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# Overcoming the Imposter Phenomenon: Exploring the Strategies Secondary Educators Used to Cope During the COVID-19 Pandemic

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# Overcoming the Imposter Phenomenon: Exploring the Strategies Secondary Educators Used to Cope During the COVID-19 Pandemic

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ABSTRACT

Overcoming the Imposter Phenomenon: Exploring the Strategies Secondary Educators Used to Cope During the COVID-19 Pandemic

by Barbra J. C. Bedwell

**Purpose.** The purpose of this descriptive mixed-method study was to explore and describe the coping skills used by secondary teachers who identified as experiencing the impostor phenomenon (IP) by the Clance Impostor Phenomenon Scale (CIPS) (Clance, 1985) to overcome the nine behavioral characteristics of IP during the transition to distance learning in response to the COVID-19 pandemic.

**Methodology.** This descriptive mixed-methods research design used both quantitative and qualitative techniques to identify teachers with IP and explore the coping techniques they used during distance learning. First, a quantitative 20-question diagnostic survey, the CIPS, was used to identify teachers with IP. In the qualitative phase, teachers with moderate to intense IP participated in a 12-question semi-structured interview to provide in-depth descriptive data. The qualitative data was analyzed to uncover themes in the coping strategies used during remote instruction.

**Findings.** The findings from this research indicate that nearly 80% of secondary educators experienced moderate to frequent impostor feelings during the pandemic. Analysis of the semi-structured interviews revealed from 1-4 coping strategies for each of the characteristics. A total of 20 major themes emerged, along with five unexpected findings. Themes included (a) accepting imperfection, (b) seeking feedback, (c) engaging support networks, (d) practicing resilience and growth mindsets, (e) identifying core values, and (f) focusing on process over product.

**Conclusions.** It is concluded that IP is a natural outcome of intense change, requiring both emotional and professional support. The researcher concluded that teachers can cope by normalizing IP experiences through peer networking and feedback, cultivating value-based mindsets that promote constructive thought patterns, being strategic when approaching long-term change, and most importantly, give themselves permission to take action, even if it is imperfect.

**Recommendations for Action.** The researcher recommends that individuals and organizations prioritize mental health as a core value during times of change. Teachers should be taught strategies to take action and seek feedback to minimize IP intensification. Organizations should create opportunities for teachers to collaborate and seek feedback in low-risk settings, provide IP-informed induction programs for new staff, and approach change initiatives strategically to avoid triggering impostor feelings.

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# CHAPTER I: INTRODUCTION

The coronavirus pandemic of 2020-2021 created unprecedented challenges worldwide. As of late January 2021, over 100 million cases of COVID-19 had been reported across the globe, and over 2.2 million people have died ("Coronavirus world map," 2021). The United States has been particularly impacted, with over 26 million cases, and over 425,000 deaths ("Coronavirus world map," 2021). Fortunately, since the beginning of 2021 in the United States, case rates are beginning to decline, deaths are leveling off, and just over one million doses of vaccine have been administered ("Coronavirus world map," 2021). The pandemic is not over yet. Two new highly infectious variants of the novel coronavirus have now been detected in the United States, threatening the race to achieve herd immunity (Chow, 2021).

While daily life has been heavily impacted by the pandemic, some of the most drastic changes have occurred within the American public education system. Beginning in March, schools began to close their doors and shift to online instruction in an effort to prevent the unchecked spread of coronavirus (Decker, Peele, Riser-Kositsky, 2020). In the middle of March, 27 states announced that public schools would be closed; by April, nearly 50.8 million American students were attending schools that announced they would remain closed through the end of the school year (Decker et al., 2020). As a result of these school closures, nearly 80% of teachers reported that they were interacting with their students online rather than in person (Decker et al., 2020). This abrupt shift in teaching caused a sharp increase in anxiety levels, especially among teachers providing "live" online instruction (Allen, Jerrim, & Simms, 2020).

For teachers who demonstrate some of the characteristics of impostor syndrome, the shift to online learning may have been particularly challenging. First described in 1978, the impostor phenomenon (IP) (or impostor syndrome) is a persistent mindset characterized by severe anxiety, depression, self-doubt, emotional exhaustion, and perceived inadequacy (Chae, Piedmont, Estadt, & Wicks, 1995; Clance & O'Toole, 1987). This profound insecurity leads individuals to experience a near-constant fear that they will be exposed as a fraud even in spite of their outward appearance of success (Harvey & Katz, 1985). Work environments that combine high stress with ambiguous success criteria are known for promoting feelings of impostorism (Hutchins, 2015; Slank, 2019). The coronavirus pandemic created exactly this type of environment. As a result of the pandemic, "…the [teaching] profession was plunged into unfamiliar working patterns…" (Allen et al., 2020, p. 18), creating a set of conditions particularly difficult for teachers who were already struggling with feelings of fraudulence and impostorism (Kasper, 2013; L. E. Kim & Asbury, 2020; Leary et al., 2000; Young, 2011).

## Background

The background will provide a brief historic and behavioral framework for understanding the IP. Further, the causes and development of IP are presented in further detail, as well as the impacts of impostorism on the workplace. Finally, a description of the nine behavioral characteristics of IP provides a context in which to explore how individuals cope with IP. This study is positioned to examine how teachers who may have experienced IP during the pandemic coped during the sudden transition to distance learning.

## Historical Context for the Impostor Phenomenon

The IP, first identified in 1978, is a disconnect between an individual's internal and external assessments of their success (Chae et al., 1995). Clance and Imes (1978) defined IP as "...an internal experience of intellectual phoniness that appears to be particularly prevalent and intense among a select sample of high achieving women…" (p. 241). Early research tended to focus on the incidence of IP in women; however, inconsistent gender effects were noted as early as one year after the original study (Imes, 1979).

Individuals with IP tend to be highly successful, yet paradoxically they suffer from persistent, nagging fears (Clance & O'Toole, 1987; Harvey & Katz, 1985; Topping & Kimmel, 1985). They believe that their success is more due to luck than intelligence — and they work in fear of being exposed as an impostor (Harvey & Katz, 1985; Topping & Kimmel, 1985). Additional studies during the 1970s and 1980s expanded upon this original definition to explore the origins, extent, and distribution of IP in various populations (Clance & O'Toole, 1987; Harvey & Katz, 1985; Imes, 1979; Topping & Kimmel, 1985). While the causes of IP are complex, the outcomes are well documented: a wide variety of negative behaviors that affect both job performance and personal well-being (Hutchins, Penney, & Sublett, 2018; D. B. Scott, 2017; Tiefenthaler, 2018; Warraich, Swales, & O'Leary, 2017; Young, 2011).

## Theoretical Framework

The IP construct was grounded in two theories in classical psychology: attribution and self-efficacy (Ross, Stewart, Mugge, & Fultz, 2001). Attribution theory seeks to describe how individuals connect feelings with events: in other words, how

people attribute positive or negative feelings to personal experiences (Weiner, 2010). Clance and Imes framed their original work on IP as an issue with attribution, whereby successful women were more likely to (incorrectly) connect their success with luck or effort rather than to intelligence or ability (Ross et al., 2001). Efficacy, on the other hand, relates to a person's feelings of being able to positively influence outcomes because of one's actions (Bandura, 1977). In terms of self-efficacy, the intense perfectionism and overwork exhibited by IPs are often interpreted as behaviors used by IPs to regain some measure of control. Unfortunately, since they do not attribute their success to their abilities, they often take little pride in this effort (Imes, 1979; Weiner, 2010).

**Modern Contributions to Understanding the Impostor Phenomenon**

As noted in both Bravata et al. (2020) and Mak, Kleitman, and Abbott (2019), impostorism has been studied for over forty years in both mainstream media and in peer-reviewed journals. Originally framed as a gender issue affecting professional women, IP has now been identified in a wide variety of genders, life stages, and professions (Bravata et al., 2020; Imes, 1979; Ross et al., 2001). Academic research has generally explored the incidence, identification, and severity of the impostor phenomenon in a wide range of populations (Bravata et al., 2020).

In addition, academic research has often sought to uncover the developmental causes of IP as well as the psychologically correlating behavior patterns, such as neuroticism and introversion (Fraenza, 2014; Hutchins, 2015; Parkman, 2016). Though the IP has not been formally identified as a clinical disorder, the term "impostor syndrome" has become popular in mainstream media (Mak, Kleitman, & Abbott,

2019). Mainstream sources have tended to provide advice on how to "deal with" or "overcome" these maladaptive feelings and behaviors in the workplace (Bravata et al., 2020; Mak et al., 2019; Young, 2011).

**Factors that Impact the Development of Impostor Phenomenon**

Nearly all individuals experience stress and self-doubt at some point in their academic and professional development; however, only some individuals become fully involved in the IP. Three underlying factors appear to be important contributors to the development of impostorism: (a) family structures, (b) gender roles/stereotypes, and (c) career expectations. Families that place extremely high or extremely low expectations of success on a child can both create favorable conditions for impostor feelings (Ross et al., 2001). For example, the first child in a family to attend college often experiences intense pressure to succeed (Harvey & Katz, 1985). Gender roles and gender stereotypes have been identified as important factors since the earliest studies on IP (Ross et al., 2001). However, recent reviews of research indicate that both males and females can experience strong gender stigma consciousness (Bravata et al., 2020). Indeed, IP may be more directly related to career expectations than gender stereotypes (Andrews, 2020; Bravata et al., 2020; D. B. Scott, 2017). High stress work environments coupled with vague criteria for success -- such as those found in academia and in the arts -- appear to be particularly favorable for fostering the development of IP (Bravata et al., 2020; Hutchins, 2015; Zorn, 2005).

Studies indicate that career and workplace stressors are important in understanding the development of impostorism (Hutchins, 2015; D. B. Scott, 2017; Zorn, 2005). Impostors are deeply afraid of being exposed as a fraud and will often overwork

in order to avoid being "outed" (Hutchins, 2015; Hutchins et al., 2018). As a result of this, individuals with impostorism are highly productive and engaged at work, even though they are deeply unhappy (Bravata et al., 2020; Parkman, 2016; Young, 2011). The perfectionism and work effort displayed by impostors is often viewed favorably by employers, who then provide additional responsibilities to the impostor, resulting in the "impostor cycle" (Ross et al., 2001). In the long run, impostors suffer from intense burnout and emotional exhaustion as a result of their unsustainable effort (Hutchins, 2015; Parkman, 2016). Work-place programs that increase security and inclusiveness, such as mentoring, orientations, and tenure, can moderate the impacts of IP (Bravata et al., 2020; Hutchins, 2015; Parkman, 2016; Topping & Kimmel, 1985)

## Behavioral Characteristics of Impostor Phenomenon

Clance and Imes (1978) defined IP as "...an internal experience of intellectual phoniness…" (p. 241). Impostors exhibit a set of behaviors that are directly and indirectly indicative of the persistent stress and self-doubt that impostors experience. The nine behavioral characteristics of the impostor phenomenon include:

- anxiety
- lack of self-confidence or self-doubt
- depression
- perfectionism
- procrastination
- impression management
- emotional exhaustion

- fear of success
- fear of failure (Clance, 1985; D. B. Scott, 2017; Vergauwe et al., 2015).

It is not necessary for an individual to express each of these nine traits equally; intense experience of two or three traits may be enough to classify someone as an impostor (Clance, 1985). However, even though IP is an individual experience, the constellation of these nine traits creates a generalized profile of someone suffering from the impostor phenomenon (Vergauwe, Willie, Feys, De Fruyt, & Anseel, 2015).

**Anxiety**

Anxiety is a natural response to stress but can be detrimental when triggered by fears about everyday activities or about possible future events. Individuals with impostorism struggle with pervasive, growing anxiety related to their fears of being "caught" (Fraenza, 2014; Rakestraw, 2017). Impostors often express that they were hired by mistake or by luck, or that they somehow don't "deserve" their position (Clance, 1985; Ross et al., 2001). Numerous studies have demonstrated that anxiety and depression are strongly linked to IP (Clance & Imes, 1978; Clance & O'Toole, 1987; Cokley et al., 2015; Hutchins, 2015; Imes, 1979).

**Self-Doubt or Lack of Self-Confidence**

Reduced self-confidence and self-esteem are also strongly correlated with IP (Clance & Imes, 1978; Clance & O'Toole, 1987; Parkman, 2016; Topping & Kimmel, 1985). Impostors tend to believe that success is due to chance external factors, such as luck or accident. As a result, they struggle with self-efficacy, or the belief that one's own actions and abilities can positively impact the world around them. When impostors compare themselves to others, they tend to overemphasize their own weaknesses and the

strengths of others, while simultaneously downplaying their own abilities (Fraenza, 2014). In addition, impostors have a difficult time with receiving positive feedback or compliments from superiors or peers (Clance & O'Toole, 1987).

**Depression**

Depression is a persistent feeling of sadness, unhappiness, or negativity, often associated with low energy and a lack of interest in daily life. Anxiety and depression are two of the behavioral characteristics most strongly associated with the IP (Clance & O'Toole, 1987; Ross et al., 2001). Feeling depressed at work is one of the major characteristics that leads to reduced job satisfaction for individuals with IP (Hutchins et al., 2018) and can even lead to long-term mental health issues including alcoholism and substance abuse (D. B. Scott, 2017).

**Perfectionism**

Impostors live in fear of failure, as it risks exposing them as a fraud. In order to improve their chances of success, IPs often overwork and over prepare (Hutchins, 2015; Trefts, 2019; Young, 2011). Furthermore, IPs tend to emphasize perfectionism as well as effort (Fraenza, 2014; Parkman, 2016; Young, 2011). The intense need to control every detail appears to be one way that impostors attempt to cope with the fear of being exposed as a fraud (Caselman, Self, & Self, 2006; Vergauwe et al., 2015). And, while attention to detail is an important contributor to success in many work environments, impostors tend to emphasize the maladaptive dimensions of perfectionism rather than the positive dimensions (Fraenza, 2014; Vergauwe et al., 2015).

**Procrastination**

In response to these feelings of fear, individuals often overwork and over prepare. This causes the person to attribute their success to their focus on the preparation and effort rather than to their intelligence or abilities. As the pressure to succeed becomes unbearable, individuals with IP may avoid engagement with work tasks altogether (D. B. Scott, 2017). Procrastination, followed by frantic, intense work-cycles, is a maladaptive response to stress that favors short-term relief over long-term goals (Korstange, Craig, & Duncan, 2019). For individuals with IP, procrastination is one of the behaviors used to avoid the crippling fear brought on by deadlines and work-related tasks.

**Impression Management**

Impostors may also seek to control how they are perceived by others. While impostors do not easily accept positive feedback or praise, they are deeply concerned with how superiors gauge their performance (Hutchins, 2015). Individuals with IP may engage in forms of impression management to reduce expectations of success (Hutchins, 2015; Leary et al., 2000; D. B. Scott, 2017). Furthermore, impostors may use flattery to solicit approval from superiors (Ross et al., 2001; Trefts, 2019).

**Emotional Exhaustion**

The impostor cycle creates an intense spiral of anxiety, fear, and overwork. Impostors expend considerable energy seeking to ensure success and avoid failure. Overwork, over preparation, perfectionism, and anxiety lead impostors to spend more time than their peers at work-related tasks eventually contributing to burnout (D. B. Scott, 2017). The constant need to maintain a successful façade can lead to overcompensation, emotional and physical exhaustion, and panic attacks, along with other types of

maladaptive behaviors such as alcohol and substance abuse (Rakestraw, 2017; D. B. Scott, 2017).

**Fear of Failure**

One of the hallmarks of impostorism is a persistent "...terror of failure..." (Clance & O'Toole, 1987). Impostors regularly attribute their successes to luck, but ironically believe that their failures are due to innate flaws in their abilities (Hutchins et al., 2018). As a result, impostors live with the persistent fear that each opportunity is another chance to be exposed as a failure (Rakestraw, 2017). To compensate for their self-perceived lack of ability, these individuals often increase their work effort and output, and utilize extreme attention to detail to ensure success (Ross et al., 2001). Fear of failure may also lead individuals to set low career goals for themselves and limit their abilities to achieve their full potential (Hutchins et al., 2018).

**Fear of Success**

Paradoxically, individuals with IP not only fear failure, but they also fear success (Clance & O'Toole, 1987). Impostors tend to believe that success is more due to chance than skill or intelligence (Hutchins et al., 2018). Therefore, impostors fear that even if they do achieve success, they will not be able to maintain or repeat it. Individuals may avoid opportunities for interaction or advancement with the apparent hope of reducing the chances of being exposed as an impostor (Clance & O'Toole, 1987; Hutchins, 2015). In addition, impostors may be afraid that they will no longer be able to live up to the pressure of increased expectations from superiors (Bechtoldt, 2015). Sadly, impostors even fear that that their success could in future disappointments or loss of affection and praise from peers (D. B. Scott, 2017).

## Identifying and Measuring Imposter Phenomenon

Researchers have developed several diagnostic tools to determine the extent of IP expression in individuals, including the Clance Impostor Phenomenon Scale (CIPS) and the Harvey Impostor Scale (Bravata et al., 2020; Holmes, Kertay, Adamson, & Holland, 1993; Mak et al., 2019). Much additional research was carried out to determine the validity and consistency of these scales (Bravata et al., 2020; Mak et al., 2019; Topping & Kimmel, 1985). While controversy remains about whether or not IP is a true "syndrome" in the formal psychological sense, research appears to support that it is a clinically identifiable combination of behaviors and attitudes (Holmes et al., 1993; Kolligian & Sternberg, 1991; Lapp-Rincker, 2003; Leary et al., 2000; Mak et al., 2019; Ross et al., 2001)

## Imposter Phenomenon in the Workplace

IP can cause detrimental effects on the mental health of individuals who suffer from moderate to severe cases. There is a fundamental disconnect between the individual's internal and external assessments of their success (Clance & O'Toole, 1987; Ross et al., 2001). As a result, impostors are often perceived as being highly successful at work, even though their private feelings may be intensely negative (Bravata et al., 2020; Parkman, 2016; Young, 2011). Impostors attribute their achievements to external factors such as charm or luck rather than their innate intelligence; as a result, each success becomes yet another opportunity to fail (Harvey & Katz, 1985; Imes, 1979; Parkman, 2016). Maintaining the appearance of success while privately experiencing intense anxiety and self-doubt causes intense job-related stress and contributes to emotional exhaustion and burnout (Parkman, 2016).

Due to their need to appear successful, individuals with IP often exhibit behaviors that are highly desirable in the workplace (Hutchins, 2015). An observer would likely describe an impostor as a highly organized perfectionist: hard working, and overly well-prepared. On the inside, however, impostors live in fear of being "discovered" as a fake (Harvey & Katz, 1985; Hutchins et al., 2018; Topping & Kimmel, 1985). Success becomes something that impostors deeply need, yet impostors struggle to "own" their successes (Harvey & Katz, 1985; Ross et al., 2001). This often leads to the impostor cycle: impostors work to the point of emotional exhaustion to ensure that they are successful; as a result, employers perceive them as being highly capable and provide additional responsibilities. For an impostor, each success creates additional pressure opportunities for failure, eventually causing the impostor to experience emotional exhaustion and burnout (Parkman, 2016). Eventually, individuals with impostorism may procrastinate, avoid interactions with colleagues, refuse advancement opportunities, or even withdraw from professional life in order to relieve the intense stress created by the impostor cycle (Clance & O'Toole, 1987; Parkman, 2016; Zorn, 2005).

The coronavirus pandemic of 2020 created an environment in which impostors experienced unprecedented challenges in the workplace. In educational settings, teachers responded to school closures by rapidly transitioning to online instruction. At the same time, the pandemic created a unique set of challenges for teachers who may also experience the IP.

## Statement of the Research Problem

The IP was first described in 1978. In their landmark study, Clance and Imes (1978) noticed that some otherwise highly successful women lived with a burden of deep

and persistent self-doubt. These professionals, regardless of their career achievements, felt like professional impostors: they felt they did not deserve or earn their success, and they lived in fear that they would be exposed (Clance & Imes, 1978; Clance & O'Toole, 1987; Imes, 1979). Research has provided insights into many aspects of IP, but the root causes of impostorism are still unclear, especially in adolescents and young adults (Bravata et al., 2020).

Researchers now recognize that both men and women are affected by IP, though they may express it in different ways (Bravata et al., 2020; Cokley et al., 2015; Hutchins, 2015; Imes, 1979). While a wide range of professions have been shown to foster IP, competitive academic settings such as college, graduate school, and medical school appear to be particularly risky environments for impostors (Andrews, 2020; Bravata et al., 2020; Fraenza, 2014; Hutchins, 2015; Ives, 2011; Parkman, 2016; D. B. Scott, 2017; Topping & Kimmel, 1985; Trefts, 2019). Though IP in higher education is well-documented, little research has been done on the impacts of IP in teachers at the secondary level (Bravata et al., 2020; Hutchins et al., 2018; Parkman, 2016). This is an important gap in the research, as teachers play a vital role in creating healthy learning environments for their students. Students who have authentic interactions with their teachers demonstrate increased academic, social, and emotional development compared to peers in non-authentic environments (Sax & Gialamas, 2017). This is even more important during times of crisis, where teachers are more likely to create healing relationships and safe, trusting environments that are critical for student success in spite of trauma (Couris, 2020; Davis, 2017; Gomez-Lee, 2017; Keselman & Saxe-Braithwaite, 2020).

The onset of the coronavirus pandemic created an urgent need to study the IP, especially in classroom teachers. The pandemic compelled schools to close, forcing teachers to rapidly pivot to online instruction (Allen et al., 2020; Decker et al., 2020; L. E. Kim & Asbury, 2020). This type of unstable work environment is precarious for individuals suffering from the IP (Allen et al., 2020; L. E. Kim & Asbury, 2020). Many impostors work feverishly to maintain their illusion of success, causing mental health issues like anxiety, depression, and burnout (Clance & Imes, 1978; Topping & Kimmel, 1985). In response to changing work environments, impostors may seek to regain control through overwork and perfectionism, triggering the downward spiral of the impostor cycle (Clance & Imes, 1978; Harvey & Katz, 1985; Puzak, 2018; Zorn, 2005). Other impostors may seek to avoid work-related stress by procrastinating, minimizing interactions, or rejecting advancement opportunities (Hutchins, 2015; D. B. Scott, 2017; Tiefenthaler, 2018). In severe cases, impostors may turn to substance abuse or develop suicidal thoughts as a way to cope with the stress (Lester & Moderski, 1995; D. B. Scott, 2017).

The behaviors associated with the IP stand in stark contrast to those of successful teachers (Ramsey, 2006; Sax & Gialamas, 2017). Specifically, teachers who demonstrate the characteristics of authentic leadership have more positive mental health characteristics and are more resistant to job burnout (Mao & Tang, 2016). On the other hand, self-doubt, overwork, and burnout are commonly associated with the impostor phenomenon (Hutchins et al., 2018; Puzak, 2018). Early identification and intervention may help teachers to avoid this cycle. The IP can have long-lasting implications for mental health and career success. Currently, there is a lack of research into the behaviors

that indicate hidden impostor feelings in classroom teachers or identifying healthy strategies for teachers to cope with the IP. Understanding these behaviors can help individuals to break out of the destructive impostor cycle, create supportive work and classroom environments, and identify positive coping strategies to allow impostors to develop to their fullest potential.

## Purpose Statement

The purpose of this descriptive mixed-method study was to explore and describe the coping skills used by secondary teachers who identified as experiencing the impostor phenomenon by the Clance Impostor Phenomenon Scale (Clance, 1985) to overcome the nine behavioral characteristics associated with the impostor phenomenon during the transition to distance learning in response to the COVID-19 pandemic.

## Research Question

The study was guided by the following research question:

1. What coping skills did secondary teachers who identified as experiencing the impostor phenomenon, as measured by the Clance Imposter Phenomenon Scale (Clance, 1985), use to overcome the nine behavioral characteristics (characteristics of anxiety, lack of self-confidence, depression, perfectionism, procrastination, self-presentation, emotional exhaustion, fear of failure and fear of success) associated with the imposter phenomenon?

## Significance of the Problem

The coronavirus pandemic created unprecedented challenges for the public education system within the United States. As schools closed, educators were forced to shift their classrooms online (Decker et al., 2020). Teachers rapidly adjusted their

teaching strategies so that they could continue to provide meaningful instruction from a distance. Reports of stress-related mental health issues – including anxiety, depression, emotional exhaustion, and sleep disturbance - surged as students and teachers struggled to adapt to this change (Lee, 2020; Pera, 2020). Many teachers felt as though they'd had "the rug pulled out from under them" as they were forced to discard teaching techniques honed through years of in-person experience (L. E. Kim & Asbury, 2020). Unsurprisingly, this pivot in pedagogy caused many teachers to doubt their abilities to teach academic content while also providing mental health support to their vulnerable students (Pozo-Rico, Gilar- Corbí, Izquierdo, & Castejón et al., 2020; Stachteas & Stachteas, 2020).

Periods of self-doubt at work are common; however, individuals suffering from the IP take this to an extreme. For educator impostors, the old adage "he who can, does…he who can't, teaches" rings particularly true. Even before the pandemic, educators with IP were at high risk of experiencing harmful impacts such as anxiety, emotional exhaustion, overwork, and burnout (Hutchins et al., 2018; Puzak, 2018). Furthermore, the impostor cycle creates a destructive downward spiral for individuals struggling to establish a professional identity in spite of the profound fear that they don't deserve their peers' respect (Bothello & Roulet, 2018; Craddock, Birnbaum, Rodriguez, Cobb, & Zeeh, 2011). As a result of these factors, people with IP report lower job satisfaction, reduced engagement and diminished work potential, but exhibit increased avoidant coping behaviors (Hutchins et al., 2018; Tiefenthaler, 2018). These IP-related factors, combined with pandemic-related anxiety, stress, fear, and depression, may lead to

long-term impacts on teachers, especially those experiencing the impostor phenomenon (Allen et al., 2020; Stachteas & Stachteas, 2020)

Learning how educators cope with IP is particularly relevant during the pandemic. Trauma-informed teaching has been recommended as a classroom strategy to mitigate the emotional stress felt by students during distance learning (Hall, 2021; Imran, Zeshan, & Pervaiz, 2020; Keselman & Saxe-Braithwaite, 2020). Teachers who use authentic or trauma-informed practices build healthy relationships with students and promote students' emotional and intellectual development (Couris, 2020; Davis, 2017; Nealy-Oparah & Scruggs-Hussein, 2018; Sax & Gialamas, 2017). In addition, teachers who exhibited mental resilience were more likely to avoid the most negative mental health aspects of teaching through the pandemic (Mao & Tang, 2016; Stachteas & Stachteas, 2020).

While the IP is well-known in higher education (Hutchins, 2015; Parkman, 2016), the prevalence of IP in secondary education has not been thoroughly explored (Bravata et al., 2020). It would be particularly valuable to identify the strategies that teachers used to cope with their impostor feelings, especially during the shift to distance learning during the pandemic. School leaders may be able to develop teacher support programs that provide training in positive coping strategies, while minimizing the prevalence of avoidant and/or harmful strategies. These supports would benefit all teachers, especially including those with IP, as they work towards recovering from the educational trauma caused by the pandemic (Pozo-Rico et al., 2020). Research into the impostor phenomenon's impact on secondary teachers, and the coping strategies they used, will

help shift classrooms towards authentic behaviors and create healthier environments for both students and teachers.

## Definitions

### Theoretical Definitions

*Coping skills.* The skills used to execute a response to a threat (Bachmann & Simon, 2014; Carver, Scheier, & Weintraub, 1989; Hutchins, 2015; Neureiter et al., 2016).

*Impostor phenomenon.* A psychological construct describing an individual's intense internal experience of feeling intellectually fraudulent, possessing a fear of exposure, and being unable to internalize actual success (Bechtoldt, 2015; Caselman et al., 2006; Clance & Imes, 1978; Vergauwe et al., 2015).

### Operational Definitions

*Behavioral characteristics*. For the purposes of this study, behavioral characteristics are personal qualities typically associated with those identified as impostors by the CIPS (Clance, 1985). This study addressed the following nine characteristics: anxiety, lack of self-confidence, depression, perfectionism, procrastination, self-presentation, emotional exhaustion, fear of failure, and fear of success.

*Coping skills.* For the purposes of this study, coping skills are the actions individuals take in response to the negative behavioral characteristics created by feelings of impostorism.

*COVID-19.* COVID-19 is a newly identified infectious disease caused by a previously unknown coronavirus. This disease was first identified in Wuhan, China in

2019. The name COVID-19 is an abbreviation: CO for coronavirus; VI for virus; D for disease; 19 for the year of discovery. This disease spreads easily from person to person, largely through airborne respiratory droplets. While this disease generally causes mild symptoms (fever, dry cough), it can also cause severe illness and even death (Centers for Disease Control and Prevention, 2021).

*Distance learning.* Due to the COVID-19 pandemic, students were not allowed to attend class in traditional school settings. For the purpose of this paper, distance learning is defined as a mode of education where teachers and students are physically separated during instruction. In many cases, technology is used for communication between teachers and students, and as a means for students to access curriculum content and instructional activities.

*Impostor cycle.* A series of behaviors and actions beginning with diligence and hard work to overcome the fear of exposure as a fraud, followed by finding success with a project, and finally returning to the initial fear of exposure (Clance & Imes, 1978).

*Impostor phenomenon.* For the purposes of this study, the researcher focused on individuals scoring 45 or higher on the CIPS (Clance, 1985).

*Trauma-informed teaching.* Trauma-informed teaching refers to teachers who utilize trauma-informed leadership practices within the classroom (Nealy-Oparah & Scruggs-Hussein, 2018; Stokes & Brunzell, 2020). Trauma-informed teachers are aware and tolerant of psychological traumas that can occur in their students, families, staff, and other involved systems (Nealy-Oparah & Scruggs-Hussein, 2018; Stokes & Brunzell, 2020). Trauma-informed teachers can recognize the struggles that come with crisis and

lead with vulnerability, empathy, and compassion towards their employees (Nealy-Oparah & Scruggs-Hussein, 2018; Stokes & Brunzell, 2020).

*Pandemic.* A pandemic is an outbreak of infectious disease that spreads across several countries and affects a large number of people (Centers for Disease Control and Prevention, 2021). The World Health Organization (WHO) officially declared the COVID-19 outbreak to be a global pandemic on March 11, 2020 (as cited in Centers for Disease Control and Prevention, 2021).

*Quarantine.* For the purpose of this paper, quarantine is the period of time in which states and counties imposed restrictions on individuals to isolate themselves from others when in contact with the COVID-19 virus. The quarantine period was 14 days after the exposure.

*School closure.* School closures occurred in response to the COVID-19 pandemic as a way to ensure that the spread of the virus was slowed and to minimize the risk to students, teachers and staff in the school setting. Students were moved to distance on-line learning.

## Delimitations

- The study was delimited to secondary teachers serving in public high schools in northern California.
- The study was delimited to full-time teachers.
- The study was delimited to teachers who were required to shift to distance learning because of temporary school closure due to the coronavirus pandemic.

- The study was delimited to participants who scored 45 or higher on the CIPS (Clance, 1985).

## Organization of the Study

The chapters of this study are organized to demonstrate the components of the research process. An extensive review of the literature is presented in Chapter II. The impostor phenomenon is explored in detail, with attention to key behavioral characteristics, coping strategies employed by impostors, and the intersection between IP and effective classroom instruction. Next, Chapter III describes the research methodology for the study, including the data collection process and the research instruments used. The presentation of the data is in Chapter IV, including both quantitative and qualitative components. Finally, the research is summarized in Chapter V. The data analysis highlights key findings, provides answers to the research questions, and leads to suggestions for future research.

# CHAPTER II: REVIEW OF THE LITERATURE

The review of the literature starts with a discussion of the global context in which the study occurs: The coronavirus pandemic and its impacts on schools. Next, the IP is examined, including the historical development of the construct, the theoretical framework supporting the concept, factors that may influence the development of IP feelings, and measurement techniques. Then, the nine behavioral characteristics of the impostor phenomenon are detailed, followed by a discussion of the common coping strategies impostors use to cope with those behaviors. The review concludes by exploring challenges faced by teachers with IP, especially in the context of teaching through the pandemic.

## Context: Teaching Through the Pandemic

While teaching is already a stressful profession for many, the coronavirus pandemic of 2020-2021 created an unprecedented challenge for educators. Teachers with impostor feelings struggle with low self-esteem, feelings of inadequacy, anxiety, depression, and fear of being found out even in traditional classroom settings (Matthews, 2001; Rittenhouse, 2021). School closures and the rapid shift to distance learning created an additional layer of pressure for teachers who were already struggling with their own mental health (Allen et al., 2020; L. E. Kim & Asbury, 2020). This section provides a brief overview of the pandemic and its impacts on education.

### Coronavirus Pandemic

One of the most remarkable features of the coronavirus pandemic was the speed and extent of the response (Decker et al., 2020). The novel coronavirus, also known by its scientific name SARS-CoV-2, was first recognized in the United States in late

January, 2020 (Decker et al., 2020). By March, the pandemic had been declared and the first states began to implement lockdowns and school closures in an attempt to curb the spread of the virus (Decker et al., 2020).

**Pandemic.** A cluster of unusual pneumonia cases had been reported in Wuhan, China in late summer 2019, but the significance of the disease was not recognized until outbreaks of respiratory disease began to overwhelm hospitals in Italy and France during December 2019 (Platto, Wang, Zhou, & Carafoli, 2021). A mutation in the surface spike proteins was responsible for the virus' high degree of transmissibility, eventually resulting in its "…terribly efficient worldwide diffusion…." (Platto et al., 2021, p. 22). In March, 2020 the WHO declared a global pandemic, spurring widespread efforts to slow the spread of the disease (Decker et al., 2020). Unfortunately, these efforts have largely failed; as of October 2021, there have been more than 245 million cases of COVID-19, resulting in nearly 5 million deaths worldwide (Centers for Disease Control and Prevention, 2021). In the United States, there have been more than 45 million cases and over 725,000 fatalities (Centers for Disease Control and Prevention, 2021; "Coronavirus world map," 2021). Fortunately, the rapid development of several different vaccines has reduced the severity of disease; yet, the specter of new viral variants has tempered optimism for an end to the pandemic (Chow, 2021).

