

An Exploration of Burnout and Compassion Fatigue in ABA Providers in an Online Forum

by

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THESIS EXAMINATION INFORMATION

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The above committee determined that the thesis is acceptable in form and content and that a satisfactory knowledge of the field covered by the thesis was demonstrated by the candidate during an oral examination. A signed copy of the Certificate of Approval is available from the School of Graduate and Postdoctoral Studies.

ABSTRACT

Applied Behaviour Analysis (ABA) is a treatment for Autism Spectrum Disorder (ASD). ABA providers develop treatment programs and face occupational hazards. This exploratory, qualitative research examined: 1) “How do ABA providers express experiences of burnout and compassion fatigue (CF) in an online community” and 2) “How do ABA providers receive feedback and support from these expressions”. Data sources were posts on the social media site Reddit, analyzed using directed content analysis. The findings suggest that providers expressed experiences through (a) direct expressions of burnout and CF, (b) seeking support and advice from others, and (c) identifying symptoms of burnout and CF. They received feedback and support by (a) suggestions for resources or coping, (b) sharing similar experiences, (c) validation, (d) negative or dismissive responses. Recommendations include the development of psychoeducational programs to support the mental health of providers and continued research on how providers utilize social media for self-care.

Keywords: applied behaviour analysis; burnout; compassion fatigue; social media; self-care

AUTHORS DECLARATION

I, Michelle Reiterer, hereby declare that this thesis consists of original work of which I have authored. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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MICHELLE REITERER

STATEMENT OF CONTRIBUTIONS

I hereby certify that I am the sole author of this thesis and that no part of this thesis has been published or submitted for publication. I have used standard referencing practices to acknowledge ideas, research techniques, or other materials that belong to others. Furthermore, I hereby certify that I am the sole source of the creative works and/or inventive knowledge described in this thesis.

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LIST OF ABBREVIATIONS AND SYMBOLS

| | |
|---------------------|---|
| ABA | Applied Behaviour Analysis |
| ACT | Acceptance and Commitment Therapy |
| APA | American Psychological Association |
| ASD | Autism Spectrum Disorder |
| AWS | Areas of Work-life Survey (Leiter & Maslach, 1999) |
| BACB [®] | Behavior Analyst Certification Board [®] |
| BCaBA [®] | Board Certified assistant Behavior Analyst [®] |
| BCBA [®] | Board Certified Behavior Analyst [®] |
| BCBA-D [®] | Board Certified Behavior Analyst [®] - Doctorate Level |
| BI | Behaviour Interventionist |
| BST | Behavioural Skills Training |
| CF | Compassion Fatigue |
| FA | Functional Analysis |
| MBI | Maslach Burnout Inventory (Maslach, Jackson, & Leiter, 1997) |
| P1 | Participant 1 |
| P2 | Participant 2 |
| P3 | Participant 3 |
| P4 | Participant 4 |
| P20 | Participant 20 |
| P21 | Participant 21 |
| P22 | Participant 22 |
| P23 | Participant 23 |

| | |
|------|---------------------------------|
| P24 | Participant 24 |
| P25 | Participant 25 |
| P26 | Participant 26 |
| P27 | Participant 27 |
| RBT® | Registered Behavior Technician® |
| REB | Research Ethics Board |
| SIB | Self Injurious Behaviours |
| SNT | Social Network Theory |
| ST | Sub Themes |
| WHO | World Health Organization |

Chapter 1. Introduction

In Canada, one in 66 children and youth aged five to 17 are diagnosed with Autism Spectrum Disorder (ASD), which accounts for one to two percent of the Canadian population. Approximately 135,000 Ontarians are on the autism spectrum (Ofner et al., 2018). ASD is a neurological and developmental disorder characterized by repetitive and restrictive behaviours such as pervasive deficits in social communication (American Psychological Association, 2013). These impairments can include but are not limited to, delays in verbal communication, restricted interests, exhibiting self-injurious behaviours, and difficulties with socialization, relationship, development, and peer relationships (APA, 2013).

Applied Behaviour Analysis (ABA) is the science devoted to the understanding and improvement of meaningful human behaviour (Cooper et al., 2007); it is an empirically recognized treatment module for individuals with autism (Rieske, 2019). ABA is the process of applying interventions that are based on the principles of learning derived from experimental psychology research to systematically change behaviour and to demonstrate that the interventions used are responsible for the observable improvement in behaviour (Myers et al., 2007). ABA focuses on objectively defined behaviours that are of social significance. It is the scientific approach to determining the environmental variables which affect these behaviours and developing a technology to monitor and improve them (Cooper et al., 2007). Roane et al. (2016), stated that children with ASD who show behaviour problems and skill deficits in multiple areas are candidates for immersive and intensive ABA treatments to mitigate the deficits of ASD through implementing a comprehensive treatment plan. Intensive behavioural interventions such as ABA have been empirically validated as the leading treatment modality for ASD (Pollard et al., 2017; Rieske, 2019). Board Certified Behavior Analysts[®] (BCBA[®]s) are clinicians

responsible for the development and provision of ABA services. They work with a team of Registered Behaviour Technicians[®] (RBT[®]s) and other paraprofessionals to deliver ABA therapy in individual and small group environments (Behavior Analyst Certification Board, n.d.). These team members are collective “ABA providers.”

On top of occupational hazards, emotional, physical, and psychological strains are inherent in the behavioural health field, such as ABA providers (Yang, 2020). Their scope of practice often requires high empathy, compassion, and a high degree of tolerance for the difficulties and behavioural challenges exhibited by their clients (Jethi, 2020; Simpson, 2021; Yang, 2020). Due to the nature of the services provided, ABA providers and others working in helping professions must balance empathic client care and compassionate care of self to mitigate the increased risk of the development of secondary traumatization and the associated negative outcomes (Simpson, 2020). Service provisions to individuals with ASD are associated with extremely high experiences of stress (Symes & Humphrey, 2011; Zarafshan et al., 2013). As per Alkema et al. (2008), secondary traumatic stress, compassion fatigue, vicarious traumatization, and burnout, all encompass similar principles that identify a “professional hazard for those who choose to help others" (p. 104).

Burnout is a prolonged three-dimensional response to job stressors, incorporating exhaustion, cynicism, and inefficacy (Maslach et al., 1998). Compassion fatigue was first described by Joinson (1982) as an extended form of burnout, affecting those in caregiving professions under profound emotional and physical stress who are unable to refuel and regenerate. Figley (1995) found that empathy and exposure are at the heart of the concept of compassion fatigue, and when both are present, compassion fatigue is a natural consequence of caring. Burnout in healthcare professionals is often associated with high turnover intentions,

medical errors, poor performance, and suboptimal care (Bria et al., 2012; Yang, 2020). The provision of ABA services to individuals with ASD puts ABA providers at an increased risk for burnout (and compassion fatigue) which is correlated with negative outcomes for both the clients and practitioners (Bottini et al., 2020). Burnout is a significant problem for ABA providers that impacts their performance and job satisfaction.

1.1 Research Problem

In recent years there has been greater attention on burnout and compassion fatigue in the workplace. Research has explored the effects and predictors of burnout and compassion fatigue present in the work environment (Alarcon, 2011), including individuals working in helping professions. This includes research with the following: nurses (Leiter & Maslach, 2009; Lombardo & Eyre, 2011; Greenglass et al., 2001) psychotherapists (Figley, 2002), physicians (West et al., 2018), teachers (Aloe et al., 2014; Koenig, 2014), direct support professionals (Flynn et al., 2020), and ABA providers (Hastings et al., 2004; Kazemi et al., 2015; Yang, 2020).

Research on ABA providers suggests increased levels of burnout for providers while serving individuals with autism leading to a greater risk for mental health problems (Bottini et al., 2020). Previous research focused on burnout in ABA providers in the following areas: (a) identifying risk and protective factors for ABA professionals (Yang, 2020), (b) burnout in providers serving individuals with ASD (Bottini et al., 2020), (c) occupational stress, burnout and professional efficacy in teachers and ABA providers (Lundin, 2021), (d) high level of burnout in early career ABA providers with low collegial support (Plantiveau et al., 2018), (e) the use of Acceptance and Commitment Therapy (ACT) and Behavioural Skills Training (BST) to increase staff performance and reduce burnout (Saint, 2019), (f) studying compassion fatigue, burnout and compassion satisfaction (Simpson, 2020) and (g) the relationship between life and

job attitudes and the pressure to act unethically and the experience of burnout for newly certified ABA providers (Brown, 2021).

However, a research area that has little attention is how ABA providers might use technology as a form of self-care. Wellness and self-care can help decrease burnout risk in professionals and caregivers of individuals with autism (Allday et al., 2020; Behket & Matel-Anderson, 2017; Gérain & Zech, 2019; Khanna, 2010; Kütük et al., 2021; Leontine et al., 2020; Manzano-García & Ayala, 2017). Wellness and self-care strategies are among the evidence-based practices for mitigating and overcoming the effects of burnout and compassion fatigue (Abernathy & Martin 2019; Alkema et al., 2008; Boyle, 2011; Duarte & Pinto-Gouveia, 2016; Flarity et al., 2013; Gregory, 2015; Hevezi, 2016; Ifrach & Miller, 2016; Meadors & Lamson, 2008; O'Halloran & Linton, 2000; Williams, 2018).

Spiker (2019) laid the foundational exploration of self-care in service providers by researching specifically how current ABA providers engaged in self-care repertoires. He found they did engage in self-care; however, it was based on the individualized needs of the provider. Jethi (2020) explored stress and self-care strategies in a small sample size of ABA providers at a single agency. Simpson (2020) examined how providers experienced secondary traumatization, including using self-care strategies to mitigate burnout. The self-care strategies employed included maintaining a work-life balance by having a flexible work schedule, setting boundaries and positive self-talk. Slowiak & DeLongchamp (2021) also studied self-care strategies and job crafting practices. They found that when providers were able to use job crafting strategies such as flexible work hours, able to choose their schedule, and the option for reduced work week with flex time along with self-care strategies, there was a correlation between strong predictions of work-life balance and increased engagement in the occupational environment.

Continued research on self-care strategies by ABA providers is needed (Spiker, 2019; Jethi, 2020; Simpson, 2020; Slowiak & DeLongchamp, 2021; Yang, 2020). Jethi (2020) recommended that self-care strategies are examined with larger sample sizes (only eight respondents participated) from various provider agencies. Simpson (2020) recommended future studies should further investigate the occupational and personal variables of ABA providers that may positively influence levels of compassion fatigue and burnout and employ a mixed methods study design.

In addition to the need for continued research on how ABA providers are utilizing self-care, there is a need to explore self-care within the digital age. ABA professionals live in a digital age and engage with technology regularly in their professional and personal life. No research specifically examines the role technology plays in self-care for them. For example, how are ABA professionals using technology like social media or online support groups to support their well-being or as a form of professional care? Online communities, such as Reddit, have successfully brought together people with similar interests and goals. While most messages exchanged on social media sites are personal statuses or updates on current affairs, some posts are support-seeking, where people are looking for assistance and help as a form of self-care (Kapoor et al., 2018). An exploration of online communities within the ABA service provider realm has not yet been researched. “By better understanding self-care in behaviour analytic practice, it is possible to improve the experiences for both practitioners and patients” (Spiker, 2019, p. 15). Increasing individual mental health to support productive and happy lives is a primary goal for professionals in the areas of humanistic (Rogers, 1951), individual (Adler, 1925), and positive psychology (Seligman, 1998). Understanding healing and mental health theories is critical for practitioners in these helping fields.

1.2 Research Purpose

Research that explores how technology, such as social media sites, can support mental health for professionals is important (Laffier, 2021; Naslund et al., 2016). In the field of ABA providers, there has been a growing interest in researching how they overcome mental health stressors and practice wellness (Jethi, 2020; Saint, 2019; Simpson, 2020; Spiker, 2019; Yang, 2020). However, a research gap exists where few studies explore how providers use technology such as social media sites to express burnout or compassion fatigue and the impacts on their wellness. This study aimed to address that research gap.

The purpose of this research was to investigate how ABA providers used social media platforms to share experiences of burnout and compassion fatigue as a potential form of self-care. Technology, such as games, apps, or social media, can support mental health when used properly (Laffier, 2021). More specifically, the study aimed to identify how ABA providers were expressing and self-identifying occurrences of burnout and compassion fatigue in their online community. It was critical to focus on the experiences within the online community, as this kind of expression has not yet been studied and is thus a foundational baseline. The research questions that guided this research study's inquiry were: 1) "How do ABA service providers express experiences of burnout and compassion fatigue in an online community" and 2) "How do ABA providers receive support and feedback from these expressions in the online community" To answer these research questions a qualitative research approach, phenomenology, was utilized, whereby social media posts by ABA providers were analyzed.

1.3 Researcher Positionality

This research study is of personal interest to me as the researcher. I have worked as an ABA provider for the past 13 years. There are many aspects of the job that contribute to feelings

of burnout and compassion fatigue. As a result, my colleagues and I have engaged in a variety of self-care practices such as maintaining boundaries with work and life balance, job crafting, engaging in physical activity, mindfulness, and debriefing with supervisors and colleagues. More recently, I have seen many ABA providers use technology as a way to discuss their challenges, especially on social media sites. Although I have not personally engaged in this, I was interested in researching literature that discussed professionals using technology as a form of self-expression or self-care. In my review of the literature, I noticed there was little research on the use of technology such as social media platforms as a form of self-care amongst ABA providers. As we move into the digital age I think this is an important area to explore.

Positionality is an important consideration in a research study as it captures the personal biases and perspectives that the researcher brings to the research process (Rowe, 2014; Savin-Baden et al., 2013). My position presented some benefits, such as understanding the complexity of the occupation, the organizational structure, and common self care practices. However, I am aware that my position may also bring challenges that need to be addressed, such as researcher bias. Researcher bias can occur at any phase of research and may include selection or interpretation bias (Mays & Pope, 1995). This occurs when the researcher selects certain participants or data or interprets the data based on prior knowledge of the field.

