protective clothing and hats
85157	x	

85017	x	Increase prevention and treatment equipment.
85069	x	Overall, I think my organization handled the pandemic well. We were testing all patients, as well as using droplet, contact, and aerosol precautions. There were times where equipment and PPE were lacking due to supply chain issues. The emotional needs of employees were neglected during the pandemic.
85697	x	
84967	x	Do a good job of self-protection and strictly disinfect.
84968	x	
85006	x	Take precautions in advance
85011	x	Take corresponding measures in advance to increase the impact on COVID-19
85148	x	Well
85183	x	
85206	x	
85381	x	It is required to wear protective clothing and other equipment to protect yourself.
85097	x	Wash hands frequently and practice good respiratory hygiene
85087	x	none
85080	x	
85149	x	
85579	x	I am a bit disappointed in our organization this was respiratory's time to shine and show the world wh we are and what we could do instead I feel we are even more unoticed and becoming more obsolete. There are constant reminders about nursing shortages. We are told constantly we do not make money for our department and we are not given higher roles with our education, we are very much under utilized. It is very sad Nursing keeps taking our jobs the higher education I get the less I get paid and the more NURSE PRACTIONER is there waiting to take my job and get paid at about 140,000 a year for a lesser degree than I have
85733	x	Face up to
85029	x	Ask for a temperature measurement, and those with high temperatures will be treated individually.
85333	x	
85211	x	Face up to
85003	x	
84929	x	The organization didn't trust it at first but when the World health organization declared the vaccine as the original one, we started using it
85035	x	
85539	x	
85566	x	Wear a mask and disinfect
85602	x	
85042	x	The whole process of strict protection, regular disinfection