**Quarantine and lock-down.** By early March 2020, clusters of cases had been identified in Italy and France; the rapid rate of spread and high fatality rates, especially in older patients, provoked extreme response: isolation, quarantine, and lockdown (Decker et al., 2020). In the United States, bans on public gatherings began to appear in mid-March; on March 19, California became the first state to enact a stay-at-home order

(Centers for Disease Control and Prevention, 2021). Between March 15th and May 1st, nearly 40 states had enacted stay-at-home orders, affecting nearly 75% of Americans (Centers for Disease Control and Prevention, 2021; Decker et al., 2020).

These lockdown orders impacted nearly all aspects of American life, including travel, shopping, dining, and recreation. One of the greatest impacts, however, was on how Americans worked and attended school (Parker, Menasche Horowitz, & Minkin, 2020). Due to the stay-at-home orders, many Americans were forced to rapidly transition to remote work and distance learning. At the height of the pandemic lockdowns, over 70% of Americans reported that they were working from home, though not all workers had this option; only 25% of people from lower income jobs could complete their work remotely (Parker et al., 2020).

Unfortunately, even though stay-at-home orders prevented many individuals from contracting coronavirus, the lockdowns also had negative mental health impacts on some people (Parker et al., 2020; Pera, 2020). Many individuals reported a lack of attention/focus, low motivation, "Zoom fatigue", interruptions and loneliness as major barriers to productivity, though most enjoyed the increased flexibility and safety from exposure (Parker et al., 2020). Emotional distress, anxiety, depression, panic attacks, sleep disorders, and substance abuse were more serious effects of isolation during lockdown (Pera, 2020). Furthermore, individuals with pre-existing mental health issues experienced intensified symptoms (Pera, 2020).

The pandemic lockdowns also created an environment that was favorable for the development of impostor feelings (James, 2021). Within a span of days or weeks, people needed to adapt their workplace practices (virtual meetings, working from home,

distanced management) while simultaneously coping with personal stressors such as loneliness, health risks, financial insecurity, and family challenges (Kniffin et al., 2021). Leaders had to motivate and manage employees from a distance; workers had to cope with social and physical isolation or, conversely, encroachments from family (Kniffin et al., 2021; Parker et al., 2020). Self-doubt is a natural outcome of such rapid and unprecedented changes, and the lack of social feedback stemming from isolation and virtual communication exacerbated the feelings of faking it (James, 2021).

## Impacts on Schools

While children were generally less at risk from severe complications of COVID-19 than adults, their lives were even more heavily disrupted during the pandemic (Centers for Disease Control and Prevention, 2021; Imran et al., 2020). In many areas, schools closed in response to local outbreaks and stay-at-home orders, and teachers rapidly pivoted to distance-based instruction (Ujifusa, 2020). Students lost their school-based social support networks; experienced anxiety, depression and mortal fear; gained weight and lost physical fitness; and struggled academically (Imran et al., 2020; J. Lee, 2020; Pozo-Rico et al., 2020).

**School closures.** The first school closures in the United States came at the end of February, in response to an outbreak in the state of Washington (Decker et al., 2020). Within two weeks, Ohio became the first state to close its schools in response to the pandemic; by mid-March, more than half of all states had followed suit (Decker et al., 2020; Ujifusa, 2020). By April 1st, all public buildings in the United States had closed for the remainder of the year, though many continued to provide essential services such as meals and internet to their most vulnerable populations (Decker et al., 2020).

For teachers, the impact of the pandemic was felt on three major levels. First, teachers experienced health-related anxiety superimposed upon the psychological stress of isolation. Teacher morale fell to historic lows (Decker et al., 2020). Second, teachers suffered through many of the same work-from-home transitions as workers in other industries, including changes in workplace practices such as virtual collaboration, lack of connection to supervisors, and loss of feedback (L. E. Kim & Asbury, 2020; Kniffin et al., 2021). Finally, teachers experienced an additional layer of stress as they observed the impacts of the pandemic on their students. Not only did teachers empathize with their students; they also felt pressure to provide additional emotional and academic support beyond what would be needed in a traditional school year (Allen et al., 2020; L. E. Kim & Asbury, 2020). Yet teachers found this shared connection with their students to be one of the most rewarding aspects of teaching through the pandemic (McLeod & Dulsky, 2021).

**Distance learning.** One of the greatest causes of teacher stress was remote learning – the need to adjust to new technology, classroom management, and content adaptation – combined with the complete lack of engagement and positive feedback from students. As schools closed, various distance learning techniques were implemented including sending paper packets home, sharing assignments via email, posting pre-recorded video lessons, using pre-packaged digital curriculum, creating virtual spaces using Google Classroom, and hosting online video meetings with Zoom. Using technology was not a major stressor for younger, more educated teachers, who had more familiarity with integrating technology in their daily and work lives (Stachteas & Stachteas, 2020). Teachers reported that the most stressful instructional technique was

participating in synchronous ("live") sessions, followed by creating pre-recorded video lessons (Allen et al., 2020). Some teachers reported a sense of satisfaction and competence at being able to overcome technological hurdles and provide meaningful content (L. E. Kim & Asbury, 2020; McLeod & Dulsky, 2021). While virtual teaching was exhausting, teachers also reported that distance learning provided several benefits, such as more flexible schedules and the elimination of common classroom behavior management problems (Allen et al., 2020; Decker et al., 2020).

Under these challenging circumstances, it is not surprising that many teachers felt that they were impostors: simply faking it until things got better (Allen et al., 2020; James, 2021; L. E. Kim & Asbury, 2020). The combination of the rapid changes in work environment, loss of social support networks, widespread apprehension, and uncertainty about the future created a favorable climate for development of the impostor phenomenon (James, 2021). The following sections will provide an in-depth examination of the impostor experience, as well as how IP impacts teachers' ability to effectively lead during times of intense change.

## Introducing the Impostor Phenomenon

Stressful work environments often inspire feelings of self-doubt and fears of inadequacy in people. For some individuals, however, these feelings become deeply persistent, resulting in a toxic mental state known as the IP. These "impostors" become consumed by the irrational fear that they will be exposed as a fraud. This section presents a description of the imposter phenomenon including the beliefs and behaviors that are its hallmarks. Next, the theories underpinning the psychological foundations of impostorism are presented, along with a discussion of the factors that are believed to

contribute to the development of IP in some individuals. Finally, techniques for identifying IP and measuring its severity are reviewed.

## Original Description

In their seminal 1978 work, Pauline Rose Clance and Suzanne Imes recognized that many of their high-achieving, female psychotherapy clients suffered from a unique cognitive dissonance relating to their self-perceptions about success (Clance & Imes, 1978). These women, who by all external measures would be classified as highly successful, felt insecure and anxious about their performance at work. Despite their degrees, promotions and recognition, these professional women felt inadequate and undeserving of their success and worked in fear that they would be discovered as being frauds (Clance & Imes, 1978; Harvey & Katz, 1985). Rather than experiencing an "internal sense of success" from their achievements, they were convinced that their success was due to factors such as luck, personality, social connections or hard work rather than their abilities, skills or intelligence (Clance & Imes, 1978; Imes, 1979). While this phenomenon was originally identified in White, middle-class women in the United States, it has since been recognized across a diverse spectrum of ages, cultural groups, sexual orientations and genders (Bravata et al., 2020; Clance & O'Toole, 1987; Imes, 1979; D. B. Scott, 2017; Topping & Kimmel, 1985).

**Overview of behaviors and traits.** Impostors believe that they are not as bright or as competent as they appear to be and develop an intense, nagging fear that they are going to be discovered as a phony (Clance & O'Toole, 1987; Harvey & Katz, 1985). This results in clinical psychological symptoms such as profound anxiety, depression, lack of self-confidence and/or low self-esteem, and perfectionism (Clance & Imes, 1978;

Clance & O'Toole, 1987; Kolligian & Sternberg, 1991). Their profound fear of failure – and the humiliation that accompanies it – often leads them to avoid evaluation, reject offers of support, and work in isolation (Clance & O'Toole, 1987)

One of the hallmark characteristics of IP is a person's inability to believe that their innate abilities and intelligence are the root causes of their success (Clance, 1985; Topping & Kimmel, 1985). When impostors experience success, they are likely to attribute it to external factors, such as luck, work effort, perceptiveness, or even personal charm (Clance, 1985). In addition, impostors tend to believe that others perceive them to be more skilled and capable than they really are (Clance & O'Toole, 1987; Kets de Vries, 2005). Furthermore, individuals with IP tend to overestimate the abilities of others while underestimating their own abilities (Clance & O'Toole, 1987). Conversely, impostors are acutely aware of perceived failures and are highly self-critical (Kets de Vries, 2005; Thompson, Davis, & Davidson, 1998). They are more likely to attribute failures to a lack of intelligence or ability, and to over-generalize the importance of a single failure as an indication of their intellectual shortcomings (Thompson et al., 1998). Furthermore, impostors tend to reject external evidence of their success and have difficulty with accepting positive feedback or compliments (Clance & O'Toole, 1987). Thus, individuals with IP experience a type of cognitive distortion that causes them to accept the burdens of their failures without experiencing the benefits of success.

As a result of these feelings, impostors tend to engage in a variety of behaviors that are intended to either relieve stress, minimize the impact of potential poor performance or to maintain a successful impostor persona (Clance & Imes, 1978; Leary et al., 2000). Impostors often engage in over-preparation and perfectionism, believing

that their hard work, diligence, and extreme attention to detail will compensate for their perceived lack of ability (Clance & Imes, 1978; Thompson et al., 1998). On the other hand, an impostor's intense fear of failure can cause them to procrastinate or otherwise avoid engagement in work-related tasks (Chrisman, Pieper, Clance, Holland, & Glickauf-Hughes, 1995; Hutchins et al., 2018; D. B. Scott, 2017). In addition, impostors spend a significant amount of time on impression management, either by reducing others' expectations of their success or by engaging in acts of "intellectual inauthenticity" such as flattery, pandering, or withholding authentic opinions (Clance & Imes, 1978; Hutchins et al., 2018; Parkman, 2016). Some individuals with IP, especially women, may withdraw from public view and work in isolation to avoid the potential for exposure and humiliation (Caselman et al., 2006; Clance & O'Toole, 1987; Hutchins et al., 2018). For some individuals with IP, the situation becomes one of simply hanging on: "The focus becomes one of maintaining the façade for as long as possible until an escape plan can be formulated. The imposter now has to get out before being found out…" (Parkman, 2016, p. 52). Clance and Imes observed that individuals may engage in one or several of these behaviors, but rarely exhibit all of them (Clance & Imes, 1978). The behavioral characteristics of IP are examined in further detail in the section entitled "Describing the Imposter Phenomenon" later in this chapter.

**The impostor cycle.** The intense anxiety and self-doubt felt by impostors often leads to a repeated pattern of behaviors known as the impostor cycle (Clance & Imes, 1978). Upon being given a new project or assignment, impostors often exhibit one of two responses: either extreme over-preparation or intense procrastination, followed by "frenzied preparation" (Thompson et al., 1998). Due to their fear of failure, impostors

are driven to succeed at all costs. Using their diligence and attention to detail, impostors are often highly successful, but may expend huge quantities of energy and time to do so (Kets de Vries, 2005). As a result, individuals with IP are often perceived as being highly engaged and productive at work, often resulting in additional project assignments or promotions (Hutchins et al., 2018). For impostors, these new duties are accompanied by additional levels of stress and anxiety, and the cycle begins anew.

Even when impostors successfully complete tasks, the pride of accomplishment is short-lived, as impostors see their success as a product of their extreme effort (if they over-prepared) or luck (if they procrastinated) rather than their ability (Thompson et al., 1998). In short, they feel as though they have merely maintained their façade, rather than demonstrating authentic skills, intelligence, or abilities. In addition, impostors believe that other individuals would not have needed to work as hard to attain success (Parkman & Beard, 2008). This deepens their feelings of impostorism while also increasing the levels of perfection that they expect themselves to achieve. The impostor is trapped between two untenable options: the potential humiliation of failure or the exhaustive effort required to ensure success. As a result, individuals with IP not only experience fear of failure, but they also develop a fear of success; each hard-won success creates yet another opportunity to fail or to be exposed as a fraud. This experience is captured by the classical Roman poet Horace: "the higher the tower, the greater the fall."

**Theoretical Foundations: Attribution and Self-Efficacy**

The IP construct is largely grounded in two concepts from classical psychology: attribution and self-efficacy (Ross et al., 2001). Attribution is the process by which individuals assign positive or negative feelings to events (Deaux & Emswiller, 1974;

Weiner, 2010). On the other hand, self-efficacy describes the extent to which a person believes their choices and actions can positively impact the outcome of an event (Bandura, 1977). When a person experiences success on a task, they may attribute that success to either internal factors (e.g. skill, ability, intelligence), or externally-controlled factors such as luck, task difficulty, or social interactions (Deaux & Emswiller, 1974; Weiner, 2010). Success on a difficult task is associated with pride (positive attribution) unless it is negatively attributed to luck (Weiner, 2010). Deaux and Emswiller (1974) observed that women are more likely to attribute success to accident or error, whereas men tend to attribute it to their abilities: "what is skill for the male is luck for the female" (p. 80).

The second, and related, theoretical foundation for the impostor phenomenon is Bandura's concept of self-efficacy (Bandura, 1977). Rather than being used to understand the causes of IP, this theory is important the choices and actions of individuals who experience IP. The motivation to perform an action is associated with two different predictions: efficacy expectations and outcome expectations (Bandura, 1977). People will perform a behavior if they believe that a desired outcome will result from their behavior (i.e. positive outcome expectation). However, people need to believe that they actually have the capacity to perform the necessary behavior (i.e. positive efficacy expectation) in order to take action (Bandura, 1977). When individuals feel that they can positively influence outcomes with their actions, they have self-efficacy: The feeling of being in control.

Clance and Imes (1978) grounded their original description of the imposter phenomenon as an error in attribution, whereby successful women were more likely to

(incorrectly) attribute their success to luck or effort rather than to intelligence or ability. According to the attribution theory, these errors cause individuals with IP to perceive themselves as being imposters; successful only because they were lucky, not because they were capable. Several studies have shown a strong positive correlation between IP feelings and attributions of success to factors with an external locus of control, especially work effort (Sightler & Wilson, 2001; Topping & Kimmel, 1985). Conversely, individuals with IP are more likely to attribute failures to factors with an internal locus of control (Niles, 1994). In addition, research has shown that individuals with IP are more likely to exhibit low self-efficacy; yet they are still highly motivated to achieve (Lapp-Rincker, 2003). Due to these errors in attribution and generally low self-efficacy, individuals with IP have different expectations of success, and therefore, exhibit different behavioral responses to challenging tasks (Lapp-Rincker, 2003; Leary et al., 2000).

The intense perfectionism and overwork exhibited by IPs are often interpreted through the lenses of attribution and self-efficacy. Individuals with IP often struggle under the perception that their success (an outcome) is the product of an incorrect set of inputs, such as luck or effort, rather than intelligence or ability (Clance & Imes, 1978). As a result, they are highly motivated to increase their effort in order to achieve success. Yet, they do not attribute their success to their abilities, and as a result, take little pride in this effort (Imes, 1979; Weiner, 2010). Individuals with IP compensate for their self-perceived lack of ability by increasing their effort, resulting in the cycle of stress and burnout known as the imposter cycle (Clance & Imes, 1978; Cokley et al., 2015; Hutchins, 2015). Only through the understanding of attribution and self-efficacy

can individuals with IP gain control over their negative behavioral patterns and break the cycle.

**Factors that Influence the Development of IP**

While early research focused specifically on the sources of impostorism in professional women (Clance & Imes, 1978), IP is now known to be found in men and women from diverse backgrounds. Furthermore, research has shown that impostor feelings are already well-established by adolescence (Caselman et al., 2006; Chayer & Bouffard, 2010; Lester & Moderski, 1995). This section will describe the factors that contribute to the development of impostor feelings. These include the impact of a young person's family dynamics as well as gender-related expectations. In addition, the broader influence of stereotypical expectations based on race, gender, and sexual orientation are also considered.

**Family influences.** Clance and Imes (1978) noted that the professional women they worked with tended to come from two different types of family backgrounds. At one end of the spectrum, some grew up in families with unrealistically high expectations of success. At the other extreme, some came from families that were either ambivalent or critical of the impostor's potential for success (Ross et al., 2001). While any sibling can become an impostor, there is some evidence that eldest children are most susceptible to developing impostor feelings, especially if they are the first to attend college (Craddock et al., 2011; Harvey & Katz, 1985; Kets de Vries, 2005).

Family messaging is often responsible for creating the conditions in which impostor feelings develop (Clance & O'Toole, 1987). When children grow up hearing that they are outstanding and capable in every way, they come to integrate that

expectation into their self-image (Clance & O'Toole, 1987). This is especially true for children whose parents praise them lavishly and indiscriminately at a young age, even for objectively "average" accomplishments such as learning to walk or read (Clance & Imes, 1978). These children come to believe that everything that they do should come easily to them, and they come to expect perfection from themselves. As a result, when they have challenges in completing tasks, or fall short of superior execution, they begin to doubt both their parents' perceptions and their own abilities (Clance & Imes, 1978). This cognitive disconnect creates self-doubt and anxiety, especially if the family member's express disappointment (Clance, Dingman, Reviere, & Stober, 1995). As a result, they begin to create a façade, maintaining an outward appearance of excellence while hiding their inner struggle. Thus, the impostor persona appears to originate as a self-protective strategy.

As the child grows into adolescence and young adulthood, they may feel obligated to live up to family expectations, even when they know this is impossible. College, graduate, and medical students feel intense pressure to succeed, especially when they come from families who insist upon consistently high academic achievement (Bravata et al., 2020; Craddock et al., 2011; King & Cooley, 1995). First-generation college students particularly feel the burden of high expectations as they represent their family's future (Harvey & Katz, 1985; Trefts, 2019). It is important to note that a person's *perception* of family expectations is likely more important to the development of impostor feelings than the actual achievement orientation of the family (King & Cooley, 1995). Achievement motivation itself does not appear to be a cause of impostorism;

rather, high achievement motivation combined with low self-efficacy is a strong predictor of IP (Lapp-Rincker, 2003).

On the opposite end of the familial spectrum, children who grow up in ambivalent or unsupportive households are also vulnerable to the development of impostor feelings (Clance et al., 1995; Clance & Imes, 1978; Kets de Vries, 2005). These children often receive the message and that another member of the family is the "bright one" and that their strengths are instead based on physical appearance, social skills or communication, (Clance & Imes, 1978; Clance & O'Toole, 1987). Rather than being encouraged to succeed, their ambitions are dismissed or minimized, and they are often encouraged by family members to prioritize family responsibilities (such as helping to care for siblings or work in a family business) or pursue alternate career paths (Steinberg, 1986). Young girls often receive the message that their desire for personal achievement is secondary to their need to work within the household (Steinberg, 1986). In unsupportive familial settings, especially where conflict is present, the child may secure the support of adults by working to please others, regardless of their own needs or desires (Clance et al., 1995). The child actively creates an outward persona designed for the approval of others, and as a result experiences cognitive dissonance as their self-image develops in conflict between what others expect and what they themselves want.

**Gender.** The impostor phenomenon was originally identified in the late 1970s, during the period when women were first beginning to enter the professional workforce in large numbers. Much of the early research into IP focused on the tension between the traditional roles held by women in American society and the desire for women to pursue education and careers that had previously been dominated by men (Clance & Imes,

1978). Women often feel tension in pursuing education and careers, especially when it conflicts with their ability to prioritize traditional family responsibilities, causing anxiety and guilt (Clance & O'Toole, 1987). Western society tends to instill messages about "appropriate" roles for women at an early age and push them towards more "nurturing" careers such as nursing and teaching (Studdard, 2002). Clance and Dingman (1995) hypothesized that IP helps alleviate the conflict between gender expectations and the desire for achievement:

> …on an unconscious level the imposter phenomenon allows a woman to deal with her ambivalence about being successful by allowing her to keep her achievement out of her awareness…she may attribute her success to more acceptable and traditionally feminine skills… (p. 84)

Persistent patterns of gender inequality and gender socialization appear to be a major factor in the development of IP in women (Cokley et al., 2015; McGregor, Gee, & Posey, 2008).

Many studies have shown that IP is not solely experienced by women. As early as 1979, studies emerged that demonstrated that IP feelings were expressed in both sexes (Imes, 1979). Bravata's et al. (2020) comprehensive review revealed that more than half of all recent studies indicated no gender difference in prevalence of IP. Other studies indicate that while IP may be experienced by both sexes, females appear to experience impostor feelings more intensely than their male counterparts (Cokley et al., 2015; Kumar & Jagacinski, 2006). Furthermore, males and females may have different behavioral responses to IP feelings and use gender-specific coping strategies (Badawy, Gazdag, Bentley, & Brouer, 2018). This may indicate that there are underlying

personality traits, including neuroticism, introversion, and conscientiousness, that are more relevant predictors of IP than gender (Ross et al., 2001). For example, individuals who engage in "feminine" social comparison processes, i.e. who are highly empathetic and self-conscious, are more likely to exhibit imposter feelings regardless of their sex (Fassl, Yanagida, & Kollmayer, 2020).

A common theme in these studies is that individuals, regardless of sex, may develop imposter feelings when they are pursuing achievement in an area outside of societal gender expectations (Clance et al., 1995; Clance & O'Toole, 1987; Cokley et al., 2015). In professions that are predominantly associated with one sex, members of the opposite sex are more likely to experience IP (Harvey & Katz, 1985; Parkman, 2016). Furthermore, individuals who exhibit gender stigma consciousness – i.e. the belief that "stereotypes about their gender will be used to judge their intellectual competence" (Cokley et al., 2015, p. 422) are significantly more likely to experience IP. This indicates that cultural and social pressures, rather than gender itself, may be more important in influencing the development of impostor feelings.

**Societal expectations based on stereotypes.** Modern research has examined IP across a more diverse cross section of individuals and is starting to explore the intersections between of racial and sexual identity with impostorism. Social hierarchies, especially those influenced by gender and race, are particularly important in exacerbating feelings of inadequacy: "…people feel fraudulent especially when ascending hierarchies in which by societal definition they do not belong at the top of the pyramid…" (Clance et al., 1995, p. 84). Chae et al. (1995) noted that IP is found with much lower prevalence in Korean populations, possibly because Korean society has "…clearly defined social

hierarchy [that provides] a clearer sense of identity for individuals…" (p. 481). This tension may be felt particularly acutely by women of color, who not only experience gender- and family-related expectations, but also oppression and microaggressions based on race-related stereotypes when trying to cross social boundaries (D. L. Bernard, Lige, Willis, Sosoo, & Neblett, 2017; Nadal, King, Sissoko, Floyd, & Hines, 2021). This is exacerbated even further when individuals of color pursue career paths that cross traditional gender expectations, such as African American women in male-dominated STEM fields (Collins, Price, Hanson, & Neaves, 2020).

Craddock et al. (2011) noted that young women of color were intensely aware of their racial identity and felt pressure to succeed as a representative of their race. However, race alone is not enough to explain impostor feelings (D. L. Bernard et al., 2017; Ewing, Richardson, James-Myers, & Russell, 1996). Many students of color experience stress related to their minority status, but IP was a greater predictor of negative mental health outcomes than minority-status stress (Cokley et al., 2017). Race-related expectations appear to function in conjunction with family expectations and academic self-identity to intensify, rather than cause, impostor feelings (D. L. Bernard et al., 2017; Cokley et al., 2017; Ewing et al., 1996). Furthermore, the complex interplay between race, culturally-specific family roles, traditional values, and IP may cause some minority groups to be more vulnerable to IP than others. For example, in a study of African American, Latino, and Asian students, African American students reported the highest levels of minority status stress, yet students of Asian descent were significantly more likely to report intense impostor feelings (Cokley, McClain, Enciso, & Martinez, 2013).

Impostorism may also be felt strongly by members of the LGBTQ+ community, though this is a relatively new area of research. D. B. Scott, (2017) recognized the important parallels between the experiences faced by impostors and the feelings of fraudulence LGBTQ+ members experience before their coming out. Cokley et al. (2015) observed that the connection between gender and impostorism may be particularly important for individuals who believe that their performance will be judged based on their gender. This may be particularly acute for individuals who experience stereotype threat based on their sexual orientation or gender expression, or for individuals who are members of multiple marginalized groups, such as lesbian African American women (D. L. Bernard et al., 2017; Nadal et al., 2021). Models seeking to explore the development of IP should include the nuances of parenting style and family experiences, as well as the intersectionality between race, status, and sexual orientation (Nadal et al., 2021).

## Quantifying and Measuring IP

There have been several different assessment techniques designed to identify individuals with IP and assess the intensity of that experience (Clance, 1985; Harvey, 1981; Leary et al., 2000; Kolligian & Sternberg, 1991). Researchers have validated these instruments, though there is disagreement about which is the most effective at distinguishing the impostor experience from other intersectional phenomena, such as neuroticism and perfectionism (Bravata et al., 2020; Chae et al., 1995; Chrisman et al., 1995; Mak et al., 2019). Of these instruments, the original CIPS remains the most commonly used measure of impostor feelings (Bravata et al., 2020).

**Clance imposter phenomenon scale.** Quantitatively measuring IP experiences and feelings is most often achieved with CIPS, originally published in 1985. This

questionnaire asks users to rate themselves on a scale of one (not at all true) to five (very true) for 20 statements that address impostor-related behaviors. Examples of prompts from the CIPS include "I can give the impression that I am more competent than I really am" (Clance, 1985, question 2) and "At times, I feel my success has been due to some kind of luck" (Clance, 1985, question 11). These questions can be divided into three aspects of the impostor experience: (a) fake, (b) luck, and (c) discount (Bechtoldt, 2015; Chrisman et al., 1995). Discount questions investigate an individual's responses to receiving positive feedback or praise, including fears about future performance. Luck questions assess a person's suspicions that chance, error, or good fortune are the explanation for success. Finally, fake questions are used to explore the individual's self-doubt about their intelligence, skills, and abilities.

A person's total score is calculated by adding up the points for each response. A score of 61-80 points is generally classified as "high" impostor feelings; scores above 81 points indicate "intense" impostor experiences (Clance, 1985). These are not strict cut-off values, however, and researchers have been somewhat inconsistent at applying these labels (Bravata et al., 2020). Numerous studies have validated the use of the CIPS to identify impostorism (Chrisman et al., 1995; Mak et al., 2019), but there has been considerable discussion about whether the CIPS score reflects a single construct, or is instead the result of multiple, intersecting psychometric dimensions (Bravata et al., 2020; Chae et al., 1995; Chrisman et al., 1995; Mak et al., 2019). While the CIPS is the most common assessment technique for the identification of IP (Bravata et al., 2020; Mak et al., 2019), several other scales have been developed to assess various other aspects of impostorism.

**Other assessment techniques.** The first measurement scale for IP was known as the Harvey imposter phenomenon scale, or HIPS (Harvey, 1981). Researchers noted unexpected results with this scale, however, as further testing revealed issues with internal consistency and the ability of the HIPS to distinguish between impostors and non-impostors (Chrisman et al., 1995; Holmes et al., 1993). This was particularly noted in non-clinical settings (i.e. self-testing) where false positives and false negatives were relative common near the cut-off scores (Holmes et al., 1993). Clance developed the CIPS in response to the issues with the HIPS, especially eliminating reverse-score items that may have been confusing for users and impacted accuracy in self-assessment (Chrisman et al., 1995; Holmes et al., 1993). The CIPS scale also produced fewer false positives and false negatives than the HIPS and was e more sensitive overall in detecting IP feelings in both clinical and non-clinical subjects (Holmes et al., 1993).

Other researchers rejected the concept of IP as a distinct psychological construct, and instead focused on a multidimensional experience of self-perceived fraudulence (Kolligian & Sternberg, 1991; Lapp-Rincker, 2003; Ross et al., 2001). Kolligan et al. (1991) developed the perceived fraudulence scale (PFS) to focus on the continuum from "true" impostors (deliberate intent to create a false impression) to "perceived" impostors who feel like frauds due to attribution errors. Both the PFS and CIPS were found to be internally reliable, were able to identify individuals with IP and similarly quantified the relative strength of an individual's impostor feelings (Chrisman et al., 1995). In addition, both the PFS and CIPS confirm the existence of IP as a psychological construct that is related to, but distinguishable from anxiety, depression, self-esteem, and self-monitoring (Chrisman et al., 1995; Mak et al., 2019). However, researchers disagree as to the

number and type of dimensions involved, thereby limiting the development of a single "gold standard" assessment (Mak et al., 2019).

The most recent measurement instrument, the Leary impostor scale (LIS) was developed as a more focused attempt at assessing a single dimension of IP: an individual's sense of being a fraud (Leary et al., 2000). Of the measurement scales presented here, this is the only unidimensional scale. As a result, it is challenging to compare the validity of this tool directly to the CIPS, HIPS, and PFS (Mak et al., 2019).

While researchers disagree whether IP represents a single psychological "syndrome," research appears to support that it is a reliably identifiable complex of attitudes and behaviors. Since the CIPS is relatively short and easy to administer reliably, it appears to be preferred over the PFS (Chrisman et al., 1995; Mak et al., 2019). Furthermore, the CIPS scale appears to be more sensitive at detecting impostor feelings in nonclinical subjects (Holmes et al., 1993). However, there are concerns that the CIPS and PFS assess multiple dimensions of the IP experience (such as anxiety, perfectionism, fraudulence), yet produce only a single summary score (Holmes et al., 1993; Mak et al., 2019). Finally, since the original measurement scales were developed without regard to sex, race, or other culturally relevant factors, there are challenges with interpreting results from these instruments across marginalized populations (Bravata et al., 2020; Mak et al., 2019; Nadal et al., 2021). Some researchers have advocated for the development of "intersectional" scales for measuring IP in non-White populations, such as scales specifically developed for LGBTQ+ people or people of color (Nadal et al., 2021).

## Experiencing the Impostor Phenomenon

What is it like living with the feelings that one is a fraud, and how does this impact impostors' daily lives? In this section, the nine behavioral characteristics of IP are described, including:

- anxiety
- self-doubt
- depression
- perfectionism
- procrastination
- impression management
- emotional exhaustion
- fear of failure
- fear of success (Clance, 1985; D. B. Scott, 2017; Vergauwe et al., 2015).

Finally, coping strategies used by impostors are discussed, including both adaptive and maladaptive techniques.

### Nine Behavioral Characteristics of Imposter Phenomenon

The chronic stress and dread felt by impostors results in a constellation of nine behaviors that are indicative of the impostor experience (D. B. Scott, 2017). In their original work outlining the impostor phenomenon in a clinical setting, Clance and Imes (1978) noted four symptoms directly associated with IP: "…generalized anxiety, lack of self-confidence, depression, and frustration related to inability to meet self-imposed standards of achievement [i.e. perfectionism]…" (Clance & Imes, 1978, p. 242). Furthermore, these core behaviors often indirectly result procrastination, emotional

exhaustion (including burnout), manipulation of one's public image (i.e. self-presentation or impression management), fear of failure, and fear of success (D. B. Scott, 2017). Impostors do not necessarily experience all nine of these behaviors; yet, when considered together, they provide a relatively nuanced image of the impostor experience (Clance, 1985; Vergauwe et al., 2015). Each of these nine characteristic behaviors is discussed in detail below.

**Anxiety.** Anxiety is a normal feeling of nervousness or uneasiness experienced by people as they think about possible future events. It is so common that DiTomasso and Gosch (2002) called it a "…universal phenomenon experienced by all human beings at one time or another during the course of their lives…" (p. 1). Mild levels of anxiety may provide a fight-or-flight survival advantage for individuals coping with real-world threats (Chrousos, Mentis, & Dardiotis, 2020; DiTomasso & Gosch, 2002). Since impostors live in fear potential discovery, it is not surprising that that they experience persistent and profound anxiety (Clance & Imes, 1978; Steinberg, 1986). The brain responds to this distress by releasing a unique mix of neurotransmitters and activating specialized regions of the central nervous system (Chrousos et al., 2020). Chronic anxiety causes a chemical imbalance in this stress response system, which, in turn, triggers other mental and physical symptoms, including stress, depression, sleep disorders, digestive concerns, and substance abuse (Chrousos et al., 2020; DiTomasso & Gosch, 2002).

Numerous studies have demonstrated a strong positive association between IP and anxiety (N. S. Bernard, Dollinger, & Ramaniah, 2002; Chae et al., 1995; Chrisman et al., 1995; Fraenza, 2014; Ross et al., 2001; Topping & Kimmel, 1985). This appears to be rooted in the anticipation of being "caught" as being a fraud (Rakestraw, 2017). This

relationship may be particularly important in academic and other high-stress environments (Fraenza, 2014; Hutchins, 2015; Ives, 2011) or in settings where an individual has recently advanced or been promoted (Topping & Kimmel, 1985). Individuals in these environments often express that they were hired by mistake or because of luck, personality, or networking; as a result, they anticipate the future threat of being exposed as a pretender (Kets de Vries, 2005; Ross et al., 2001; Whitman & Shanine, 2012). There is evidence that young impostors begin feeling anxiety during childhood or adolescence as they feel pressure to succeed at home or at school (Caselman et al., 2006; Chayer & Bouffard, 2010; Langford & Clance, 1993). Anxiety related to impostor feelings is well-established in college, graduate, and post-graduate students (Bravata et al., 2020; Ives, 2011; Kolligian & Sternberg, 1991; Thompson, Foreman, & Martin, 2000). Women and people of color may be particularly vulnerable to anxiety related to stereotype threat, as they seek to achieve despite race- and gender-related societal expectations (Edwards, 2019; Nadal et al., 2021).