To address these potential researcher biases, I took several precautions. I employed a reflexive approach throughout my research. Reflexivity occurs when researchers identify, construct, critique and articulate their positionality (Holmes 2020). Reflexivity becomes the process through which researchers establish and communicate the grounds for the rigor and trustworthiness of their research (Probst & Berenson, 2014). It was crucial to acknowledge and

address my positionality throughout the research process, and to maintain a reflexive stance that allowed me to critically examine my own biases and assumptions (Holmes, 2020).

I took additional steps to address any potential sampling bias with data selection. For example, I developed strict inclusion and exclusion criteria for the data selection phase to ensure the collection process was guided through objective criteria (Mays & Pope, 1995). I read the data (posts) multiple times to ensure they met the criteria. This helped to reduce potential biases from my preferences or previous knowledge (Mackieson, 2019).

I also engaged in constant self-reflection throughout my data collection and analysis process to consider how I was interpreting data based on my experience and knowledge (Mackieson, 2019). I kept a writing journal that helped me identify my reactions and thoughts to the research process. I also chose to write this paper from a third-person perspective to encourage a neutral lens.

I sought feedback from others to ensure my positionality had limited influence on my research. My research supervisor, Dr. Laffier, a mental health expert and non -member of the ABA field, encouraged critical analysis of the literature and data and provided an external perspective to support objectivity and accuracy of my findings. By employing a transparent, reflexive approach and taking additional steps to mitigate bias, I enhanced the credibility of my research findings.

1.4 Theoretical Framework

Theoretical frameworks and philosophical perspectives present specific beliefs and principles that a researcher aims to contribute by supporting, expanding, or challenging the theory (Gelso, 2012). This study is based on the theoretical frameworks of mental health and wellness theories. More specifically, the theories of burnout, compassion fatigue, self-care and

the role of social media in online communities will be further explored. These theories were utilized to demonstrate the wider lens of wellness, mental health and strategies to mitigate the stressors which have manifested into burnout and compassion fatigue. A brief description of these theories is provided in this introduction, however, greater detail will be completed in the literature review.

1.4.1 Mental Health and Wellness

Mental health is a component of overall health and well-being that affects all individuals. As per the Canadian Mental Health Association (CMHA) (2021), mental health is a state of well-being that includes the emotional, physical, and psychological states of an individual, it affects how we behave, our emotions, thoughts and feelings of connection to others, and our ability to self-regulate high and low emotions. Mental health is a basic human right and integral to building personal, community, and socio-economic capacity (WHO, 2022)

Closely related to mental health is the concept of wellness. The World Health Organization (WHO) defines wellness as “the optimal state of health of individuals and groups, and a positive approach to living” (WHO, 2022). Wellness is the act of improving mental health and returning to a state of balance and calm, wellness and mental health are interdependently correlated. Increasing individual mental health and wellness to support productive and happy lives is a primary goal for helping professionals and understanding theories related to healing and mental health is critical for practitioners in these fields (Laffier, 2015).

1.4.1.1 Burnout

To study how occurrences of stress, burnout, and compassion fatigue are expressed in the online ABA community, one must have an understanding of these theories. This study will examine Maslach et al.'s (1997) theory of burnout, specifically job burnout. This theory will be

useful in analyzing how occupational stressors influence ABA providers' expressions of burnout in the online community. With this theory, we can determine if providers are identifying and recognizing the symptoms of burnout as expressed in their online contributions.

The term burnout has been prevalent in wellness literature for decades. Burnout is a prolonged three-dimensional response to job stressors, incorporating exhaustion, cynicism, and inefficacy (Maslach et al., 1997). It is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. Three dimensions characterize it: (a) feelings of energy depletion or exhaustion, increased mental distance from one's job, (b) feelings of negativism or cynicism related to one's job; and (c) reduced professional efficacy. The term burnout initially originated in a novel by Graham Greene entitled "A Burnt-Out Case" where he wrote of an architect who no longer found passion or happiness in his life or profession (Edú-Valsania et al., 2022). Burnout was first introduced in psychology literature by psychologist Herbert Freudenberger in the *Journal of Social Issues* (Freudenberger, 1974). Later on, Maslach et al. (1997), further contributed to the literature by describing additional burnout symptoms beyond the three main elements of (a) feelings of alienation from work-related activities, (b) viewing their profession as increasingly stressful and frustrating, and (c) emotionally distancing themselves from their work. They described physical symptoms such as headaches, stomach aches or intestinal issues, inability to cope or become unmotivated to get work done, under-performance, being unable to concentrate, and experiencing a lack of creativity. Burnout is a serious threat to wellness, so much so that the World Health Organization (WHO) has included burnout as a syndrome in the 11th Revision of the International Classification of Diseases (ICD-11) as a phenomenon exclusive to the occupational context (WHO, 2019). Closely related to burnout is another mental health condition: compassion fatigue.

1.4.1.2 Compassion Fatigue

Compassion fatigue is a mental health syndrome which falls under the wellness and mental health umbrella. Compassion fatigue can affect anyone who has been in contact with clients, family members, or people who have experienced trauma. When it comes to professional risk factors, compassion fatigue can affect a practitioner who is in a position where they are providing help to other individuals. There has been research on many professionals and their experiences with compassion fatigue; physicians, nurses, psychologists, mental health providers, human service workers, and emergency workers (Pryce et al., 2007). The symptoms of compassion fatigue may include feelings of isolation, anxiety, dissociation, physical ailments, and sleep disturbances. The symptoms of compassion fatigue are acute and can come up suddenly and seemingly without warning. Additionally, compassion fatigue is associated with a sense of confusion, helplessness, and a greater sense of isolation from supporters than is seen with burnout. (Figley, 1995, 2001). The term compassion fatigue was first originated by Figley (1995) in the context of an occupational hazard in helping professions; when both empathy and exposure to trauma are present, compassion fatigue can be a natural consequence. When the symptoms are unknown and or unaddressed, caregivers begin to experience dramatic professional and personal consequences (Figley, 2001). Fortunately, there are treatments for overcoming compassion fatigue, one of which is the use of self-care strategies.

1.4.1.3 Self-Care

Self-care is described as the application of a range of activities with the goal being “well-functioning,” which is described as “the enduring quality in one’s professional functioning over time and in the face of professional and personal stressors” (Coster & Schwebel, 1997, p.

5). It is a crucial component for those employed in caring professions and is essential in preventing distress, burnout, and impairment (Barnett et al., 2005). Self-care strategies may be applied to prevent and mitigate many conditions related to wellness including self-care for burnout, and compassion fatigue. It is a broad concept that includes (a) hygiene (general and personal), (b) nutrition (type and quality of food eaten), (c) leisure and lifestyle (sporting, leisure activities, etc.), (d) environmental factors (living conditions, social habits, etc.), (e) socioeconomic factors (income level, cultural beliefs, etc.) and (f) self-preservation and medication (WHO, 2014). Individuals working in caring professions are more likely to experience stress and burnout; these professionals need to practice self-care strategies (Orem, 2001). Much research in self-care has been conducted in the field of nursing; Orem's theory of self-care which originated in nursing states that each individual requires engagement in some type of self-care behaviour (2001). Self-care is the provision of strategies to manage and decrease stress; self-care strategies are unique to the individual, however, previous research suggests some common practices for mitigating and decreasing the effects of burnout and compassion fatigue. Self-care strategies come in many shapes and forms and have a variety of applications based on the reason for use. Self-care has also evolved to include technology-based implementation including mental health apps, social media, and online journaling (Laffier, 2021).

Self-expression is a notion that is closely associated with a plethora of positive psychology concepts, such as freedom, creativity, courage, and healing (Laffier, 2015). From a positive psychology lens, self-expression, is the act of expressing oneself freely and deeply, to promote well-being (Orehek & Human, 2017). According to Steele (1988), authentic self-expression (the process) allows individuals to verify and affirm their sense of self which can

increase self-esteem and a sense of belonging. This theory of self-expression examines self-expression as integral to healthy human development. When individuals have opportunities to express their thoughts or feelings it can also be cathartic and empowering. The act of self-expression can help individuals release and process their emotions healthily and constructively, rather than letting them build internally (Orehek & Human, 2017). For example, Laffier (2015) found that the act of expressing unpleasant emotions helped participants feel heard, valued, and understood. Self-expression can therefore be a form of self-care as it supports psychological rehabilitation by helping individuals process feelings of anger and sadness and engage in active problem-solving (Botton & Armstrong, 2011; Malchiodi, 2011). An area which is continuing to emerge is the study of self-expression on social media and in online communities.

1.4.1.5 Social Media and Online Communities

Social media are well-positioned to act as a platform for self-expression. Social media sites are communities where users can engage with others in a continuously changing and interactive manner. This continuous sharing and shaping of information are made up of the self-expressions of its users (Byrne, 2017). The online community Reddit has been successful in bringing together people with similar topics of interest and creating online communities (Kapoor et al, 2018). It is beneficial to explore how these communications occur and act as a form of self-care. Therefore, in this study, the social network theory was used as part of the theoretical framework.

Social network theory (SNT) is a framework that examines the patterns of interactions in individuals and groups and how they are connected in social networks (Gruzd & Haythornthwaite, 2013; Liu, 2017). SNT suggests that patterns of relationships and

communication are formed and maintained in online environments. SNT has a wide range of applications in various fields such as sociology, psychology, and communication studies. For example, a psychology based study found that online users of the social media site, Facebook, more frequently interacted with strangers and acquaintances (weak ties) in their social network than close friends and family (strong ties) (Coulson, 2009). Users interact with their weak ties in the following forms; communicating with distant friends, meeting new friends, getting to know acquaintances and meeting others with similar interests in online groups. SNT can provide insight as to how ABA providers are communicating and building relationships as a form of self-care on social media.

In summary, chapter one has highlighted the main phenomenon being explored; the use of social media as a form of self care for ABA providers. In this chapter the research problem, purpose, and theoretical frameworks related to mental health, burnout, compassion fatigue, self-expression and social networking were introduced. Since the researcher of this study is an ABA provider, a section on positionality was included.

Chapter 2. Review of the Literature

This literature review will explore the main themes of this study. First, Autism Spectrum Disorder (ASD), a developmental disorder that can cause severe impairments in communication, social interaction, and cognitive abilities will be discussed (Reynolds, 2015). Next, Applied Behaviour Analysis (ABA), an evidence-based treatment for ASD and ABA providers will be examined. Next, the topics of wellness, burnout, compassion fatigue, and self-care will be examined. Finally, the research surrounding the role of technology to support mental health will be explored. This will include a review of the online, anonymous platform, Reddit and the risks associated with social media use.

2.1 Autism Spectrum Disorder

According to the American Psychological Association (2013), ASD is a neurological and developmental disorder characterized by repetitive and restrictive behaviours such as pervasive deficits in social communication. These impairments can include delays in verbal communication, restricted interests, exhibiting self-injurious behaviours, and difficulties with socialization, relationship, development, and peer relationships (APA, 2013; Center for Disease Control, 2022). In Canada, one in 66 children and youth aged five to 17 are diagnosed with ASD, accounting for one to two percent of the Canadian population. Approximately 135,000 Ontarians are on the autism spectrum (Ofner et al., 2018). It is noted that individuals with autism may choose to use disability first language (autistic) to represent and advocate for themselves, the researcher respects and understands an individual's right to decide how they wish to be addressed. For this research, person-first language (a person with autism) will be used for consistency.

Individuals with a diagnosis of ASD may experience a significant impact in all (or some) major areas of functioning, which may put them, their caregivers and those around them at risk (APA, 2013). The impact of ASD is unique for each individual with a diagnosis; some individuals engage in dangerous behaviours such as running away (elopement), aggression and self-injury. These behaviours can place the individual and caregivers at risk of threatened or actual serious injury, and in a small percentage of cases, threatened or actual death (Stewart, 2020). Caring for individuals who have autism takes a significant toll on caregivers and families. Caregivers of children with ASD experience poorer health and an increase in reported stress, anxiety, depression, and physical health problems than parents of children with typical

development (Bekhet, 2014; Estes et al., 2013; Huang et al., 2014; Lovell et al., 2012; Stewart, 2017). In response, caregivers may be forced to develop a hypervigilant style of caring with heightened watchfulness and preparation for action to protect their loved one, family, and self (Larson, 2010; Woodgate et al., 2008). The lives of caregivers of individuals with ASD are severely impacted by having to care for their loved ones. This is reflected in a quote from a caregiver who states that the needs of the individual with ASD are prioritized above everyone else's; impacting the whole family unit. "You are walking on eggshells 24 hours a day...We were just drowning in autism" (Woodgate et al., 2008, p. 1079). Caregivers living in these stressful environments exhibit clinically significant problems in daily social and occupational functioning due to the additional stress caregiving requires (Larson 2010; Oberleitner et al., 2006).

The care of children with ASD is highly individualized and depends on the strengths and needs of the person (Government of Canada, 2022; Myers et al., 2007). Care often involves several treatment programs, which include various professionals each with specific expertise and goals; however, the main goals of treatment are to minimize the deficits, increase functional independence and improved quality of life, and mitigate distress experienced by the individual and family (Government of Canada, 2022; Myers et al., 2007).

Individuals with ASD may benefit from multi-disciplinary support across common settings of their daily life such as school, home, and the broader community to ensure safety. Supports may include assistance to address adaptive, communication, and emotional regulation deficits (Lord et al., 2018). In addition to these needs, individuals with ASD and other disabilities may engage in challenging behaviours that pose a risk of injury to themselves and those around them (Spiker, 2019). Some of the more severe maladaptive behaviours they may

engage in might include self-injurious behaviours (SIB), elopement, physical aggression, and property damage and destruction (Scheithauer et al., 2019; Brown et al., 2019).