**Self-doubt (lack of self-confidence).** Like anxiety, self-doubt is a normal human experience that is both chronic and exaggerated in impostors. Self-doubt occurs when one feels "…uncertainty about one's abilities or competence…" (Zhao, Wichman, & Frishberg, 2019, p. 300). Moderate self-doubt can be beneficial to individuals, resulting in improved effort and performance (Zhao et al., 2019). However, chronic or intense self-doubt acts as a cognitive threat to a person's need for competence and can therefore result in increased anxiety (Zhao et al., 2019). As self-doubt persists, it often impacts individuals' self-esteem and develops into a deep-seated fear of failure, feeding back into a cycle of anxiety, emotional exhaustion, and depression (Hutchins et al., 2018;

Rakestraw, 2017; Whitman & Shanine, 2012). Several other commonly observed IP behaviors are linked to maladaptive techniques for coping with self-doubt, including procrastination, impression management (especially self-handicapping behaviors), and over-preparation to ensure success (Zhao et al., 2019).

This destructive loss of self-confidence appears to be grounded in the attribution errors common to the imposter phenomenon (Ross et al., 2001). Rather than attributing their success on tasks to their competence, IPs tend to credit luck or effort for that success (Clance & Imes, 1978; Topping & Kimmel, 1985). Furthermore, individuals with IP resist positive feedback from peers and superiors, thereby losing the opportunity build self-confidence and create a sense of agency (Clance & O'Toole, 1987). On the other hand, individuals with IP are more likely to blame themselves for failures, and to exaggerate the importance of those failures (Fraenza, 2014; Thompson et al., 1998). As a result of these errors, individuals with IP tend to lose their feelings of self-efficacy, or the belief that they can positively and intentionally impact the outcome of an event (Bandura, 1977; Ives, 2011). Taken together, the loss of self-efficacy, persistent feelings of self-doubt, and overall lack of confidence in one's ability to be an agent of success can all contribute to reduced self-esteem for impostors (Bahram, 2011; Matthews, 2001; Ross et al., 2001; Thompson et al., 1998).

**Depression.** Depression is a mental state that encompasses a wide variety of persistent negative moods and behaviors, including sadness, weakness, powerlessness, loss of energy, and loss of interest or enjoyment in activities (Barroso, 2003; World Health Organization, 2021). Depression can also produce physical symptoms, such as loss of appetite, sleep disturbance, fatigue, and lack of concentration (World Health

Organization, 2021). Individuals who suffer from serious depression may withdraw from social contact with others and are at increased risk of substance abuse and suicide (Barroso, 2003; World Health Organization, 2021). Anxiety and depression are strongly related to each other (DiTomasso & Gosch, 2002) and are the two traits most strongly associated with the IP (Bravata et al., 2020; Clance & O'Toole, 1987; Ross et al., 2001; Wang, Sheveleva, & Permyakova, 2019).

Clance and Imes noted (1978) in their original work that depression was one of the clinical symptoms seen most often in the women who were receiving therapy for the impostor phenomenon. Recent work has attempted to clarify the relationship between depression and IP, as it appears that the two are separate, but comorbid, conditions (Bravata et al., 2020; Chrisman et al., 1995; McGregor et al., 2008). Numerous studies have linked both conditions to psychological profiles such as neuroticism, perfectionism, and introversion (Berinato, 2015; N. S. Bernard et al., 2002; Chae et al., 1995; Clance, 1985; Cokley et al., 2018; Langford & Clance, 1993; Ross et al., 2001; Vergauwe et al., 2015). The general personality type of IPs appears to be strongly influenced by depressive cognition patterns combined with overly sensitive self-monitoring and social anxiety (Chae et al., 1995; Fassl et al., 2020; Kolligian & Sternberg, 1991; Ross et al., 2001). The connection between depression and perfectionism is particularly important: perfectionistic individuals high in impostor feelings were significantly more likely to develop depression than non-impostors (Wang et al.. 2019).

The psychological distress caused by IP appears to be one of the key factors in causing or contributing to depression (Clance, 1985; Fassl et al., 2020; McGregor et al., 2008; Thompson et al., 1998). The long-term effects of feeling trapped within a lie can

lead to a downward spiral of negative thoughts and result in mental health challenges (Calafell, 2017; Kasper, 2013; Whitman & Shanine, 2012; Zorn, 2005). This may be experienced particularly acutely by individuals in minority populations, who already feel isolated, invisible, and under increased pressure to succeed (D. L. Bernard et al., 2017; Cokley et al., 2013; Craddock et al., 2011; Nadal et al., 2021). In extreme cases, depressive thoughts associated with IP have been associated with self-destructive behaviors such as social isolation, substance abuse, and may even lead to suicidal thoughts (Hutchins, 2015; Lester & Moderski, 1995; D. B. Scott, 2017; Steinberg, 1986).

**Perfectionism.** Perfectionism is a multidimensional construct that is grounded in the act of setting unreasonably high standards or goals. One of the most widely used models of perfectionism ascribes three targets for those standards: (a) self-oriented, (b) socially oriented, and (c) other-oriented (Brustein, 2013). While Clance and Imes (1978) did not specifically use the term self-oriented perfectionism, they described one of the defining characteristics of the impostor phenomenon as "…frustration related to inability to meet self-imposed standards of achievement" (p. 242). Socially oriented perfectionists perceive that everybody else has excessively high standards for them, while other-oriented perfectionists expect others to perform at unreasonably high levels (Brustein, 2013).

Of the three types of perfectionism, research on impostors has shown self-oriented perfectionism to be most strongly linked with IP (Thompson et al., 2000; Wang et al., 2019), with more limited impacts from socially oriented and other-oriented perfectionism (Fassl et al., 2020; Ferrari & Thompson, 2006). Clance (1985) observed that impostors often feel "…the need to be special, to be the very best…[and] expect to do everything

flawlessly and with ease…" (p. 26). When impostors cannot easily and perfectly execute a task, their feelings of fraudulence are intensified. A strong connection between IP and self-oriented perfectionism was demonstrated in impostors who were particularly concerned about making mistakes (Dudau, 2014; McGregor et al., 2008; Thompson et al., 2000). Perfectionist impostors were significantly more likely to be anxious, exhibit depressive/negative affect, and feel less control over their environment (Thompson et al., 1998; Thompson et al., 2000).

On the other hand, Leary et al. (2000) found that impostors did not directly experience socially-oriented perfectionism. Instead, high impostor scores were predicted by a large discrepancy between impostors' own negative self-appraisals and their perceptions of other's positive, but not excessively high, appraisals of them. Other researchers have shown that IPs are more deeply concerned with social appearances and displays of perfectionism in a social context (Ferrari & Thompson, 2006). Socially oriented perfectionism may play an important role in impostors' perceptions of gender- and race-related stereotype threat, whereby impostors feel the need to represent their race/gender or surpass socially established stereotypes (Dancy & Brown, 2011; Edwards, 2019).

Several studies have sought to explore the connections between the impostor phenomenon and general personality profiles (Ross et al., 2001; Thompson et al., 2000; Vergauwe et al., 2015). The psychological traits of perfectionism and neuroticism (anxiousness, depression, and shame), along with measures of self-efficacy, were the key factors in explaining variance in IP scores (Vergauwe et al., 2015). In other words, individuals high in maladaptive perfectionism and neuroticism and low in self-efficacy

were significantly more likely to experience intense impostor feelings (Vergauwe et al., 2015). Several other studies have demonstrated similar links between maladaptive perfectionism and IP, especially in combination with neuroticism (N. S. Bernard et al., 2002; Cokley et al., 2018; Wang et al., 2019). On the other hand, self-oriented perfectionism in impostors can also play a positive role in achievement orientation, motivation, and academic success (King & Cooley, 1995; Kumar & Jagacinski, 2006; Thompson et al., 1998).

Perfectionism is also strongly linked with a fear of failure in individuals with impostor feelings (Berinato, 2015; Rakestraw, 2017). Combined with neuroticism, these factors create ideal conditions for a destructive feedback loop known as the impostor cycle (Berinato, 2015; Vergauwe et al., 2015). Individuals set exceedingly high standards for themselves, yet, because they're somewhat neurotic, they develop anxiety about the possibility of failure. They respond by either overpreparing or by initially procrastinating and then completing the task in a frenzy of activity (Vergauwe et al., 2015). Because of their perfectionism, they are generally successful at the task; however, rather than feeling rewarded, their success simply reinforces their feelings of fraudulence – and they become anxious that they will be exposed. Because of their success, they are often assigned new tasks, and thus the cycle is renewed. This combination of traits can lead to the intense work ethic often exhibited by impostors, and can eventually contribute to overwork, depression, and burnout (Hutchins, 2015; Trefts, 2019).

**Procrastination.** As noted in the description of the impostor cycle above, the fear of failure and perfectionism can also lead to procrastination, or the desire to avoid or delay a task (Korstange et al., 2019). It is important to note that not all procrastination is

maladaptive. Korstange, Craige, and Duncan (2019) differentiates between active and passive forms of procrastination. In active procrastination, individuals who prefer to work under pressure (such as deadlines) will strategically delay work, yet still achieve success. Passive procrastinators, on the other hand, will avoid work due to fear or indecision, and as a result delay their work until they can no longer complete the task satisfactorily (Korstange et al., 2019). Thus, it is passive, or avoidant, procrastination that is a key component of the impostor cycle: "…they're so afraid they won't be able to do well that they … feel they're unable to move at all towards completing the task… (Clance, 1985, p. 25). Unfortunately, once IPs finally begin the task, they must work with a sense of panic and intense effort to finish on time, and as a result they tend to attribute their success on the task to their frenzied effort rather than to their abilities. This sets the stage for the impostor cycle, "…an almost superstitious belief that they must endure all of the torment again in order to succeed…" (Clance, 1985, p. 26).

Passive procrastination can be seen as an avoidant coping strategy used by impostors to reduce or delay negative emotions such as anxiety (Hutchins et al., 2018). Procrastination also provides impostors some relief from their self-imposed expectations of perfection by providing a convenient explanation for any shortcomings (Dudau, 2014; Ferrari & Thompson, 2006). In this sense, procrastination is a protective self-handicapping behavior that places "an obstacle in the path [of success] … so that possible failure can be blamed on the obstacle…" (Want & Kleitman, 2006, p. 963). Self-handicapping behaviors like procrastination represent a type of achievement orientation known as ability-avoidance goals, where the primary outcome is the desire to avoid failure, rather than to achieve success (Kumar & Jagacinski, 2006). In this case, the

impostor seeks to minimize damage to their self-esteem by manipulating the outcome: they intentionally fail at a lesser task (time management) rather than risking failure at an important task, such as skill mastery (Ross et al., 2001).

Unfortunately, procrastination is only a short-term solution as it does not address the true cause of distress. Procrastination is an attractive behavior for impostors as it allows them to conserve emotional resources and defer their anxiety (Hutchins et al., 2018). However, since avoidance does not truly treat the cause of the stress – i.e. the impostor feelings themselves – the cycle of procrastination, fear of failure, perfectionism, and frenzied overwork will eventually contribute to emotional exhaustion (Hutchins et al., 2018; Whitman & Shanine, 2012).

**Self-presentation and impression management.** Impostors use a great deal of energy to project an image of success despite their private feelings of insecurity, vulnerability, and inadequacy (Ross et al., 2001). Once the false impostor persona has been assumed, it is critical that the illusion is protected. Parkman (2016) states, "…in the mind of the impostor, a very positive, but very false impression of ability has been created…maintaining this false impression becomes a significant goal…" (p. 54). Clance and Imes (1978) described acts of "intellectual inauthenticity" as one of the types of behaviors responsible for helping to maintain the impostor's phony public persona. This type of management is known as self-presentation which is a conscious or unconscious behavior intended to communicate information about the self to others and to create a favorable public representation of the self to an audience (Baumeister, 1982).

Individuals may use flattery, social skills, or friendship as a way of seeking approval from mentors or superiors (Clance et al., 1995). In addition, some individuals

may curry favor by withholding their own contradictory ideas or negative opinions. For example, women may cultivate a positive image by engaging in consensus-building rather than debate, and by phrasing their ideas as questions rather than as statements (Mullangi & Jagsi, 2019). For people of color or members of marginalized groups, there may be additional pressure to conform or to prove that they belong. "…[I]instead of being their full selves, they mask, camouflage, or alter their being to be accepted by the majoritarian group…" (Edwards, 2019, p. 20). In another study, female, first-generation STEM majors reported that they felt pressure to display a public image of success but were so afraid of failure that they felt physically ill (Trefts, 2019). They crafted this image by engaging in perfectionistic, workaholic behaviors, but then concealing their intense efforts, often lying about the extent of their academic achievements (Trefts, 2019). By using flattery, conforming to stereotypes, or hiding perfectionistic work habits, IPs use impression management to mediate the discrepancy between what the individual perceives as their "true self" and the impostor persona that they project to the outside world.

In general, there is evidence that individuals with IP may be highly self-aware of their personality characteristics as well as participate in more self-monitoring and social comparison behaviors (Chae et al., 1995; Fassl et al., 2020; Kolligian & Sternberg, 1991). One study found that impostors tended to hide both their positive and negative traits from others (Byrnes & Lester, 1995). However, individuals with IP may have distorted self-appraisals, where they exaggerate the negative traits and minimize the positive ones (Thompson et al., 1998). Perfectionistic impostors utilize self-presentation strategies to display a highly positive public image that starkly contrasts with their inner doubt

(Dudau, 2014). These strategies may include intensely positive self-promotion, concealing or avoiding discussion of mistakes, or completing tasks in private to minimize the opportunity for others to observe potential imperfection (Dudau, 2014).

Several authors have explored the idea that IP may be an intentionally manipulative act, whereby individuals actively construct and project a false persona to gain certain social benefits (Leary et al., 2000). For example, by publicly downplaying their abilities, impostors can lower others' expectations, project an image of modesty or humility, and solicit emotional support (compliments, assurances) from others (Kets de Vries, 2005; Leary et al., 2000). Impostors appear to be aware that this claimed handicapping does not represent truly deficient abilities; in other words, they are engaging in intentional impression management rather than self-deception (Ferrari & Thompson, 2006).

Especially for perfectionistic impostors, self-handicapping provides a layer of protection for the impostor's self-esteem (Ferrari & Thompson, 2006; Want & Kleitman, 2006). If impostors anticipate that they will not be successful, they may either claim handicaps or intentionally self-sabotage to provide a reasonable excuse (Ferrari & Thompson, 2006; Leary et al., 2000; Whitman & Shanine, 2012). This behavior is particularly strong in public settings, demonstrating that it is more important for some impostors to project an image of perfection rather than to achieve it (Dancy & Brown, 2011; Ferrari & Thompson, 2006; Want & Kleitman, 2006).

**Emotional exhaustion.** The delicate balance of maintaining the appearance of perfection while also crafting a reasonable "exit strategy" to justify imperfection can contribute to emotional exhaustion (Kets de Vries, 2005). Emotional exhaustion is a state

of physical and emotional depletion that results from prolonged exposure to feelings of stress, anxiety, fear, guilt, shame, and depression (Whitman & Shanine, 2012). Kasper (2013) described the emotional exhaustion as a feeling of being trapped in a downward spiral by stating, "…the constant effort to flee from or conquer the negative thoughts and feelings that attend impostor syndrome does nothing so much as to intensify it…" (p. 3). Impostors are caught in a complex web of competing feelings: (a) needing to succeed to the point of near-perfection; (b) feeling that they are about to be exposed as a fraud at each new opportunity; (c) coping with their own deep fears of inadequacy; and (d) fearing that there is no end to this cycle that does not lead to intense, personal shame. Since impostors do not experience the positives associated with success, the chronic emotional drains caused by the impostor cycle eventually causes feelings of exhaustion, both mentally and physically.

Several authors have utilized Hobfoll's (1989) conservation of resources theory (COR) as a framework for understanding the links between chronic stress, impostor phenomenon, and emotional exhaustion (Hutchins et al., 2018; Whitman & Shanine, 2012). This theory states that individuals will act in such a way as to preserve limited resources; for impostors, self-esteem (positive self-image) is highly limited. At first, impostors will bolster their self-esteem by gaining outside approval. Conservation of resources helps to explain the perfectionistic and impression-management behaviors employed by impostors by helping the impostors ensure their success as well as to increase the likelihood of receiving positive feedback from others (Hutchins, 2015). Unfortunately, these positive experiences do not replenish the self-esteem resource since impostors suffer from distorted attribution processes, even these "positive" events cause

additional resource drain (Hutchins, 2015). Each time an impostor experiences success, they feel the need to expend even more physical, mental, and emotional resources on maximizing their performance (Hutchins, 2015). Success itself causes a drain on impostors' resources.

As self-esteem becomes an even more limited resource, impostors begin to turn to behaviors that will limit further loss, at least in the short-term. Procrastination and claimed self-handicapping (negative impression management) are techniques used by impostors to preserve self-esteem. In this case, these behaviors provide short-term relief from impostor feelings in the form of an "exit strategy." An alternate excuse to explain potential failure that does not expose the impostor's true lack of self-esteem. Unfortunately, repeatedly rehearsing excuses and using negative self-presentation "…as they reinvent alibis of incapacity and fraudulence in successive achievement contexts…" (Ferrari & Thompson, 2006, p. 350) only contributes to resource depletion and emotional exhaustion (Ferrari & Thompson, 2006).

Impostors constantly expend energy to maintain their impostor persona, eventually depleting their resources and contributing to exhaustion (Rittenhouse, 2021). Left unchecked, emotional exhaustion contributes to social withdrawal and depression, avoidance of career advancement opportunities, and is one of the major components of burnout (Hutchins, 2015; Parkman, 2016).

**Fear of failure.** As described above, the emotional exhaustion experienced by many impostors is the result of two counterbalanced, but seemingly paradoxical, fears: the fear of failure and the fear of success. On one hand, impostors fear that any failure will expose them. This fear of failure is directly related to negative consequences

associated with task evaluation and motivates an individual to succeed. On the other hand, success creates its own challenges. For some impostors, task completion merely delays the inevitable: it creates opportunities to fail at a future date, causing a never-ending feeling of impending doom. Conversely, impostors may fear that success will have negative ramifications such as increased pressure, competition with peers or social rejection (Neureiter & Traut-Mattausch, 2016a). In either case, the fear of success may motivate an impostor to fail at a task in order to preserve social networks or minimize future psychological stress (Neureiter & Traut-Mattausch, 2016a).

The intense self-doubt felt by impostors even despite object evidence of success is one of the hallmarks of the impostor phenomenon (Clance & Imes, 1978). The origins of this self-doubt may begin in early childhood and it is unclear whether impostors fear letting themselves or others down (Caselman et al., 2006; Chayer & Bouffard, 2010). Self-doubt is a normal, universal experience but what makes the self-doubt of impostors pathological, however, is the intense anxiety and fear of failure that impostors associate with this otherwise normal feeling. Many of the behaviors attributed to the impostor phenomenon are rooted in the fear of failure (Clance & O'Toole, 1987). This is due in part to the attribution errors experienced by impostors: failures are personally claimed as evidence of internal inadequacy while successes are given to external factors such as luck or effort (Thompson et al., 1998). Even as impostors receive evidence of their success in the form of positive feedback from peers, academic achievement, or job promotions, it is the fear of failure that pushes impostors to improve their performance (Craddock et al., 2011).

The fear of failure underlies many of the behaviors consistent with IP, including perfectionism, workaholism, procrastination/avoidance, and self-handicapping (Kumar & Jagacinski, 2006; Want & Kleitman, 2006; Zhao et al., 2019). It is important to note that the fear of failure can drive impostors to be highly successful. For example, students with IP worked harder, were more academically engaged, and had higher GPAs than their non-IP peers (Cokley et al., 2015). On the negative side, fear of failure can cause impostors to avoid threats to their self-esteem through refusal, procrastination, or self-handicapping (Kumar & Jagacinski, 2006; Zhao et al., 2019). In cases where the impostor feels that they have a chance at success, and somewhat reduced fear of failure, they may use claimed self-handicaps such as false humility or impression management to lower the expectations of others (Leary et al., 2000). When impostors experience intense fear of failure, such as when evaluation is involved, they may utilize behavioral handicaps to deflect the source blame away from the self (Want & Kleitman, 2006). Procrastination, avoiding competition with peers, self-sabotage (intentional lack of preparation) or physical illnesses are tangible expressions of the intense fear of failure (Chae et al., 1995; Kumar & Jagacinski, 2006; Ross et al., 2001). These behaviors may be particularly acute in work settings that punish mistakes (Kets de Vries, 2005) or have an exceedingly high cost of failure, such as in aviation and medicine (Henning, Ey, & Shaw, 1998; Mehta, Rice, Tianhua, Cooke, & Lange, 2020).

**Fear of success.** Since impostors work so hard to maintain the appearance of perfection, yet fear the consequences that accompany success, the fear of success may be one of the most counterintuitive behaviors expressed by impostors. There are two general categories of consequences that cause distress to impostors. First, impostors

perceive success as the product of luck or effort; therefore, future success is not predicted by current achievement. Any positive feelings associated with present success are short lived, as the impostor then turns their attention towards the next challenge. Rather than experiencing pride of accomplishment, impostors are plagued with feelings of "escaping without being caught" each time they complete a task (Clance, 1985). Feelings of relief quickly transform into anticipation of future failure (Clance, 1985; Kets de Vries, 2005). Superiors and peers who provide positive feedback or publicly recognize the impostor's success inadvertently calls attention to the impostor's deepest secret: Their feelings of self-doubt. Furthermore, because impostors often ensure their success through diligence and work effort, they are often highly sought-after employees. Superiors often "reward" impostors with additional projects, responsibilities**,** and promotions. For an impostor, this success comes with a cost. The impostor is placed in an unfamiliar position where they must engage in increasingly self-destructive work behaviors or risk failure at even higher stakes than before. One author likened this experience to winning an Oscar or Pulitzer early in ones' career. Expectations are set so high that there is little chance of repeating success without super-human talent, luck, or effort (Kets de Vries, 2005). Fear of success in this context is fear of greater future failure.

Fear of success may also be rooted in a very different context, that of: fear of damage to the impostor's social support networks. Many impostors actively seek praise and approval support even though these do not appear improve the impostor's self-image (Clance, 1985). Some impostors will go so far as to engage in intellectual inauthenticity (such as flattery) to strengthen their connections with superiors or peers (Clance & Imes, 1978). Other impostors will minimize conflict by avoiding tasks that place them in

competition with peers (Chae et al., 1995). In each case, impostors fear that too much success will jeopardize the affection and approval they receive through their social networks (Kets de Vries, 2005; Neureiter & Traut-Mattausch, 2016b). This is particularly risky for impostors, as their only source of approval is from others; they do not seem capable of enjoying their own success (Thompson et al., 2000).

## Coping with the Impostor Phenomenon

The persistent feelings of self-doubt and fear that characterize the impostor phenomenon are associated with stress, anxiety, depression, and emotional exhaustion (Clance, 1985; Kets de Vries, 2005; Whitman & Shanine, 2012). In order to understand the impostor experience, it is important to explore how impostors cope with these negative feelings. This section first explores the concept of coping, then provides a review of both positive (adaptive) and negative (destructive) coping strategies often used by individuals living with impostor phenomenon.

### The Coping Construct

In the field of psychology, there have been numerous attempts to define and categorize the concept of coping (Carver & Connor-Smith, 2010). In general, the coping construct encompasses a wide range of behaviors used by people to minimize their experience of stress or threat or to provide a layer of psychological protection from harmful social experiences (Carver & Connor-Smith, 2010; Pearlin & Schooler, 1978). Within impostor phenomenon research, relatively nontechnical definitions of coping such as "…the ways in which individuals respond to stressful situations…" (Hutchins & Rainbolt, 2017, p. 196) appear to be preferred over more precise definitions seen in psychology research (Carver & Connor-Smith, 2010).

Various classification strategies have been developed to sort and group coping behaviors; however, a key distinction is often drawn between engaged and disengaged strategies (Carver & Connor-Smith, 2010). Engaged coping is an active, problem-solving approach whereby the individual attempts to directly address the source of the stress (Carver & Connor-Smith, 2010; Pearlin & Schooler, 1978). Disengaged coping, on the other hand, often allows the individual to avoid the stressor or to minimize the emotional impact of an experience (Carver & Connor-Smith, 2010; Pearlin & Schooler, 1978). Impostor phenomenon researchers tend to use the terms active coping and avoidant coping rather than engaged/disengaged to describe these two categories (Hutchins & Rainbolt, 2017; Whitman & Shanine, 2012). Overall, active coping strategies are characterized as positive, constructive, and effective at minimizing the impacts of impostor feelings; avoidant coping techniques are described as short-term, dysfunctional, or psychologically harmful (Barr-Walker, Werner, Kellermeyer, & Bass, 2020; Hutchins, 2015; Hutchins et al., 2018; Hutchins & Rainbolt, 2017; L. E. Lee et al., 2021; Whitman & Shanine, 2012).

Impostors engage in coping behaviors to reduce the stress and anxiety that develop from impostor fears. As described by Hutchins and Rainbolt (2017), impostors continue to experience "…psychological distress until they can reconcile (or cope) with the [triggering] event and adjust their perception accordingly…" (p. 197). Some of the behaviors associated with IP, such as overwork and impression management, are attempts by the impostor to cope with their fundamental insecurity (Dudau, 2014; Kasper, 2013; Kets de Vries, 2005; Korstange et al., 2019). Perfectionism is highly correlated with IP, but there is disagreement about whether perfectionism is a trigger for IP or a consequence

of it. For example, some researchers interpret perfectionism as a pre-existing personality trait that makes individuals more likely to suffer from impostor thoughts (Henning et al., 1998; L. E. Lee et al., 2021). On the other hand, perfectionism and overwork may be avoidance strategies used by IPs to manipulate outcomes rather than addressing the source of the impostor feelings themselves (Hutchins & Rainbolt, 2017; Whitman & Shanine, 2012).

The choice to engage in active or avoidant coping strategies may be related to the psychological and emotional resources the impostor can access (Hobfoll, 1989; Hutchins et al., 2018). When using active coping behaviors, impostors must actively work to eliminate or reduce the source of the stress, i.e., the fundamental feelings of self-doubt, fraudulence, and insecurity (Hutchins & Rainbolt, 2017). These strategies require more intense use of psychological and physical resources such as energy, time, effort, and focus (Hobfoll, 1989; Whitman & Shanine, 2012). When under stress, individuals are more likely to conserve their resources and engage in avoidance responses such as procrastination and disengagement (Hutchins et al., 2018). Impostors may recognize avoidance coping is ineffective yet lack sufficient resources to engage in more active strategies (Barr-Walker et al., 2020; Hutchins et al., 2018). Furthermore, gender may play a role in preference for active or avoidance strategies as women were more likely to employ active coping strategies, especially those that engaged social networks or peer support, while men tended to rely on avoidance behaviors (Hutchins & Rainbolt, 2017). Over time, resource depletion and avoidant coping behaviors put all impostors at risk of depression, emotional exhaustion, and burnout (Hutchins & Rainbolt, 2017; Whitman & Shanine, 2012).

**Maladaptive Coping Strategies**

As described, avoidant coping behaviors represent attempts by an impostor to minimize their negative feelings by emotionally distancing themselves from the stressor (Barr-Walker et al., 2020; Carver & Connor-Smith, 2010; Hutchins & Rainbolt, 2017). Avoidance strategies, such as procrastination, are maladaptive because they do not directly address the source of the stress; instead, the energy spent by the impostor contributes to resource depletion and emotional exhaustion (Hutchins, 2015; Hutchins et al., 2018). Avoidant strategies were associated with higher impostor scores, increased anxiety and depression, and reduced work satisfaction (Barr-Walker et al., 2020; Hutchins, 2015; Neureiter & Traut-Mattausch, 2016b).

Maladaptive avoidance strategies can involve both emotional and behavioral components. Impostors may procrastinate, then complete tasks in an intense burst of work (Korstange et al., 2019; Thompson et al., 1998). This delay allows impostors to avoid their feelings of fraudulence, and also provides them with a convenient explanation should they fail at the task (Ferrari & Thompson, 2006). Paradoxically, perfectionism and intentional overwork are also types of behavioral avoidance (Dudau, 2014; Vergauwe et al., 2015). In this case, impostors superficially deal with their feelings of incompetence by working harder and attempting to guarantee success, rather than attempting to understand and eliminate the source of those feelings (Barr-Walker et al., 2020). Emotional distancing, on the other hand, can take the form of socially withdrawing from work communities, alcohol or substance abuse, or simply ignoring their impostor feelings (Barr-Walker et al., 2020; Neureiter & Traut-Mattausch, 2016b; Vergauwe et al., 2015). Finally, impostors may seek to physically distance themselves as

well, choosing to work in isolation so that they can hide their fears (Clance & O'Toole, 1987).

Participating in avoidant coping strategies was associated with a reduction in imposter phenomenon scores (i.e., reduced impostor feelings), though active coping strategies resulted in a greater decrease (Barr-Walker et al., 2020; Kasper, 2013). Impostors appear to be aware that avoidance strategies are only temporary remedies. Over preparing, avoidance, and perseverance were all self-reported by impostors as ineffective (Barr-Walker et al., 2020). Though impostors often utilize a blend of both active and avoidant strategies, males are more likely than women to procrastinate, disengage, persevere, or simply ignore their feelings (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017). As a result, male impostors may be more at risk of psychological harm, including anxiety, depression, and burnout (Hutchins, 2015; Neureiter & Traut-Mattausch, 2016a).

**Constructive Coping Strategies**

While any attempt at directly coping with impostor feelings appears to be beneficial, researchers generally agree that active coping strategies are more effective than avoidant strategies at reducing the negative impacts of IP (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017; Neureiter & Traut-Mattausch, 2016b; Parkman, 2016; Vergauwe et al., 2015). Fortunately, impostors report the use of proactive, constructive strategies more often than maladaptive strategies (Hutchins & Rainbolt, 2017). Active coping techniques protect the psychological and emotional health of the impostor while helping them to directly address the source of stress and fears (Hutchins & Rainbolt, 2017). All active coping strategies appear to be beneficial at reducing impostor feelings,

even though there is marked variability in the effectiveness of various approaches (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017). One of the simplest, highly effective coping strategies is acknowledgement. Wen impostors recognize their feelings of fraudulence, they can begin to actively address their lack of knowledge or experience as well as begin to activate supportive social networks (Barr-Walker et al., 2020).

The most effective active coping strategies enlist peers and mentors to provide meaningful low-risk feedback, identify authentic success criteria, help impostors to correct distorted attribution patterns, and normalize the experience of impostor feelings (Bothello & Roulet, 2018; Hutchins et al., 2018; McAllum, 2016; Mullangi & Jagsi, 2019; Parkman, 2016). These programs can include formal and/or informal settings such as mentoring, orientations, workshops, cohort meetings, and group discussions (Fraenza, 2014; Ives, 2011; Parkman, 2016; Tiefenthaler, 2018). This is particularly beneficial for impostors of color, who often lack strong role models and, as a result, experience intense feelings of otherness (Craddock et al., 2011; Dancy & Brown, 2011; Ewing et al., 1996; Mullangi & Jagsi, 2019; Trefts, 2019). Strong social support networks counteract the negative impacts of chronic anxiety and depression, and shield impostors from resource depletion and emotional exhaustion (Hutchins, 2015; Whitman & Shanine, 2012). In addition, mentoring programs provide the psychological and emotional feedback impostors need to learn realistic attributions for their abilities, effort, and success (Bothello & Roulet, 2018; Hutchins, 2015; Parkman, 2016). Finally, mentoring programs provide instrumental and procedural support, thereby reducing impostors' fears of failure and public embarrassment (Hutchins & Rainbolt, 2017).

Not all active strategies are equally beneficial, however. Independent techniques, including reflection, mindfulness, and recording praise, were less effective at reducing impostor feelings than strategies that engaged social networks or peer support (Barr-Walker et al., 2020). Self-help strategies such as positive reinforcement, gratitude journals, constructive self-talk, mindfulness, and reflection are often recommended for impostors who do not have access to social approaches (Hochtritt, Acuff, Justice, & Bain, 2021; Puzak, 2018; Tiefenthaler, 2018; Verkoeyen, 2017; Woolston, 2016), but these are more effective when guided by a trained therapist (Clance & O'Toole, 1987; Steinberg, 1986). In all cases, it is critical that the impostor conscientiously explores the underlying source of their feelings for independent strategies to be effective (Barr-Walker et al., 2020; Puzak, 2018).

It is important to note, however, that it may be challenging to get impostors to participate in constructive (active) coping interventions. Education and mentoring programs may be an additional burden for impostors who are already experiencing severe resource depletion (Whitman & Shanine, 2012). Burnout, financial limitations, anxiety, and time stress may all cause impostors to use avoidance rather than more effective, but energetically expensive, active strategies (Hutchins & Rainbolt, 2017; Vergauwe et al., 2015; Whitman & Shanine, 2012). In addition, male impostors appear to be more resistant to social coping strategies, possibly due to social stigmas involving masculinity and expression of emotion (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017). Furthermore, both males and females express confidentiality and exposure risk as major concerns; however, women are more likely to seek out emotional support to address their psychological needs (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017).

## Impostors in the Workplace

The impostor phenomenon has profound effects on people's personal and professional relationships. Most of the behaviors and feelings associated with IP are triggered in academic settings or in the workplace. In this section, the impacts of the impostor phenomenon in the workplace will be explored, including a discussion of the types of environments most likely to trigger impostor feelings. Finally, a brief overview of workplace strategies that can be used to support impostors is presented.

### Impostors at Work

The impostor phenomenon has profound impacts on its sufferers. Only recently has research turned towards exploring the consequences that IP has on workplace relationships and on career development. From its inception, IP was recognized as a career-related concern. The impostors in Clance and Imes' seminal 1978 study were noteworthy as being high-achieving professional women. Researchers now know that IP does not only affect women; it can impact both men and women from a wide range of racial, social, and familial backgrounds. Some of the characteristic behaviors of IP make them ideal employees: the fear of failure, combined with perfectionism and an intense work ethic, results in IPs who are highly capable, reliable, and productive workers.

Because of these traits, impostors are often highly successful at work, despite their internal conflicts. This has both positive and negative implications for both the impostor and the workplace environment. Individuals with mild to moderate impostor feelings can often use their fear of failure and perfectionism to improve work outcomes in the short-term. Unfortunately, however, the negatives largely outweigh the advantages. Perfectionistic employees tend to expect others to live up to the same unrealistic

standards that they hold for themselves (Vergauwe et al., 2015). As a result, impostors can be judgmental micromanagers who are impatient and overly critical of others' work (Kets de Vries, 2005). Furthermore, many impostors are ineffective delegators, feeling the need personally complete tasks to their own satisfaction. As a result, impostors increase their own workload, thereby contributing to exhaustion, and undermining their ability to develop trusting relationships with coworkers (Kets de Vries, 2005).

IPs are often perceived as highly valuable team members and may be promoted or given additional responsibilities as a reward for their success. Unfortunately, for impostors this success tends to trigger feelings of being trapped within a cycle of increasing pressure and workplace demands. Impostors are afraid of failure; yet they are unable to enlist the help of others due to the fear that the work done by peers will be unsatisfactory, or that the request for help will expose their own lack of ability. Thus, impostors engage in intense overwork, often alone, to ensure success. This chronic cycle of anxiety, overwork, and joyless success eventually contributes to emotional exhaustion and burnout (Hutchins, 2015). As a result, people with IP experience decreased job satisfaction, increased emotional and mental distancing from work, and a reduced motivation to engage in career development opportunities (Hutchins, 2015; Neureiter & Traut-Mattausch, 2016a).

Over time, the impostor may seek ways to reduce work-related anxiety. This has important consequences for career development as impostors may avoid development opportunities, reject career advancement, eschew leadership roles, leave the workplace, or even quit the career entirely (Neureiter & Traut-Mattausch, 2016a). Stress-induced emotional, physical, and mental depletion has been directly related to depression, fatigue,

burnout, and reduced job satisfaction (Hutchins, 2015). Impostors feel trapped in their current positions yet are afraid to leave (Bannatyne, 2015). As a result, impostors display reduced organizational citizenship behaviors, i.e. those positive behaviors that benefit a workplace, yet are not specifically required by the job description (Bannatyne, 2015; Neureiter & Traut-Mattausch, 2016a; Vergauwe et al., 2015). Impostors conserve their strained resources by withdrawing both physically and emotionally from their workplace communities (Neureiter & Traut-Mattausch, 2016b; Vergauwe et al., 2015). Imposters may resist opportunities for feedback and collaboration, avoid decision-making, fail to develop mentoring relationships, or even avoid public view (Parkman, 2016). Furthermore, IPs may suffer economic handicaps as well, as they are less likely to recognize the value of their work and as a result do not pursue promotions or negotiate higher salaries (Neureiter & Traut-Mattausch, 2016b). In each of these cases, the impostor's feelings of inadequacy and fraudulence restrict their ability to grow to their full potential.

**Career Characteristics: Professions at Risk for Imposter Phenomenon**

Studies are beginning to determine the types of careers and working environments that are more likely to foster the development of IP feelings. The incidence of IP in academic settings has been established across a wide range of settings including in undergraduate students (Badawy et al., 2018; King & Cooley, 1995; Sightler & Wilson, 2001; Trefts, 2019); graduate students (Cisco, 2020; Craddock et al., 2011; Fraenza, 2014), medical and nursing school students (Brennan-Wydra et al., 2021; Henning et al., 1998; Warraich et al., 2017); and in higher education faculty (Bannatyne, 2015; Hutchins, 2015; Kasper, 2013; Parkman, 2016). It is less well studied in adolescents, but there is

evidence that IP can be well-developed by high school (Caselman et al., 2006; Lester & Moderski, 1995; McAllum, 2016), suggesting that it may appear as early as childhood (Caselman et al., 2006; Chayer & Bouffard, 2010). Impostor phenomenon has been described in wide range of professions, including librarians (Andrews, 2020; Barr-Walker et al., 2020; Rakestraw, 2017), doctors (Mullangi & Jagsi, 2019), nurses (Gómez-Morales, 2021), artists (Giles, 2021; Rosenberger, 2021), writers (Hochtritt et al., 2021), accountants (Byrnes & Lester, 1995), psychologists (Niles, 1994), pilots (Mehta et al., 2020), scientists (Woolston, 2016), entrepreneurs (Sightler & Wilson, 2001), managers (Bechtoldt, 2015; Bothello & Roulet, 2018), and leaders of non-profit organizations (D. B. Scott, 2017).

Researchers have suggested that there are several workplace conditions that make individuals more likely to develop or intensify impostor feelings. First, impostor feelings are commonly triggered with disruptive events, such as graduation, new positions, or promotions (Hutchins & Rainbolt, 2017; Jacobs, 2016; Rakestraw, 2017). These changes trigger feelings of self-doubt, as impostors "…often mistake being *inexperienced* with being *unqualified…*" (Rakestraw, 2017, p. 473, italics in original). This experience may cause professionals to question their legitimacy within a field (Hutchins & Rainbolt, 2017). This is particularly true for cases of early or unexpected advancement, such as being a young winner of a prestigious award or being the first black female accepted to a research program (Dancy & Brown, 2011; Harvey & Katz, 1985). For many, impostor feelings decrease with age and experience in a position (Parkman, 2016; Rakestraw, 2017). Unfortunately, organizations tend to value upward mobility rather than stability: "…we promote until we reach the level of incompetence…" (Berinato, 2015, p. 5).

Coping with the stress of advancement may cause impostors to experience emotional exhaustion, burnout, or avoidance behaviors (Hutchins et al., 2018).

IP appears to be most prevalent in highly competitive, stressful careers, especially where success criteria are vague, on-going, or unattainable (Hutchins, 2015; Kets de Vries, 2005; Parkman, 2016). For example, academics and researchers experience intense pressure to "publish or perish", but performance targets relating to publication and funding tend to be vague or inconsistent (Bothello & Roulet, 2018; Hutchins, 2015; Woolston, 2016; Zorn, 2005). Artists and writers may feel like frauds because their success is judged by public opinion rather than the objective quality of the work (Parkman, 2016). Doctors and nurses, on the other hand, have clear criteria for success -- successful patient outcomes – but also a high cost of failure. Medical professionals often feel intense pressure to execute their work perfectly, yet they have little control over pre-existing conditions, must react to unknown or undisclosed factors, and are powerless to prevent future incidents (Henning et al., 1998).

Finally, societal factors such as gender and race can increase the incidence of IP in some career fields. Professions that are stereotypically linked to one sex, such as nursing (females) or engineering (males), often see higher rates of IP in the opposite sex (Harvey & Katz, 1985). Early research identified IP as a women's issue, possibly due to the influx of women into what had been previously male-dominated professions (Clance & Imes, 1978). Analysis of numerous studies revealed no clear patterns of connection between IP and gender, demonstrating the complex interplay between the two (Bravata et al., 2020). Furthermore, there is some evidence that women may experience IP strongly yet feel pressure to conceal those feelings due to fear of negative consequences

(Andrews, 2020; Calafell, 2017; Mullangi & Jagsi, 2019; Slank, 2019; Trefts, 2019). Systemic racism and the experience of microaggressions in the workplace may also intensify IP feelings, especially among people of color or nonbinary sexual identities (Andrews, 2020; Nadal et al., 2021; D. B. Scott, 2017). People of color often report additional pressure to succeed as representatives of their race, yet often must do so without mentors who understand their unique racial and cultural backgrounds (D. L. Bernard et al., 2017; Brennan-Wydra et al., 2021; Bridgette, LaTrice, & Jerren, 2015; Cokley et al., 2013; Craddock et al., 2011; Dancy & Brown, 2011; Ewing et al., 1996; Nadal et al., 2021).

**Workplace Support Strategies**

Support for impostors can occur at three levels: (a) personal, (b) managerial, and (c) organizational (Barr-Walker et al., 2020). Personal support strategies, including: (a) journaling/reflection, (b) collaborating with peers, and (c) self-education, were discussed in the previous section. The research on impostor phenomenon also describes several other layers of support that can help impostors to be effective employees and leaders. Supervisors and managers can provide either formal or informal support to impostors by (a) engaging in directed positive feedback, (b) normalizing discussion of impostor feelings, encouraging peer support networks, (c) embracing diversity and collaboration as core values, and (d) acknowledging mistakes as natural opportunities for growth (Barr-Walker et al., 2020; Kets de Vries, 2005; Parkman, 2016; Rakestraw, 2017). In addition, managers can encourage employees to maintain a healthy work-life balance and discourage workaholic/perfectionistic behavior rather than treat it as exemplary (Barr-Walker et al., 2020). Supervisors can help to develop impostor-resistant leadership by

setting evaluation goals around task delegation, recognition of diverse approaches to work styles, emphasizing process over product, and embracing resilience and persistence over perfection (Barr-Walker et al., 2020; Rakestraw, 2017).

Research has also revealed important organizational level strategies, including (a) the creation of formal mentoring programs, (b) impostor-informed orientation programs for new hires, (c) providing education opportunities, and (d) training supervisors to recognize situations that are likely to trigger impostor feelings (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017). However, in the creation of any support program for impostors, it is important to recognize the central role of organizational culture in either promoting or mitigating impostor feelings. Impostors are particularly at risk in "neurotic organizations" that utilize perfectionistic or paranoid management cultures (Kets de Vries, 2005). Instead, organizations should develop a culture that promotes healthy risk-taking strategies and a growth mindset. Kets de Vires (2005) states that "…the wise organization does not punish 'smart' mistakes; indeed, to 'fail forward' should be part of an organization's implicit cultural values..." (p. 7).

In an unsupportive environment, small group discussions, education, and mentoring programs may be underutilized by impostors, due to their fear of exposure and lack of confidentiality in group settings (Barr-Walker et al., 2020; Hutchins & Rainbolt, 2017). This may be particularly challenging for male impostors, who are more reluctant to share their vulnerability than their female counterparts (Hutchins & Rainbolt, 2017). In a high trust environment, however, facilitated discussions can allow impostors to find peers because often times "…once one person is willing to share her secret, others are able to share theirs…they are astonished and relieved to find they are not alone…"

(Rakestraw, 2017, p. 475). Unfortunately, the emotional and psychological depletion caused by the impostor phenomenon creates a barrier for participation in these programs (Hutchins et al., 2018). Many impostors lack sufficient resources, such as time, money, and energy, to seek out this type of support (Barr-Walker et al., 2020; Hutchins et al., 2018).

At the organizational level, an examination of cultural factors related to gender, race, and identity may reveal triggers for impostor feelings. Several authors have explored the relationship between the impostor experience, microaggressions the workplace, and oppressive cultural norms (Andrews, 2020; Barr-Walker et al., 2020; Slank, 2019). By attempting to normalize impostor feelings, organizations may unintentionally gaslight their employees by shifting the blame for a toxic work environment onto the impostors themselves (Anderson & Ackerman Anderson, 2010; Barr-Walker et al., 2020; Slank, 2019). For example, instructing impostors to embrace resiliency can instead encourage them "…to manage up, to ignore systemic inequalities, to return to a status quo which too often upholds silence over difficult change…" (Barr-Walker et al., 2020, p. 34). Developing organizational culture that values diverse ways of thinking and working can help create inclusive workplaces that foster growth, increase productivity, and reduce burnout (Andrews, 2020; Slank, 2019; Whitman & Shanine, 2012)

## Classroom Teachers

The impacts of IP on the workplace, including career characteristics, leadership behaviors, and support strategies were discussed in the previous section. This section will focus on the impacts of IP on an often-overlooked group: classroom teachers. First

the leadership behaviors of classroom teachers will be established. Then the implications of impostor-related behavior for teacher effectiveness and healthy classroom development will be considered.

**Leadership Within the Classroom**

Modern organizations, including educational systems, have shifted from an emphasis on management to a focus on leadership (Ramsey, 2006; Spillane, 2004; Turaga, 2017). Schools are responsible for more than presenting academic curriculum and controlling student behavior. Educational leaders must leverage a diverse range of skills to deliver high quality teaching and learning, such as: (a) organizational management; (b) instructional improvement; and (c) the ability to motivate, support and collaborate with diverse team members (Jacques et al., 2016; Spillane, 2004; Turaga, 2017).

While educational leaders include traditional administrative roles (i.e. superintendents, principals, directors and deans), there is a growing movement recognizing the importance of classroom teachers as leaders in their own right (Bowman, 2004; Crowther, 1997; Warren, 2016). Administrators are often responsible for guiding the organization's vision, but the decisions and actions of classroom teachers are responsible for accomplishing those goals (Crowther, 1997; Gabriel, 2005). Teacher leadership is most effective when it is distributed throughout the educational system (Jacques et al., 2016; Spillane, 2004). For example, they may serve in semi-formal leadership positions (department chairs or instructional leaders), as informal peer leaders (mentors), and as leaders of students (Gabriel, 2005; Jacques et al., 2016; Spillane, 2004). Teacher leadership is somewhat different from administrative-level work, as teachers

often possess limited formal power over their constituents, even though they have authority (Bowman, 2004; Gabriel, 2005). Successful teachers are capable of motivating and influencing followers (including students and other teachers) over which they have little or no true control and who may not even be participating voluntarily (Bowman, 2004).

Classroom teaching can be seen as a type of transformational leadership whereby instructors (leaders) guide followers (students) through a process of personal growth (Crowther, 1997; Gabriel, 2005; Warren, 2016). In addition, teachers function as leaders of organizational change as they participate in peer mentoring, content-area curriculum development, membership in support teams, and contribution to strategic committees (Gabriel, 2005; Jacques et al., 2016). Whether working with students or peers, teachers are expected to demonstrate common qualities of authentic, transformational, and trauma-informed leadership:

- Being genuine and trustworthy.
- Communicating a vision of a better world.
- Building networks of support.
- Advocating for followers.
- Being creative and fair in securing and allocating resources.
- Nurturing a culture of success (Avolio & Gardner, 2005; Bowman, 2004; Crowther, 1997; Gabriel, 2005; McLeod & Dulsky, 2021).

The coronavirus pandemic brought about increased pressure on teachers to use these skills to adapt to rapidly changing circumstances in an emotionally charged environment (L. E. Kim & Asbury, 2020; McLeod & Dulsky, 2021).

## Impacts of Impostor Phenomenon on Teachers

As leaders, classroom teachers are not immune from the effects of the impostor phenomenon. The impacts of IP on higher education faculty have been established (Bravata et al., 2020; Collins et al., 2020; Dancy & Brown, 2011; Hutchins, 2015), there is little research on elementary and secondary teachers (Byrnes & Lester, 1995; Matthews, 2001). While the literature has few direct references to IP in classroom teachers, impostorism is likely to have at least three major areas of influence on teacher effectiveness, especially within the context of the coronavirus pandemic. The three major areas of influence on teacher effectiveness include: (a) job stress and burnout for teachers, (b) expression and use of emotional intelligence by teacher leaders, and (c) the ability of teachers to create emotionally supportive classrooms.

**Job stress and burnout.** Individuals with high levels of impostor feelings report increased levels of stress, anxiety, and emotional exhaustion and report decreased job satisfaction (Bravata et al., 2020; Neureiter & Traut-Mattausch, 2016b; Parkman, 2016; Vergauwe et al., 2015). For example, higher education faculty who experienced intense impostor feelings were more likely to use less effective teaching strategies (such as lecture), reduce their interactions with students and peers, and report increased feelings of depression and isolation (Hutchins, 2015). On the other hand, authentic leadership and trauma-informed practices appear to provide a buffer against emotional exhaustion in both teachers and students (S. Kim, Crooks, Bax, & Shokoohi, 2021; Mao & Tang, 2016). Teacher well-being is sustainable in environments that support deep and meaningful collaboration between teachers and students as they work collaboratively to achieve shared goals (Shirley et al., 2020). Unfortunately, these healthy environments

are based on mutual trust; impostors' need to conceal their "true selves" makes this type of genuine relationship difficult and ultimately contributes to burnout (Parkman, 2016; Vergauwe et al., 2015).

The coronavirus pandemic created an acutely stressful environment for teachers especially during the early weeks of the shutdown (Allen et al., 2020; L. E. Kim & Asbury, 2020). Teachers were faced with the emotional drain of coping with their own fears of the disease, while simultaneously attending to the academic and emotional needs of students (Allen et al., 2020; McLeod & Dulsky, 2021). For teachers suffering from IP, the pre-existing resource drain of coping with impostor feelings would likely have been compounded by the additional expenditures of energy needed during the pandemic (Hutchins et al., 2018; Rittenhouse, 2021). Since individuals with IP are likely to employ avoidant coping strategies in the face of resource depletion, they become trapped in a cycle of energy drain, emotional exhaustion, and eventual job burnout (Hutchins et al., 2018; Rittenhouse, 2021).

**Emotional intelligence.** As noted above, authentic leadership and trauma-informed leadership practices are both beneficial classroom strategies, especially during times of stress (Amaro & Beede, 2021; Gomez-Lee, 2017; L. E. Kim & Asbury, 2020; Nealy-Oparah & Scruggs-Hussein, 2018). Emotional intelligence is one of the key components of authentic leadership, transformational leadership, and trauma-informed leadership (S. Kim et al., 2021; Nealy-Oparah & Scruggs-Hussein, 2018; Yadav & Lata, 2019) and is strongly correlated with teacher and student engagement in the classroom (Abiodullah, Dure, & Aslam, 2020). Being able to perceive and respond to the emotional

needs of students is key to supporting their social-emotional development and mental health through the pandemic and beyond (Imran et al., 2020; Sax & Gialamas, 2017).

Individuals with IP, however, generally score relatively low for various components of emotional intelligence (Bahram, 2011; Bravata et al., 2020; Ferrari & Thompson, 2006; Hutchins & Rainbolt, 2017; Leary et al., 2000; Schoeps, Tamarit, Peris-Hernández, & Montoya-Castilla, 2021). As a result, impostors are prone to low self-esteem, tend to over-generalize their failures, and believe that others are judging their performance negatively (Langford & Clance, 1993; Leary et al., 2000; Thompson et al., 1998; Vergauwe et al., 2015). Furthermore, perfectionistic impostors may protect their limited self-esteem by holding others to conform to their unreasonably high standards, thereby creating a hostile work environment (Cokley et al., 2018; Dudau, 2014).

Teachers that had higher emotional intelligence scores were more likely to demonstrate resilience in the face of challenges, a key component in avoiding burnout (S. Kim et al., 2021; McLeod & Dulsky, 2021; Pozo-Rico et al., 2020). Coping strategies designed to increase emotional intelligence, such as reflection, seeking feedback, and group discussions, may help impostors normalize their fears while increasing the accuracy of their emotional perceptions (Barr-Walker et al., 2020; Parkman, 2016; Verkoeyen, 2017). Providing safe opportunities for impostors to demonstrate vulnerability and express their true selves could help reduce teacher burnout, support positive classroom culture, and improve well-being for both teachers and students (Couris, 2020; Imran et al., 2020; S. Kim et al., 2021; Mao & Tang, 2016).

**Creating supportive classrooms.** One of the most important challenges for teachers with impostor phenomenon is the creation of classrooms that support social,

emotional, and academic learning for students (Sax & Gialamas, 2017). Because of their insecurity, low self-esteem, and fear of exposure, impostors may have trouble with building authentic connections in the workplace (Kets de Vries, 2005; Vergauwe et al., 2015). In higher-education settings, faculty with IP are more likely to use teaching practices that minimize classroom interactions, including using lecture-based instruction, reducing student-contact hours, and avoiding question and answer sessions (Chae et al., 1995; Parkman, 2016). Furthermore, impostors tend to use avoidant coping strategies (such as procrastination) and are prone to anxiety, pessimism, and exhaustion, none of which are conducive to the creation of a positive classroom environment (Hutchins et al., 2018).

The ability of teachers to create holistically supportive classroom environments is particularly important during times of upheaval and is a key component of trauma-informed school practice (Gomez-Lee, 2017; Sax & Gialamas, 2017). These classrooms promote meaningful connections between students and teachers; increase students' independence and self-direction; and help children to develop self-confidence both academically and socially (Sax & Gialamas, 2017). The creation of multiple support networks for students is important for increasing their confidence, self-esteem, and buffering them against developing impostor feelings (Caselman et al., 2006). The pandemic was particularly challenging for students who relied on mental health or special education services provided on school campuses, as these students suddenly found themselves both socially and physically isolated from their support systems (J. Lee, 2020).

Classrooms rich in social-emotional learning have been shown to promote resilience (Hall, 2021; Hillman, 2013; McLeod & Dulsky, 2021). Trauma-informed teaching helps teachers and students to recognize common emotional triggers and provides strategies to help heal the trauma (Hall, 2021; Nealy-Oparah & Scruggs-Hussein, 2018). For teachers with impostor feelings, however, this type of emotionally connected classroom environment is likely to trigger their own traumatic fears of being exposed as a fraud. One of the key components of a safe and resilient classroom environment is vulnerability, where teachers (and students) share their authentic doubts, fears and feelings of shame or guilt (Couris, 2020; Hall, 2021). Unfortunately, vulnerability is anathema to impostors, who experience low self-esteem and crushing self-doubt (Matthews, 2001). Furthermore, the self-esteem of students is shaped by the behavior of their teachers: "…it is essential that school personnel not only understand … their own self-esteem, and how they model this through their actions and behaviors, might influence students…" (C. G. Scott, 1999, p. 367). Fortunately, intentional teacher training can help to alleviate impostor fears and improve teacher efficacy in creating supportive classrooms (Pozo-Rico et al., 2020).

## Conclusions

The coronavirus pandemic caused a rapid shift in workplace environments during the spring of 2020, including the closure of many worksites and a shift to working from home. This created a challenging situation as people were no longer able to work directly with their peers, superiors, and teams. For classroom teachers, the responsibility of leading children through the pandemic was acutely stressful as teachers balanced their personal fears while they implemented novel teaching strategies during distance learning

(Allen et al., 2020; L. E. Kim & Asbury, 2020; Kniffin et al., 2021). These unprecedented circumstances created an environment favorable for development of the impostor phenomenon in teachers as they struggled to "fake it" through pandemic-related school closures.

The literature provides details about the identification and experience of the impostor phenomenon. A constellation of characteristics and behaviors are often exhibited by individuals plagued by impostor fears, including self-doubt, anxiety perfectionism, fear of failure, procrastination, and emotional exhaustion. Utilizing active coping strategies helps IPs to achieve positive outcomes and minimize feelings of fraudulence, while avoidant coping strategies tend to contribute to emotional exhaustion and burnout. As the teaching profession is already plagued by job turnover and a paucity of effective, experienced classroom leaders, it is important to identify positive coping strategies used by successful IP teachers.

Teachers in the classroom must cope with their own fears of inadequacy while attempting to create an environment that supports academic, social, and emotional learning. During the pandemic, this became even more difficult as classrooms closed and learning moved online. Teachers who were able to overcome their fears and adapt their teaching styles were able to establish healthy, resilient classroom and foster student well-being. Research is needed to explore the techniques that teachers used to cope with their impostor feelings while adapting to distance learning during the pandemic.

## Synthesis Matrix

A synthesis matrix of the research compiled for this literature review along with the key organizational concepts is presented in Appendix A.

# CHAPTER III: METHODOLOGY

## Overview

This chapter details the methodology used to complete this research. First, the purpose and research question will be restated, followed by a detailed description of the methods used to collect the data presented in Chapter IV. Next, an overview of the study population is provided, with an in-depth description of the purposeful sampling technique used. This chapter also describes the research instruments used and provides support for their reliability and validity. This is followed by an explanation of the techniques used to collect the data for this study, along with the methods used to analyze that data. The limitations of the research are presented, along with a summary of the research process.

## Purpose Statement

The purpose of this descriptive mixed-method study was to explore and describe the coping skills used by secondary teachers who identified as experiencing the impostor phenomenon by the Clance Impostor Phenomenon Scale (Clance, 1985) to overcome the nine behavioral characteristics associated with the impostor phenomenon during the transition to distance learning in response to the COVID-19 pandemic.

## Research Question

The study was guided by the following research question:

1. What coping skills did secondary teachers who identified as experiencing the impostor phenomenon, as measured by the Clance Imposter Phenomenon Scale (Clance, 1985), use to overcome the nine behavioral characteristics (characteristics of anxiety, lack of self-confidence, depression, perfectionism,

procrastination, self-presentation, emotional exhaustion, fear of failure and fear of success) associated with the imposter phenomenon?

## Research Design

The purpose of this descriptive mixed method study was to explore and describe the coping strategies secondary teachers used to overcome nine behavioral characteristics associated with the imposter phenomenon during the transition to distance learning in response to the COVID-19 pandemic. Descriptive research is used to characterize a phenomenon as it is; in other words, it "…assesses the nature of existing conditions…" (McMillan & Schumacher, 2014, p. 30). Mixed methods studies combine elements of both quantitative and qualitative research in the data collection and analysis phases (McMillan & Schumacher, 2014). A mixed methods approach is often used "…when there are individuals or a small group whose thinking differs significantly from that of the majority…" (McMillan & Schumacher, 2014, p. 425). As secondary teachers with impostorism would represent a small subset of teachers in general, the use of a mixed-methods approach is supported.

Mixed method approaches are used when both quantitative and qualitative data provide different, but complimentary, insights into complex phenomena: "…personal stories and narratives have a different power than statistics, but both have important contributions to make…" (Patten & Newhart, 2018, p. 27). The sequential approach utilized in this study began with a quantitative phase, and then employed qualitative methods to explore the trends revealed during the quantitative phase (McMillan & Schumacher, 2014). In this case, the results of the CIPS scale were analyzed quantitatively, followed by a qualitative interview process. First, quantitative data

collected from the CIPS scale was analyzed statistically to identify which participants exhibited IP. Then, individuals with IP were invited to participate in a qualitative follow-up interview, to identify themes in how those individuals coped with IP. In order to fully explore the lived experience of individuals with IP, "…one must undertake in-depth interviews with people who have directly experienced the phenomenon of interest…" (Patton, 2015, p. 115).

The theoretical research framework implied by these techniques is known as phenomenology (Patton, 2015). This approach seeks to gain "…a deeper understanding of the nature or meaning of … everyday experiences…" (Patton, 2015, p. 115). In this case, the objective was to identify the common experiences of teachers suffering from the impostor phenomenon, as well as to explore the how they coped with it. According to Creswell (2013), the purpose of phenomenological research is to explore "…the *essence* of the experience for individuals incorporating 'what' they have experienced and 'how' they experienced it…" (p. 79). This research uncovered the lived experiences of teachers coping with the impostor phenomenon as they transitioned to distance learning.

## Population

A population is the total group of participants to which the results of a study can be generalized (McMillan & Schumacher, 2014). In this case, the most general population would include all secondary teachers in public high schools. During the 2017-2018 school year, the most recent year for which data is available, there were approximately 3.5 million full- and part-time teachers in the United States, of which approximately 1.8 million were secondary teachers (National Center for Education Statistics, 2021). Due to the enormous size of this population, it was necessary to restrict

this to a more limited target population including specific selection criteria (McMillan & Schumacher, 2014).

The target population was narrowed down to the secondary teachers in the state of California. However, since this represents over 80,000 individuals serving in more than 1,300 high schools in California alone (California Department of Education, 2020), it was necessary to reduce the target population further. In this case, the population was limited to non-urban school districts in the "superior" region of northern California, defined as including the 17 counties north of the greater Bay Area and east of Interstate 5 (California Census 2020, 2020).

Furthermore, the context of this study included the events of the coronavirus pandemic, and its impacts on teachers suffering from imposter phenomenon. As a result, the target population is limited temporally as well as geographically. In this case the target population only includes secondary teachers who were working full-time in districts that were forced to transition to distance learning during the pandemic for the final months of the 2020-2021 school year or at any time during the 2021-2022 school year. For this study, the target population included full-time secondary teachers in the superior region of northern California suffering from IP who were impacted by the impostor phenomenon as they transitioned to distance learning during the coronavirus pandemic of 2020.

## Sample

Since it would have been impractical to study all secondary teachers in northern California, this research utilized a smaller nonrandom sample population. McMillan and Schumacher (2014) define the sample population as being the subset of the population

"…from whom data are collected; often representative of a specific population…" (p. 7). In this qualitative study, a nonprobability technique known as purposive (or purposeful) sampling was used (Creswell & Plano Clark, 2011; McMillan & Schumacher, 2014). In this technique, commonly used in qualitative research, researchers "…select individuals who they believe will be good sources of information…" (Patten & Newhart, 2018, p. 100). While this technique is less generalizable to a population at large than a random sample, it has several important benefits such as time effectiveness, high rates of participation, and a focus on information-rich subjects (McMillan & Schumacher, 2014).

For the first phase of the research, a sample of secondary teachers from northern California school districts classified as being either "rural" or "town" locales were used for the initial assessment of IP characteristics using the CIPS scale. To qualify for inclusion in the sample, the individuals needed to fit the following characteristics:

- Full-time teachers during the pandemic lockdowns (spring and/or fall 2020).
- Secondary school (grades 9-12).
- Employed in a public school.
- School located in a "rural" or "town" locale (not urban or suburban).
- Provided full-time distance/remote learning during school closure.

Once secondary teachers with IP were identified, purposive sampling was used to select a smaller sub-sample to participate in semi-structured follow-up interviews. This narrowed the population to a relatively small group of high-quality, information-rich subjects for final qualitative analysis (Creswell & Plano Clark, 2011). A total of 12 participants were interviewed for the qualitative phase, to foster an "…in-depth

understanding of a few people…" (Creswell & Plano Clark, 2011, p. 174) and maximize the detail of the individuals' experiences of the imposter phenomenon (Creswell & Plano Clark, 2011).

## Instrumentation

There were two types of instrumentation for this mixed-methods study: The quantitative instrument was the CIPS (Clance, 1985) and the qualitative instrument was a semi-structured interview consisting of nine two-part questions with those individuals identified as experiencing moderate or intense impostor feelings.

### Quantitative Instrument

Quantitative instruments are those whose results can be reduced to numbers (Patten & Newhart, 2018). Questionnaires that can be converted to numerical responses, multiple choice questions, and short-answer questions yielding measurements are examples of items that could be found on quantitative instruments (Patten & Newhart, 2018). In this case, the CIPS questionnaire uses Likert-scale responses that can be easily converted to numeric values for analysis (Clance, 1985). Likert-type scales of this nature are often used in quantitative research to "…determine participants' *typical* levels of performance…" (Patten & Newhart, 2018, p. 153). Utilizing a pre-existing survey, such as the CIPS questionnaire, increases instrument fidelity as it provides for consistency of administration and ensures the researchers' data can be assimilated into the larger body of work on the impostor phenomenon (Creswell & Plano Clark, 2011).

The 20-item CIPS questionnaire was given to all study participants to determine which ones were experiencing the IP (Clance, 1985) (see Appendix B). The researcher received permission to use this instrument from Dr. Clance (see Appendix C). The CIPS

is a 5-point Likert-type scale, with choices ranging from "not at all true" to "very true" where each statement contains an indicator of one of the nine behavioral characteristics of IP (Clance, 1985). Higher scores on the CIPS indicate more frequent or intense experiences of IP, with greater impacts on a person's daily life (Clance, 1985). Respondents' IP feelings are described as moderate with scores between 41-60 points, frequent for 61-80 points, and intense for scores over 81 points (Clance, 1985). Consistent with D. B. Scott (2017), respondents with scores higher than 45 were invited to participate in the qualitative interview phase of the research.

**Qualitative Instrument**

Upon completion of the quantitative phase of the study, participants were invited to participate in semi-structured interviews. The purpose of the interview in this context was to "…evoke a comprehensive account of the person's experience of the phenomenon…" (Patton, 2015, p. 433). In mixed-methods research, interviewing is often used in conjunction with quantitative techniques because the qualitative data is often richer and more extensive than numerical data, yet it is challenging to analyze (Creswell & Plano Clark, 2011). For phenomenological studies, the interviewer's goal is to conduct "…in-depth interviews…to describe the meaning of the phenomenon for a small number of individuals who have experienced it…" (Creswell, 2013, p. 161).

For this study, a semi-structured interview approach was used (Patten & Newhart, 2018). This technique was chosen to ensure consistency in the qualitative process but allowed the interviewer to follow the natural "flow" of the conversation and ask meaningful follow-up and clarification questions as needed (Patten & Newhart, 2018). Nine two-part interview questions were developed by a team of five doctoral students for

use in the qualitative phase of the research. An alignment table was created by the team of doctoral students to ensure that each question directly addressed one of the nine behavioral characteristics associated with IP as well as the coping strategies used to deal with those behaviors (see Appendix D). During the interview, the participants were provided a brief description of the study and allowed to ask clarification questions about the research, as well as given an opportunity to decline to answer or leave the study. Two introductory questions were used to establish rapport with the participant and elicit background information about the participant's teaching experiences during the pandemic, and one concluding question allowed the participant to add any additional details. These interviews were recorded digitally, and the generated transcripts were coded for common themes. The interviewer also recorded some observational notes during the interview to document the non-verbal aspects of the interviewees' responses.

**Validity and Reliability**

Validity refers to whether an instrument "...captures the information it is meant to measure…" (Patten & Newhart, 2018, p. 126), whereas reliability speaks to how repeatable the measure is. For this research, the quantitative and qualitative instruments would have validity if variation in the data was directly related to the impostor phenomenon and not to other similar experiences, such as neuroticism. On the other hand, instruments are considered reliable if they could be used by another researcher and produce similar results.