There are various evidence-based interventions and treatments for ASD. Common non-medical-based treatments include speech and language therapy, occupational therapy, mental health therapy, physical therapy and behavioural therapy (Spiker, 2019). The type and intensity of intervention that children and adults with ASD receive and require are individualized and vary greatly around the world (Elsabbagh & Johnson, 2016). One of these interventions is Applied Behaviour Analysis therapy.

2.2 Treatments: Applied Behaviour Analysis

Applied Behaviour Analysis (ABA) is the science devoted to the understanding and improvement of meaningful human behaviour (Cooper et al., 2007) which emerged from the greater field of psychology and is derived from the initial findings of Skinner (1938) based on operant conditioning. ABA is the process of applying interventions that are based on the principles derived from experimental psychology research to systematically change behaviour and to demonstrate that the interventions used are responsible for the observable improvement in behaviour (Myers et al., 2007). ABA attempts to identify and isolate the variables which affect the behaviour in question, known as a functional analysis (FA). The purpose of an FA is to determine the true underlying function of this behaviour, there are four functions of behaviour: escape, attention, automatic, and or sensory (Cooper et al., 2017). The information from the FA is then used to create a treatment plan to replace the maladaptive behaviour with an adaptive alternative that better serves individuals with ASD (Smyth et al., 2019).

ABA is a technology that can be applied to virtually any setting, though the greatest body of research and application has occurred in clinical and educational settings for individuals with

developmental disabilities, such as ASD (Alligood & Gravina, 2021). Other applications of ABA include: treating addiction (Dallery et al., 2019), animal training and behaviour (Edwards & Poling, 2011), behavioural gerontology (LeBlanc et al., 2010), behavioural pediatrics (Allen & Hine, 2015), business management (Wilder et al., 2009), instructional design (Critchfield & Twyman, 2014), sports and fitness (Normand, 2008), safety (Sulzer-Azaroff & Austin, 2000) and video game design (Hopson, 2013). In 2022, the Behavior Analyst Certification Board[®] (BACB[®]), a nonprofit organization that oversees the certification of behaviour analysts in Canada, the United States, the United Kingdom, and Australia, conducted a survey that found that over 72.2% of respondents were practicing exclusively in the field of the treatment of ASD. This percentage may be even higher as 10.14 % of respondents chose not to answer (BACB[®], 2022). ABA is an evidence-based treatment to improve the lives of individuals with ASD (Pollard et al., 2017; Rieske, 2019).

2.2.1 ABA for ASD

ASD affects each individual in unique ways, meaning each person has their strengths and challenges, thus requiring varying levels of support. Individuals with autism may experience challenges in the domains of communication, and repetitive and restrictive behaviours (APA, 2013). Roane et al. (2016), stated that children with ASD who show behaviour problems and skill deficits in multiple areas can benefit significantly from immersive and intensive ABA treatments to overcome the deficits of ASD through the implementation of a comprehensive treatment plan. Intensive behavioural interventions such as ABA have been empirically validated as the leading treatment modality for ASD (Pollard et al., 2017; Rieske, 2019). An estimated 42% of individuals with ASD engage in challenging behaviours that can be considered

self-harming (Blanchard et al., 2021). Self-harming behaviours include head banging, hair pulling, hand hitting, cutting hands and arms (Blanchard et al., 2021).

Concerning children and the early identification of ASD with severe symptoms and complex needs, treatment, such as early intensive ABA services are most effective when a treatment plan is implemented early (under the age of five) and for an intensive number of hours, depending on the unique needs of the individual (Lovaas, 1987). Empirically, the greatest gains made by individuals with ASD occur in individuals who have attained early diagnosis and have made progress in their language and verbal skills (Pickles et al., 2014). ABA services can be provided in the home, therapeutic center, school, or community environments, all depending on the needs of the client served. Though the role of a service provider will depend highly on the specific needs of the clients, most providers serving the ASD population are trained to use ABA techniques to teach skills in the areas of cognition, language, communication, and social development, as well as to record data and implement programs designed to improve problem behaviour (Leaf & McEachin, 1999).

There are two main goals of ABA programs: (a) to reduce problematic behaviours and (b) to teach and build functional behaviours. Problematic behaviours that have been effectively reduced through the use of ABA principles include maladaptive, self-injurious behaviours (SIB), elopement, physical aggression, property damage, destruction and behaviours that put the individual and those in their community at risk (Scheithauer et al., 2019; Brown et al., 2019). These behaviours are intense and have a long history of occurring, therefore, they place families, caregivers, and frontline therapy team members at an increased risk of establishing negative side effects (Blanchard et al., 2021; Emerson et al., 2001). Due to the complex nature of providing care and therapy to individuals with autism, intensive and specialized supports are required,

these services are rendered by licensed professionals and paraprofessionals who have undergone significant training, are bound to a code of ethics, and are also caregivers, who adhere to an ABA modality.

2.3 ABA Providers

ABA services are provided by a team of professionals with specialized training, each team member has a specific role and responsibilities. A team of ABA providers may include Board Certified Behavior Analysts[®] (BCBA[®]s), Board Certified Behavior Analysts[®] with a doctorate (BCBA-D[®]), Board Certified Assistant Behavior Analysts[®] (BCaBA[®]s), Behaviour Interventionists (BIs), Registered Behavior Technicians[®] (RBT[®]s). Their roles and responsibilities are outlined below.

BCBA[®] and BCBA-D[®]s are clinicians responsible for the development and oversight of ABA services (Behavior Analyst Certification Board, n.d.). BCBA[®]s are the primary practitioners providing direct services to individuals with socially significant problem behaviours within the field of ABA (Spiker, 2019). To become a BCBA[®], individuals must have a minimum of a master's degree and complete over 1000 hours of direct supervision and training under an already certified BCBA[®] in addition to passing a board exam (Behavior Analyst Certification Board, n.d.). In Canada, the United States, and Australia, BCBA[®]s must register with the Behavior Analyst Certification Board[®] (BACB[®]) and are bound to a code of ethics, the Behavior Analyst Code of Ethics. BCBA[®]s most often work with a team of paraprofessionals who deliver ABA services in individual and group environments. These paraprofessionals, BIs, may also register with the BACB[®] under the RBT[®] credential.

BIs and RBT[®]s are responsible for the provision of behavioural interventions to a wide range of individuals with mental health needs and developmental delays, including individuals

diagnosed with ASD (Behavior Analyst Certification Board, n.d.). To become an RBT[®], an individual must meet certain requirements, some of which are as follows: be over the age of 18, have a minimum of a high school diploma, pass a background check, complete a 40-hour training, written competency test and provide ABA services in a setting where they receive oversight and ongoing training from an RBT[®] coordinator, such as a BCBA[®] or BCaBA[®] (Behavior Analyst Certification Board, n.d.). Additionally, most BIs have a background and education surpassing a high school diploma, they often possess an undergraduate degree or college diploma in a related field such as psychology, special education, or early childhood education (Zapatero, 2021). Moving forward, the term “ABA providers” encompasses the following professionals: BCBA[®], BCaBA[®], BCBA-D[®], RBT[®], BI, and any other individuals employed within a setting where ABA is practiced.

2.3.1 Mental Health and ABA Providers

Mental well-being is of utmost importance for ABA providers. As providers of direct services for vulnerable individuals, professionals need to prioritize their well-being for the population served. Increasing individual mental health to support productive and happy lives is a primary goal for helping professionals and understanding theories related to healing and mental health is critical for practitioners in these fields (Laffier, 2015). ABA providers face many barriers that place them at risk of experiencing a decline in their mental health. ABA providers are under constant emotional, physical, and psychological strain (Yang, 2020), which puts them in a vulnerable state to experience stressful situations, which could lead to unbalanced mental well-being.

The role of an ABA service provider can be mentally and physically taxing. As per Yang (2020), ABA providers' scope of practice often requires high empathy and tolerance for the

challenging needs of the population served, including mitigating severe behavioural challenges, this can put the practitioner under conditions of extreme stress and negatively impact their mental health. Examples of the severe behaviours ABA providers teach adaptive and functional alternatives to include self-injurious behaviours (SIB), elopement, physical aggression, property damage, destruction and behaviours that put the individual and those in their community at risk (Scheithauer et al., 2019; Brown et al., 2019). These behaviours are intense and have a long history of occurring, potentially placing both the practitioner and client in extremely high-stress situations.

In addition to a high-stress physical and emotional work environment, the mental health of ABA providers has been further put at risk by high turnover rates and a shortage of staff and qualified personnel. These stressors can negatively impact client care and are common occurrences in the field (Kazemi et al., 2015; Yang 2020). ABA providers are at a higher risk for experiencing burnout, this has been correlated with high-stress workloads and low resources (Hastings et al., 2004; Plantiveau et al., 2018).

2.4 Mental Health and Wellness

Mental health is a component of overall health and well-being. As per the Canadian Mental Health Association (CMHA) (2021), mental health is a state of well-being that includes the emotional, physical, and psychological states of an individual; it affects how we behave, our emotions, thoughts and feelings of connection to others, and our ability to self-regulate high and low emotions. The concept of wellness will also be discussed. The traditional, Western, view of wellness, as well as alternative, Indigenous, views of mental health and well-being, will be examined.

Mental health affects all people, across different ages, levels of education, income levels, and cultures. Every individual has mental health and will experience challenges regarding their mental well-being, but not everyone will experience a mental illness, though, one in five develop a mental illness each year (Canadian Mental Health Association, 2021). Mental health is not static; it is constantly changing and evolving. In traditional Western medicine, mental health is often referred to as a continuum, meaning that there are different levels of wellness. An individual can fluctuate across different stages at various points and can always return to a healthy state of functioning. One example of a mental health continuum, created by the Canadian Mental Health Commission of Canada (CMHCC, 2013) included the following stages: (a) healthy, (b) reacting, (c) injured and (d) ill. Healthy is the ideal state and with the proper support and strategies, each person can move along the continuum to return to this state. On the other end of the continuum is the “ill” stage, where mental disorders, psychosocial disabilities and other states associated with extreme distress, impairment in functioning, or risk of self-harm can occur (CCHCC, 2013; WHO, 2022). Closely related to mental health is the concept of wellness.

The World Health Organization (WHO, 2022) defines wellness as the optimal state of health of individuals and groups and a positive approach to living. Mental health is a basic human right and integral to building personal, community and socio-economic capacity (WHO, 2022). The main difference between (mental) health and wellness is that achieving positive (mental) health is the goal and wellness is the active process of achieving it (WHO, 2022). One cannot have health without first achieving wellness. Wellness directly influences overall health, which is essential for living a fulfilled life (WHO, 2022).

Another view of wellness and mental health is the holistic, Indigenous view. One of the wellness and mental health models from this community is the belief that health is a balance

between the four parts of the self: (a) physical, (b) mental, (c) emotional and (d) spiritual wellness (Mussell et al., 1993). There are several differences between the traditional and Indigenous modules; the inclusion of the spiritual component and the focus on the role of the greater cultural community. The spiritual component can include connection to the greater Indigenous community such as support from the Elders, respected individuals, who are key advisors in the community, they can provide emotional and spiritual support. The role of community is prominent, as individuals often lean on each other for support, advice and a sense of interdependence (Stewart, 2008). As per Stewart (2008) when adequate attention is not paid to all of the parts of the self, an imbalance occurs, which is viewed as a decrease in wellness. Therefore, balance across all parts of the self is synonymous with wellness. Within the Indigenous community, there is also an overarching focus on personal control and strengths, as opposed to weaknesses, therefore some mental health disorders are not often openly discussed. Burnout and compassion fatigue are two mental health disorders related to occurrences of prolonged occupational stress.

2.4.1 Burnout

Maslach et al. (1998) defined burnout as a prolonged three-dimensional response to job stressors, incorporating exhaustion, cynicism, and inefficacy. Pines & Aronson (1988) suggested burnout is "a state of physical, emotional and mental exhaustion caused by long-term involvement in emotionally demanding situations" (p. 9). Burnout is a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed. It is characterized by three main symptoms: feelings of exhaustion, creating more mental distance from occupational tasks, negative or cynical feelings related to one's job; and a reduction in professional efficacy. Maslach et al. (1997), described several additional burnout symptoms such

as feelings of alienation from work-related activities, viewing your profession as increasingly stressful and frustrating, emotionally distancing themselves from their work, experiencing physical symptoms: headaches, stomach aches or intestinal issues, inability to cope or becoming unmotivated to get work done and under-performance, being unable to concentrate or experiencing a lack of creativity. There has been significant research on burnout under various circumstances and professions, one of these being job burnout.

Job burnout theory is a branch of burnout specific to the occupational environment, the three components of exhaustion, cynicism, and inefficacy (Maslach et al., 2001). Job burnout is specific in its occurrence within the occupational environment and should not be applied to describe experiences in other areas of life (World Health Organization, 2019). Exhaustion refers to an individual's feelings of being overworked, which results in lower energy levels and emotional drainage. Cynicism occurs when an individual can become irritable and display temperamental feelings towards the clients and population they serve, along with feelings of disengagement within the occupational environment. Finally, inefficacy involves feeling helpless, and individuals have difficulty feeling effective (Maslach & Leiter, 2016). Furthermore, in addition to the three main criteria of job burnout theory, it also employs a model consisting of the six domains of work-life: workload, control, reward, community, fairness, and values, each of these domains can work independently or interact with one another and it is hypothesized that job burnout is more likely to occur when there are inequities between individuals and their work environments concerning these factors (Maslach et al., 2001).

At the core of being an ABA service provider is the desire to improve socially significant behaviours in the vulnerable populations served (Cooper et al., 2007). This can often include overlooking their well-being which can lead to negative outcomes in the professional

environment (Jethi, 2020). Burnout is reported at high rates in helping professions and leads to staff turnover and poor staff performance (Mutkins et al., 2011), thus making ABA providers potential candidates who could fall victim to burnout.