**Validity.** MacMillan and Schumacher (2014) describe validity as the degree to which scientific explanations of phenomena match reality. In other words, a study is only valid when the variation in the data can only be explained by the independent

variable. Several studies have established the validity of the CIPS as a measurement instrument for the impostor phenomenon (Bravata et al., 2020; Chae et al., 1995; Chrisman et al., 1995; Mak et al., 2019). While the IP is closely related to other similar experiences, such as depression, anxiety, low self-esteem, and perfectionism, use of the CIPS scale appears to identify the unique synthesis of traits that is characteristic of the impostor phenomenon (Chae et al., 1995; Chrisman et al., 1995; Mak et al., 2019). Furthermore, as the CIPS is the most widely used IP diagnostic tool (Bravata et al., 2020), its application in this study helps to situate this work centrally within the larger body of published research and provides support for both validity and reliability.

Validity of the qualitative component of this study is also supported through the sequential nature of the quantitative and qualitative phases. By using the CIPS as a screening tool for the qualitative component of the research, the descriptive data gathered during the interview process is more likely to be directly related to the experience of the impostor phenomenon, rather than other complicating variables. Furthermore, the quantitative and qualitative data help to provide triangulation, as together, these two aspects combine "…to capture the full essence…" (Patten & Newhart, 2018, p. 124) of an experience that is otherwise difficult to measure (Patten & Newhart, 2018). As second form of triangulation involved identification of common themes across multiple participants (Creswell & Plano Clark, 2011). Finally, peer review and feedback were used to improve the validity of the interview questions and protocol by providing "…an external check of the research process…" (Creswell, 2013, p. 251). A group of five researchers collaborated on the development of the questions and protocol and provided multiple perspectives in assessing the validity of each question.

**Reliability.** Reliability in a scientific context refers to how repeatable a test is; in other words, reliability is a measure of whether or not a test "…yields *consistent* results…" (Patten & Newhart, 2018, p. 136). It is important to establish instrument reliability so that a reader will know that any variation in the results were due to effects of the independent variable rather than due to random chance alone. In qualitative research, there is less of an emphasis on reliability than validity; reliability of qualitative data is improved by techniques that increase intercoder agreement (Creswell & Plano Clark, 2011).

Several steps were taken to improve the reliability of the quantitative and qualitative data from this study. First, the study used a standard online administration technique (Google Forms) of an established instrument (CIPS) to ensure that each participant had a consistent experience. For the qualitative interview component, the researcher used standard protocol to introduce the study, and then followed with a set of open-ended semi-structured interview questions, all presented in a consistent format to all participants. All responses were recorded digitally with Zoom or Google Meets, and a digital transcript was produced by the software. Digital transcripts were reviewed and corrected (when necessary) by the researcher within 48 hours of the interview. Themes in the transcripts were identified using NVivo software and were confirmed through peer review, a technique known as intercoder agreement (Creswell & Plano Clark, 2011).

## Expert Validity

Overall, content validity is important for "…assessing whether the information obtained through the qualitative data collection is accurate…" (Creswell & Plano Clark, 2011, p. 211). Prior to conducting the research, an outside expert on the impostor

phenomenon was consulted to assist in establishing the validity of the qualitative instrument. The interview questions were presented to Dr. Annamarie Cohen, the Associate Superintendent of Educational Services for the Lake Tahoe Unified School District (LTUSD) in northern California. Dr. Cohen was instrumental in developing LTUSD's response plan for the coronavirus pandemic. Furthermore, she is deeply familiar with conducting both quantitative and qualitative research, as demonstrated by her doctoral research on the use of visual supports for special needs students in inclusive classrooms (Cohen, 2009). Her feedback was used to adjust the wording of interview questions and the overall interview protocol.

**Field Test**

A field test, or pilot study, is often used by researchers to test out new instruments, such as surveys and interview questions (Creswell & Plano Clark, 2011; McMillan & Schumacher, 2014). The purpose of field testing in this case is to "…determine if any questions are ambiguous, or if there are questions that participants refuse to answer…" (Patten & Newhart, 2018, p. 110). It also allows the researcher to practice with establishing rapport with interview subjects, building trust, and practicing delivery techniques such as cadence, tone, and phrasing (McMillan & Schumacher, 2014). Finally, field testing is used to allow the researcher an opportunity to rephrase and revise the qualitative instrument (McMillan & Schumacher, 2014).

The researcher contacted a colleague who was suspected of experiencing impostor feelings. The CIPS was provided in an online survey format, and with a score of 63, the participant was confirmed to be experiencing frequent impostor fears (Clance, 1985). The individual was invited to participate in a semi-structured interview, which was

recorded via Zoom. The researcher identified several important changes to the qualitative component of the research. First, the need to provide a concise explanation of the impostor phenomenon in the introductory script; second, the importance of using probes to extend the depth of the response; and finally, the challenge of sticking to the script rather than entering a conversation with the respondent. Overall, however, the field test revealed that the wording of the questions was clear to the respondent and resulted in the expected responses.

## Data Collection

Data collection is a process by which scientists use strategies to systematically gather and record information about a research question (McMillan & Schumacher, 2014). This information, collectively known as data, can either consist of numbers (qualitative data), or words (quantitative data) (Patten & Newhart, 2018). This mixed-methods study produced both types of data: The CIPS used in the first phase of the study was quantitative, while the semi-structured interviews in the second phase produced qualitative results.

Data collection did not commence until the researcher had ensured the safety and confidentiality of the human subjects participating in the study. In most social science research, an Institutional Review Board is consulted to establish that the research is carried out ethically (Patten & Newhart, 2018). The researcher gained approval from the UMass Global Institutional Review Board (UMGIRB) by submitting the following documents for evaluation:

- CIPS instrument.
- Permission from Dr. Clance to use the CIPS.

- Interview instrument (see Appendix E).
- Informational letter to principals requesting permission to seek participants for the study (see Appendix F).
- Informational letter to prospective parties requesting their participation (Appendix G and H).
- Participant consent forms for both the quantitative and qualitative components of the research (Appendix I and J).
- Participant's statement of rights (Appendix K).
- Completion certificate for human subjects research course (Appendix L).

**Quantitative Data Collection**

Upon securing permission from the UMGIRB (see Appendix M), the researcher contacted the principals of three northern California high schools in February, 2022. Once permission from the principal was granted, an invitation to participate, an informational letter, and the participant's bill of rights were sent to prospective teachers via email. Most of the participants were previously known to the researcher. Further participants were contacted through professional networks and recommendations of principals and participants. During February, 40 teachers within the researcher's district of employment were contacted, along with seven teachers from two additional school districts. Once the consent forms were completed electronically, the respondents received a link to the CIPS instrument. The participants were instructed to complete the CIPS while thinking about their remote teaching experiences during the coronavirus pandemic school closures. Teachers were asked to respond within two to three days of

receiving the link. Respondents were assured that their results would be kept confidential and that they would be informed of their score and a brief interpretation of its meaning.

Survey responses were screened for completion of the consent form and inclusion criteria. Confidentiality of participants was ensured by assigning a generic ID number to each individual, known only to the researcher. All respondents received their IP scores, regardless of inclusion in the study. Teachers who scored below 45 points, or who failed to meet eligibility criteria (for example, if they were not full-time teachers) were thanked for their participation and excluded from further participation in the study. Participants who scored 45 points or higher were invited to participate in interviews.

**Qualitative Data Collection**

Once potential participants for the qualitative phase were identified, the researcher used a consistent approach to arrange for interviews. First, the researcher sent an email to determine if the participant was willing to further participate and see if they had any questions about the topic or the process. Once contact was established, the participant was provided with the interview questions ahead of time, along with the consent to participate. Finally, the interview was scheduled via Zoom or Google Meets, at the participant's discretion. Priority was given to scheduling participants with higher CIPS scores; once those had been arranged, the remaining interviews were scheduled based on availability until all 12 had been completed.

The researcher used a semi-structured interview protocol to ensure consistency during the qualitative portion of the data collection process (Patten & Newhart, 2018). This protocol included a written script to introduce the topic of the interview and explain the purpose of the research, a standard set of questions to be asked of all participants, and

a series of optional follow up or probing questions designed to elicit additional details (Patten & Newhart, 2018). The interview protocol for this study included two background questions prompting the participant to discuss their teaching experiences during the pandemic, followed by a series of nine two-part questions addressed the interviewee's experiences with the behavioral characteristics of IP as well as their coping strategies for each. Each interview lasted approximately one hour, and a digital transcript was created. Transcripts were edited to remove the participants name and utilize the generic ID from the quantitative phase. In addition, the researcher recorded notes on nonverbal aspects of participant's communication, including overall mood, gestures, facial expressions, and tone. The researcher maintained confidential electronic copies of the data in a password-protected Google Drive folder, including CIPS scores, interview transcripts, and observational notes.

## Data Analysis

Mixed methods research involves both quantitative and qualitative data collected from the same participants to identify trends, but also to explore underlying mechanisms (Patten & Newhart, 2018). In other words, this type of research yields both statistics and stories; the number of participants who experience specific feelings or behaviors, but also the details that provide meaning to that experience (Patton, 2015). In this case, the quantitative data was used as a criterion for inclusion in the qualitative phase, producing a homogeneous sample. Then an inductive approach was used to identify themes that emerged from the descriptive responses (Patten & Newhart, 2018). This approach allows the researcher to "…enter the participants' world…" (Patten & Newhart, 2018, p. 167) to

develop a deep understanding of the phenomenon being studied and identify meaningful patterns (Patten & Newhart, 2018).

**Quantitative Data Analysis**

The CIPS is a 20-item questionnaire. Each question has a five point Likert-type scale response, where respondents indicate their similarity to a prompt with a score ranging from 1 (not at all true) to 5 (very true). The total score on the CIPS could range from 20 to 100 points. The participants completed the CIPS via Google Forms, and the researcher maintained a spreadsheet with the scores. Each respondent was assigned a generic ID number, and their personally identifying information was kept in a separate document. Scores were used by the researcher to identify participants who met the CIPS minimum score of 45 to be included in the qualitative phase of the research. In addition, summary statistics of the entire sample were calculated, including mean IP score and percent of respondents in each IP category (few, moderate, frequent, and intense). The following chapter presents these summary data.

**Qualitative Data Analysis**

The interview transcripts and observational field notes comprised the quantitative data analyzed by the author. The interviews were carried out virtually, and transcripts were automatically generated by either Zoom or Google Meets (with the Tactiq extension enabled). The transcripts were reviewed within 48 hours of the interview to ensure accuracy and to correct transcription errors. In addition, notes were taken that documented descriptions of the participants' nonverbal behaviors, including tone, mood, posture, and expressions.

The written transcripts were uploaded into the NVivo software package to assist in identifying and grouping themes in the participants' responses. The researcher continually referred back to the research question to ensure that "coping strategies" remained the central theme for analysis. Numerous codes were identified on the first pass through the data. These were then grouped hierarchically into daughter and parent themes for coping strategies associated with each of the nine behavioral characteristics of IP. Finally, the researcher identified higher-order coping strategies that were associated with more than one of the behavioral characteristics.

### Interrater Reliability

Quantitative data are considered to be reliable when two or more researchers can obtain measurements that are consistent (Patten & Newhart, 2018). For qualitative data, this type of reliability is usually described in terms of interrater agreement: The degree to which two different coders will identify the same themes (Creswell & Plano Clark, 2011; McMillan & Schumacher, 2014). To improve the reliability of the coding data, the researcher enlisted a peer to complete a review of the identified themes. The following discussion allowed the researcher to clarify the wording of several themes as well as to adjust and condense the parent/daughter themes into fewer overall categories. The following chapter presents the themes that emerged in detail.

## Limitations

Sequential descriptive mixed methods research allows a researcher to "…frame their work with statistics…[then] connect their data to a larger context, meaning, or significance…" (Patten & Newhart, 2018, p. 177). In this study, the researcher used a quantitative phase to identify individuals experiencing moderate to intense IP feelings,

followed by a qualitative interview phase allowing the research to identify important themes in the coping strategies used. As with all research, there are several limitations to this type of research, including both sampling and measurement techniques.

First, the CIPS instrument is self-reported. While respondents were urged before taking the survey to only consider their remote work during the pandemic, there could be uncontrollable outside factors influencing their subjective perceptions. The 20 CIPS prompts do not remind the respondent to consider their behavior and feelings at work; thus, it is possible that the respondents' feelings about their personal life or non-pandemic work could influence their ratings. Second, the sample used for this study is small, and not necessarily representative of the whole population. Teachers were selected from a relatively limited area in northern California, and may not represent teachers from larger, more urban communities or other states. In addition, more than half of the interviewees were known by the researcher due to their employment within the same school district. The prior knowledge between the researcher and participants may have contributed to bias on the part of the researcher. On the other hand, this prior knowledge also allowed for increased trust between the researcher and interviewees also contributed to greater depth and detail in the qualitative responses. The researcher subjectively noted shorter, less detailed responses from the four interview participants who were not previously known. Finally, this research is limited due to its unique context: The remote work caused by coronavirus pandemic-related school closures. Teachers with IP feelings may have used different coping strategies if they had not been influenced by the large-scale societal disruptions caused by the pandemic.

## Summary

This chapter began with a restatement of the study's purpose and research question. Next, the work was situated within the overall framework of mixed-methods research, including the sequential explanatory nature of the quantitative and qualitative phases. The study's target population and sample were outlined, along with a description of the research instrumentation used. Finally, the chapter presented the strategies used in data collection and analysis for both the quantitative and qualitative results, along with limitations for the study. In the next chapter, the data collected during this study is presented in detail.

# CHAPTER IV: RESEARCH, DATA COLLECTION, AND FINDINGS

## Overview

This descriptive mixed-method study explored the lived experiences of secondary teachers as they coped with impostor phenomenon-related feelings while remote teaching during school closures caused by the novel coronavirus pandemic in 2020-2021. As part of a thematic study, five researchers determined that a sequential mixed methods approach would be best suited to first, identify individuals suffering from impostor fears and feelings; and second, explore and describe the strategies these individuals used to cope with those feelings. The initial identification used an established quantitative instrument, the CIPS, to measure the intensity of the impostor experience (Clance, 1985). The qualitative phase of the study used a semi-structured interview protocol developed by the thematic group to explore in-depth the coping strategies used by teachers experiencing moderate to severe impostor feelings.

Chapter IV begins with a restatement of purpose statement and the research question. This is followed by a brief summary of the research methodology and data collection procedures. The population, sample, and demographic data are also presented. The chapter concludes with a presentation of the data, including an analysis of the common themes identified within the context of the research question. The chapter concludes with an overall summary of Chapter IV.

## Purpose Statement

The purpose of this descriptive mixed-method study was to explore and describe the coping skills used by secondary teachers who identified as experiencing the impostor phenomenon by the Clance Impostor Phenomenon Scale (Clance, 1985) to overcome the

nine behavioral characteristics associated with the impostor phenomenon during the transition to distance learning in response to the COVID-19 pandemic.

## Research Question

The study was guided by the following research question:

1. What coping skills did secondary teachers who identified as experiencing the impostor phenomenon, as measured by the Clance Imposter Phenomenon Scale (Clance, 1985), use to overcome the nine behavioral characteristics (characteristics of anxiety, lack of self-confidence, depression, perfectionism, procrastination, self-presentation, emotional exhaustion, fear of failure and fear of success) associated with the imposter phenomenon?

## Research Methods and Data Collection Procedures

The researcher used a descriptive mixed-methods approach within a phenomenological framework to explore the lived experiences of secondary teachers during the coronavirus pandemic. First, a quantitative instrument, the CIPS (Clance, 1985), was administered to secondary teachers who were forced to pivot to remote teaching during pandemic-related school closures. Teachers who were identified with moderate to intense impostor feelings were invited to participate in a semi-structured interview. The interview protocol consisted of nine questions designed to assess the interviewee's experiences with the nine behavioral characteristics of the impostor phenomenon:

- anxiety
- lack of self-confidence or self-doubt
- depression

- perfectionism
- procrastination
- impression management
- emotional exhaustion
- fear of success
- fear of failure (Clance, 1985; D. B. Scott, 2017; Vergauwe et al., 2015).

Follow-up questions elicited descriptions of the strategies teachers used to cope with those behaviors as they worked through distance learning.

Prior to participating in the survey or the interview, each participant was provided with information detailing the purpose of the study and the research question, the interview questions, and a document outlining potential risks and benefits of participation in the study. In addition, the participants were provided with the UMass Global Participants' Bill of Rights and an electronic informed consent form. The CIPS survey was administered electronically via Google Forms, with the Formfacade add-on used to calculate the participants' scores. Participants who received a score of 45 or higher, indicating moderate to intense impostor experiences, were invited to participate in the interview. Interviews were conducted via Zoom or Google Meets. At the beginning of the interview, participants were again provided copies of the documents above, and were asked to consent verbally to recording the interview.

The researcher completed the CITI Program's Human Studies Research Course for Educational Researchers and received approval from UMass Global's Institutional Review Board prior to data collection. These steps were completed to ensure that the research was completed both ethically and legally, and provided for the safety and

confidentiality of the participants (McMillan & Schumacher, 2014; Patten & Newhart, 2018). All guidelines established by the UMass Global IRB were followed by the researcher.

The researcher obtained permission from a school administrator prior to contacting secondary teachers. Teachers were invited to participate in the survey via email and were provided with: a link to the CIPS survey, a document containing information about the study, the interview protocol, and an electronic copy of the Research Participant's Bill of Rights. The link directed participants to a Google Form with an embedded electronic Informed Consent Form followed by the 20-item CIPS questionnaire. At the end of the survey, the participants were provided with their score, along with a brief interpretation of that score.

Participants who scored 45 points or more on the CIPS were invited via email to schedule a Zoom interview. This email included additional copies of the study description, the interview protocol , and the Research Participant's Bill of Rights. In addition, the participants were given an electronic Informed Consent Form for the interview, including permission to use Zoom to create an audio/video recording. Upon completion of the interview, the researcher used Zoom software to create a transcript of the conversation to be used for data analysis and coding of themes. The researcher then edited the transcript while watching the recording of the interview. Participants were provided copies of the transcripts for their approval.

## Validity

Research tools, such as surveys and interviews, are scientifically valid if the data produced accurately reflects what they intended to measure (Patten & Newhart, 2018).

Several studies have supported the use of the CIPS questionnaire in identifying and quantifying the impostor phenomenon (Bravata et al., 2020; Chae et al., 1995; Chrisman et al., 1995; Mak et al., 2019). The use of the CIPS as a screening tool for the interview phase helped to ensure that the qualitative data was associated with the impostor experience. Furthermore, the validity of the interview was improved through the alignment of the interview questions directly with the nine behavioral characteristics. A group of five researchers collaborated on the development of the interview protocol and provided diverse perspectives to improve the validity of the qualitative research tool.

## Reliability

Patten and Newhart (2018) state that a measure is reliable "…if it yields *consistent* results…" (p. 136, italics in original). In other words, the quantitative and qualitative data should be repeatable and not subject to variation based on time or place. To improve the reliability of the quantitative data, the researcher provided the CIPS in a consistent format (Google Forms) to all participants. During the interviews, a standard interview protocol was used, whereby each participant was presented with the same background information and the same questions, and in the same order. In addition, all participants were provided with a copy of the interview questions both before and during the interview.

Furthermore, the reliability of the coding and themes was improved through inter-rater reliability. A peer researcher with experience in doctoral level coding reviewed a sample of the data and was asked to independently assign themes. More than 82% of the codes were consistent with the codes obtained by the researcher; generally, agreements of 80% or better are considered to be acceptable (Creswell & Plano Clark, 2011; Patten &

Newhart, 2018). Upon further discussion with the peer reviewer, many of the discrepancies appeared to be due to the lack of non-verbal cues and context provided by the interview transcript, including tone of voice, gestures, and inferences from other segments of the interview.

## Population

A population is a group of participants "that conform to specific criteria and to which we intend to generalize the results…" (McMillan & Schumacher, 2014, p. 143). In this case, the most general population would include all secondary teachers in public high schools. In the 2017-2018 academic year, the last year for which data was published, there were approximately 1.8 million secondary teachers in the United States (National Center for Education Statistics, 2021). Due to the context of the study within the coronavirus pandemic, it was also important to utilize delimiting variables to limit the overall population (McMillan & Schumacher, 2014). In this study, the target population only included secondary teachers who were working full-time in districts that needed to transition to distance learning during the pandemic for the final months of the 2019-2020 school year or at any time during the 2020-2021 school year. Finally, the sampling frame was further reduced geographically, to focus on non-urban school districts within the "superior" region of northern California, consisting of 17 counties north of the greater Bay Area and east of Interstate 5 (California Census 2020, 2020).

## Sample

Researchers generally cannot study all the members of a population; instead, they generally draw a sample from the population. Patten and Newhart (2018) describe sampling as a technique whereby researchers "… study a subset of the population of

interest and use analytical methods that allow them to make inferences about the population…" (p. 89). This is particularly important in qualitative research, where the researcher "…uses observation or extended interviews, …[and is] more intent on understanding the perspective of those directly involved the issue…(Patten & Newhart, 2018, p. 100). The population was narrowed down using a sampling frame with specific demographic and temporal delimiting variables. In this study, the sampling frame was restricted to full-time secondary teachers in northern California public schools that were forced to transition to distance learning as result of the coronavirus pandemic during the 2019-2020 or 2020-2021 school years.

A nonprobability technique known as purposive (or purposeful) sampling was used to select participants for this study (Creswell & Plano Clark, 2011; McMillan & Schumacher, 2014). Nonprobability sampling does not include a random selection from the population; instead, subjects are selected because they are "…accessible or who may represent certain types of characteristics…" (McMillan & Schumacher, 2014, p. 150) important to the research. For the quantitative phase of the study, secondary school teachers from three non-urban northern California school districts were contacted. To be included in the initial sample, the participants needed to satisfy four criteria:

- Full-time educator during pandemic-related school closures (Spring 2020 and/or Fall 2021).
- Secondary teacher (grades 9-12) in a public school.
- Rural or small-town northern California.
- Taught online/remote/distance during the school closures.

These teachers were assessed using the CIPS to assess the intensity of their impostor feelings. Individuals with scores greater than 45 (moderate impostor feelings) were invited to participate in semi-structured interviews. Individuals with CIPS scores above 60, indicating frequent to intense impostor feelings, were prioritized for interviews. Additional participants with scores between 45-60, indicating moderate impostor feelings, made up the remainder of the sample.

## Demographic Data

For this study, 47 educators were contacted to take the CIPS survey. Of those, 29 completed the CIPS. More than 85% of the respondents experienced IP during the pandemic, with nearly half (48%) falling into the moderate category and more than 30% experiencing frequent IP feelings. From the initial sample, two respondents were eliminated from the research sample due the fact that they did not provide full-time remote teaching services during the pandemic school closures, and therefore did not meet the minimum criteria for inclusion in the study. Of the remaining 27 respondents, 6 did not meet the minimum qualifying CIPS score of 45 and were not invited for an interview (see Table 1 and Figure 1).

Table 1

*Clance Impostor Phenomenon Scores of Initial Respondents*

| CIPS Score | 0-40 (Few) | 41-60 (Moderate) | 61-80 (Frequent) | 81-100 (Intense) | Total |
|---|---|---|---|---|---|
| Number of Respondents | 4 | 14 | 9 | 2 | 29 |
| Percentage | 14% | 48% | 31% | 7% | 100% |

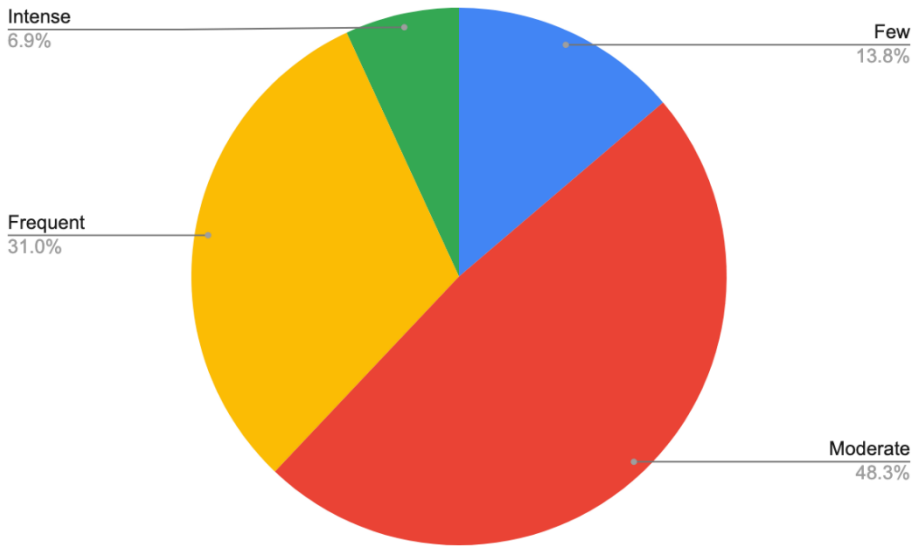


*Figure 1*. Distribution of respondents by severity of imposter phenomenon experiences, based on Clance Impostor Phenomenon Scale score.

The remaining 21 participants were contacted and invited to participate in interviews, with priority given to individuals with the highest CIPS scores. The researcher attempted to interview teachers with a diverse range of CIPS scores, years of teaching experience, and subject-area expertise. Twelve interviews were completed, including teachers from three districts in several geographic regions of northern California (Sierra Nevada mountains, Sierra Nevada foothills, and northern Central Valley). Participants in the interviews had CIPS scores ranging from a minimum of 45 to a maximum of 86; approximately half of the sample was classified as experiencing moderate IP. The average CIPS score of the study population was a 63, indicating that many participants in the study were classified as having frequent impostor feelings. The interview participants had a wide range of teaching experience: Five of the teachers were within the first five years of their career, while five teachers had more than 20 years of experience in education (see Table 2).

Table 2

*Demographics of Study Participants*

| Participant ID | CIPS | Gender | Years Teaching | Subject |
|---|---|---|---|---|
| 02 | 86 | M | 0-5 | Humanities |
| 11 | 83 | F | 20+ | Humanities |
| 03 | 71 | M | 20+ | CTE/Arts |
| 01 | 66 | F | 0-5 | Humanities |
| 09 | 64 | F | 20+ | Other |
| 10 | 63 | M | 0-5 | Other |
| 07 | 62 | F | 10-20 | Humanities |
| 05 | 61 | F | 20+ | CTE/Arts |
| 04 | 53 | M | 0-5 | STEM |
| 08 | 52 | F | 0-5 | Humanities |
| 06 | 49 | F | 20+ | Humanities |
| 12 | 45 | M | 5-10 | STEM |
| Average | 62.9 | | | |

*Note*. CIPS = Clance Impostor Phenomenon Scale; CIPS controlled the sort in ascending order.

## Presentation and Analysis of Data

The transcripts from the participants' interviews along with the researcher's notes were utilized in the analysis of the data. Interviews were transcribed with Zoom's built-in software and were reviewed and edited by the researcher. Research participants were provided with their transcripts prior to the researcher carrying out the coding process. The transcripts were analyzed for key coping strategies associated with each of the nine behavioral characteristics of the impostor phenomenon. These findings, along with important implications, are presented in Chapter IV.

### Data Analysis

In phenomenological research, the goal of the researcher is to explore and describe a "lived experience" among a small group of research participants: "…what was experienced, how it was experienced, and finally, the meanings that the interviewees assign to the experience…" (McMillan & Schumacher, 2014, p. 382). To achieve this,

the researcher carried out a relatively small number of in-depth interviews, and then used an inductive approach to identify the common codes and themes that emerged (Patten & Newhart, 2018). The first step was for the researcher to read the interview transcripts and identify key phrases that indicated or implied coping strategies. The researcher then looked for similarities and patterns in those phrases and developed a set of preliminary codes. These preliminary codes were often words or short phrases, intended to capture the brief essence of the coping strategy, for example: *(a) let it go, (b) planning/ organizing, (c) think of others, and (d) build relationships.*

The researcher used a qualitative software, NVivo, to inductively develop themes by grouping similar codes and then refining those categories. The researcher used a recursive method to code and recode the data and ensure that the developed themes accurately captured the essence of the participants' experience (McMillan & Schumacher, 2014). First the researcher coded the data for each participant. Next, since the interview questions were aligned directly with the nine behavioral characteristics associated with the imposter phenomenon, the data associated with each behavioral characteristic were coded for all participants. Similar codes were combined and simplified. Finally, groups of related codes were combined into themes. At the end of the coding process, major and minor themes were identified for each behavioral characteristic based on number of different participants who mentioned the theme along with a consideration of the total frequency for each theme.

**General Findings**

To improve reliability, all 12 interview participants were asked the same questions in the same order. Codes and themes aligned with each of the nine behavioral

characteristics were developed through a recursive inductive process using the qualitative software program, NVivo. A frequency analysis was carried out for the codes and themes within each behavioral characteristic. For a theme to be presented in the findings of this study, it must have been mentioned by a minimum of eight participants (two-thirds of the sample) and have a frequency of at least 20 mentions. The frequency count is relatively high due to the tendency of individual participants to repeat and rephrase a similar idea several times within the same response. As a result, an individual could contribute several items to the frequency count of a single code within a theme.

Individual impostors may experience some or all of the nine behavioral characteristics associated with the impostor phenomenon:

- anxiety
- depression
- lack of self-confidence (self-doubt)
- perfectionism
- procrastination
- self-presentation (impression management)
- emotional exhaustion
- fear of failure
- fear of success (Clance, 1985; D. B. Scott, 2017; Vergauwe et al., 2015).

While each participant was asked to describe coping strategies for each of the nine characteristics, participants did not respond to each question equally. Table 3 presents the frequency count for mentions of coping strategies for each of the nine behavioral characteristics. For the participants in this study, coping with anxiety and emotional

exhaustion were the most commonly mentioned behavioral characteristics, with 20% and 17% of the overall frequency counts, respectively. Perfectionism, depression, self-doubt, and fear of failure were in a second cluster of frequencies, each representing 11-13% of the frequency count. Coping strategies associated with self-presentation, procrastination, and fear of success were the least frequently mentioned behavioral characteristics by the participants in this study, with less than 10% of the overall frequency count for each. See Figure 2 for a visual represntation of the frequencies of coping strategies associated with each of the behavioral characteristics.

Table 3

*Frequency Counts for Mentions of Coping Strategies Associated with Each of the Nine Behavioral Characteristics*

| Characteristic | Frequency | Percent |
|---|---|---|
| Anxiety | 172 | 20% |
| Emotional exhaustion | 145 | 17% |
| Perfectionism | 113 | 13% |
| Depression | 102 | 12% |
| Self-doubt | 101 | 12% |
| Fear of failure | 93 | 11% |
| Self-presentation | 59 | 7% |
| Procrastination | 40 | 5% |
| Fear of success | 37 | 4% |
| Total | 862 | 100% |

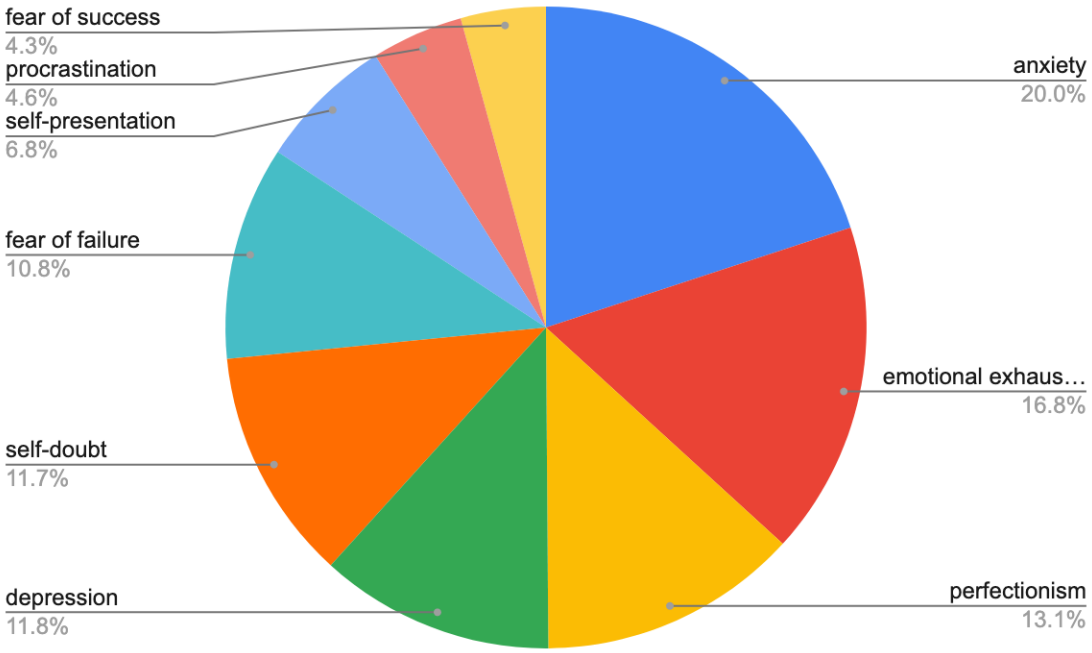


*Figure 2*. Frequency of coping strategy responses by each behavioral characteristic.

**Data by Behavioral Characteristic**

Data for each of the nine behavioral characteristics are described below. Each section begins with a description of participants' experiences of the behavioral characteristic. Next, the major themes of coping strategies associated with each behavior are presented. In order to be considered as a major theme, it must have been mentioned by a minimum of 8 participants and have a minimum frequency of 20 mentions. Finally, each of the major themes is considered, with details of the coping experience provided in the participants' own words whenever possible.

**Anxiety.** The pandemic caused a major upheaval to teachers personal and professional lives. Pandemic-related school closures forced teachers to pivot their instructional strategies almost overnight. As a result of these rapid changes, all 12 participants experienced symptoms of anxiety. Participant 01 described the experience

thus: "…I don't know what I'm doing and I feel super anxious and I'm just like so lost in the world, and so that was really bad…." The symptoms of anxiety ranged from mild nervousness "…over just opening up my computer…" (Participant 03) to full-blown panic attacks: "…there were times when I was trying to make the materials that my heart would get going so fast, and I couldn't think and I'd have to … walk away from the computer…" (Participant 04).

Four themes emerged from the discussion of coping strategies associated with anxiety. The themes were *control what you can and accept what you can't; recognize and avoid triggers; engage support networks; and practice intentional self-care*.

The first theme, *control what you can and accept what you can't,* emphasizes the dual needs of teachers to exert control over their environments, yet acknowledge that this is impossible, especially during times of uncertainty. Teachers expressed that especially during the pandemic, routines, planning and organizing helped them to reduce their anxiety: "… that normal pattern, that routine was a savior…" (Participant 05). However, teachers also recognized the need to let go and accept that certain things were uncontrollable: "… when you're in emergency mode you just do whatever you need to do…" (Participant 11). Participants also recognized that a tendency to overwork during the pandemic provided some relief in the form of feelings of control and a disruption of negative thought patterns. Participant 10 stated that he would "…kind of bury myself in my work…" while Participant 05 would "…have the lesson plans set up for the whole entire week, knowing every single minute because I could control that...." Unfortunately, this strategy also came at a cost. Participant 02 reported that they were "…up all night working…" and another felt that they needed to push through the fatigue: "…I just told

myself I don't have a choice, I just have to do this…." (Participant 09). In the long run, however, teachers realized that this level of exertion was unsustainable: "…I did have to figure out how I could let things go…" (Participant 07).

The second theme, *recognize and avoid triggers*, attempts to capture the coping strategy used by nine of the participants to prevent or minimize the onset of anxiety. Teachers reported that they experienced heightened anxiety due to the widespread impacts of the pandemic and sought to distract themselves from the stress of daily life. One teacher noted that "…my anxiety only exerts itself when I'm by myself…" (Participant 04) so he would avoid working in isolation through social media or video calls. Other participants described using housework or other menial tasks as a way to avoid thinking about the pandemic or to put off work-related stress. For example, Participant 10 would "…bury myself into working excessively on teaching...then it was cleaning the bathroom until I fell asleep…." Another teacher would use checklists to help them break down projects and reduce the fear of forgetting important tasks: "…what helps to kind of reduce that anxiety, a little bit has been able to cross something off [the list]..." (Participant 08).

The third theme, *engage support networks*, was mentioned by 8 of the 12 participants, and also had the highest frequency of mentions (28%) of the coping strategies for anxiety. Participants emphasized the importance of collaborating with peers and mentors to reduce anxiety as well as providing emotional support. Teachers used their peer support networks to "bounce ideas off of" (Participant 12); get advice from experts (Participant 02); "share strategies that were working" (Participant 11) for different students; prioritize learning objectives and determine "…what's the most

important here…" (Participant 04); or work out the "nuts and bolts of using the technology" (Participant 03). One participant summarized the importance of support networks by saying: "… it was really valuable to me to have [colleagues] who continued to share resources with me … problem solving together … that was a huge stress reliever and lifesaver…" (Participant 07). Social networks also provided critical emotional support, and helped individuals to realize that they were not alone in their fears: "…just talking to them a lot helped me to feel like okay I'm doing what I'm supposed to do… it's okay to feel this way, everyone else is feeling this way too…" (Participant 08).

Finally, the fourth theme, *practice intentional self-care*, seeks to describe how participants consciously attempted to improve their mental health. This theme was also mentioned by 8 of the 12 research participants, and had the second-highest frequency of mentions in this category. Participants reported exercising, meditation, experiencing nature, playing with pets, yoga, talking with loved ones, and reading self-help books as forms of self-care. In the words of Participant 09: "…when I started to recognize that I couldn't work like this, I would stand up, walk away, get on my bike, watch something funny, just walk away…. I just had to stop working…." It is important to note that six participants stated that they used alcohol as a type of self-care during the pandemic to reduce their anxiety. Furthermore, alcohol use was often combined with support networks in the form of "unwinding" cocktails with spouses/family members, during virtual "book club" meetings, or with colleagues after work.

Table 4 demonstrates the number of participants mentioning each theme and the frequency of mentions for each theme.

Table 4

*Major Themes in Coping Strategies for Anxiety*

| Theme | Frequency | | | |
|---|---|---|---|---|
| | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Control what you can and accept what you can't | 10 | 83% | 36 | 21% |
| Recognize and avoid triggers | 9 | 75% | 24 | 14% |
| Engage support networks | 8 | 67% | 48 | 28% |
| Practice intentional self-care | 8 | 67% | 45 | 26% |
| Total | 11 | 92% | 172 | -- |

**Emotional exhaustion.** All 12 participants in the study reported symptoms of emotional exhaustion, especially as school closures extended into their second year. The teachers in the study noted two distinctly different phases to their emotional exhaustion. During the Spring of 2020, the total lockdowns and associated emergency school closures required educators to "pivot" to distance learning, often with only two weeks of preparation. This rapid change was disorienting for teachers: "…this year, it felt like the carpet, like the rug just got pulled out from under everybody…" (Participant 09). The rapid change in instructional strategies often meant that educators needed to spend many hours developing resources and techniques that would work in an online format. The sheer number of hours required to re-invent course materials was exhausting: "I'm doing my best and I feel like I'm barely holding on…" (Participant 02) and "…I was definitely exhausted, I think I underestimated the work, I didn't think teaching [online] was going to take so much of my time and energy…" (Participant 08).

All 12 teachers continued distance learning for at least part of the 2020-2021 school year, with 10 of the 12 teachers required to continue remote teaching until at least January 2021. For these teachers, the extended duration of the school closures

contributed strongly to their emotional exhaustion. Learning new technology, long hours of lesson preparation, "Zoom fatigue" from daily online teaching sessions, and an increasingly disengaged student body were important elements described by participants. Participant 04 observed the disconnect between hours worked and student success: "… many, many teachers I know experienced like more work during the pandemic with lesser results…." Another teacher noted that even getting sick didn't provide a break while working from home: "…even when I was out with COVID for a week, I was sitting behind the computer eight hours or more…" (Participant 08). As the fight over extended school closures became a political issue, the increasingly divisive climate contributed additional stress, as noted by Participant 03: "I used to be Really proud to say I'm a teacher, now I'm like uhhhh because it opens a can of worms…." Several of the participants described how teaching during the school closures nearly pushed them to their limits, as exemplified by this comment from Participant 02: "…sometimes I'm just like I want to throw in the towel and just say, I don't care, I don't care, I don't care."

The discussion of coping strategies for emotional exhaustion produced four major themes: (a) *practice resilience,* (b) *make connections with others,* (c) *shift towards a more positive mindset,* and (d) *find meaning in the work.*

The first theme, *practice resilience,* captures the essence of how participants attempted to push through or get control of the intense workload as the pandemic stretched on. Participant 09 observed that "…it's a whole new beast and your old things don't work on it really that well anymore…" while Participant 10 noted "I'm kind of like if retirements way out here [years away], I have to figure out how to survive…." However, instead of spiraling downward into full burnout, the participants developed a

sense of pride and strength in continuing to teach in spite of being exhausted: "I think I just wanted to put my head down, [instead] I charged ahead…" (Participant 04) and "…I have really figured out how to push through…." (Participant 09). Other teachers used organizational strategies to reduce feelings of being out of control (Participants 05, 09, and 12) or setting boundaries (Participants 05, 06 and 09) to limit overwork. In the end, however, teachers exhibited resilience by simply refusing to give up: "I guess it was pure will…" (Participant 04).

Most of the participants acknowledged that dealing with emotional exhaustion is much easier when it is not faced alone. The second theme, *make connections with others*, is captured in this statement by Participant 03: "…it's therapeutic to talk about it…." While two participants sought help from professional therapists, most made connections through more informal channels such as sharing with friends, peers, co-workers, mentors, students, and family members. Talking with peers and coworkers provided a sense of shared experience: "…I think just talking to others and realizing that even though they're not new [teachers], they're still feeling that same way…" (Participant 08). It also allowed teachers the opportunity to release stress and seek perspective: "…to be able to admit my weaknesses with them and say like hey this sucks and I do not know why…" (Participant 07) and "I'm learning that not everybody thinks or does like I do" (Participant 09). And teachers continued to forge connections with students, in spite of never meeting in person: "… [I] just stare at all the little [Zoom] pictures that are in front of me and try to see them [as human beings] … because that is like my driving force and what makes me like a good teacher" (Participant 04).

The third theme, *shift towards a more positive mindset*, describes the efforts that participants made to interrupt negative thought patterns and reframe their pandemic experiences in a more positive light. Often, the first step in adopting a more positive mindset was for participants to realize that they were not alone: "…it helps me know that I'm not the only one feeling that way…" (Participant 08). Other participants adjusted their mindset by seeking a greater perspective. One participant reflected on the past: "…I kept looking back at other things I had gotten through in my life and tried to compare it to those experiences that were pretty heavy at the time, but I made it through…" (Participant 03). Other participants looked to a better future: "I think things are going to change, I know it won't be forever, or at least I'm hoping [so] … because I've had time to see the changes…" (Participant 06) and "…its gotta get better.." (Participant 12). One person described using positive self-talk as way to provide therapy to themself: "I'll get through it… I'm smart enough, I've got family, I've got a wife I've got food, I've got I got all these things… it's gonna be okay…" (Participant 03). Finally, one teacher recognized the need to avoid negative social influences: "…I'm burned out listening to the negativity, I'm burned out listening to my colleagues complaining…I'm tired of listening to the divisiveness…" (Participant 09).

The fourth theme, *find meaning in the work,* was a way for teachers to reduce burnout by reminding themselves of why they had entered the profession in the first place: "...having purpose made you keep working even through the exhaustion and crying…" (Participant 09). For example, teachers described the profession as their "calling" (Participant 02), or found the strength to push through because the students needed them (Participant 03). Other participants focused on more practical types of

meaning, such as financial stability and access to health insurance (Participants 06 and 08). However, the participants tended to cope by drawing on deeper types of meaning. For example, participant 05 focused on her values and conscience: "…every one of us could have quit, and walked away every time…but that just wasn't right…." And Participant 03 coped with his exhaustion with reverence: "…we're also granted this ability or this opportunity or this privilege to pass on the collective human knowledge [to our students]…."

Table 5 summarizes the frequencies of each theme. The representation of each theme was relatively balanced, with eight or nine participants mentioning each, and between 20 and 35 total mentions.

Table 5

*Major Themes in Coping Strategies for Emotional Exhaustion*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Practice resilience | 9 | 75% | 34 | 23% |
| Make connections with others | 9 | 75% | 33 | 23% |
| Shift towards a more positive mindset | 8 | 67% | 28 | 19% |
| Find meaning in the work | 8 | 67% | 21 | 14% |
| Totals | 12 | 100% | 145 | -- |

**Perfectionism.** For participants, perfectionism was deeply interwoven with other aspects of impostor-related behaviors, such as anxiety, fear of failure, and emotional exhaustion. Several participants described that they often demonstrate perfectionism in their professional lives, such as Participant 08: "…I like things to be done right from the beginning…." However, the pressure and responsibility of teaching through the pandemic exaggerated those tendencies: "…the pandemic sort of made work my world

because I wanted it to be right at work…" (Participant 07) and "…I always felt like there's something more I should have done…" (Participant 02).

Coping strategies associated with perfectionism were ranked third in terms of frequency of mentions. All 12 participants discussed experiencing feelings of perfectionism, and 13% of all mentions of coping strategies were in relation to this behavior. Three themes emerged from the interviews: *focus on the big picture, get comfortable with imperfection,* and *be goal oriented (check things off the list*).

The most common technique that impostor teachers used to cope with perfectionism was to *focus on the big picture*. Ten of the 12 participants mentioned using this strategy, with 35% of the overall frequency count for mentions. Participants described ways to step back from an overwhelming attention to detail and instead spend their energy and time on what was truly important. Six of the participants recalled giving themselves and their students permission to be less than perfect, especially within the context of the pandemic. For example, Participant 08 reflected: "…I had to stop and realize that it was an extraordinary situation for goals for myself and [my students]…." Participant #12 realized that he had unreasonable expectations for his colleagues: "…what I think is them not doing enough is actually them doing as much as they can…." And participants recognized the importance of breaking the cycle of anxiety and overwork: "…it was more like I just wanted to make sure everything was good, …but it was never good enough" (Participant 02). By using trauma-based thinking, teachers were able to accept that past expectations were no longer valid: "…I had to really negotiate with myself that this school that school year was different…" (Participant 01).

The second most frequently cited strategy, *get comfortable with imperfection*, attempts to capture how teachers cope when their expectations aren't met. One teacher (Participant 09) described herself as "…a recovering perfectionist…" when she realized that her 12-14 hour work days were not sustainable: "…I learned that lesson hard when I couldn't be perfect I just couldn't do it, I just had to let go...." The online teaching format created stress, but also an opportunity for self-forgiveness: "…I just went into it [online teaching] having the same expectations as my normal class and quickly realized like 'man I gotta lower the bar on myself right now'…" (Participant 02). Other teachers recognized the importance of reducing the pressure on the students: "…it was like, 'okay I'm going to take a half step with this topic… I'm going to take one step not five steps'…" (Participant 07).

The third major theme, *be goal oriented (check things off the list)*, was a strategy used by teachers to cope with their perfectionism when they couldn't reduce their expectations. Nine of the 12 participants described situations where they felt that they simply had to push through: "I sacrificed my mealtimes and my family time and my sleep time ... in order to make it right…" (Participant 07). In these situations, participants coped by planning, staying organized, and recognizing the accomplishment of task completion. Participant 08 stated: "I do a lot of like post-its and some lists, I kind of just embrace it, … when I feel like I'll get overwhelmed and pushing myself too much, I tried to like split things up in smaller tasks…." Other participants used tools such as notebooks to keep track of ideas at all hours of the night (Participant 09), or used backwards planning to make sure they started with the end in mind (Participant 06). And

creating and maintaining routines helped both teachers and students to get control of the workload and accomplish critical tasks during uncertain times (Participants 05, 08, 12).

Table 6 summarizes the frequencies of the three major themes for coping with perfectionism.

Table 6

*Major Themes in Coping Strategies for Perfectionism*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Focus on the big picture | 10 | 83% | 39 | 35% |
| Get comfortable with imperfection | 10 | 83% | 35 | 31% |
| Be goal oriented (check things off the list) | 9 | 75% | 23 | 20% |
| Total | 12 | 100% | 113 | -- |

**Depression.** Depression was not experienced as universally among the study participants as anxiety, emotional exhaustion, and perfectionism. In general, participants reported that their depressive symptoms were more linked to the pandemic than to their impostor feelings at work. Participant 02 recalled, "wasn't just the work experience that was depressing, it was also what was going on around me that I could see … especially [the impact of the pandemic on] my kids…" who were also struggling with anxiety and depression.

Coping strategies for avoiding or minimizing depression were discussed by 10 of the 12 participants. In this case, one clear theme emerged: *take action to provide relief. Take action to provide relief* captures the importance of doing something to forestall the feelings of hopelessness, sadness, and apathy that often accompany depressive thoughts. This need for action is summarized by Participant 07: "…just doing something

[anything] generates the energy or the directionality or whatever it is to do something else and get you moving…." In this case, the participant was not referring to physical activity, but rather, making a decision to get moving mentally. Others emphasized the importance of physical activity, especially exercising outdoors: "…I rode my bike every day, every flipping day, and I've never ridden my bike that much in my life…." (Participant 09).

Several participants expressed the need to seek out others and share their thoughts and feelings as a way to take action. For example, Participant 11 remembered the importance of admitting their feelings to friends: "…if you have good enough friends, then you don't lie… owning up to that [sadness] to other people so that I could feel like they were there too…." Participant #09 recalled the importance of letting the emotions out: "…just to have a good cry together… and collectively recognize it [the trauma of the pandemic]….." Other people described the importance of reaching out to peers for help with managing the intense workload (Participants 03 and 07) or problem-solve issues (Participants 05, 06, and 10). And one person described the need for professional help: "….it was so bad, I had to get a second therapist [laughs]…" (Participant 01).

Finally, many participants cited self-care as a type of action. Several participants discussed using hobbies such as reading (Participants 01, 09, and 10), cooking (Participants 03 and 12), crafts (Participants 01 and 02), and playing video games (Participants 02 and 12) as a way to stay mentally active: "…it kept me busy, so I couldn't like sulk and feel bad and lonely…" (Participant 05). As stated above, exercise and getting outside were also common strategies. Several participants mentioned admittedly unhealthy coping strategies such as overeating or using alcohol, though often

these were associated with seeking peer support in social contexts (Participants 01, 02, 04, 05, 10, 11, and 12).

Table 7 shows that all 10 participants who reported coping with depression mentioned this theme. Furthermore, more than 60% of all mentions for coping with depression fell into this category.

Table 7

*Major Themes in Coping Strategies for Depression*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Take action to provide relief | 10 | 83% | 62 | 61% |
| Total | 10 | 83% | 102 | -- |

**Self-doubt (lack of self-confidence)**. The rapid shift to online teaching during the pandemic caused many participants to experience intense periods of self-doubt. This was true for highly experienced teachers who had been in the profession for more than 20 years (Participants 03, 05, 06, 09, and 11) as well as relatively novice teachers just starting their careers (Participants 01, 02, 04, 08, and 10). For experienced teachers who were deeply familiar with their subject, the shift in instructional technique was deeply unsettling. For example, Participant 11 recalled "…I thought that I was a decent teacher, but apparently I'm not good enough to teach kids unless I am in the classroom hounding them…" and Participant #3 stated "…I just felt like a hamster on a wheel …I felt like I no longer was good at my job, and before that I felt really confident…." On the other hand, new teachers struggled with seeing themselves as effective teachers at all. Participant 01 began teaching during the pandemic: "…we moved online and then I had no idea what I was doing and I didn't know if they learned anything and I didn't see them

again [after the course ended]…." Participant 02 remembered feeling responsible for his students' lack of success: "…I see students that are struggling and I see myself in that…like should I really be up here on screen or in class or anything teaching these people?"

Eleven of the 12 teachers in the study reported experiencing a lack of self-confidence during online teaching, and 12% of all mentions of coping techniques addressed this behavioral characteristic. Participants in this study utilized two major strategies in coping with their self-doubt: *ready, fire, aim* and *engage support networks*.

For teachers who were experiencing serious self-doubt, it was important to forge ahead in spite of their lack of confidence. The *ready, fire, aim* strategy encapsulates the pattern of analyzing an issue and planning an initial response ("ready"), followed by immediate action ("fire") with the knowledge that course correction would be possible after more feedback was acquired ("aim"). This helped teachers to push through their lack of confidence and make progress while also giving themselves permission to make mistakes. As Participant #9 recalled, "…every time that I sat down to try and do it [teach online], I still didn't think I could do it, but I kept doing it anyway…." Another teacher described the experience as "…It's gonna suck but you're just gonna have to do it. Fail and do better next time…" (Participant 02).

Experienced teachers tended to used routines to help them feel a sense of normalcy and build up enough confidence to attempt new tasks. Participant 03 described how he came to the school building during the shutdown to teach from a familiar space:

> …I came in here every single day, set up my camera and just went back to my syllabus and said 'I'm just going to walk through and do all the stuff that the kids would be doing [even though] no one's here…

On the other hand, newer teachers tended to seek examples during the "ready" phase: "…it was looking at lot of online resources [to make sure] I'm doing it the way others are doing it too, so it's not like I'm totally off doing something that has not been up to standard…" (Participant 08).

The second theme, *engage support networks*, was noted by nine of the participants. This theme encapsulates the importance of feedback and emotional safety in helping teachers to overcome their lack of confidence. Several participants reported that the isolation caused by the pandemic stripped them of their opportunity for feedback from both peers and their students. Participant 04 observed that feedback from students' facial expressions was key; since students didn't turn on their cameras, "…I realized that I was missing those connections with the students online…." One teacher noted the importance of online department meetings: "…I got to see results and you know, share with other teachers. I had a great support in the department, and I feel like that helped me a lot…." (Participant 08). Another teacher noted that they went back to the school building as soon as possible once the lockdown lifted even though the students were still online. This allowed them to get feedback because teachers could "…stick their heads in other classrooms… that helped, seeing people at school, even though we were scared of getting [sick]…" (Participant 06). Peer feedback networks also provided much-needed emotional support: "…[I could see that] everyone else is in the same boat, like no one else knows anything…" (Participant 01). Several teachers participated in an online book

club that gave them an opportunity to problem-solve, share feedback, and build up their confidence:

> we just got on zoom and be like 'oh my God how am I going to do this?' and we would just drink wine for an hour … talk about how terrible it was …and we start[ed] to help each other, like the stupidest things that really helped all of us… (Participant 06)

Table 8 shows the frequency distribution of the two major themes. The strategy *ready, fire, aim* was used by 12 participants who experienced self-doubt and was mentioned 34% of the time, while *engaging support networks* was described by 9 of the 11 participants, and consisted of 25% of the coping mentions for this behavior.

Table 8

*Major Themes in Coping Strategies for Self-Doubt (lack of self-confidence)*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Ready, fire, aim | 11 | 92% | 34 | 34% |
| Engage support networks | 9 | 75% | 25 | 25% |
| Total | 11 | 92% | 101 | -- |

**Fear of failure.** Six of the 12 teachers described intense or frequent fears of failure. The combination of new technology, the need to adapt lessons and activities to be done by students at home with minimal supervision, and the inability to interact directly with either their peers or their students, resulted in many teachers experiencing an acute feeling of "…Oh God, I don't know how to do this, I can't even do this…." (Participant 01). At first, teachers were worried about the technological aspects of getting lessons posted online and virtual sessions running, but this transitioned into a fear of not being able to complete the work in a timely fashion "'….like what's going to

happen if I just can't do this? I have to sleep…I gotta stop, but what's going to happen online tomorrow…?'" (Participant 12). Teachers also felt an intense fear of failing their students by not providing an effective learning environment: "…I'm really good at meeting kids where they're at and figuring out what they need to be successful, but that was almost impossible on Zoom…" (Participant 10). Finally, teachers worried that they were failing their loved ones because they were so overwhelmed with work. One participant recounted having to watch her own children struggle on their own while she was spending hours preparing materials and teaching online "…Oh my God, I failed *my* kids for other people's kids…" (Participant 06).

Eleven of the 12 participants in this study described strategies to cope with their fear of failure, with an overall frequency of 93 mentions (11%). Two themes emerged from the discussions: *embrace failure as an opportunity (growth mindset),* and *reframe failure as a challenge to overcome (resilience mindset).*

The most common approach used by participants was *embrace failure as an opportunity*, or in other words, adopt a growth mindset: "…[the goal] is always improvement and we are improving, working to be better…" (Participant 05). One teacher described the frustration of attempting to adapt curriculum to an online format, and being ultimately unsuccessful: "…I think a lot of the coping was just us accepting failure as okay…" (Participant 01). Participant 11 recalled that using feedback from students ("…you know they're brutally honest…") helped them to improve and realign the goals of the project, thereby turning failure into success.

Several teachers emphasized that the pandemic gave them a unique opportunity to take risks without judgement: "…it's not going to be like last year… I can't hold myself

responsible for any of this" (Participant 10). This included working with students who were failing: some teachers stopped giving traditional grades and shifted to a pass/no pass system more closely related to effort. One teacher noted that students also often suffer from a fear of failure: "…they base their [self-image] on failure, based on a grade…not based on progress…" (Participant 06) and adopting a growth mindset helps to create a positive learning environment. Rather than failing students, and as a result, feeling like a failure as a teacher, a more flexible grading system "… gave me more of an ability to talk to them about what they could improve…" (Participant 06).

The second theme, *reframe failure as a challenge to overcome*, captures the idea of resilience: bouncing back from setbacks rather than accepting failure as final. Teachers explained that they dealt with the repeated issues that they encountered – including old computers, slow internet, lack of student engagement, and non-existent resources – as hurdles that they simply had to find a way over or around. One teacher (Participant 01) described it thus: "it was a lot of leaning into failure … I think if we're going to fail, what else can you do?" Most teachers coped with their fear of failure through Herculean effort: "…I mean you work, really, really, really hard, really hard and you put a lot of hours into it…" (Participant 09). Participant 08 recognized that the long hours provided a sense of accomplishment and relief: "…overworking myself was not healthy, but then it also gave me that peace of mind…." And Participant 05 used her organizational strategies and positive self-talk to give herself the energy to face her fears: "…every day I just set aside time, to make sure everything was planned….I kept thinking that [if] I can't do it, I'll just do it again…." One teacher summarized how he coped with

his fear of failure with a paraphrased movie quote: “How do you know [you’re going to fail]? You don’t. It's just a leap of faith… you just gotta go” (Participant 02).

Table 9 summarizes the frequency of each major theme. Each theme comprised approximately one-third of the mentions for coping strategies related to the fear of failure. *Embrace failure as an opportunity* was mentioned by 10 participants and *reframe failure as a challenge to overcome* was mentioned by 9 participants.

Table 9

*Major Themes in Coping Strategies for Fear of Failure*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Embrace failure as an opportunity (growth mindset) | 10 | 83% | 31 | 33% |
| Reframe failure as a challenge to overcome (resilience mindset) | 9 | 75% | 33 | 35% |
| Total | 11 | 92% | 93 | -- |

**Self-presentation (impression management)**. During distance learning, secondary teachers reported the need to project an image of competence in spite of their fears of ineptitude and in defiance of the disruptions caused by the pandemic. While only three teachers reported feeling a strong need to modify their public persona, a total of nine teachers described presenting a public image that felt somewhat false. Eleven of the 12 teachers felt the need to present themselves online more positively than they felt on the inside. Participant 10 stated, “…absolutely I feel like tried to project more competence then was there…” while another participant recalled “…I think [I faked it] every time I taught in Google Meets…it was like every single time” (Participant 1). One of the teachers felt that she had to hide her depression: “…I want to be the teacher that other people expect me to be…” (Participant 07). And one of the most experienced

teachers described the psychological toll of constantly managing her online persona: "…it wears you out… by the end of the day, even though we were teaching short days I was exhausted…." (Participant 11).

The discussion of coping strategies revealed two themes relating to self-presentation: *be as authentic as possible, and fake it till you make it.*

It is perhaps not surprising that teachers are accustomed to being aware of their public persona. Participated 04 stated: "…the only way I can teach is by being myself and that's why I walk this fine line [between professional and friendly]…." Nine of the teachers expressed a desire to *be as authentic as possible* yet acknowledged that doing this in an online environment presented additional challenges. It was difficult to make authentic connections with students, especially those whom teachers had never met in person. Participant 12 expressed his frustration thus: "…like I'm trying to be real and get to know them … and they can see me but I'm talking to … a bunch of [school] icons [on Google Meets]…." Teachers also felt the need to conceal their lack of confidence and inexperience with online pedagogy: "…I mean normally I'd say I've tried to be as real as possible with the kids, but I did, I felt like I was kind of faking my way through it a lot of times…" (Participant 01).

In addition, teachers felt the need to put their "…best foot forward…" (Participant 07) despite their own mental health struggles. One participant stated that they were "…pretty brutally honest with the kids…I told them that I wanted to quit..." (Participant 03). However, others hid their true feelings: "…I'm going to take that [negative] emotion and pop it right over here in this box, because now, I have to get down to business…" (Participant 07). Some teachers coped with their emotions by focusing on the needs of

the students first: "…I held it together through the lesson, but once the [meeting] ended…I just cried…" (Participant 12). Teachers found that sharing at least some of their authentic feelings with both their students and peers helped them to cope: "…I wanted them to know there were other people going through the same things…" (Participant 11).

While participants found it important to *be as authentic as possible*, the second theme, *fake it till you make it*, provided an important counterpoint. As described above, it was not always possible for participants to share their true emotions. In many cases, however, it was useful for participants to project confidence and competence even though they were teaching in a completely novel situation. Participant 10 recalled dressing up to teach online: "I wanted that professionalism… I wanted the kids to see I'm taking this seriously, 'I want you to take it seriously'…." The cognitive dissonance caused by doing a familiar job in completely unprecedented circumstances made participants feel that they were performing rather than teaching. As one highly experienced teacher explained, "We always say as teachers that we're on stage, for six or seven hours a day…but this [online teaching] was crazy…." (Participant 11). Participant 01 recalled her anxiety at realizing she didn't know who was watching her online lessons: Students, parents, or even total strangers. She stated:

> [I was] pretending like I knew what I was doing and knowing what I was saying, even if I would get nervous and then forget my whole lesson…it's about me being brave, because I don't want the kids to know that I'm afraid.... (Participant 01)

But teachers found strength in using their personas to create a safe place for their students:

> Keep going because you have to…it's for them [the students]. I never had a choice to say 'no, stop.' I just kept doing it. Okay. I just kept surviving. You know 'everything's good, everything's fine,' when I really want to curl up and cry… (Participant 05)

Teachers also described feeling particularly self-conscious due to the daily feedback from video cameras: Often the only face a teacher would see during an online class session would be their own. Participants described their experiences with feeling that they were putting on a show rather than teaching: "I just don't find myself to be a digital person…. I felt like I had to put more makeup on because I struggled with [what] I looked like on camera…" (Participant 06) and "…I'm not good at it. But that's what it is [required by the job] so, then I have to fake it…" (Participant 09). Participant 07 remembered coping with insecurity by exaggerating her personality: "…I threw myself out there more than I would have…." Several teachers found the irony in trying to look professional even though things at home were chaotic: "…shirts & ties on top, sweats and slippers on the bottom, dogs barking in the other room…" (Participant 12). One participant (10) recalled that there could be consequences for students if he didn't continue to put forward a positive persona: "…I had to act like I felt ok when I had COVID, because I wanted to make sure they [the school] didn't use it [teacher illness] as an excuse to keep school closed …." (Participant 10).

Table 10 shows the frequency of each theme and the number of participants reporting each. Note that there is a relatively low frequency of mentions for this behavior, with fewer than 60 total. The theme, be as authentic as possible, was mentioned by nine participants, with 42% of the mentions. On the other hand, *fake it till*

*you make it,* was described by eight of the participants but had a greater overall frequency, with 51% of the total mentions.

Table 10

*Major Themes in Coping Strategies Self-Presentation (impression management)*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Be as authentic as possible | 9 | 75% | 25 | 42% |
| Fake it till you make it | 8 | 67% | 30 | 51% |
| Total | 11 | 92% | 59 | -- |

**Procrastination**. In this study, procrastination was one of the least experienced behavioral characteristics for teachers. In the words of Participant 06: "I don't know if I *can* procrastinate, I don't even know if that's in my DNA…." Only one teacher admitted to regularly putting off tasks because of their impostor feelings; three other teachers reported this behavior occurred occasionally. One participant struggled with feeling hopeless at the beginning of the pandemic: "I was just thinking it was just so sad… so I was just like whatever the school year's ruined anyways…" (Participant 01). On the other hand, another participant tied their procrastination to perfectionism: "…I don't want to do anything that's not going to be perfect, and none of it can be perfect, I just put it off…" (Participant 09). Other participants reported feeling that teaching online took so many hours that the rest of their lives were on hold: "…I probably felt like I was procrastinating ...but I don't think I put [work] things off like I normally do, I think I put everything else off, like cleaning…" (Participant 11).

In the discussion of how teachers avoided procrastination, one major theme emerged: *Focus on your goals instead of your tasks.* All 12 participants mentioned

coping strategies for procrastination, as it was perceived as being a skill that was critical for success in the teaching profession.

The theme, *focus on your goals instead of your tasks*, was the overwhelming favorite among participants in this study. Most participants indicated that they did not suffer from a tendency to procrastinate as it was considered to be a part of being a successful teacher: "…it's so against my person now there's no way I could do it…I don't procrastinate…" (Participant 06). When asked to describe how they avoided the urge to procrastinate, participants talked about what they were trying to accomplish in their work rather than focusing on the amount of time it would take. For example, instead of thinking of it as tedious grading, one teacher focused on the importance of the feedback they were providing: "I have to see what they're doing, if they're getting it or not…I still felt the need to give them that feedback as quickly as possible so that they could get better…" (Participant 04). Another participant wanted to increase student participation: "…I bought into that whole [mindset] if I give the kids feedback right away, they know I'm watching, and more of them are going to be engaged…" (Participant 07). Several teachers stated that their peace of mind was the key goal. For example, Participant 03 said "… I try to stay on top of it because it to me, it relieves stress…" and Participant 08 explained "…mostly to feel better…I'll get things done, cross it off the list, and I'll feel better…."

Table 11 shows the frequency of mentions for the major theme, as well as the number of participants that described it. Ten of the 12 participants mentioned this theme, with a frequency of 60%. It is important to note, however, that procrastination had a

relatively low frequency count when compared with other behavioral characteristics: only 40 total mentions (approximately 11% overall).

Table 11

*The Major Theme in Coping Strategies for Procrastination*

| | Frequency | | | |
|---|---|---|---|---|
| Theme | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Focus on your goals instead of your tasks | 10 | 83% | 24 | 60% |
| Total | 12 | 100% | 40 | -- |

**Fear of success**. The fear of success was the least-often mentioned behavior by participants in this study. One participant reacted with surprise to the idea of a fear of success: "I'm always so worried about not failing that I don't think I ever think about what's going to happen if I do good…" (Participant 08). Only eight participants reported any experience with feeling a fear of success, and of those, only three mentioned that it occurred somewhat regularly. The fear of success tended to fall into three general categories. Most importantly, teachers feared the pressure of ever-increasing expectations. For example, Participant 11 stated "…You want desperately to be successful, and to do things right, but then that fear that if I do that then that's going to be the [new] standard…." Participant 04 recalled thinking "…once the bar is set high, you're like, 'oh no,' you're expecting this always to happen…." Second, teachers worried that if they were perceived as doing well that they would be given additional responsibilities: "…I'm gonna get asked to do things but I've learned to say 'no' though… (Participant 02). Finally, teachers recognized that their success could be perceived as a threat to others. Participant 09 worried that her big-picture thinking would be a challenge to an administrator: "...in teaching, you're supposed to kind of stay in your

lane…." On the other hand, Participant 06 recognized that her success with students might make other less-successful teachers look bad: "…so because I'm helping kids by scaffolding… it's perceived as I'm asking kids to do too much, and so I feel that judgment [from other teachers]…."