2.4.2 Compassion Fatigue

This study will examine Figley's (1995) Theory of Compassion Fatigue. This theory is useful in analyzing how occupational stressors influence ABA providers' expressions of burnout in the online community. With this theory, we can determine if providers are identifying and recognizing the symptoms of compassion fatigue as expressed in their online contributions. Compassion fatigue is closely associated with burnout, both occur in the workplace environment and are negative outcomes as a result of several factors, including lack of self-care. The specific differences between compassion fatigue and burnout will be discussed in the following section.

Several terms can be used interchangeably or are closely related to compassion fatigue: worker-related stress and countertransference (Haley, 1974; McCann & Pearlman, 1990), vicarious traumatization (Pearlman & Saakvintine, 1995), secondary traumatic stress (Stamm, 1995) help-induced trauma (Adams et al., 2001; Jenkins & Baird, 2002; Stamm, 1997). For clarity and to be concise, the current study will utilize the assumptions of Figley's (1995, 2001) theoretical model of compassion fatigue.

To adequately identify and treat compassion fatigue, the symptoms of the condition must be recognized. Compassion fatigue can occur as a negative outcome of working with traumatized clients and the symptoms are similar to those of post-traumatic stress disorder (PTSD) (Figley, 1995; Killian, 2008; Osofsky et al., 2008). These symptoms include intrusive thoughts images and sensations; avoidance behaviours of situations that trigger traumatic memories; an increased sense of arousal which can manifest through sleep problems, hypervigilance, anxiety, and

irritability (Killian, 2008). The symptoms of compassion fatigue may include feelings of isolation, anxiety, depression, dissociation, physical pain, and sleep disturbances. Additionally, compassion fatigue is associated with a sense of confusion, helplessness, and a greater sense of isolation from supporters than is seen with burnout. (Figley, 1995; 2001). Figley (1995) first employed the term compassion fatigue. The term was used in the context of describing the fatigued symptoms of helping professionals as a consequence of providing great deals of empathy when serving traumatized individuals. When the symptoms are unknown or unaddressed, caregivers begin to experience a dramatic decline in professional and personal consequences (Figley, 2001).

Boyle (2011) summarized the six ways in which compassion fatigue may present itself: the emotional toll (overwhelmed by their occupation, appears angry, irritable, and has lost enthusiasm for their work), intellectual undertaking (impairments in concentration and reduction in maintenance of attention to detail), physical symptoms (body pain, stiffness, and headaches), decrease in energy, endurance and becoming more accident prone, avoidance of intense situation with clients, decrease in performance abilities, decrease in professional productivity (increased tardiness and absenteeism) and spiritual and social implications.

Compassion fatigue can affect any individual or caregiver who is in a position where they are providing help to another. Research has been conducted with many professionals and their experience with compassion fatigue; physicians, nurses, psychologists, mental health providers, human service workers, and emergency workers (Pryce et al., 2007). Burnout and compassion fatigue are closely related, therefore the following section will examine the subtle differences.

2.4.2.1 Burnout vs. Compassion Fatigue

There are many similarities between experiences of burnout and compassion fatigue, this section will examine the differences between both occurrences. A table summarizing these findings has been created.

Burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatization all contain similar principles that identify a “professional hazard for those who choose to help others” (Alkema et al., 2008, p. 104). Several characteristics distinguish an occurrence of compassion fatigue from burnout, Boyle (2011), summarized these findings by triggers or etiologies, chronology or onset, and outcomes or symptoms. Burnout is triggered by conflict within the occupational environment, stressors can include staff turnover, too much workload, a lack of resources, and inequitable management (Alcock & Boyle, 2009; Alkema et al., 2008; Bush, 2009; Kash et al., 2000; Potter et al., 2010). Compassion fatigue stems from relational connections practitioners have with the individuals they provide care for, or their families (Boyle, 2011). Compassion fatigue occurs when there is emotional engagement and interpersonal intensity associated with working with traumatized individuals and presents as overwhelming exhaustion from experiencing the secondhand suffering of others (Boyle, 2011; Simpson 2020). Additionally, burnout usually evolves where the onset of compassion fatigue is sudden and acute (Boyle, 2011). A practitioner experiencing burnout gradually withdraws; alternatively, a practitioner suffering from compassion fatigue will try harder to give even more to their clients (Boyle, 2011). See Table 1 for a summary of the comparison of the characteristics of burnout and compassion fatigue.

Table 1.

Comparing the Characteristics of Burnout and Compassion Fatigue

| Characteristic | Burnout | Compassion Fatigue |
|----------------|--|---|
| Triggers | Reactional: occurs in response to occupational or environmental stress: staff turnover, workload, lack of resources, management issues | Relational: a consequence of caring for individuals who have experienced trauma |
| Onset | Gradual, over time | Sudden, acute |
| Symptoms | Withdrawing from work tasks, decreased motivation and empathy, negative perspective regarding your occupation, decrease in professional efficacy | Continues to complete work demands while experiencing a decrease in empathy and objectivity |

Note. Adapted from “Characteristics Differentiating Burnout From Compassion Fatigue” by Boyle, D. A., 2011, Countering compassion fatigue: A requisite nursing agenda. *The Online Journal of Issues in Nursing*, 16(1)

Both compassion fatigue and burnout can be treated by engaging in self-care interventions. The following section will review theories of traditional and tech-based self-care.

2.4.3 Self-Care

Self-care is described as the application of a range of activities with the goal being “well-functioning,” which is described as “the enduring quality in one’s professional functioning over time and in the face of professional and personal stressors” (Coster & Schwebel, 1997, p. 5). It is a crucial component for those employed in caring professions and is essential in preventing distress, burnout, and impairment (Barnett et al., 2005). Self-care strategies may be applied to prevent and mitigate many conditions related to wellness including self-care for burnout, and compassion fatigue. This section will review the literature on traditional and

technology-based self-care strategies and previous research conducted on the implementation of these strategies within the ABA providers population. Finally, the risks and barriers associated with technology-based self-care strategies will be discussed.

2.4.3.1 Traditional Self-Care

According to the World Health Organization (WHO) (2021), self-care is a broad concept that includes general and personal hygiene, nutrition; leisure and lifestyle; environmental factors such as living conditions and social habits; socioeconomic factors and medical well-being. Additionally, the WHO outlined two overarching principles of self-care: the fundamental principles for the individual as well as the greater community. Self-care principles at the individual level include self-reliance, empowerment, autonomy, personal responsibility, and self-efficacy. Self-care at the greater community level includes immersion in the community through participation, involvement, and empowerment (2021). Acts of self-care are subjective based on the individual's needs and can vary across people, therefore, self-care has a broad definition and can encompass any or several of the tasks listed above, depending on the needs of the person.

Individuals working in caring professions are more likely to experience stress and burnout, therefore requiring self-care strategies (Orem, 2001). Much research in self-care has been conducted in the field of nursing, Orem's theory of self-care which originated in nursing states that each individual requires engagement in some type of self-care behaviour (2001). The main tenets of the theory include: the individual is responsible for their self-care in addition to the self-care of others who depend on them, each person is unique and therefore has their own self-care needs, primary (self) care such basic universal needs in addition to developmentally appropriate self-care for illness prevention, nursing and caring require communication and

interactions between people, self-care behaviours are learned through social and cultural contexts, and having knowledge of the health risks associated with negligence of self-care is required to promote these behaviours. The following section will review the literature specific to self-care in the context of mitigating burnout and compassion fatigue.

2.4.3.1.1 Self-Care for Burnout and Compassion Fatigue

Burnout and compassion fatigue are two separate threats to well-being with different manifestations and causes. However, they are both consequences of repeated exposure to stressful stimuli and environments. Self-care is the provision of strategies to manage and decrease stress; self-care strategies are unique to the individual; however, previous research suggests some common practices for mitigating and decreasing the effects of burnout and compassion fatigue.

Much of the research on self-care practices for the treatment of burnout has been in the population of counsellors (Germer & Neff, 2015; Horn & Johnston, 2020; Linder et al., 2000; Skovholt & Trotter-Mathison, 2014; Utley & Garza, 2011), as this is where the term burnout first originated. Mindfulness is one of the self-care strategies which can mitigate feelings of burnout. Research by Germer & Neff (2015) established practices of mindfulness as a founding principle of self-compassion, which can be a component of burnout mitigation. Another self-care strategy is journal writing and reflecting after a session, which can facilitate personal resilience and act as an alternative to debriefing with another clinician (Lent, 2009; Utley & Garza, 2011). Physical activity and nutritional self-care involve engaging in sports or increased activity and making nutritionally conscious therapeutic lifestyle choices (Skovholt & Trotter-Mathison, 2014; Walsh, 2011). Furthermore, religion and spirituality, sleep, and adequate time off can help buffer against burnout (Horn & Johnston, 2020).

A great deal of research on self-care practices for mitigating compassion fatigue has occurred in the nursing field (Abernathy & Martin 2019; Alkema et al., 2008; Boyle, 2011; Duarte & Pinto-Gouveia, 2016; Flarity et al., 2013; Hevezi, 2016; Meadors & Lamson 2008), due to the severity of stress and traumatic situations they encounter in their profession. Additional research has also been conducted in other helping professions such as psychotherapists (Ifrach & Miller, 2016; Williams, 2018), counsellors (O'Halloran & Linton, 2000) and social workers (Gregory, 2015). The provision of counselling by a qualified professional trained in emotional support for compassion fatigue in one-on-one or group environments (Alkema et al., 2008; Boyle, 2011) has been researched. Additionally, workshops and psychoeducational training on the topic of compassion fatigue (Boyle, 2011; Meadors & Lamson 2008), particularly if they are offered during non-working hours such as evenings, weekends or retreat environments (Boyle, 2011) have proven to be effective. Engaging in art therapy (Boyle, 2011; Ifrach & Miller, 2016) and yoga, mindfulness, or meditative practices (Abernathy & Martin 2019; Duarte & Pinto-Gouveia, 2016; Flarity et al., 2013; Hevezi, 2016; Williams, 2018) have empirical value. Boyle (2011) also found that massage therapy can be an effective self-care tool if the practitioner finds it relaxing. Additional self-care strategies for compassion fatigue include flexible and adaptive professional environments (Keidel, 2002), maintaining a balance between personal and professional boundaries through adequate sleep, nutrition and social support (Boyle, 2011, Gentry & Baranowsky, 2013; Keidel, 2002), managing stress by addressing social, spiritual, physical, cognitive, emotional, and vocational needs (Jones, 2005; O'Halloran & Linton, 2000).

In addition to the above-mentioned strategies, research in self-care continues to grow, the next section will discuss emerging research in technology-based self-care strategies.

2.5 Burnout and Compassion Fatigue in ABA Providers

There is no denying that ABA providers may be faced with stressful work conditions. Occurrences of burnout and a decline in job satisfaction have been influenced by heavy workloads and demands (Hastings et al., 2004). ABA providers have reported high rates of problems with well-being as well as burnout in practitioners in the ASD sector, putting themselves at risk for negative physical and psychological outcomes (Bottini et al., 2020; Symes & Humphrey, 2011; Zarafshan et al., 2013). Upon a review of the literature, there appear to be specific situations under which ABA providers experienced burnout.

There has been considerable previous research on the presence of burnout and emerging research on compassion fatigue in ABA providers. Bottini et al., (2020) studied burnout in providers serving individuals with ASD by examining the relationship between provider burnout and work-life balance. The research consisted of 149 providers who completed an online survey consisting of the Maslach Burnout Inventory (MBI; Maslach et al., 1997), the Areas of Work-life Survey (AWS; Leiter & Maslach, 1999), in addition to research on their training and supervision conditions. They found low satisfaction scores in the areas of workload, reward, fairness, and values emerged as the best predictors of burnout. Elevated occurrences of burnout are correlated with negative physical and psychological outcomes. Brown (2021) examined how newly certified providers managed life and job attitudes and were influenced to act unethically. One hundred and six providers completed a survey on supervisory pressure along with measures of burnout, life satisfaction, job satisfaction and potential turnover. They found that providers reported negative life and job attitudes also were more likely to report levels of burnout. They also found no significant differences in reported burnout, life satisfaction, job satisfaction, or intention to turnover among providers working primarily in different environments. Additionally,

77% of providers reported experiencing pressure from stakeholders in a position of seniority or power to behave unethically; the most common outcome was withholding a recommendation for services due to costs (Brown, 2021). Lundin (2021) examined occupational stress, burnout and professional efficacy in teachers and ABA providers. They found a high correlation between elevated levels of stress and burnout in ABA providers who are not formally supported by a team of other (independent practitioners) and lower levels of stress and burnout in ABA professionals with formalized training and the support of a team of clinicians. They also did not find a difference in levels of stress or burnout in providers working in a school versus a habilitation setting. Plantiveau et al. (2018) found there were high levels of burnout in early-career ABA providers with low collegial support. Additionally, burnout could lead to absenteeism, turnover, low standards of service, and poor health outcomes for providers. Slowiak & DeLongchamp (2021) found in a sample of 826 ABA practitioners, 72% reported medium to high levels of burnout and minimal job satisfaction. A final factor was the amount of time spent on work-related tasks outside of the typical workday increased the providers' perceived level of burnout (Rupert & Kent, 2007; Simpson, 2021).

The literature review yielded a single study on occurrences of compassion fatigue within the population of ABA providers. Simpson (2020), studied how ABA practitioners experienced compassion fatigue and found that clinicians with increased levels of burnout were observed in those that held more advanced levels of education. Interestingly, ABA providers experienced both compassion fatigue and compassion satisfaction simultaneously, however those who experienced secondary stress, burnout and compassion fatigue were predictors of negative work attitudes and lower job satisfaction compared to ABA providers who exhibited higher levels of compassion satisfaction and self-care were found to help offset the potential negative

consequences of working in the field of ABA (Simpson, 2020). The age of the clients receiving service also affected the prevalence of burnout as providers who worked with children between the ages of six and 13 experienced statistically significantly lower levels of burnout than those who worked with clients of all ages (Simpson, 2020).