One major theme emerged from the analysis of coping strategies used by participants: *Redefine success as a process, not a product*. The major theme, *redefine success as a process not a product*, incorporates the recognition that while growth mindset values achievement, it also strongly emphasizes the importance of constant goal setting, feedback, and improvement. Participants coped with their fear of success by acknowledging that "finishing" a task was merely one step along a normal progression of gaining proficiency. Participant 05 recalled struggling with decoupling the ideas of success and pressure to perform: "…Yeah, it's weird. It's uncomfortable. It's always easier to work for something than to finish and accomplish it…." Another participant learned to cope once he admitted that he was the source of the problem: "…like this is so screwed up for so many reasons, I'm doing this to myself… there has to be something we can do to fix this…" (Participant 12). And several participants recognized the need for feedback from peers to help them recognize their own growth: "…I think that we're all kind of looking for that that ... someone to tell me that I'm doing okay, but I don't want you to scrutinize me [too harshly]…" (Participant 11). Finally, Participant 06 reflected that teachers would need to build trust in order to give (and receive) honest feedback about both success and failure: "…it's because they're [the other teachers] not doing it … it's not the culture here, it's a threat…."

Table 12 shows the frequencies of this theme and of the fear of success. Eight participants described coping strategies for the fear of success; all eight utilized *redefine success as a process not a product* as one of their coping strategies. Coping strategies for the fear of success were only mentioned 37 times in total (4% of all mentions), but this major theme represented more than half of the mentions for coping strategies associated with this behavior.

Table 12

*The Major Theme in Coping Strategies for the Fear of Success*

| Theme | Frequency | | | |
|---|---|---|---|---|
| | Number of Participants | Percent of Participants | Number of Mentions | Percent of Mentions |
| Redefine success as a process, not a product | 8 | 67% | 20 | 54% |
| Total | 8 | 67% | 37 | -- |

## Key Findings

This mixed-methods phenomenological study sought to explore and describe the strategies used by secondary teachers to cope with behaviors related to the impostor phenomenon while they transitioned to distance learning during school closures caused by the coronavirus pandemic. The initial quantitative phase of the study involved administering the CIPS via electronic survey to 29 secondary educators in northern California. Of that group, 79% were identified as experiencing moderate to intense impostor feelings. Twelve of these individuals participated in the qualitative phase of the study: A semi-structured interview designed to elicit descriptions of the coping strategies used to address each of the nine behavioral characteristics of the impostor phenomenon. The collected data was then coded, and themes emerged. Major themes were identified for each of the nine behavioral characteristics. A theme was considered to be major if it

was mentioned by at least eight of the participants and with a minimum frequency count of 20.

**Key Findings: Coping with Anxiety**

1. *Control what you can and accept what you can't* was mentioned by 10 participants and had a frequency count of 36 out of 172 mentions for anxiety.
2. *Recognize and avoid triggers* was mentioned by 9 participants and had a frequency count of 24 out of 172 mentions for anxiety.
3. *Engage support networks* was mentioned by 8 participants and had a frequency count of 48 out of 172 mentions for anxiety.
4. *Practice intentional self-care* was mentioned by 8 participants and had a frequency count of 45 out of 172 mentions for anxiety.

**Key Findings: Coping with Emotional Exhaustion**

5. *Practice resilience* was mentioned by 9 participants and had a frequency count of 34 out of 145 mentions for emotional exhaustion.
6. *Make connections with others* was mentioned by 9 participants and had a frequency count of 33 out of 145 mentions for emotional exhaustion.
7. *Shift towards a more positive mindset* was mentioned by 8 participants and had a frequency count of 28 out of 145 mentions for emotional exhaustion.
8. *Find meaning in the work* was mentioned by 8 participants and had a frequency count of 21 out of 145 mentions for emotional exhaustion.

**Key Findings: Coping with Perfectionism**

9. *Focus on the big picture* was mentioned by 10 participants and had a frequency count of 39 out of 113 mentions for perfectionism.

10. *Get comfortable with imperfection* was mentioned by 10 participants and had a frequency count of 35 out of 113 mentions for perfectionism.
11. *Be goal oriented (check things off the list)* was mentioned by 9 participants and had a frequency count of 23 out of 113 mentions for perfectionism.

**Key Findings: Coping with Depression**

12. *Take action to provide relief* was mentioned by 10 participants and had a frequency count of 62 out of 102 mentions for depression.

**Key Findings: Coping with Self-Doubt (Lack of Self-Confidence)**

13. *Ready, fire, aim* was mentioned by 11 participants and had a frequency count of 34 out of 101 mentions for self-doubt.
14. *Engage support networks* was mentioned by 9 participants and had a frequency count of 25 out of 101 mentions for self-doubt.

**Key Findings: Coping with a Fear of Failure**

15. *Embrace failure as an opportunity (growth mindset)* was mentioned by 10 participants and had a frequency count of 31 out of 93 mentions for fear of failure.
16. *Reframe failure as a challenge to overcome (resilience mindset)* was mentioned by 9 participants and had a frequency count of 33 out of 93 mentions for fear of failure.

**Key Findings: Coping with Self-Presentation Issues (Impression Management)**

17. *Be as authentic as possible* was mentioned by 8 participants and had a frequency count of 30 out of 59 mentions for self-presentation.

18. *Fake it till you make it* was mentioned by 9 participants and had a frequency count of 33 out of 59 mentions for self-presentation.

**Key Findings: Coping with Procrastination**

19. *Focus on your goals instead of your tasks* was mentioned by 10 participants and had a frequency count of 24 out of 40 mentions for procrastination.

**Key Findings: Coping with a Fear of Success**

20. *Redefine success as a process not a product* was mentioned by 8 participants and had a frequency count of 20 out of 37 mentions for fear of success.

Table 13 shows the key findings for each behavior and their corresponding frequency counts.

Table 13

*Key Findings: Major Themes for each of the Nine Behavioral Characteristics*

| Behavioral Characteristic | Major Theme | Number of Participants | Percent of Participants | Frequency of Mentions |
|---|---|---|---|---|
| Anxiety | Control what you can and accept what you can't | 10 | 83% | 36 |
| | Recognize and avoid triggers | 9 | 75% | 24 |
| | Engage support networks | 8 | 67% | 48 |
| | Practice intentional self-care | 8 | 67% | 45 |
| Emotional Exhaustion | Practice resilience | 9 | 75% | 34 |
| | Make connections with others | 9 | 75% | 33 |
| | Shift towards a more positive mindset | 8 | 67% | 28 |
| | Find meaning in the work | 8 | 67% | 21 |
| Perfectionism | Focus on the big picture | 10 | 83% | 39 |
| | Get comfortable with imperfection | 10 | 83% | 35 |
| | Be goal oriented (check things off the list) | 9 | 75% | 23 |
| Depression | Take action to provide relief | 10 | 83% | 62 |

continued

| Behavioral Characteristic | Major Theme | Number of Participants | Percent of Participants | Frequency of Mentions |
|---|---|---|---|---|
| Self-Doubt (Lack of Self-Confidence) | Ready, fire, aim | 11 | 92% | 34 |
| | Engage support networks | 9 | 75% | 25 |
| Fear of Failure | Embrace failure as an opportunity (growth mindset) | 10 | 83% | 31 |
| | Reframe failure as a challenge to overcome (resilience mindset) | 9 | 75% | 33 |
| Self-Presentation (Impression Management) | Be as authentic as possible | 9 | 75% | 25 |
| | Fake it till you make it | 8 | 67% | 30 |
| Procrastination | Focus on your goals instead of your tasks | 10 | 83% | 24 |
| Fear of Success | Redefine success as a process, not a product | 8 | 67% | 20 |

## Summary

The purpose of this descriptive mixed-method study was to explore and describe the coping skills used by secondary teachers to overcome the nine behavioral characteristics associated with the impostor phenomenon during the transition to distance learning in response to the COVID-19 pandemic. Twelve semi-structured interviews were conducted with secondary educators who had been identified with the CIPS as experiencing moderate to frequent impostor feelings while participating in remote teaching during coronavirus-related school shutdowns. Interview questions were designed to elicit coping strategies relating to each of the nine behavioral characteristics associated with the impostor phenomenon:

- anxiety
- lack of self-confidence

- depression
- perfectionism
- procrastination
- self-presentation
- emotional exhaustion
- fear of failure
- fear of success (Clance, 1985; D. B. Scott, 2017; Vergauwe et al., 2015).

The interview data was analyzed, coded, and major themes were identified for each of the nine characteristics.

Chapter IV presented the data and key findings as they related to each of the nine behavioral characteristics. The 12 participants in the study described their experiences with the impostor phenomenon and the coping strategies that they used to address each of the behaviors. Key themes were identified as those that were referenced by at least eight participants with a minimum frequency count of 20. The relatively high frequency count was due to the tendency of participants to repeat and rephrase key strategies within a single response.

Analysis of the data revealed between one and four major themes for each of the nine behavioral characteristics of impostor phenomenon. A total of 20 major themes were identified to describe the strategies used by secondary teachers to cope with impostor feelings as they engaged in remote teaching during school shutdowns caused by the coronavirus pandemic. Chapter V presents a summary of the study, reviews the key themes for each characteristic, provides conclusions, proposes implications for action, and makes recommendations for future research.

# CHAPTER V: FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Chapter V begins with a review of the purpose statement and research question, then summarizes key components of the research methods used in the study. Next, the major findings of the research are presented, along with a discussion of several unexpected findings. Conclusions about these findings and implications for action are presented, followed by recommendations for future research. The chapter concludes with some final remarks and reflection by the researcher.

## Overview

The coronavirus pandemic of 2020-2021 created unprecedented challenges for educators. As schools closed, teachers pivoted to online or distance learning, often within a matter of days. The initial stages of the school shutdowns required a rapid transition in educational strategies that caused stress for both teachers and students; however, there was hope that the disruptions would only last a few weeks. Unfortunately, as the pandemic stretched into a second year, the pressures of providing online education caused many teachers to experience mental health challenges. For educators with impostor phenomenon, the ability to cope with persistent stress in an uncertain work environment became a key factor for teacher success. The purpose of this study was to explore and describe the lived experiences of secondary teachers as they coped with impostor feelings while providing distance learning during the COVID-19 pandemic.

## Purpose Statement

The purpose of this descriptive mixed-method study was to explore and describe the coping skills used by secondary teachers who identified as experiencing the impostor

phenomenon by the Clance Impostor Phenomenon Scale (Clance, 1985) to overcome the nine behavioral characteristics associated with the impostor phenomenon during the transition to distance learning in response to the COVID-19 pandemic.

## Research Question

The study was guided by the following research question:

1. What coping skills did secondary teachers who identified as experiencing the impostor phenomenon, as measured by the Clance Imposter Phenomenon Scale (Clance, 1985), use to overcome the nine behavioral characteristics (characteristics of anxiety, lack of self-confidence, depression, perfectionism, procrastination, self-presentation, emotional exhaustion, fear of failure and fear of success) associated with the imposter phenomenon?

## Methods

The researcher used a mixed-methods descriptive approach based on a phenomenological framework. The first phase used a quantitative instrument, the CIPS, to identify secondary teachers experiencing the impostor phenomenon and to measure the intensity of their feelings. CIPS scores indicate that a person has moderate (score 41 or higher), frequent (score 61 or higher), or intense (score 81 or higher) impostor feelings. For this study, teachers who scored 45 points or higher on the CIPS were invited to participate in the qualitative phase of the research.

The second phase was a semi-structured interview designed to explore the lived experiences of participants with IP while teaching remotely during the pandemic and describe the strategies those educators used to cope with IP. The interview consisted of

three background questions exploring teaching during pandemic school closures and nine questions aligned directly with the behavioral characteristics of IP:

- anxiety
- lack of self-confidence
- depression
- perfectionism
- procrastination
- self-presentation
- emotional exhaustion
- fear of failure
- fear of success (Clance, 1985; D. B. Scott, 2017; Vergauwe et al., 2015).

Each of the nine questions were designed to elicit a description of the participant's experience of the behavioral characteristic, followed by a discussion of how the participant coped with each characteristic.

Twelve interviews were conducted via Zoom, and digital transcripts were automatically generated by the meeting software. These transcripts were edited by the researcher for accuracy and all personally identifying information was removed. These transcripts were then loaded into the NVivo software program for coding. The interview transcripts were coded inductively and grouped into themes. Between one and four major themes for each behavioral characteristic emerged. To be considered a major theme, it must have been mentioned by at least eight participants, with a minimum frequency count of 20.

## Population

At its broadest, the population of interest for this research is secondary teachers in public schools within the United States, including approximately 1.8 million secondary teachers during the 2017-2018 school year (National Center for Educational Statistics, 2021). For this study, however, the context of school closures due to the coronavirus pandemic was critical. The population for this study was limited to those teachers who taught fully online during the Spring of 2020 or during the 2020-2021 school year. Nearly all public-school teachers in the United States were forced to go virtual between March and June, 2020. In the 2020-2021 school year, approximately 30% of all teachers taught in a fully online format, with an additional 49% of teachers engaged in partially online (hybrid) instructional model (Zamarro, Camp, Fuchsman, & McGee, 2021). The sampling frame for this study included full-time public secondary school teachers in northern California who taught in a fully online format during coronavirus-related school closures during the 2019-2020 or 2020-2021 school years.

## Sample

To be included in the sample for this study, the individual needed to meet four criteria:

- Full-time public school educator.
- Secondary teacher (grades 9-12).
- Rural or small-town northern California.
- Online/remote/distance teacher during pandemic school closures.

A total of 47 teachers from three northern California school districts were contacted to participate in the study; 29 completed the CIPS, with the majority of

educators coming from a single district. Two of the respondents were eliminated from the study because it was later determined that they did not teach full time during distance learning. Six of the respondents did not meet the minimum qualifying score of 45 on the CIPS and were not invited to interview. Out of the remaining 21 participants, 12 teachers were interviewed for the qualitative component of the study. These 12 teachers had CIPS scores ranging from 45 to 86, with an average of 63 (frequent IP experiences). The sample included five males and seven females from a wide range of subject areas and number of years of teaching experience.

## Major Findings

This study was designed to uncover the coping strategies that were used by secondary teachers with impostor phenomenon as they pivoted to distance learning during pandemic-related school closures. Analysis of the 12 interviews revealed several interrelated strategies that educators used to cope with their unique combination of IP behavioral characteristics and their individual experiences with the pandemic. The major findings for each of the nine behavioral characteristics are summarized below.

### Major Finding 1: Coping with Anxiety

Coping with anxiety was the most frequently mentioned behavioral characteristic. Eleven of the 12 participants reported feeling anxiety. Ten participants (83%) felt that their most important strategy for dealing with anxiety was a two-pronged approach: control what you can and accept what you can't. Teachers felt the need to plan and stay organized to increase predictability, but also to let go and be flexible during unprecedented times. Next, nine teachers (75%) described the need recognize their anxiety triggers and avoid them whenever possible. The final two themes were only cited

by eight participants each (67%) but had the highest frequency counts for this behavioral characteristic. Teachers reported that using support networks, including peers and mentors, provided an important avenue for relieving both emotional and professional anxiety. Finally, participants coped with their anxiety by consciously focusing on their self-care through exercise, relaxation, and mindfulness practices.

**Major Finding 2: Coping with Emotional Exhaustion**

All 12 participants in the study reported feeling emotional exhaustion, especially as distance learning extended into the second school year. Coping with emotional exhaustion was the second most frequently mentioned behavioral characteristic. Teachers utilized four major strategies when coping with emotional exhaustion. Practicing resilience and making connections with others were the two most frequently mentioned strategies, and were described by 75% of the participants. Participants emphasized the importance of pushing through, bouncing back, and refusing to give up in spite of the intense challenges created by remote teaching. Teachers also discussed the importance of making connections with others, including therapists, friends, colleagues, and students, to gain perspective and a sense of shared experience as well as to release negative emotions. The third strategy, using the power of a positive mindset, and the fourth technique, find meaning in the work, were both shared by eight participants (67%). Each of these strategies focus on powerful frames of mind that allow individuals to regain feelings of control over their lives and reduce burnout.

**Major Finding 3: Coping with Perfectionism**

Perfectionism was experienced by all 12 participants in the study, and was the third most frequently mentioned in the discussion of coping strategies. Three major

themes emerged in the coping strategies used by teachers in this study. Ten of the 12 participants (83%) described focusing on the big picture or getting comfortable with imperfection as major techniques to cope with perfectionism. The first strategy was related to identifying what was meaningful in a task, while the second strategy was more closely aligned to judging the quality of a product produced by others. The third major coping strategy, be goal oriented, was cited by nine participants (75%) in this study. This strategy focuses on recognizing and valuing the achievement in incremental progress towards a complex project.

**Major Finding 4: Coping with Depression**

While only 8 of the 12 participants felt that they were depressed during the pandemic, 10 of the 12 (83%) discussed coping strategies for this behavioral characteristic, and it was the fourth most frequently cited. Participants utilized one major strategy for dealing with depressive behavior: Take action to provide relief. All 10 of the participants who discussed coping with depression described the importance of *doing something* to break out of the downward spiral of negative thoughts. The key to this strategy was mental or physical action. Teachers referred to social strategies, such as joining peer groups or seeking therapy, as well as individual actions such as intentional problem-solving, engaging in hobbies or simply going outdoors.

**Major Finding 5: Coping with Self-Doubt (Lack of Self-Confidence)**

Coping with self-doubt, or a lack of self-confidence, was expressed by 11 of the 12 (93%) participants in the study, and coping strategies associated with this behavioral characteristic were the fifth most frequently described. According to all 11 participants, a "ready, fire, aim" approach was effective for overcoming feelings of self-doubt.

Participants found it useful to prepare for a task to build confidence, but it was just as important to begin taking action quickly rather than waiting until perfection was achieved. In a second major theme, teachers also recognized the need for collaboration with peers to relieve self-doubt through social calibration. Nine of the 12 participants (75%) used social networks to build confidence through shared experiences, problem solving, and emotional support.

**Major Finding 6: Coping with Fear of Failure**

A fear of failure was also common among teachers during the pandemic, with eleven of the 12 participants (93%) expressing deep-seated concerns that they wouldn't be successful during distance learning. Ten teachers (83%) felt that embracing failure as an opportunity to grow was a key mindset in overcoming the fear of failure. Components of this strategy included setting realistic goals, focusing on improvement and using peers to recognize success within imperfection. A complimentary theme, reframe failure as a challenge to overcome, was identified by 9 of the 12 participants (75%) in the study. These teachers refused to accept failure as an option, and practiced resilience, persistence, and will-power to push through challenges. In these cases, even though participants were afraid of failing as digital teachers, the cost of giving up was simply too high.

**Major Finding 7: Coping with Self-Presentation (Impression Management)**

Eleven of the 12 participants (93%) described feeling the need to present a public impression that was more positive and confident than they felt on the inside, but only three participants expressed a need to strongly manipulate their self-presentation. Most teachers felt that impression management was simply part of the profession. Two major

strategies emerged for coping with challenges related to self-presentation. Nine of the participants (75%) advocated being as authentic as possible; in other words, being vulnerable and sharing true feelings unless it is inappropriate for the situation. This strategy was preferred as it allowed for relationship building and allowed teachers to be a role model for their emotionally vulnerable students. On the other hand, eight teachers (67%) found that the "fake it till you make it" approach was useful in circumstances where authenticity would be considered unprofessional.

**Major Finding 8: Coping with Procrastination**

Procrastination was a rare characteristic amongst participants in this study; only four teachers indicated that they procrastinated during distance learning. On the other hand, all 12 participants discussed coping strategies for avoiding procrastination, often stating that that this was necessary for teaching. In the discussion of how teachers avoided putting off work, one major theme emerged: 10 of the participants (83%) reported that focusing on their goals rather than the individual tasks helped them avoid procrastinating. Teachers' key goals included providing feedback to students or giving themselves peace of mind.

**Major Finding 9: Coping with Fear of Success**

For the teachers in this study, the fear of success was the least frequently mentioned of the nine behavioral characteristics during distance learning. One major theme emerged for coping with the fear of success. Eight participants (67%) felt that redefining success as a process rather than a product was an effective way to deal with this fear. Valuing a cycle of feedback and improvement rather than focusing on

achievement helped participants to reduce their fears of judgement or increased burdens at work.

## Unexpected Findings

The data for this study revealed numerous strategies that secondary educators used to cope with their impostor feelings during distance learning related to the COVID-19 pandemic. Major themes were associated with each of the nine behavioral characteristics, with several similar strategies that crosscut more than one behavior. The teachers in this study were deeply reflective about their struggles through the pandemic and appreciated the opportunity to share their experiences. During the analysis of the data, the researcher noticed several unexpected findings relating to teachers' experiences while remote teaching during the coronavirus pandemic.

### Unexpected Finding 1

The researcher was surprised at the prevalence of impostor phenomenon among secondary teachers within the context of the pandemic. More than 85% of teachers in the sample population experienced moderate, frequent, or intense IP while remote teaching. The researcher anticipated that IP would be relatively common during the pandemic, but this greatly exceeded the researcher's expectations.

### Unexpected Finding 2

Several teachers recalled that the interview was the first time they had truly reflected upon about their pandemic teaching experiences. The third question of the interview, "share your pandemic [teaching] story," was intensely emotional for some participants. Several participants stated that teaching during the pandemic was so traumatic that they had difficulty remembering how they got through it. Teachers

expressed gratitude to the researcher for taking the time to listen to their story, finding the experience to be "almost therapeutic" (Participant 01). At the end of his interview, Participant 12 expressed a sentiment shared by several other teachers: "…maybe now I can let go…and move on."

**Unexpected Finding 3**

The researcher noted that many teachers did not recognize their own coping strategies. When asked how they coped with anxiety (for example), they often had a quick response similar to "I didn't – I just pushed through it." The researcher was surprised at the lack of awareness that teachers had for their own strength and willpower, especially when it related to protecting the needs of their students.

**Unexpected Finding 4**

The researcher noticed that there were three different types of impostor among the participants: New, temporary, and long-term impostors. It was not surprising to observe brand new teachers to experience impostor feelings, especially within the context of starting a new career during a pandemic. However, several teachers with more than 20 years of experience indicated that they became impostors during the pandemic. With CIPS scores in the frequent or intense categories, they indicated that they were not "normally" impostors, but that distance learning had deeply shaken their self-image. Other teachers indicated that they felt like an impostor before the pandemic began and were surprised to feel some relief knowing that others were sharing their IP experiences.

**Unexpected Finding 5**

The researcher noted a pandemic paradox: It provided both the source of intense stress, and at the same time, provided a way for participants to cope. Participants used

the excuse of the pandemic to allow themselves to reduce their expectations, to be imperfect, and to express their insecurity more openly.

## Conclusions

While the extreme disruption caused pandemic was a unique situation, there are several important conclusions that can be drawn from this study. The experiences of teachers with IP during distance learning may provide insight into coping strategies that work for all teachers with IP tendencies.

### Conclusion 1

The data from this study indicates that the nine behavioral characteristics associated with IP in teachers are deeply interrelated and have a profound impact on mental health in teachers. Six of the behavioral characteristics comprised a common profile for teachers with IP and put teachers at risk of mental health concerns:

- anxiety
- depression
- fear of failure
- perfectionism
- self-doubt
- emotional exhaustion

Periods of intense change may put educators at increased risk of developing or intensifying this complex of IP-related behaviors. Teachers coping with this constellation of behaviors should seek out collaborative support networks that prioritize emotional well-being as well as professional development.

**Conclusion 2**

Teachers who are undergoing major changes in their work environment should be forewarned that impostor feelings are a common and natural consequence of disruption. The pandemic gave a unique opportunity for all teachers to suffer together, effectively normalizing the experience. As recalled by Participant 11: "…when you know you're not the only one, it's easier…." Teachers should be prepared to feel like novices, an experience that may be deeply unsettling for individuals with many years in a profession. Teachers should seek out other peers with impostor feelings, possibly from other career stages, to provide empathetic, but realistic, feedback about work-related expectations.

**Conclusion 3**

An important approach to dealing with impostor feelings involves actively cultivating mindsets that are authentic, constructive, and positive. Some of the most toxic experiences stemming from the IP arose when teachers felt powerless, helpless, and out of control. The pandemic forced teachers to react to change rapidly, with very little time to prepare and few effective teaching tools. Effective mindsets for coping with impostor feelings included being mindful, focusing on growth, and developing resilience. In each case, teachers empowered themselves to exercise control over their thought patterns in a way that was consistent with their core values. Teachers should not be forced to adopt a particular approach; instead, they should be encouraged to seek a mindset that feels natural to them, and then build upon it through intentional practice.

**Conclusion 4**

The participants in this study often cited "pushing through" as a strategy that they used to cope with impostor feelings during the pandemic. Indeed, teachers should

celebrate their collective willpower as a monumental accomplishment and a source of pride. However, the strategy of "pushing through" was recognized as unsustainable in the long term. This strategy contributed to emotional exhaustion and burnout: "…I couldn't have kept going if we [stayed] online… I wouldn't have lasted, not for much longer…" (Participant 04). On the other hand, teachers who used a strategic planning approach – setting realistic goals, measuring progress, anticipating roadblocks and taking corrective action – coped more effectively with the long-term impacts of imposter feelings. A strategic approach, rather than just "pushing through," would allow teachers to feel a sense of control as well as increase their ability to recognize incremental progress.

**Conclusion 5**

The most important coping strategy was deceptively simple: Take action. This was the central theme that connected the coping strategies for each of the nine behavioral characteristics. For teachers, the first step was the most important: Any action was better than no action. Action may have been mental or physical: A decision to change a mindset; choosing to go for a walk; meeting with peers to discuss strategies; providing feedback to students; reflecting on why they had entered the profession; or simply getting up and doing it all again the next day. The cliché "fake it 'till you make it" encapsulates both agency and optimism: If you *do something* (even if it's imperfect) and *keep going*, you will reach success.

## Implications for Action

This study revealed several important conclusions about how teachers coped with impostor feelings related to distance learning during pandemic-related school closures.

In consideration of the data from this study and the conclusions cited above, the researcher recommends the following actions to support teachers with IP and improve the educational organizations in which they work.

**Implication 1**

*Mental health must become a core value of the professional culture* in educational organizations. The six behavioral characteristics if IP experienced most frequently by teachers -- anxiety, depression, fear of failure, perfectionism, self-doubt, and emotional exhaustion – can be mitigated through regular access to wellness programs. Work cultures should promote resilience and growth mindset for employees, especially during times of change. This could be accomplished through formal trainings, the regular use of wellness language in organizational communication, or informal peer support networks.

**Implication 2**

Educational leaders should *mindfully approach change initiatives*. Disruption at the workplace can be traumatic; leaders may unintentionally trigger or intensify impostor feelings if they push the pace of change too quickly. Leaders must use emotional intelligence to anticipate and recognize the signs of impostor phenomenon in their teams. When leaders model authenticity, collaborative decision-making, feedback, and a growth mindset, healthy organizational change can occur with minimal trauma for all.

**Implication 3**

When faced with the challenges of impostor feelings, individuals should seek to *take action to begin the healing process*. Impostors should allow themselves to "fail forward," embrace uncertainty and accept imperfection. Action may begin with small

steps or reflecting upon their "why." By taking mindful action, people can connect their choices to their values, and become empowered to make meaningful change.

**Implication 4**

Teachers with impostor feelings should *actively seek feedback* to avoid many of the negative impacts of IP. Gaining an outsider's perspective can help impostors to more accurately align their self-perception with professional expectations. Feedback is especially powerful when combined with a growth mindset to mitigate anxiety, self-doubt, perfectionism and fear of failure. Feedback could be formal or informal, and include sharing frustrations, problem-solving classroom issues, observing other classrooms, or sharing relationship building approaches. More formal mentoring relationships would provide opportunities to grow and gain institutional knowledge with more experienced colleagues, as well as to normalize impostor feelings.

**Implication 5**

Impostors should *join collaborative teams* rather than work in isolation, even if it is uncomfortable at first. Organizational leaders should require teachers to come together with multiple groupings of their peers, and provide regularly structured time to do so. Impostors often believe that they are the only ones suffering. A team approach provides opportunities for impostors to share ideas, debrief challenging experiences, engage in long-term project management, and develop realistic expectations.

**Implication 6**

Educational leaders should *provide developmental mentoring programs* to elevate and engage all new members of a professional community, whether they are novice or experienced. Taking on a new position is likely to intensify impostor feelings.

Mentoring programs create an opportunity to monitor for impostor feelings, normalize the impostor experience, and teach coping strategies for common behaviors. Partnership programs reduce professional and social isolation, and help educational leaders foster a culture of feedback and collaboration. Mentoring programs should have three different goals: (a) operational support, to make organizational culture transparent and facilitate access to resources; (b) growth-minded feedback and coaching groups to enhance professional development; and (c) peer support networks to develop inclusive work communities with social support for mental health.

## Recommendations for Further Research

The findings from this study provide a variety of opportunities for further exploration into the impacts of the IP. Additional research is needed to explore healthy coping strategies for the IP in a variety of contexts. Recommendations for future research include the following:

- The current study involved 12 teachers from a relatively narrow geographic region of California. This region experienced a rapid early shutdown in response to COVID-19, and those closures persisted long into the following school year. The study should be replicated in other regions of the country, especially those with different progressions of the pandemic.
- A study on the impacts of community support of school closures should be completed, for example, a comparison of IP coping strategies used by teachers in a district whose community supported the school closure versus in a district where closure was controversial or unsupported.

- The schools in this study were limited to rural areas or small towns. A similar study carried out in large, urban areas (San Francisco, Los Angeles) to determine the impact of community/district size on coping strategies.
- A longitudinal study with the same district and teachers could be performed one year and five years from the school reopening to determine the persistence of traumatically induced impostor feelings over time. Furthermore, it would be possible to determine shifts in coping strategies, potentially distinguishing between short-term and long-term effectiveness.
- This study assessed coping strategies only in secondary teachers. Since IP is relatively poorly studied in educators, replication studies in elementary teachers or middle-level teachers should also be carried out.
- Teachers in this study were forced to transition to distance learning during the pandemic. A comparison study of teachers who were previously employed online or in distance learning programs would provide insight into the effect of the pandemic itself on IP coping strategies, without the variable of changing instructional strategies.
- This study explored IP coping strategies in teachers who were forced to work remotely during the pandemic. A comparison study could be carried out to explore the coping strategies of individuals from other industries who were forced to work from home during the pandemic.
- In this study, the pandemic was a traumatic event that caused a major, rapid shift in instructional technique. The impact of other types of disruptive organizational change could also be studied; for example, when a major

school-wide change is rapidly implemented, such as standards-based grading, project-based or experiential learning, or common core.

- Finally, this study focused on the coping strategies used by teachers to cope with impostor feelings during an intensely disruptive life event. An important extension of this study would be to explore how high school *students* coped with the transition to distance learning.

## Concluding Remarks and Reflections

The IP has been discussed among professionals, especially women, for over 40 years. It has seen a recent resurgence in popular media in recent years, reflecting awareness of increasingly rapid changes in global society. Technology, climate change, economic development, and cultural conflict have created both incredible opportunities and societal tension. It seemed like the news was full of stories about people struggling to keep up with the pace of change, especially with young professionals. Paradoxically, I felt relief: It became mainstream to talk about the feelings that I have coped with for my entire life. To hear others sharing their hidden struggles so publicly was liberating; at least I knew that my experience wasn't anomalous. I wasn't alone.

As a secondary teacher with more than 20 years of experience, I finally committed to overcoming my fears by entering a doctoral program in organizational leadership. I wanted to learn the strategies and skills necessary to envision myself as a leader, rather than as "just" a teacher. I did not intend to become an expert in the IP when I entered my doctoral program in the Fall of 2019, I just hoped to survive it.

And then the pandemic hit.

And everything stopped.

And as the world slowly started up again, it felt like *everything* was different.

As a teacher during the pandemic, I experienced the pivot to distance learning first-hand. I was intensely aware of the self-doubt, anxiety, and emotional exhaustion caused by the abrupt shift. I also started to recognize that many of my colleagues, students, and friends were feeling like impostors for the first time. I became an accidental mentor to many as others looked to me for support, not knowing that I was probably one of the biggest impostors of them all. However, my years of experience coping with IP became invaluable as I was able to recognize the signs of IP and provide some measure of empathy, advice, and leadership. Being aware of my own responses to IP helped me to guide others on their journeys towards self-acceptance and resilience.

Understanding the coping strategies that teachers used to cope with their impostor feelings during the pandemic will provide important insights in the years ahead. The educational system has suffered a traumatic event on a scale never anticipated. Teachers and students will be coping with the echoes of this disruption for a generation. Anxiety, self-doubt, depression, and emotional exhaustion have become nearly endemic. Fortunately, as a result, the discussion of mental health is no longer taboo, something to be suffered in silence. Learning to recognize impostor feelings, normalizing the experience, and openly discussing coping strategies are all important steps in recovering from the trauma of the pandemic experience for both educators and their students.

Finally, this dissertation journey has been an important opportunity for my own personal growth. It is the completion of a promise that I made to myself over 20 years

ago, and was always secretly afraid that I wouldn't be able to achieve. When the pandemic began, I almost used it as an excuse to step away again. It's hard enough to complete a dissertation, it's even harder when you doubt yourself every day. But to persist on this journey through a global pandemic? That's *remarkable*. Sharing stories of persistence, resilience, and growth with other teachers has been truly inspiring. Most importantly, I have seen how others have overcome their impostor feelings and learned to recognize those traits in myself. While I don't believe that I've cured my impostor feelings, I have proven without a doubt that I can overcome them. I can hear the voice of Christopher Robin talking to Winnie the Pooh and feel like he's speaking to me: "You're braver than you believe, stronger than you seem, and smarter than you think."