Research on occurrences of compassion fatigue in caregiving professions outside of the ABA provider population includes a study on teachers who serve an ASD population, they found teachers who lack training and have poor relationships with their students experienced higher levels of occupational stress (Baghdadli et al., 2019) They also found that psychoeducational resources such as an in-service training on ASD demonstrated a greater sense of self-efficacy in the participants following the training, and potential decrease in the occurrences of compassion fatigue and an increase in compassion satisfaction (Busby et al., 2012). Similar to predictors of burnout, exposure to environmental factors such as long work hours, large caseloads and lack of collegial support have been associated with increased levels of compassion fatigue in professionals in caregiving (Boyle, 2011; Cocker & Joss, 2016; Udipi et al., 2008).

The well-being of ABA providers is at risk, burnout and other stressors are prevalent and as a result provider turnover is high. To avoid burnout in the ABA profession, one must be able to set limits and adopt self-care behaviours to promote a healthy lifestyle and experience improved working conditions (Miller & McGowen, 2000). The next section will focus on self-care strategies for ABA providers.

2.5.1 Self-Care Strategies for ABA Providers

Yang (2020) identified risk and protective factors for ABA providers and found that there were various predictors of burnout based on the different dimensions. The risk factors included: providers were more likely to leave their employment when they were unsatisfied with their pay, did not receive enough supervision and were unsatisfied with their job. Protective factors included: providers who engaged in playing sports regularly and scored lower on the exhaustion dimension. They found burnout can be minimized by employers focusing on competitive pay rates, supervisory support, fringe benefits, balanced caseload, and promotion of a healthy lifestyle.

Spiker (2019) found that ABA providers engaged in self-care practices but the type of care depended on the needs of the practitioner. The implementation of consistent and more frequent self-care practices in ABA could reduce the occurrences of burnt-out providers; when providers are in a balanced state of well-being, they do not experience some of the negative outcomes such as issues with treatment fidelity in interventions, decrease in caring towards clients and the expansion of their self-care repertoires resulting in better care for the recipients. “By better understanding self-care in behaviour analytic practice, it might have been possible to improve the experiences for both practitioners and patients” (Spiker, 2019, p. 15).

One component of self-care is the ability to recognize your symptoms to employ the appropriate self-care strategy to effectively mitigate the negative effects (Orem, 2001). Jethi (2020) explored both workplace stressors and life stressors and how self-care strategies can promote job satisfaction and reduce burnout among behavioural service providers. Jethi (2020) gathered subjective experiences from ABA providers regarding self-care practices, wherein the participants shared opinions regarding how factors in the occupational setting influenced

burnout, stress, self-care practices, work-life balance, and support. Jethi (2020), found that ABA providers can engage in self-care in the following ways: creating schedules that encourage a work-life balance, rewarding themselves with acknowledgement, and external rewards such as salary increase, which can result in more efficient work results, which leads to less turnover and happier practitioners.

Saint (2019) examined the use of Acceptance and Commitment Therapy (ACT) and Behavioural Skills Training (BST) to increase the performance of ABA providers and reduce burnout; they found through the processes of ACT (acceptance, present moment awareness, contextual self, defusion, values and committed action) their burnout scores were lower post-intervention and also found their value-driven behaviour scores were higher, demonstrating the effectiveness of behaviour- analytic procedure such as ACT in mitigating symptoms of burnout. Slowiak & DeLongchamp (2021) examined the effects of self-care strategies and job-crafting practices on the high levels of burnout (exhaustion and disengagement) in ABA providers and found the use of both self-care strategies and job-crafting practices strongly predicted work-life balance, work engagement, and decreased burnout above and beyond sociodemographic variables (gender and years of experience).

Slowiak & DeLongchamp (2021) studied the self-care strategies of ABA providers and found the use of self-care strategies as well as job crafting, predicted increased work engagement and that work-life balance decreased occurrences of burnout. Self-care includes seeking professional support, cognitive awareness and maintaining a daily balance. (e.g., professional support, cognitive awareness, balance) and job crafting practices (e.g., decreasing life demands, increasing social resources). Cognitive awareness is described as behaviours which included self-monitoring, self-exploration, and self-reflection (Slowiak & DeLongchamp, 2021).

Self-care continues to be an important topic of emerging research in the behaviour analytic field. As per Spiker (2019) “self-care is recognized among those in the community, though not from a clinical or academic perspective” (p. 112). See Table 2 for a summary of self-care strategies and observations for ABA service providers

Table 2.

Self-Care Strategies for ABA Providers

| Self-Care Strategy | Description/ Example | Outcome |
|--|--|---|
| ACT and BST (Saint, 2019) | Apply ACT strategies in self-reflective practice | Reduce burnout and increase in value-driven behaviour post-intervention |
| Cognitive awareness (Slowiak & DeLongchamp, 2021) | Self-monitoring, self-exploration, and self-reflection | Increased efficiency and productivity |
| Compassion satisfaction (James & Gilliland, 2013; Simpson, 2020) | Pleasure and satisfying feeling that comes from helping others: | Reduce feelings and symptoms of compassion fatigue |
| External rewards (Jethi, 2020; Yang 2020) | Increase in pay, fringe benefits | Reduce burnout, less likely to turnover |
| Individualized personal preference (Saint 2019; Spiker 2019) | Individualized based on preference: meditation, mindfulness practice, more time with supervisors, external rewards | Reduce burnout and compassion fatigue |
| Self- acknowledgement (Jethi, 2020; Spiker 2019; Yang 2020) | Positive self-talk, increased supervisory support | Reduce burnout |
| Work- life / daily balance (Jethi 2020; Slowiak & DeLongchamp, 2021) | Job crafting: flexible work schedule, setting boundaries (self-care) | Reduce burnout and staff turnover |

2.6 Technology and Mental Health

Technology has provided many opportunities for individuals to access mental health resources that would not otherwise be possible. Some of the areas of wellness which have been enriched by technology include online counselling, online communities to seek support and social media use. There are also some risks associated with the increased use of technology which will be discussed.

Online counselling, also referred to as cyberpsychology, e-therapy, e-counselling and cybertherapy is the provision of therapeutic interventions in an online environment wherein the communication between a trained counsellor and client takes place in the online computer-mediated environment (Richards & Viganó, 2012). There is a growing body of research which demonstrates the efficacy of online counselling when compared to face-to-face encounters with a therapist (Richards & Viganó, 2013). The goal of counselling is to mitigate and overcome symptoms of distress, anxiety, and other concerns of the individuals and attempts to return a client to their functioning before the crisis, therefore, improving their well-being, building on their strengths, and helping improve overall functioning (Mallen et al., 2005). The provision of technology-based self-care strategies such as online counselling can have a positive impact on an individual's mental health when they are experiencing distress such as burnout or compassion fatigue (Mallen et al., 2005; Richards & Viganó, 2013). Advantages of online counselling include accessibility for individuals who may otherwise not be able to access therapeutic sources due to geographical location, long wait lists and overall accessibility of services. Technology and social media have made immense contributions in facilitating access to build, maintain and establish relationships which may not otherwise exist (Pearce & Rice, 2017).

Another form of technology that has provided opportunities for improvement in mental health and wellness is social media and the communities it can create.

2.6.1 Social Media for Wellness

Social media is a technology-based tool, where people have begun sharing their experiences and challenges with threats to mental health through online communities in the form of forums, micro-blogs or tweets (Kapoor et al., 2018). Through social media, individuals can connect with others who are going through similar life situations and share their experiences, which can help them feel less isolated and provide validation and hope.

Social media can facilitate relationship building amongst users from varying backgrounds resulting in a complex social structure which generates massive amounts of information sharing not dictated by location or typical accessibility barriers (Kapoor et al, 2018). Social media also provides a platform where individuals often feel more open to expressing themselves online authentically due to the anonymity they feel (Laffier, 2016; Lenhart et al., 2001).

Online communities such as Facebook, Twitter or Reddit have created a new platform for researchers with a valuable source of text data and social metadata to study (Tadesse et al., 2019). There are many social media platforms available today, three of the most popular are Twitter, Facebook and Reddit. Twitter is one of the most popular social networking sites with almost 326 million active users and 90 million tweets publicly broadcasted (T. S. PortalStatistics and Studies, 2019). Many researchers have successfully utilized Twitter data for their studies. Facebook is another micro-blogging site with more than 2.2 billion users (T. S. PortalStatistics and Studies, 2019). Users do not have anonymity and must befriend one another to view shared content such as status, posts, images and videos.

Online communities have been successful in bringing together people with similar topics of interest and creating online communities. Reddit differs from other social media sites by creating an anonymous environment where users can seek support and assistance from each other, while comparatively most social media sites are constituted of personal statuses or updates on current affairs (Kapoor et al, 2018). Reddit social media is an online discussion forum conducted through different communities or “subreddits”, this platform allows full anonymity of the users, therefore is often used for discussions about stigmatic topics (Tadesse et al., 2019). Reddit has over 52 million daily active users (Reddit. com, 2020) and over 138,000 active “subreddits” (Proferes, et al., 2021). The online platform of Reddit is divided into self-created communities of users, united by a certain topic- “subreddits” (Medvedev et al., 2017). Each post on Reddit must be categorized under a subreddit name, and each subreddit and Reddit itself has a “top page” – the feed where post titles with voting and commenting links are displayed to all users (Medvedev et al., 2017). There are two factors which influence the post’s ranking position: the time of posting and the voting score, voting score on the website goes by the name “karma” which is the difference between upvotes and downvotes (Medvedev et al., 2017). The main difference between Reddit and other social media platforms is that users can follow subreddits, but not other users, compared to Facebook or Twitter, where users follow a person and not specific content (Medvedev et al., 2017). Furthermore, social media can be a source of emotional support and community building, particularly for individuals who are stigmatized or socially isolated. Online support communities can provide a safe space for individuals to share their experiences, offer and receive advice, and connect with others who understand their struggles.

Though social media provides many positive outcomes for the mental health of users, there can also be negative impacts. Scott et al., (2017) outlined several of them: increased use of

social media and digital devices can be detrimental to mental health, increased risk of decline in the mental well-being of adolescents and higher rates of depression and anxiety in higher consumers of social media. Additionally, when technological use such as social media is consumed in excess this can result in affective, cognitive, and behavioural concerns which may manifest in occurrences of excess stress, a decrease in emotional connection, self-esteem and mental health disorders such as anxiety and mood disorders (Flisher 2010). Laffier (2016) found that social media may also have negative consequences for people experiencing mental health issues such as depression. They found it can cause pain as well as provide support when adolescents posted signs of depression and anxiety online and were met with negative responses, ultimately reinforcing these negative feelings and pushing the individual into a greater state of distress (Laffier, 2016).

Research on this topic is still emerging, however, it is apparent that future research on the negative effects on mental health as a result of excess technology and social media use will be a topic of great importance (Flisher 2010; Laffier, 2016; Scott et al., 2017). Social media use has evolved to include technology-based self-care strategies such as self-expression.

2.6.2 Self-Expression as Self-Care on Social Media

One of the benefits of social media is identity formation and self-expression. Social media can provide an online community for individuals to explore their interests, connect with similar-minded people and create meaningful content (Oherek & Human, 2017). This self-expression can help foster a sense of belonging and contribute to the development of positive self-esteem (Sadagheyani & Tatari, 2021). Self-expression can take on many forms such as posting photos, reposting items, engaging with others and venting and can be cathartic and empowering.

Catharsis can lead to positive psychological improvements (Denzler and Förster, 2012) and therefore, releasing frustration and other negative emotions inside can build and lead to potentially harmful behaviours. Expressing them through venting and self-expression provides a safe space for individuals to release them and potentially experience a sense of empowerment (Laffier, 2015).

Social media can provide an online community for individuals to explore their interests, connect with similar-minded people and create meaningful content (Oherek & Human, 2017). Through online self-expression, individuals can share their perspectives, creativity, and personal experiences, which can contribute to the development of a positive self-identity and promote self-esteem (Sadagheyani & Tatari, 2021).

Venting is a form of self-expression that refers to the act of expressing one's negative emotions, frustrations, or complaints online (Rime, 2009). There are some benefits to venting in an online community, such as; (a) a sense of immediate, temporary relief and release, (b) helping individuals to process their feelings, (c) receiving social support from others in the online community, (d) validation from community members (Rime, 2009). While venting on social media can potentially provide immediate relief, it can also lead to negative consequences. Some of the potential risks of venting in the online environment include; (a) online harassment or bullying (Laffier, 2016), (b) a decline in mental well-being due to ongoing communication on negative topics (Sadagheyani & Tatari, 2021), (c) personal image damage as venting in an online community can be seen as unprofessional (Oherek & Human, 2017).

While venting as self-expression on social media can be beneficial for some individuals, it is important to exercise caution when engaging in such acts. Individuals should take into account several factors before venting in an online environment including whether they are

comfortable with others seeing and responding to their posts (Davis, 2012). One of the ways to mitigate the potential negative outcomes of venting in an online community is by posting and venting on an anonymous online forum. It is important to recognize that social media can also have negative impacts on self-expression and mental health. Individuals should therefore approach social media with intention and awareness.

Examining self-expression through a theoretical lens was a valuable step in understanding how social media influences self-expression and self-care strategies. It is important to be aware of the impacts of social networks and how our behaviour in an online community has impacts on our mental health. Social network theory was used to facilitate this exploration.

2.6.3 Social Network Theory

One way of examining social networks within a research context is by using Social Network Theory (SNT). SNT is an approach based on the patterns of interactions between individuals or a group of people, intending to understand complex and hidden group dynamics (Gruzd & Haythornthwaite, 2013). "SNT is a group of term theories that focus on individuals, teams and organizations, and the web of interpersonal relationships that both constrain and enable human action in these social systems" (Nimmon et al., 2019, p. 247). SNT and methods present a set of tools which can be used to understand media effects, enabling consideration of how micro- and macro-social structures mitigate and moderate the effects of media (Liu et al., 2017). Two components of SNT are (a) the two-step flow of communication hypothesis and (b) the theory of weak ties. In SNT, individuals or groups are often referred to as "actors" (Liu et al., 2017).

The two-step flow of communication hypothesis was used by Lazarsfeld et al. (1944). They found that personal influence yielded power in social networks and friendships. This theory suggests that information from the mass media flows through influential individuals or “opinion leaders” who then have the power to influence their social networks (Katz, 1957). This theory emphasizes the role of interpersonal communication and the importance of opinion leaders in shaping public opinion and behaviour. The personal influence of opinion leaders plays a significant role in affecting the behaviour of others (Liu et al., 2017). The two steps of this theory involve (a) the influence that mass media has on influential individuals of social significance and (b) in turn the power these (influential) individuals have on their social network (Liu et al., 2017). This theory states that information flows from the media to opinion leaders and then to the general public. The concepts of the two-step flow of communication and the influence of opinion leaders have been widely studied in SNT and have been applied in various contexts. Choi (2015) conducted a study on a public forum on Twitter and found that the tweets of opinion leaders were more widely distributed than those of non-opinion leaders, supporting the idea that opinion leaders play a significant role in disseminating information within social networks.

The theory of weak ties first appeared in work by Granovetter (1973). He studied the role of weaker personal relationships in labour relations. He found that individuals more often utilized their social connections with acquaintances and friends (weak ties) rather than family members and close friends (strong ties) (Liu et al., 2017). This theory found that given the less immediate connection to the individual of the weak ties, they were more likely to make connections and reach information outside of the strong tie network. This is often represented in social media and networking sites in the form of novel platforms through which individuals can connect with geographically distant others through “adding friends”, “following” and “liking”

the posts of others who may not otherwise have been in their physical social network (Liu et al., 2017). Coulson (2009) found that users of the social media site Facebook tended to interact more frequently with their weak ties in the online community compared to strong ties. These interactions included communicating with distant friends, meeting new friends, getting to know acquaintances and meeting others with similar interests in online groups. These examples demonstrate how components of SNT can be observed in the context of social media.

The review of the literature covered several topics. It explored the prevalence and characteristics of ASD, the evidence supporting ABA as a treatment, a brief history of ABA providers, and the mental health and well-being of these providers. The review also examined the prevalence of burnout and compassion fatigue in ABA providers and previous research on self-care strategies to mitigate these effects. Additionally, the role of social media, self-expression and online communities in implementing self-care strategies.

Chapter 3 Methodology

In this chapter I will review my research approach (qualitative), research design (phenomenology) and methods of data collection and analysis (directed content analysis). This research approach and design was chosen to answer the two main research questions: 1) How do ABA service providers express experiences of burnout and compassion fatigue in an online community? and 2) How do ABA providers receive support from these expressions in the online community?

3.1 Research Approach

To answer the research question of this study, a qualitative research approach was employed by collecting public data. Qualitative studies are a descriptive type of research that aims to address questions regarding developing an understanding of the meaning and experiences

of humans' lives and social worlds (Fossey et al., 2002). As the goal of this study is exploration and discovery, not hypothesis testing of a theory, a qualitative methodology was more appropriate than a quantitative methodology (Yin, 2011). At the core of good qualitative research is uncovering the perceived validity, reasons, opinions, and motivations of research participants (Fossey et al., 2002; Marshall, 1996). Qualitative research is good for researching topics which are concerned with understanding an individual's experiences. Qualitative methods are useful for studying phenomena which are complex, emerging and lacking previous research, in the fields such as psychology, social sciences and education. A qualitative approach allowed for the exploration of the lived experiences of ABA providers, which they shared in an online, anonymous community, Reddit.

3.2 Methodology

The methodology used for this research was phenomenology. Phenomenology is the study of individuals' lived experiences of the world. From this approach researchers can explore how phenomena exist and manifest in our experiences, this is reflected in the way we perceive and understand phenomena in the world (Van Manen, 2016). This research approach can be a powerful tool for exploring complex phenomena and can help researchers develop a deep and rich understanding of the phenomenon being studied (Wojnar & Swanson, 2007). The phenomenon being explored in this study is how ABA providers express experiences of burnout and compassion fatigue in online settings.

A phenomenological approach can be applied to any type of data that provides insight into individuals' experiences and perceptions. The data in this study were social media posts by ABA providers' about their experiences of burnout and compassion fatigue. The phenomenological approach aims to apply methods of reduction to identify themes and patterns

of people's experiences (Creswell, 2014; Harrison et al., 2017). Common steps in conducting phenomenological research through a reduction method include (Colaizzi (1987):

1. Reading and rereading the participants' descriptions of the phenomenon to acquire a feeling for their experience and make sense of their account
2. Extracting important statements directly related to the phenomenon.
3. Creating meanings for these important statements. The creations must discover and highlight meanings within the various contexts of the investigated phenomenon.
4. Categorizing the created meanings into clusters of themes that are common to all participants.
5. Integrating the findings into an exhaustive description of the phenomenon being studied.

These phenomenological research steps were followed in this study, including further analysis methods, such as content analysis, a data reduction method that identifies themes of experiences (Creswell, 2014). This method of analysis will be explained further in this chapter along with an overview of the data sources, and the data collection method.

3.3 Data Sources

This research was conducted on the social media platform Reddit, which has been called the “front page of the Internet” (Baumgartner et al., 2020). The online community of Reddit was chosen as it was the only platform which allowed full anonymity of the users, thus allowing them to be more honest and transparent in their self-expressions. In contrast to Facebook or Twitter which requires the user to sign up with a profile.

Data was collected solely within the subreddit community:

<https://www.reddit.com/r/ABA/>. The description of the community is as follows “A forum to provide dissemination of applied behaviour analysis (ABA) and evidence-based research, assist the public in understanding the science, and promote conversation between BCBA[®]s, aspiring BCBA[®]s, BCaBA[®]s, RBT[®]s, and others who are interested” (Reddit, 2022). The subreddit was created on January 13th, 2011 and as of August 27th, 2022, there were 22,446 members. When searching Reddit, there is an option to search for “posts” or “comments”, a “post” is a new thread, with a title where a user can make a comment or pose a question etc. for other users to read and respond in a chain formation. A “comment” is a contribution made by a user responding to an already existing initial post created by another user. Data was collected solely within the subreddit community: <https://www.reddit.com/r/ABA/>.

Population

The population studied were anonymous ABA service providers who posted or responded in the /ABA subreddit: <https://www.reddit.com/r/ABA/>. Reddit is a completely anonymous community, anyone (even without registering) can view most subreddit communities (Amaya et al. 2021). Reddit must register by creating a username and password, to post and comment in the subreddits. Most accounts are associated with a validated email address, however, email addresses are kept confidential and are not visible to researchers. Personal information is not collected on Reddit, therefore, the demographic makeup of the 330 million active users is unknown (Amaya et al., 2021), however, one common factor regarding all the posts chosen from the /ABA subreddit, was that they were all written or responded to in English. Due to the anonymity of the Reddit and /ABA subreddit community, no consistent distinction

was made between the designation of ABA providers, therefore the term “ABA providers” includes all service providers who are involved in the greater ABA service community.

Research Ethics

This research was not conducted with human participants; but rather the contributions they chose to make in an accessible public space. To determine whether information posted on social media is public or private is to consider how the information is accessed (Byrne 2017; Langer & Beckman, 2005; Sveningsson-Elm, 2009). All the content on Reddit can be viewed by anyone with access to the website with an internet connection; it is considered public data and therefore, requires less stringent guidelines (Langer & Beckman, 2005). For these two reasons, this research was exempt from research ethics board (REB) approval. As per the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council (2018), the following statement regarding REB exclusion was made:

Research does not require REB review when it relies exclusively on information that is: publicly available through a mechanism set out by legislation or regulation and that is protected by law; or. in the public domain and the individuals to whom the information refers to no reasonable expectation of privacy.

Although social media users are aware their posts become public, this study took precautions to ensure the privacy of participants. For example, data were anonymized and each participant was assigned a code and any identifying information regarding their place of work or location was omitted. Ensuring the privacy of participants was an aim of this study since it was using public data.

3.4 Data Collection

Qualitative data were collected to explore how ABA providers were expressing experiences and receiving support for burnout and compassion fatigue in an online community. The data sources were online, anonymous public data from the social media platform, Reddit and the subreddit community; <https://www.reddit.com/r/ABA/>. Data was collected from September 6th to November 31st, 2022. Data was captured and organized in a spreadsheet.

The inclusion and exclusion criteria are described in detail. A total of 40 posts were selected to be examined. Forty posts gave the researcher enough data to conduct an in-depth analysis to determine recurring themes across the posts. The researcher selected these 40 posts based on the inclusion of the key terms “*burnout*”, “*compassion fatigue*” or other keywords based on their operational definitions. The additional keywords included in the search criteria were: “*burnout*,” “*burnt out*,” “*burned out*,” “*burning out*,” “*compassion fatigue*,” “*physical exhaustion*,” “*mental exhaustion*,” “*emotional exhaustion*,” “*stress*,” “*low energy*,” “*reduced efficacy*,” “*low motivation*,” “*worker-related stress*,” “*countertransference*,” “*vicarious traumatization*,” “*secondary traumatic stress*,” and “*help-induced trauma*.” Additional inclusion criteria were, (a) the post or comment had to include a description of the symptoms of “*compassion fatigue*” and “*burnout*” in the context of ABA providers’ work environment, (b) the initial post was made in the period of January 1st, 2020 to November, 30th, 2022 and (c) the post had a minimum of one response from another user (comment). See Table 3 for a summary of the inclusion and exclusion criteria for the posts.

Table 3.*Inclusion and Exclusion Criteria for Posts*

| Characteristic | Inclusion | Exclusion |
|--------------------------------|--|--|
| Term | Post included at least one of the following terms in the title or body burnout, burn out, burnt out, burned out, burning out, compassion fatigue, worker-related stress, countertransference, vicarious traumatization, secondary traumatic stress, help-induced trauma, physical exhaustion, mental exhaustion, emotional exhaustion, stress, low energy, reduced efficacy, low motivation | Post did not include any of the included terms in the title or body |
| Dates | Post made between January 2020 and November 2022 | Post made before January 1, 2020 or after November 30, 2022 |
| Comments | Post included a minimum of 1 comment from another user | Post had 0 comments from other users |
| Occupational Context | Written by an ABA provider regarding the occupational environment | User did not identify as an ABA provider or post was not written in occupational context |
| Researchers Personal Judgement | Various criteria: >40 posts met all other inclusion criteria then researcher and supervisor selected posts with more details, comments, better descriptions of symptoms etc. | |

As typical in qualitative research there were several steps to data collection. A search was conducted on the website www.reddit.com under the subreddit /ABA with the keywords

“*compassion fatigue*” and “*burnout*”. Posts and comments made between January 2020 to November 2022 were included.

To organize and collect data, the researcher created a spreadsheet database with the following information: date of the post, keyword, the title of the post, number of comments, link to the post and date accessed. The researcher engaged in the following steps for each term.

1. Began the search by going on to the ABA subreddit website at <https://www.reddit.com/r/ABA/>.
2. Typed the term into the search bar.
3. Cross-referenced each post with the inclusion criteria regarding the date, as the original post had to be made between January 1st, 2020, and November 30th, 2022.
4. Cross-referenced each post with the number of comments, only posts with a minimum of one comment were included.
5. Read the posts for occupational context to ensure that it was written by an ABA provider regarding the provision of ABA services.
6. If the post met all the inclusion criteria, the researcher inputted it into the database.

This process was repeated for each term.

Next, we will further explore directed content analysis.

3.5 Directed Content Analysis

A qualitative data collection and analysis method suitable for this study was directed content analysis. Content analysis is used as a study design when the goal is to describe and explore a phenomenon and previous research and literature are limited (Hsieh & Shannon, 2005). The phenomenon under study in this research is the online expressions of burnout and compassion fatigue in ABA providers. The objective of qualitative content analysis is to

systematically transform a large amount of text into a highly organized and concise summary of key results (Erlingsson & Brysiewicz, 2017; Hsieh & Shannon, 2005). Core consistencies and meaning are identified from the text (Mayring, 2014). For this study, the text came from social media posts.

This analysis method is used to extend or contribute to the existing research on a topic when research on the phenomenon is limited (Hsieh & Shannon, 2005). Since there is limited research on how ABA providers are expressing symptoms of “*compassion fatigue*” and “*burnout*,” online space, directed content analysis was warranted. There were several steps for the directed content analysis of data conducted in this study (Berg & Lune, 2011).

In the first step, the researcher analyzed all the data following the initial search of “*compassion fatigue*,” “*burnout*” and related terms from the Reddit website. All data from the posts were inputted into a spreadsheet (database). The data were then separated into the respective categories of “*compassion fatigue*” and “*burnout*”. Additional data (the words or phrases that describe these concepts) logged included the following information: date created, term, the title of the post, link to post and date accessed. Online users (the participants) were assigned identity codes P1, P2, and P3, to protect their identities. If they had multiple posts these were identified as Post 1, or Post 2. See Table 4 for an example of the initial data collection and recording process for posts involving the term “*compassion fatigue*” and related keywords.

Table 4.

Example of Data Collection and Recording Process for “Compassion Fatigue”

| Date Posted | Term | Identity Code | Title of Post | Date Accessed |
|---------------|--------------------|---------------|---------------|----------------------|
| July 2020 | Compassion fatigue | P1 | a | September 10th, 2022 |
| December 2020 | Compassion fatigue | P2 | a | September 10th, 2022 |
| April 2020 | Compassion fatigue | P3 | a | September 10th, 2022 |
| October 2021 | Compassion fatigue | P4 | a | September 10th, 2022 |

^a Title of posts have been removed from the table to preserve the anonymity of users

The second step consisted of the researcher reading and rereading each of the posts and designated them into categories based on the inclusion and exclusion criteria. Forty posts were hand selected based on the inclusion criteria, as 55 posts met all aspects of the inclusion criteria. The researcher employed personal judgment to make the selection. Factors which influenced the researcher were: the length of the posts, the number of comments from other users, level of detail in the descriptions of symptoms and expressions of “*compassion fatigue*” and “*burnout*.” At this point, the researcher also began highlighting words and expressions of high importance by using colour codes on the database. This also allowed the researcher to study the volume of posts under each respective term.