I hope that this dissertation can inspire other educators to face their fears, believe in their strength, and follow their own path – even if they're not completely sure of the destination. Coping with impostor phenomenon is ongoing, messy, and imperfect - but also deeply rewarding. The best coping strategy is whichever one kindles a spark of hope: *ready, fire, aim!*

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# APPENDICES

APPENDIX A

## Synthesis Matrix

| | Theoretical Background | Impostor Phenomenon (Measurement/ID) | Impostor Phenomenon (Behaviors) | Impostor Phenomenon at Work | Coping Strategies (Overcoming IP) | Effective Leadership | Pandemic & COVID | Teaching & Leading | Research & Methodology (General) |
|---|---|---|---|---|---|---|---|---|---|
| Abiodullah, M., Dure, S., & Aslam, M. (2020). Emotional Intelligence as a Predictor of Teacher Engagement in Classroom. | | | | | | X | | X | |
| Allen, R., Jerrim, J., & Simms, S. (2020). How did the early stages of the COVID-19 pandemic affect teacher wellbeing? | | | | | | | X | X | |
| Amaro, S., & Beede, F. (2021). Reestablishing positive school culture after the pandemic: Strategic leadership as the school year begins. | | | | | | | X | X | |
| Anderson, D., & Ackerman Anderson, L. (2010). Beyond change management: how to achieve breakthrough results through conscious change leadership. | | | | | | X | | | |
| Andrews, N. (2020). It's not imposter syndrome: Resisting self-doubt as normal for library workers. | | | X | X | X | | | | |
| Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. | | | | | | X | | | |
| Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004). Unlocking the mask: a look at the process by which authentic leaders impact follower attitudes and behaviors. | | | | | | X | | | |
| Badawy, R. L., Gazdag, B. A., Bentley, J. R., & Brouer, R. L. (2018). Are all impostors created equal? Exploring gender differences in the impostor phenomenon-performance link. | | X | X | | | | | | |
| Bahram, A. (2011). The study of relationship between emotional intelligence and self-esteem with imposter syndrome. | | | X | | | | | | |
| Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. | X | | | | | | | | |
| Bannatyne, A. (2015). When will my cover be blown? The experience of imposter syndrome in emerging and early career academics/educators. | | | X | X | X | | | X | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Barr-Walker, J., Werner, D. A., Kellermeyer, L., & Bass, M. B. (2020). Coping with impostor feelings: Evidence based recommendations from a mixed methods study. | | | X | | X | | | | |
| Barroso, M. G. (2003). Depression: Clinical definition and case histories. | X | | | | | | | | |
| Bass, B. M. (1985). Leadership: Good, better, best. | X | | | | | X | | | |
| Baumeister, R. F. (1982). A self-presentational view of social phenomena. | X | | | | | | | | |
| Bechtoldt, M. N. (2015). Wanted: Self-doubting employees—Managers scoring positively on impostorism favor insecure employees in task delegation. | | | X | X | | | | | |
| Berinato, S. (2015). The personality traits that make us feel like frauds. | | | X | | X | | | | |
| Bernard, D. L., Lige, Q. M., Willis, H. A., Sosoo, E. E., & Neblett, E. W. (2017). Impostor phenomenon and mental health: The influence of racial discrimination and gender. | | X | X | | | | | | |
| Bernard, N. S., Dollinger, S. J., & Ramaniah, N. V. (2002). Applying the big five personality factors to the impostor phenomenon. | | X | X | | | | | | |
| Bothello, J., & Roulet, T. J. (2018). The imposter syndrome, or the mis-representation of self in academic life. | | | X | X | X | | | | |
| Bowman, R. F. (2004). Teachers as leaders. | | | | | | | | X | |
| Bravata, D. M., Watts, S. A., Keefer, A. L., Madhusudhan, D. K., Taylor, K. T., Clark, D. M., . . . Hagg, H. K. (2020). Prevalence, predictors, and treatment of impostor syndrome: A systematic review. | | X | X | | | | | | |
| Brennan-Wydra, E., Chung, H. W., Angoff, N., ChenFeng, J., Phillips, A., Schreiber, J., . . . Wilkins, K. (2021). Maladaptive perfectionism, impostor phenomenon, and suicidal ideation among medical students. | | | X | | X | | | | |
| Bridgette, J. P., LaTrice, M., & Jerren, C. W. (2015). Predictors of imposter phenomenon among talented ethnic minority undergraduate students. | | X | X | | | | | | |
| Brown, C. B. (2012). Daring greatly: How the courage to be vulnerable transforms the way we live, love, parent, and lead. | | | | | | X | | | |
| Brustein, M. (2013). Perfectionism : A guide for mental health professionals. | | | X | | | | | | |
| Byrnes, K. D., & Lester, D. (1995). The imposter phenomenon in teachers and accountants. | | | X | X | | | | X | |
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| Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. | X | | | | | | | | |

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| Hochtritt, L., Acuff, J., Justice, S., & Bain, C. (2021). Writer's corner. | | | | X | X | | | | |
| Holmes, S. W., Kertay, L., Adamson, L. B., & Holland, C. L. (1993). Measuring the imposter phenomenon: A comparison of Clance's IP Scale and Harvey's I-P Scale. | | X | | | | | | | |
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| Kim, S., Crooks, C. V., Bax, K., & Shokoohi, M. (2021). Impact of trauma-informed training and mindfulness-based social-emotional learning program on teacher attitudes and burnout: A mixed-methods study. | | | | | | X | X | X | |
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| Ross, S. R., Stewart, J., Mugge, M., & Fultz, B. (2001). The imposter phenomenon, achievement dispositions, and the five factor model. | | X | X | | | | | | |
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| Thompson, T., Foreman, P., & Martin, F. (2000). Impostor fears and perfectionistic concern over mistakes. | | | X | | | | | | |

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| Tweedy, D. (2019). Trauma informed leadership: An approach for healthcare. | | | | | | X | | | |
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| Young, V. (2011). The secret thoughts of successful women: Why capable people suffer from the imposter syndrome and how to thrive in spite of it. | | | X | X | X | | | | |

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| Zamarro, G., Camp, A., Fuchsman, D., & McGee, J. B. (2021). Understanding how COVID-19 has changed teachers' chances of remaining in the classroom. | | | | | | | X | | |
| Zhao, Q., Wichman, A., & Frishberg, E. (2019). Self-Doubt Effects Depend on Beliefs about Ability: Experimental Evidence. | | | X | | | | | | |
| Zorn, D. (2005). Academic culture feeds the imposter phenomenon. | | | | X | X | | | | |

APPENDIX B

**The Clance Impostor Phenomenon Scale**

For each question, please circle the number that best indicates how true the statement is of you. It is best to give the first response that enters your mind rather than dwelling on each statement and thinking about it over and over.

1. I have often succeeded on a test or task even though I was afraid that I would not do well before I undertook the task.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

2. I can give the impression that I'm more competent than I really am.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

3. I avoid evaluations if possible and have a dread of others evaluating me.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

4. When people praise me for something I've accomplished, I'm afraid I won't be able to live up to their expectations of me in the future.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

5. I sometimes think I obtained my present position or gained my present success because I happened to be in the right place at the right time or knew the right people.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

6. I'm afraid people important to me may find out that I'm not as capable as they think I am.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

7. I tend to remember the incidents in which I have not done my best more than those times I have done my best.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

8. I rarely do a project or task as well as I'd like to do it.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

9. Sometimes I feel or believe that my success in my life or in my job has been the result of some kind of error.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

10. It's hard for me to accept compliments or praise about my intelligence or accomplishments.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

11. At times, I feel my success has been due to some kind of luck.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

12. I'm disappointed at times in my present accomplishments and think I should have accomplished much more.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

13. Sometimes I'm afraid others will discover how much knowledge or ability I really lack.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

14. I'm often afraid that I may fail at a new assignment or undertaking even though I generally do well at what I attempt.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

15. When I've succeeded at something and received recognition for my accomplishments, I have doubts that I can keep repeating that success.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

16. If I receive a great deal of praise and recognition for something I've accomplished, I tend to discount the importance of what I've done.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

17. I often compare my ability to those around me and think they may be more intelligent than I am.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

18. I often worry about not succeeding with a project or examination, even though others around me have considerable confidence that I will do well.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

19. If I'm going to receive a promotion or gain recognition of some kind, I hesitate to tell others until it is an accomplished fact.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

20. I feel bad and discouraged if I'm not "the best" or at least "very special" in situations that involve achievement.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| (not at all true) | (rarely) | (sometimes) | (often) | (very true) |

*Note*. From "The Impostor Phenomenon: When Success Makes You Feel Like A Fake," by P. R. Clance, 1985, pp. 20-22. 

APPENDIX C

# Permission to Use the CIPS

**Permission To Use the Clance Impostor Phenomenon Scale (CIPS)**

Please find attached the requested Clance IP Scale and scoring instructions. This correspondence constitutes permission to use the scale. I request that on each CIPS you use/distribute, that you have the copyright and permission information printed on each page:

Note. From The Impostor Phenomenon: When Success Makes You Feel Like A Fake (pp. 20-22), by P.R. Clance, 1985, Toronto: Bantam Books. Copyright 1985 by Pauline Rose Clance, Ph.D., ABPP. Reprinted by permission. Do not reproduce without permission from Pauline Rose Clance, drpaulinerose@comcast.net, www.paulineroseclance.com.

This clause is already on the attached CIPS copy.

If you do not want to put the name of the test or book on the scale if it may affect your research, contact me and I can send you a version of the scale without that specific information yet retaining the clause, "Under copyright. Do not reproduce without the permission of Dr. Pauline Rose Clance."

For research purposes, I also request that you send a citation and abstract/results summary of your work to me when you are completed with your research to add to the IP reference list.

For IP presentation purposes, I request that you send me a brief summary (i.e., couple of sentences) of participant (and your own) feedback about the presentation in regard to how the Impostor Phenomenon was received.

Thank you again for your interest in the Impostor Phenomenon. Please e-mail me that you agree with these conditions. You may refer participants to my website (www.paulineroseclance.com) for any interest in viewing IP articles and for my contact information.

Best,

Pauline Rose Clance, Ph.D., ABPP

APPENDIX D

## Research Question and Semi-Structured Interview Questions Alignment Table

| **Qualitative Research Question**<br><br>What coping skills were used by secondary teachers who identified as experiencing the impostor phenomenon (IP) by the Clance Impostor Phenomenon Scale (CIPS; Clance, 1985) to overcome the nine behavioral characteristics associated with IP during the transition to distance learning in response to the COVID-19 pandemic? | | |
|---|---|---|
| **Behavior Characteristics** | **Impostor Experience Questions** | **Coping Strategies Questions (w/Optional Probes)** |
| Introductory Question | Describe your teaching role during the pandemic, especially the transition to distance learning. | Follow up: How did the pandemic affect your teaching? |
| Anxiety | Did your teaching experiences during distance learning cause you to experience symptoms of anxiety (such as panic attacks, loss of sleep… etc.)? Describe your experiences. | Follow up: How did you cope with your anxiety during these experiences? |
| Lack of self-confidence (self-doubt) | How did the COVID-19 pandemic affect your self-confidence as a teacher? Were there times that you experienced intense periods of self-doubt? | Follow up: How did you cope during those situations? |
| Depression | Did you experience depression while you were teaching during COVID-19 pandemic? How did your work experiences contribute to or intensify those feelings? | Follow up: What did you do to cope with your depression? |
| Perfectionism | As a teacher, did you feel perfectionistic tendencies during the transition to distance/remote learning? For example, did you ever find yourself setting unrealistic goals or unreasonably high expectations for yourself or your colleagues at work? | Follow up: What were the coping strategies you used to deal with these tendencies?<br><br>Optional Probe: For example, did you ever find yourself setting unrealistic goals or unreasonably high expectations for yourself, your students, or your colleagues at work? |
| Procrastination | Did you have any intensified experiences with procrastination during distance learning? Describe them. | Optional Probe: For example, were there times when you avoided important tasks or put them off until the last minute?<br><br>Follow-up: How did you typically respond when you realized you were putting off important work tasks? How did this make you feel? |

| | | |
|---|---|---|
| Self-presentation (impression management) | As a teacher during distance learning, did you ever feel the need to present yourself in a way that you feel did not represent the "real you"? Explain. | Follow up: How do you respond when other people think you are more capable than you perceive yourself? |
| Emotional exhaustion | During the COVID-19 pandemic, did remote teaching contribute to emotional exhaustion or burnout? If so, what symptoms did you experience? | Follow up: How did you cope with the emotional exhaustion or burnout you experienced? |
| Fear of failure | During the COVID-19 pandemic, how did you approach teaching tasks that were daunting or challenging, especially when you were not confident that you could be successful? | |
| Fear of success | Describe an experience during the COVID- 19 pandemic where you successfully completed a challenging teaching task. Did you feel that there were any personal risks associated with being perceived as successful at work? | Follow up: How did you mitigate those perceived personal risks or fears of being successful? |

APPENDIX E

## Standard Interview Protocol

Good afternoon/evening!

First, I want to thank you for agreeing to participate in this interview. As we discussed in our earlier conversation, I am conducting this research as a part of earning my Doctorate in Education through the University of Massachusetts Global's program in Organizational Leadership.

The purpose of my research is to explore and describe the coping strategies teachers used to overcome the behavioral characteristics associated with the imposter phenomenon while leading the transition to distance learning in response to the COVID-19 pandemic. While I currently serve as a Dean of Students, I was a high school teacher during the pandemic school closures, and I struggled to cope with my own impostor feelings during distance learning. I am interested in the experiences of other teachers who also scored high on the impostor scale and taught remotely during the pandemic. This interview will take approximately 45-60 minutes. There are three general/background questions and nine questions that directly relate to behaviors associated with the impostor phenomenon. I may also ask you follow up questions if I need further clarification or additional details.

**Informed Consent and Recording**

Before we begin the interview, I want to make sure I have your Informed Consent about your participation. I also have a copy of the UMass Global Bill of Rights I sent. I shared both of these documents with you via email when we scheduled this interview, but I can share them again with you now if you wish. Do you have any questions or need clarification about either document?

I would like to remind you that anything we have previously discussed and will discuss today will remain confidential. All of the data will be reported without making any reference to you or your employer. With your permission, I would like to record this interview so that I can guarantee an accurate transcript of your responses. After I receive the transcript, I will edit it for accuracy and remove any personally identifying information. Once it has been edited, I will send it to you via email so that you can make sure I have accurately captured your thoughts and ideas.

Finally, at any point during the interview you may ask that I skip a particular question. You may also request to stop the interview altogether with no negative consequences. Do you have any questions before we begin?

## Background & Introduction

| Question | Follow Up/Probe |
|---|---|
| Briefly introduce yourself and describe your position. | What subject's/grade levels did you teach? How many students? |
| Briefly tell your "pandemic story": What were you teaching and how did your teaching experiences change during the school shutdowns caused by the pandemic? | How long were you in distance learning?<br>How did you teach during distance learning (synchronous/asynchronous, etc.)?<br>How did you feel during remote teaching?<br>What were some of your greatest challenges? |

## Impostor Behaviors & Coping Strategies:

| Question (Impostor Experience) | Follow Up (Coping Strategies) |
|---|---|
| Did your teaching experiences during distance learning cause you to experience symptoms of anxiety (such as panic attacks, loss of sleep... etc.)? Describe your experiences. | Follow up: How did you cope with your anxiety during these experiences? |
| How did the COVID-19 pandemic affect your self-confidence as a teacher? Were there times that you experienced intense periods of self-doubt? | Follow up: How did you cope during those situations? |
| Did you experience depression while you were teaching during the COVID-19 pandemic? How did your work experiences contribute to or intensify those feelings? | Follow up: What did you do to cope with your depression? |
| As a teacher, did you feel perfectionistic tendencies during the transition to distance/remote learning? For example, did you ever find yourself setting unrealistic goals or unreasonably high expectations for yourself, your students, or your colleagues at work? | Follow up: What were the coping strategies you used to deal with these tendencies? |
| Did you have any intensified experiences with procrastination during distance learning? Describe them. | Optional Probe: For example, were there times when you avoided important tasks or put them off until the last minute?<br><br>Follow-up: How did you typically respond when you realized you were putting off important work tasks? How did this make you feel? |
| As a teacher during distance learning, did you ever feel the need to present yourself in a way that you feel did not represent the "real you"? Explain. | Follow Up: How do you respond when other people think you are more capable than you perceive yourself? |
| During the COVID-19 pandemic, did remote teaching contribute to emotional exhaustion or burnout? If so, what symptoms did you experience? | Follow Up: How did you cope with the emotional exhaustion or burnout you experienced? |

| | |
|---|---|
| During the COVID-19 pandemic how did you approach teaching tasks that were daunting or challenging, especially when you were not confident that you could be successful? | |
| Describe an experience during the COVID- 19 pandemic where you successfully completed a challenging teaching task. Did you feel that there were any personal risks associated with being perceived as successful at work? | Follow Up: How did you mitigate those perceived personal risks or fears of being successful? |

## Final Question

| Question | Conclusion |
|---|---|
| Do you have any questions or additional thoughts before we conclude the interview? | Thank you so much for your participation today! |

APPENDIX F

## Letter to Principals Seeking Participants for Study

February 2022

Dear _____, Principal:

My name is Barbra Bedwell. I am seeking your assistance in identifying secondary teachers who might be willing to participate in my doctoral research for UMass Global University. You may know that I am working on my doctorate degree in education, and I am currently completing my dissertation research. Specifically, I am studying the coping strategies that secondary teachers used to deal with the "impostor syndrome" as they pivoted to distance learning during the coronavirus pandemic. I would like to identify effective practices that support teachers' mental health and minimize burnout.

With your permission, I will send out a link to a 20-question electronic survey that would assess teachers' self-perceptions, behaviors, and feelings during the pivot to distance learning. Participation in this survey would be completely voluntary and would take approximately 20 minutes to complete. Teachers whose survey scores indicate that they may be suffering from the impostor phenomenon would be invited to participate in an hour-long interview via Zoom. My goal is to interview 10-12 secondary teachers to learn about the coping strategies they used during remote teaching.

The criteria for inclusion in this study would be full-time secondary teachers who were forced to transition to online/remote/virtual teaching during long-term pandemic-related school closures. If you could send me names and emails of secondary teachers who might be interested in participating in this research, I would greatly appreciate it. Please don't hesitate to contact me if you have any questions.

Sincerely,

Barbra Bedwell, M.S.
Doctoral Candidate, UMass Global University (formerly Brandman University)
[redacted]
[redacted]

APPENDIX G

## Invitation to Participate

February 2022

Dear Participant,

Did teaching during the pandemic make you feel like you were faking it? I would like to learn more about your experiences during the pivot to distance learning!

My name is Barbra Bedwell. I am a doctoral student with the University of Massachusetts Global (UMass Global) program in Organizational Leadership. I am conducting research on the coping strategies that teachers used during the transition to distance/remote learning caused by the COVID-19 pandemic.

My research consists of two parts: (1) a survey; and (2) an interview for some participants.

For the first part, I will send a link that will include some background information about the research, an electronic survey, and a consent form. This survey will identify how intensely you experienced feelings of "faking it" while teaching during the pandemic. The 20-question survey should take about 15-20 minutes to complete, and I will ask you to complete it with 24-48 hours of receiving the link. Your privacy is important to me. Your responses will remain confidential, and your name and personal information will be kept in a separate, locked file.

If you are selected for the second phase, I will schedule a Zoom or Google Meets interview at a time that is convenient for you. The interview will last 45-60 minutes. All information shared during the interview will be confidential and your name will not be included in the transcript. All files associated with this interview will be stored digitally in a password-protected folder. You may choose to answer the questions in whatever detail feels natural and may stop at any time. You may withdraw from the study at any point. Finally, your employer will not have any access to the interview information.

I believe that the interview process will be an enjoyable conversation! I look forward to hearing about your experiences. If you wish to participate, please contact me via email at [redacted]. I am also happy to answer any questions you may have about the research, the process, or the safeguards for your privacy.

Sincerely,

Barbra Bedwell, M.S.

APPENDIX H

## Participant Information Pre-Survey and Pre-Interview

**INFORMATION ABOUT:** Overcoming the Imposter Phenomenon: Exploring the Strategies Secondary Educators Used to Cope During the COVID-19 Pandemic

**RESPONSIBLE INVESTIGATOR:** Barbra J.C. Bedwell, M.S.

### Purpose Statement

The purpose of this descriptive mixed-method study was to explore and describe the coping skills used to overcome the nine behavioral characteristics by secondary teachers who identified as experiencing the impostor phenomenon (IP) by the Clance Impostor Phenomenon Scale (CIPS) (Clance, 1985) during the transition to distance learning in response to the COVID-19 pandemic.

### Research Question

What coping skills did secondary teachers who identified as experiencing the IP, as measured by the CIPS (Clance, 1985), use to overcome the nine behavioral characteristics (characteristics of anxiety, lack of self-confidence, depression, perfectionism, procrastination, self-presentation, emotional exhaustion, fear of failure and fear of success) associated with the IP?

### The Clance Impostor Phenomenon Scale (CIPS)

The CIPS is a 20-question survey widely used to identify the intensity of impostor phenomenon-related feelings, including: anxiety, lack of self-confidence, depression, perfectionism, procrastination, self-presentation, emotional exhaustion, fear of failure and fear of success. Each question is answered on a 5 point Likert scale, with responses ranging from 1 (not at all true) to 5 (very true). The participant's score is the sum of all answers. Participants with a score greater than 45 will be invited to participate in the interview.

### Interview Questions

Each of the interview questions below is designed to either elicit background information into the teacher's work during the pandemic, or to prompt the teacher to discuss their experiences with the nine behaviors associated with the impostor phenomenon. The follow up/probe questions elicit the key research information into the coping strategies that teachers used to deal with their impostor phenomenon-related behaviors and feelings.

1. Briefly introduce yourself and describe your position.
    a. What subjects/grade levels did you teach? How many students?
2. Briefly tell your "pandemic story": What were you teaching and how did your teaching experiences change during the school shutdowns caused by the pandemic?
    a. How long were you in distance learning?

b. How did you teach during distance learning (synchronous/asynchronous, etc.)?
c. How did you feel during remote teaching?
d. What were some of your greatest challenges?

3. Did your remote teaching experiences during COVID cause you to experience symptoms of anxiety (such as panic attacks, intense nervousness, loss of sleep, sweating...etc.)? Describe your experiences.
    a. Describe how you coped with your anxiety during these experiences.
4. How did the COVID 19 pandemic affect your self-confidence as a teacher? Were there times that you experienced intense periods of self-doubt?
    a. How did you cope during those situations?
5. Describe your experiences with symptoms of depression (if any) while you were teaching remotely/from home during the COVID-19 pandemic. How did your work experiences contribute to or intensify those feelings?
    a. Optional clarification: signs of depression can include persistent feelings of sadness, hopelessness, loss of interest in daily activities, insomnia, uncontrollable emotions, or suicidal thoughts.

. What did you do to cope with your depression?

6. As a teacher, did you feel perfectionistic tendencies during the pandemic transition? For example, did you ever find yourself setting unrealistic goals or unreasonably high expectations for yourself, your students, or your colleagues at work?
    a. How did you respond when you recognized you were being perfectionistic? What were the coping strategies you used to deal with these tendencies?
7. Did you have any intensified experiences with procrastination during the pandemic?
    a. Optional clarification: For example, were there times when you avoided important tasks or put them off until the last minute?
    b. How did you typically respond when you realized you were putting off important work tasks? How did this make you feel?
8. As a teacher during distance learning, did you ever feel the need to present yourself in a way that you feel did not represent the "real you"? Explain.
    a. How do you respond when other people think you are more capable than you perceive yourself?
9. During the COVID-19 pandemic, did your role as a teacher contribute to emotional exhaustion or burnout? If so, what symptoms did you experience?
    a. How did you cope with the emotional exhaustion or burnout you experienced?
10. During the COVID-19 pandemic how did you approach teaching tasks that were daunting or challenging, especially when you were not confident that you could be successful?
11. Describe an experience during the COVID- 19 pandemic where you successfully completed a challenging teaching or leadership task. Did you feel that there were any personal risks associated with being perceived as successful at work?

    a. How did you mitigate those perceived personal risks or fears of being successful?
12. Final Question: Do you have any questions or additional thoughts before we conclude the interview?
    a. Thank you so much for your participation today!

APPENDIX I

**Participant Consent Form – Electronic Survey (Quantitative Phase)**

INFORMATION ABOUT: Overcoming the Imposter Phenomenon: Exploring the Strategies Secondary Educators Used to Cope During the COVID-19 Pandemic

RESPONSIBLE INVESTIGATOR: Barbra J.C. Bedwell, M.S.

You are being asked to participate in a research study conducted by Barbra Bedwell, a doctoral student from the School of Education at the University of Massachusetts Global ("UMass Global"). The purpose of this study is to explore and describe the coping strategies teachers used to overcome the behavioral characteristics associated with the imposter phenomenon while leading the transition to distance learning in response to the COVID-19 pandemic.

Your participation in this survey is voluntary. You may choose not to participate. If you decide to participate in this electronic survey, you can withdraw at any time. The survey will take approximately 20 minutes to complete. The survey questions will assess your self-perceptions of intellectual and professional fraudulence while remote teaching during the pandemic. Your responses will be confidential, and each participant will be assigned a three-digit code for identification purposes. The researcher will keep the identifying codes safe-guarded in a password-protected digital file to which the Researcher will have sole access. The results of this study will be used for scholarly purposes only.

Further, I may contact you after receiving your responses to arrange for a follow-up interview.

a) No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed, and my consent re-obtained. There are minimal risks associated with participating in this research. I understand that the Investigator will protect my confidentiality by keeping the identifying codes and research materials in a locked digital file that is available only to the researcher. All information will be identifier-redacted, and my confidentiality will be maintained. Upon completion of the study all recordings will be destroyed. All other data and consents will be securely stored for three years after completion of data collection and confidentially shredded or fully deleted.

b) I understand that I may refuse to participate in or I may withdraw from this study at any time without any negative consequences. Also, the investigator may stop the study at any time. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the

Vice Chancellor of Academic Affairs, UMASS GLOBAL, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

If you have any questions about completing this survey or any aspects of this research, please feel free to contact me at any time.

Barbra Bedwell, Researcher
[redacted]
[redacted]
or
Dr. Tamerin Tooker, Advisor
tamerin.tooker@umassglobal.edu

**ELECTRONIC CONSENT:**

Please select your choice below. Clicking on the "agree" button indicates that you have read the informed consent form and the information in this document and that you voluntarily agree to participate. If you do not wish to participate in this electronic survey, you may decline participation by clicking on the "disagree" button. The survey will not open for responses unless you agree to participate.

- AGREE: I acknowledge receipt of the complete Informed Consent packet and "Bill of Rights." I have read the materials and give my consent to participate in the study.

- DISAGREE: I do not wish to participate in this electronic survey

APPENDIX J

**Participant Consent Form – Virtual Interview (Qualitative Phase)**

INFORMATION ABOUT: Overcoming the Imposter Phenomenon: Exploring the Strategies Secondary Educators Used to Cope During the COVID-19 Pandemic

RESPONSIBLE INVESTIGATOR: Barbra J.C. Bedwell, M.S.

You are being asked to participate in a research study conducted by Barbra Bedwell, a doctoral student from the School of Education at the University of Massachusetts Global ("UMass Global"). The purpose of this study is to explore and describe the coping strategies teachers used to overcome the behavioral characteristics associated with the imposter phenomenon while leading the transition to distance learning in response to the COVID-19 pandemic.

By participating in this phase of the study, I agree to participate in an individual interview. The interview will last approximately 45 – 60 minutes and will be conducted electronically using Zoom or Google Meets at the participant's discretion. Completion of the individual interviews will take place January through February, 2022. Questions in the interview will pertain to the coping strategies used by individuals experiencing impostor feelings as they participated in remote teaching during the pandemic.

I understand that:

a) There are minimal risks associated with participating in this research. I understand that the researcher will protect my confidentiality by keeping the identifying codes and research materials in a password-protected digital file that is available only to the researcher. The results of this study will be used for scholarly purposes only.

b) I understand that the interview will be recorded digitally (both video and audio). The recordings will be available only to the researcher. The recordings will be used to capture the interview dialogue and to ensure the accuracy of the information collected during the interview. A text transcript of the audio will be generated by Zoom or Google Meets, and checked by the researcher for accuracy within 48 hours of the interview. All information will be identifier-redacted and my confidentiality will be maintained. Upon completion of the study all recordings and transcripts will be destroyed. All other data and consents will be securely stored for three years after completion of data collection and confidentially shredded or fully deleted.

c) The possible benefit of this study to me is that my input may help add to the research regarding coping strategies used by teachers experiencing impostor phenomenon. The findings will be available to me at the conclusion of the study. I understand that I will not be compensated for my participation.

d) If you have any questions or concerns about the research, please feel free to contact Barbra Bedwell (researcher) at [redacted] or by phone at [redacted; or Dr. Tamerin Tooker (advisor) at tamerin.tooker@umassglobal.edu

e) My participation in this research study is voluntary. I may decide to not participate in the study and I can withdraw at any time. I can also decide not to answer particular questions during the interview if I so choose. I understand that I may refuse to participate or may withdraw from this study at any time without any negative consequences. Also, the Investigator may stop the study at any time.

f) No information that identifies me will be released without my separate consent and that all identifiable information will be protected to the limits allowed by law. If the study design or the use of the data is to be changed, I will be so informed and my consent re-obtained. I understand that if I have any questions, comments, or concerns about the study or the informed consent process, I may write or call the Office of the Vice Chancellor of Academic Affairs, UMASS GLOBAL, at 16355 Laguna Canyon Road, Irvine, CA 92618, (949) 341-7641.

I acknowledge that I have received an electronic copy of this form and the "Research Participant's Bill of Rights." I have read the above and understand it and hereby consent to the procedure(s) set forth.

**ELECTRONIC CONSENT:**

Please select your choice below. Clicking on the "agree" button indicates that you have read the informed consent form and the information in this document and that you voluntarily agree to participate. If you do not wish to participate in this electronic survey, you may decline participation by clicking on the "disagree" button. The survey will not open for responses unless you agree to participate.

- AGREE: I acknowledge receipt of the complete Informed Consent packet and "Bill of Rights." I have read the materials and give my consent to participate in the study.

- DISAGREE: I do not wish to participate in this interview

APPENDIX K

# Research Participant's Bill of Rights

UMASS GLOBAL
A nonprofit affiliate of the University of Massachusetts

## UMASS GLOBAL UNIVERSITY INSTITUTIONAL REVIEW BOARD

### Research Participant's Bill of Rights

Any person who is requested to consent to participate as a subject in an experiment, or who is requested to consent on behalf of another, has the following rights:

1. To be told what the study is attempting to discover.
2. To be told what will happen in the study and whether any of the procedures, drugs or devices are different from what would be used in standard practice.
3. To be told about the risks, side effects or discomforts of the things that may happen to him/her.
4. To be told if he/she can expect any benefit from participating and, if so, what the benefits might be.
5. To be told what other choices he/she has and how they may be better or worse than being in the study.
6. To be allowed to ask any questions concerning the study both before agreeing to be involved and during the course of the study.
7. To be told what sort of medical treatment is available if any complications arise.
8. To refuse to participate at all before or after the study is started without any adverse effects.
9. To receive a copy of the signed and dated consent form.
10. To be free of pressures when considering whether he/she wishes to agree to be in the study.

If at any time you have questions regarding a research study, you should ask the researchers to answer them. You also may contact the UMASS GLOBAL Institutional Review Board, which is concerned with the protection of volunteers in research projects. The UMass Global Institutional Review Board may be contacted either by telephoning the Office of Academic Affairs at (949) 341-9937 or by writing to the Vice Chancellor of Academic Affairs, UMASS GLOBAL, 16355 Laguna Canyon Road, Irvine, CA, 92618.

APPENDIX L

## Completion Certificate for Human Subjects Research

CITI PROGRAM

Completion Date 23-May-2020
Expiration Date N/A
Record ID 36675781

This is to certify that:

**Barbra Bedwell**

Has completed the following CITI Program course:

Not valid for renewal of certification through CME. Do not use for TransCelerate mutual recognition (see Completion Report).

**Human Subjects Research** (Curriculum Group)
**Social-Behavioral-Educational Researchers** (Course Learner Group)
**1 - Basic** (Stage)

Under requirements set by:

**Brandman University**

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wa6f3c760-d67b-43fe-b177-aaea738990b1-36675781

APPENDIX M

## UMass Global IRB Approval

Barb Bedwell [redacted]

**IRB Application Approved As Submitted: Barbra Bedwell**

1 message

**Institutional Review Board** <my@umassglobal.edu> Fri, Feb 4, 2022 at 7:15 AM
Reply-To: webmaster@umassglobal.edu
To: [redacted]
Cc

Dear Barbra Bedwell,

Congratulations, your IRB application to conduct research has been approved by the UMass Global Institutional Review Board. This approval grants permission for you to proceed with data collection for your research. Please keep this email for your records, as it will need to be included in your research appendix.

If any issues should arise that are pertinent to your IRB approval, please contact the IRB immediately at IRB@umassglobal.edu. If you need to modify your IRB application for any reason, please fill out the "Application Modification Form" before proceeding with your research. The Modification form can be found at the following link: https://irb.umassglobal.edu/Applications/Modification.pdf.

Best wishes for a successful completion of your study.

Thank you,
**Doug DeVore, Ed.D.**
Professor
Organizational Leadership
IRB Chair
ddevore@umassglobal.edu
www.umassglobal.edu