In the third step, words of high importance emerged, and the researcher highlighted them on the database via colour code as well as writing these down in a notebook. The words of high importance for “*burnout*” were: stress, exhaustion, workload, frustration, drained, depressed,

and burn out and included several variations of these keywords. Words of high importance for “*compassion fatigue*” were: fatigued, emotional, exhausted, sudden, empathy, acute, compassion fatigue, and included several variations of these keywords. The researcher also had their supervisor review the database and words of high importance as ideas for coding began to emerge.

The fourth step involved sorting and condensing the content of the posts and code development. As per Graneheim & Lundman (2004), a code is a label; a name that most exactly describes what this particular condensed meaning unit is about. This process involved the development of codes from multiple sources: the data, previous studies, and theories (Zhang & Wildemuth, 2009). The codes included comparing the keywords (a condensed version of the symptoms of burnout and compassion fatigue) with the data from the posts, which the researcher cross-referenced on the database. While reviewing the various data sources, any unit expressing these themes was transferred and coded into the database. See Table 5 for an example of the code and categories for “*burnout*”.

Table 5:

Code and Categories for “Burnout”

| Date Posted | Code | Identity Codes | Categories | Date Accessed |
|-------------|---------|----------------|--|--------------------|
| August 2022 | Burnout | P20 | Seeking advice/ support Responses: sharing similar Responses: resources/coping | December 1st, 2022 |
| April 2022 | Burnout | P21 | Burnout label Burnout symptoms Seeking advice/ support Responses: sharing similar Responses: resources/ coping | December 1st, 2022 |

| | | | | |
|----------------|-----------|---------------|---|----------------------------------|
| September 2022 | Burn out | P22 | Burnout symptoms Seeking advice/ support Vent/ frustration Responses: validation Responses: sharing similar Responses: resources/ coping | December 1st, 2022 |
| July 2022 | Burnt out | P23, P24, P25 | Burnout label Burnout symptoms Seeking advice/ support Responses: validation Responses: sharing similar Responses: resources/ coping Responses: negative/dismissive | December 1st, 2022 |
| June 2022 | Burnt out | P26 | Burnout label Burnout symptoms Seeking advice/ support Responses: validation Responses: sharing similar Responses: resources/ coping | December 1st, 2022 23rd, 2022 |
| June 2022 | Burnt out | P27 | Burnout label Burnout symptoms Seeking advice/ support Responses: validation Responses: sharing similar Responses: resources/ coping | December 23rd, 2022 |

The fifth step was to organize the data based on code into categories and themes. Categories are formed by the grouping of codes which are related to one another by content which were then sorted into themes. This step involved a review of the data for code consistency. There were several subcategories which emerged within the theme of responses. This will be discussed in greater detail in the findings section.

The sixth step involved drawing conclusions from the data in order to contrast, compare, validate, or discredit previous research related to the theoretical framework in this specific

population (Hsieh & Shannon, 2005). Conclusions were made for the theme and outcomes were compared to findings from the literature review. Additionally, to increase the content validity of the findings, the researcher's supervisor provided input and reread the themes and subthemes to avoid any researcher bias.

In this chapter, the research approach (qualitative), methodology (phenomenology) and methods of data collection and analysis (directed content analysis) were reviewed. Data sources were posts from Reddit, under the /ABA subreddit. The population consisted of ABA providers who created a Reddit account and wrote in English. This research was exempt from REB approval as it utilized public data.

Chapter 4 Findings

This research study intended to investigate how ABA providers expressed their experiences with “*burnout*” and “*compassion fatigue*” within an online community. Using directed content analysis, 40 posts were selected based on the inclusion criteria and were analyzed to answer the research questions 1) “How do ABA service providers express experiences of burnout and compassion fatigue in an online community?” 2) “How do ABA providers receive feedback and support from these expressions in the online community?” Initially, a search was conducted on the ABA subreddit for all posts and comments which included the terms “*compassion fatigue*” or “*burnout*” within the initial post or comments. There were five posts which met the criteria for “*compassion fatigue*”, the search was then expanded to include the second round of keywords which yielded an additional four posts, for a total of nine posts containing “*compassion fatigue*” or a related term. For the term “*burnout*” and related keywords there were 215 posts which contained one or more of the keywords.

The findings suggest that ABA workers are experiencing compassion fatigue and burnout and are using online platforms to express these experiences. Many of the participants used the online platforms to express their experience to others and often received feedback from their online community and sought support. There were variations in how people posted, how people responded, and how they communicated their experience of compassion fatigue and burnout.

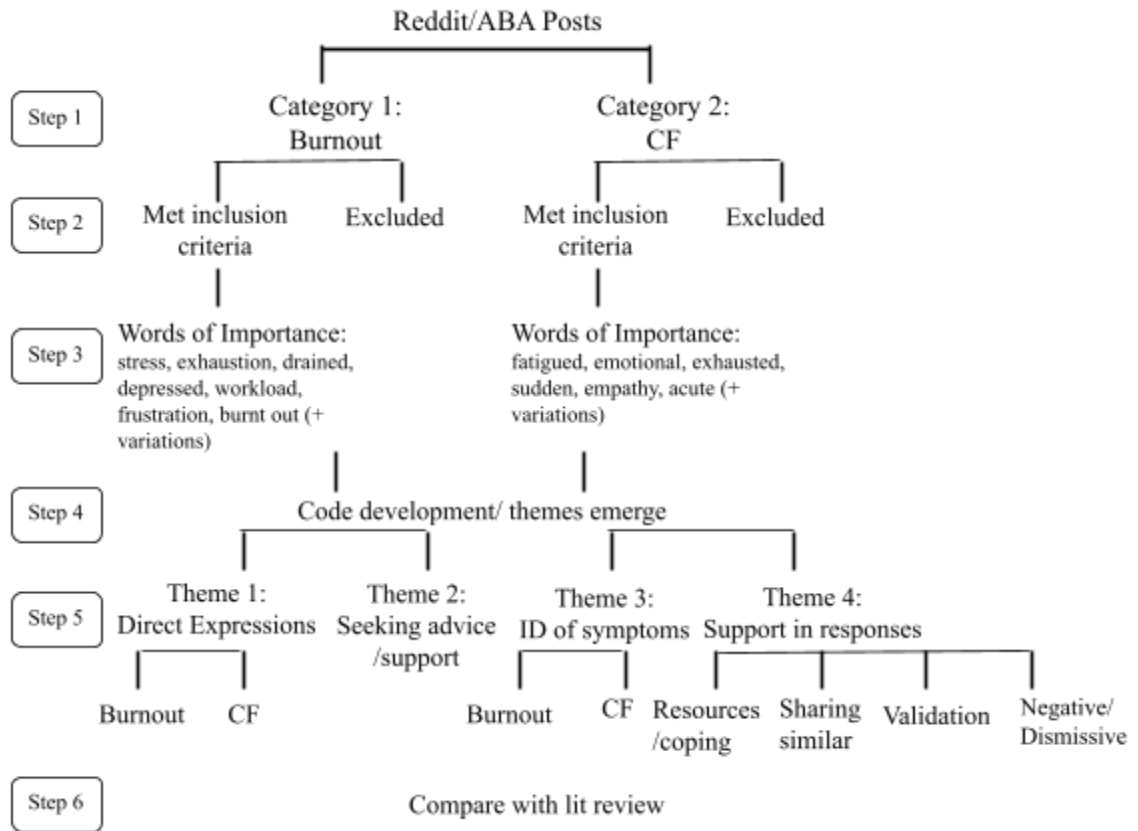
Data analysis uncovered several themes of these online expressions, each theme is listed from most to least prevalent. The first three themes are related to the posts made by users and the fourth theme is regarding solely the responses to posts. The emerging themes in order of prevalence were:

1. Posts which contained direct expressions of burnout or compassion fatigue.
2. Posts seeking support or advice.
3. Posts with identified symptoms of burnout or compassion fatigue.
4. Offers of support or feedback in the responses with several sub-themes.
 - 4a. Sharing resources or coping strategies.
 - 4b. Sharing similar experiences.
 - 4c. Validation.
 - 4d. Negative or dismissive responses.

It should be noted that inclusion in one themed category is not exclusive. Given the interdependence between mental health conditions and themes, many posts were included under several themes. See Figure 1 for an overview of the directed content analysis procedure including the themes. Furthermore, each theme is further analyzed below and a summary of the findings across themes can be found in Table 6, following a description of each theme.

Figure 1.

Overview of Directed Content Analysis Procedure with Themes



4.1 Theme 1- Direct Expressions of Feeling Burnout and Compassion Fatigue

In this theme the online users wrote direct words of compassion fatigue or burnout. This was the most prominent theme, with a total of 38 of the 40 posts, which included a direct expression of feeling burnout or compassion fatigue. The posts across both categories were included as a total sum (38) as this theme pertains to the total number of direct expressions of mental health and not the specific condition. There were more direct expressions of burnout than compassion fatigue. There were eight posts or comments which met the criteria for “*compassion fatigue*” and related keywords. For the term “*burnout*” or related keywords there were 30 which

met the criteria. Within this theme, many users shared feelings of guilt and shame around their expressions of declining mental well-being, several also expressed financial instability as a reason for staying in an unsatisfying position. Some examples demonstrating direct expressions of feeling burnout or compassion fatigue are presented below:

P2: *"I just feel so guilty about leaving her so early if I do land this position. I've been burnt out and have had compassion fatigue as an RBT for a while now, so that's part of the reason I've been looking for this new opportunity."*

P11: *"Another exhausted/burnt out post, looking for advice on how to keep stamina and not let my mental drain impact clients... Basically, I've just come to the point of feeling depressed and drained in this role. I am in a contract which is up in six months, and plan to leave then. The role and company culture doesn't fit with me and is impacting my mental health overall. I feel drained and sad when I get home and don't have energy to do anything on the weekends..."*

P32: *"I'm really burnt out. This job has been so unstable with cancellations, insurance issues, etc. and now I'm broke, stressed, and just pretty much over it. I don't want to be an RBT anymore, but the cost of existing is so high right now I need a full-time job that pays almost as much as my hourly rate is now."*

P34: *"I absolutely love my job but I am so freaking burnt out. I have 11 clients on my caseload and am attending full time university. I have been doing this for 2 years and my close relationships in my life are starting to suffer. I really want to cut down my caseload until I'm done school but I can't bring myself to leave any clients due to guilt (i work with highly aggressive individuals so it's difficult to find BI's) and also just feeling so sad because I'm emotionally invested in their well being."*

4.2 Theme 2-Seeking Support and Advice

The second most prominent theme that emerged related to posts seeking support or advice from other users. In this theme, users reached out to the online community seeking support or advice from others. Many of these posts also contained direct expressions of “burnout” and “compassion fatigue” in addition to questions about seeking support and advice to overcome, mitigate or proactively prevent these symptoms. Of the 40 posts analyzed, 34 of them, 85%, included a question where the initial poster was seeking support or advice from the online community. Several sub-themes emerged in this category: users sought advice for mitigating stressful situations in the work environment, and how to alleviate burnout and many sought feedback on ideas for other fields of employment outside of ABA. Examples of posts with expressions where the user is seeking support or advice from their online community have been included below

P3: *“I’m currently almost completed with my master’s in clinical mental health counseling. Not that counselling is any less stressful but I think I am ready for something new until LPC licensure. What other careers/disciplines have former ABA practitioners gone into?”*

P5: *“Does anyone have advice for conserving energy and getting through those long days? I start school again soon so any help would be fantastic!”*

P8: *“Now I’m in a smaller company, I have more supervision but we are overworked. I worked with four clients and no breaks till 3. The BCBA texts us even on holidays and weekends. According to Forbes, ABA is 6th most fulfilling profession. I feel exhausted at the end of the day and missing my teaching job. Is being a BCBA a truly fulfilling and well compensated profession or it’s more of the same wherever you go? What makes you love your job as BCBA?”*

P22 *"Any ways to alleviate burn out from the field? I'm feeling exhausted as a BCBA and very overworked. I'm not sure if this is normal, but my full time job gives me 50-60 clients that I need to bill 160+ hours for monthly, and I work some days 10 hours with no breaks, maybe just 30 min if I'm lucky. Is this normal?"*

P45: *"Big thing: I don't want to leave the field. I don't want to leave this company...I think any job can lead to burnout no matter how much you love it. And I definitely LOVE my job...What are your strategies to manage burnout? Especially those who have to balance health and work?"*

4.3 Theme 3- Identified Symptoms of Burnout and Compassion Fatigue

For inclusion into this theme and category, online users included descriptions of the symptoms of burnout or compassion fatigue they expressed. Within this theme, 23 posts included expressions of the symptoms of “*burnout*” and two of them included expressions of symptoms of “*compassion fatigue*”. It should be noted that posts may have met the criteria in multiple themes i.e., a post may have had a direct expression of “*burnout*” (theme one) in addition to identifying symptoms of “*burnout*”. Commonalities within this theme included the expression of the symptom of mental health conditions followed by a possible cause of stress. Many users cited the pressure to meet billable hours, lack of support from supervisors, and unclear boundaries across the home and occupational environments such as taking work home and contact with people outside of work hours. Some examples of posts with identified symptoms of burnout and compassion fatigue have been included below.

P1: *"But for the first time in my career, I've almost completely lost sympathy for a family."*

P4: *"Each day it just seems harder and harder to draw the same passion and enthusiasm before sessions. The worst is the absolute dread of showing up to a particularly tough session (kiddo and/or parents) the next day when I barely got out of sessions the evening before."*

P12: *"I don't know what to do because I am not enjoying waking up everyday and going to my sessions."*

P21 *"I am at the point where my mental health is taking a toll and the days of and before work I am sick to my stomach with dread and anxiety. I call out more than id like to just to try and get a break and when I am already stressed due to finals, I find myself crying over how physically and mentally taxing my job is. On the flip side, I feel personally obligated to this family and have become attached to the parents and even the kid"*

P37: *"Just another vent which I feel bad about. The field is wearing on my mental health... My staff don't show up or are suffering from anxiety because of pushy parents. Parents are pushy because these hours are medically necessary and their staff aren't showing up. I'm exhausted trying to cover sessions (which I'm technically not supposed to because....billable hours) while getting hounded for reports which are done by authorization dates but not by the month before because...I'm trying to cover sessions."*

4.4 Theme 4- Offers of Support or Feedback in the Responses

Another major theme which emerged was regarding the responses to the posts. Many users shared offers of feedback or support in their responses to the initial user's post. This theme was further categorized into four sub-themes based on the responses, which are listed from most to least prevalent.

1. Suggest resources or coping strategies for the original poster.
2. Sharing similar experiences in the responses.

3. Sharing responses of validation for the original poster.
4. Any responses which were negative or dismissive to the original author.

Each sub-theme is discussed in greater detail below.

4.4.1 Suggestions for Resources or Coping Strategies

This sub-theme of responses occurred when a user posted a comment that included a suggestion for finding resources or coping in response to the initial post. These comments were most often for posts which were seeking advice or support (theme 2). Of the 40 posts analyzed, 31 of them, 77.7%, responses included a comment with a suggestion for a resource or coping strategy. Many of these comments also lead to extending the conversation with the original poster. Common advice that users gave to the original post included: engaging in various self-care behaviours such as setting boundaries, by not taking work tasks out of the occupational environment, engaging in relaxation and physical activity, accessing the literature and requesting changes to duties and schedule. Some examples of these resources in the responses are included below.

P3 "Advocate for yourself... Long days and no breaks are a sure way to burnout. Bring this to your supervisors attention....You don't want to be in survival mode, at first you'll do what you need to do but over time it'll result in burnout, compassion fatigue or all out mental exhaustion. Good luck to you!"

P5 "In home is just one area that ABA services can be provided in. Others are clinics and schools and within each setting there are clients who demand more or less physically from their therapists....Make sure you take time for yourself, do self care, but also explore other options. It's not that ABA is the only way to help people ... but you've already invested so much time into

learning it if you can make it work by switching to another setting it may be better than starting over from square one."

P10 "Like any other set of behaviors. Access the literature. Wages do appear to have a positive effect on retention behavior...offer choices on tasks when possible, frequent breaks, provide verbal praise, professional development... Also, nothing is stopping you from doing a preference assessment with your staff. Let them tell you what they want. I think some mistakes can simply be addressed by reinforcing correct performance. Try to figure where people are at mentally before doing task clarification. Edit: I do think it's important to have a trauma-informed approach when supervising rbts/direct care staff. It's my personal philosophy that being a target for aggression, working through hear wrenching tantrums, major toileting teens/adults, not having decision making power in a high risk job, compassion fatigue ... social/political factors one might experience outside of work all put these people at high risks for trauma experiences. I take that into account in my consultations/supervision. It's all about empowering and nurturing people so they can be their best for themselves and our clients."

P35: "I agree with this. If you are burnt out and it is beginning to effect your personal life, it will quickly start to effect your work and schooling. In ethics, it is your job to take care of your self in order to properly serve your clients. To do this, it may benefit to drop some clients in order to better serve those fewer clients and your personal life."

P38: "It is so easy to be a martyr in this profession. You will never be able to give as much as this job is willing to take. Accepting that you cannot do everything is a very important step for work life balance."

P48: *"Look within, dude, not to a bunch of internet strangers. Do you like the work? Do you like teaching kids? If so, try to make this work. If not, find something that makes you happy."*

4.4.2 Sharing Similar Experiences

The second sub-theme within the responses occurred when a user shared a similar experience with the original author based on their post related to an expression, symptom or seeking advice regarding a mental health concern. Of the 40 posts analyzed, 28 of them, 70%, of the responses included a comment where a similar experience was shared by other users to the initial poster. Users who responded in the comments provided messages where they shared they had been in a similar situation. Many of these comments also lead to extending the conversation with the original poster. Some examples of sharing similar experiences in the responses are included below.

P13: *"Been there. I hated being an RBT honestly... You don't have to be an RBT if you don't want. ABA can be done everywhere. Behavior is happening in all settings. Find a supervisor who knows this and can find ways for you to get your hours in any setting."*

P15: *"I've worked in ABA for 3 years and I am officially BURNT TF OUT! I just graduated with my masters to become a BCBA and I am so freaking exhausted. Everyday has been a challenge and I feel it has been especially hard since the pandemic. I don't even know how to not become burnt out I just wanted to say that you are not alone."*

P18: *"Yes! I so often have to stress that I'm not just playing with the kids. It makes it harder that there's so few portrayals of ABA sessions and what it's like to be an RBT or BCBA in the media... I usually try to explain about managing data, making data based decisions, working*

with parents (legit hardest part of the job), working with severe behaviors..... at the end of the day though, haters gonna hate. Put them on extinction."

P44: "I'm in the same boat. Working full time while in grad school doing thesis. I barely have time to complete my thesis and becoming increasingly burned out by my full time responsibilities. Plus I also feel my company doesn't really value me that much either so even though I may take a financial hit, I opted to do part time work instead...My mental health is more important tbh"

4.4.3 Validation

The third most prevalent sub-theme within responses occurred when a user shared a comment that validated the original authors' post. These posts included a variety of positive messages to support the original poster. Of the 40 posts analyzed, 21 of them, 52.5%, shared responses to messages with validation and encouragement in the comments from other users to the initial poster. This subtheme differed from suggestions and resources in the responses as inclusion in this category was concerned specifically with the provision of validation towards the original user who made the post. These validating posts all contained statements that included the pronoun "you" in a statement where the responder was offering messages of validation and support. Many of these posts also were included under theme 4a) offering suggestions for resources or support category. Some examples of validation in the form of responses are included below.

P3: "Never apologize for this. You are burnt out and since we are a "helping" profession, you're probably experiencing compassion fatigue as well. Truth is, many of us are here at this point. On top of it being a rough 2020-2021, what we do is mentally and physically exhausting."

P19: *"I'm so sorry that you're experiencing this. Just know that your clients families appreciate you and your job appreciates you. You will get through this! If you ever need to vent you're more than welcome to message me."*

P25: *"I have no suggestions, but just wanted to offer virtual support. I'm almost through a graduate program and I have started applying for jobs outside of the field. I wish you well and hope you find something you feel great about!"*

P29: *"BOUNDARIES! They're so far and few in our field. I'm anonymously proud of you and will be doing the same soon. You did nothing wrong by prioritizing your well-being before you put somebody else's at stake. Good for you!! You didn't lie. You told the truth, your health is being impacted"*

P30: *"New to Reddit and also an RBT of almost a year. just wanted to read other ppl's opinions and this post made me feel so seen. Perfectly explained and did not sound ungrateful at all. I am so glad to see all my thoughts put into words on these type of forums. Thinking of leaving the field just to explore other options and jobs that would perhaps not push my further into poverty."*

4.4.4 Negative or Dismissive Responses

The fourth sub-theme of responses which emerged occurred when the feedback given in the form of comments was negative or dismissive. Of the 40 posts analyzed, two of them, 5 %, included a response which was negative or dismissive of the original poster. An example of a negative or dismissive response is included below.

P24 *"This story never changes just the people. Since you don't want to be in the field anymore or do something else related to it then invest in yourself and learn some marketable skills and apply them to a different industry."*

Table 6.

Summary of Findings across Themes

| Theme | Description of Theme | Number of Posts |
|---------|---|-----------------|
| Theme 1 | Direct expressions of mental health conditions | |
| | Posts: direct expressions of feeling "burnout" | 30 |
| | Posts: direct expressions of feeling "compassion fatigue" | 8 |
| Theme 2 | Posts seeking support or advice | 34 |
| Theme 3 | Identified symptoms of mental health condition within the post | |
| | Posts: identified symptoms of "burnout" | 23 |
| | Posts: identified symptoms of "compassion fatigue" | 2 |
| Theme 4 | Offers of feedback or support in the responses | |
| | ST* 4.1 Responses: suggestions for resources or coping | 31 |
| | ST* 4.2 Responses: sharing similar responses | 28 |
| | ST* 4.3 Responses: validation | 21 |
| | ST* 4.4 Responses: negative or dismissive | 2 |

*ST= abbreviation for sub themes

Several themes emerged from this analysis which included (a) direct expressions of feeling burnout and compassion fatigue, (b) seeking support and feedback and (c) identified symptoms of burnout and compassion fatigue. Furthermore, there were four additional sub-themes which emerged under the theme of offers of support and feedback in the responses;

suggestions for resources and coping strategies, sharing similar experiences, validation and any negative or dismissive responses.

Chapter 5 Discussion

This research intended to investigate how ABA providers shared and explored stressors they faced related to mental well-being in an online, anonymous community. The research questions which guided this study were 1) “How do ABA service providers express experiences of burnout and compassion fatigue in an online community” and 2) “How do ABA providers receive feedback and support from these expressions in the online community.” An exploratory research design was used, and four theoretical frameworks were used to support the analysis and answer the research questions. These theories included mental health and wellness, Maslach et al. 's (1997) Theory of Burnout, Figley's (1995) Theory of Compassion Fatigue and Orem's (2001) Self Care Theory. These theories were used to categorize ABA service providers' online expressions of burnout and compassion fatigue. This study employed a qualitative approach, which facilitated the exploration of the online expressions of ABA providers, which they shared in an anonymous community, Reddit. Directed content analysis guided this exploratory research.

The findings suggest that ABA service providers face significant stressors related to their work, including heavy workloads, long hours, and challenging behaviour exhibited by clients. Participants expressed a range of emotions related to these stressors, including frustration, anger, and sadness. Many also expressed feelings of being overwhelmed, exhausted, and burnt out. ABA providers expressed experiences of these mental health conditions through (a) direct expressions of “*burnout*” and “*compassion fatigue*”, (b) seeking support and advice from others, and (c) identified symptoms of “*burnout*” and “*compassion fatigue*”.

The participants also received feedback and support from other community members in the form of (a) suggestions for resources or coping, (b) sharing similar experiences, (c) validation, and (d) negative or dismissive responses. The findings suggest that ABA providers did turn to an anonymous social media forum to share their experiences with well-being in the context of expressing “*burnout*” and “*compassion fatigue*.” There were 220 posts which contained one or more of the keywords in the ABA subreddit community when the research was conducted from September to November 2022, and 40 of these posts were selected by the researcher to analyze. There were variations in how providers posted, responded, and how their experiences of “*compassion fatigue*” and “*burnout*” were communicated. This was demonstrated through the units of analysis containing alternative keywords for each term. The term “*burnout*” was expanded to search for the words “*burnt out*,” “*burned out*,” and “*burning out*.” The alternatives for “*compassion fatigue*” were: “*physical exhaustion*,” “*mental exhaustion*,” “*emotional exhaustion*,” “*stress*,” “*low energy*,” “*reduced efficacy*,” “*low motivation*,” “*worker-related stress*,” “*countertransference*,” “*vicarious traumatization*,” “*secondary traumatic stress*,” and “*help-induced trauma*.” It should be noted that none of the additional keywords for compassion fatigue yielded any additional posts which met the inclusion criteria.

5.1 Implications

We will explore further what these findings mean within the existing literature and theoretical frameworks identified for this study. These theories were utilized to demonstrate the wider lens of wellness, mental health and strategies to mitigate the stressors which may have manifested into burnout and compassion fatigue within this community.

Existing research suggests that the helping professions, such as ABA providers, have more stress and experience burnout (Hastings et al., 2004; Kazemi et al., 2015; Simpson, 2021; Yang, 2020). The findings from this study confirm that these experiences exist and impact wellness. There were 220 posts from ABA providers about stress with direct expressions of burnout and compassion fatigue. Interestingly there were fewer posts about compassion fatigue which may be due to a lack of understanding of this newer concept. The majority of posts were related to burnout and seeking support and advice. Job burnout theory is a branch of burnout specific to the occupational environment. The three components of this theory are exhaustion, cynicism, and inefficacy (Maslach et al., 2001).

ABA providers displayed evidence of job burnout within all three dimensions of exhaustion, cynicism and inefficacy in the online, anonymous environment. Within the 40 selected posts, the keyword “*exhaustion*” came up 17 times within the 40 posts demonstrating that ABA providers did express the dimension of exhaustion. Regarding the dimension of cynicism, which occurs when providers become disengaged, irritable and display negative feelings towards the population they serve (Maslach & Leiter, 2016), there were many descriptions of irritability with the work environment and lack of motivation and desire to return to work, in posts which expressed direct messages and symptoms of burnout. The dimension of inefficacy involves feeling helpless, and individuals have difficulty feeling effective (Maslach & Leiter, 2016) This was demonstrated in the posts by the use of the keywords “*helpless*” and “*ineffective*.” There were five posts which contained “*helpless*” and zero with “*ineffective*.” These findings support previous research that states that when there are inequities within the dimensions of workload, control, reward, community, fairness, and values in the occupational environment, job burnout is more likely to occur (Maslach et al., 2001).

As stated earlier, burnout, compassion fatigue, secondary traumatic stress, and vicarious traumatization all contain similar principles that identify a “professional hazard for those who choose to help others” (Alkema et al., 2008, p. 104). Compassion fatigue differs from burnout across several dimensions: the onset is acute, as a result of repeated exposure to clients who experienced trauma, and the symptoms are maintaining work demands however with decreased empathy and objectivity (Alcock & Boyle, 2009; Alkema et al., 2008; Boyle, 2011; Bush, 2009; Figley, 1995, 2002; Kash et al., 2000; Maslach et al., 1997; Potter et al., 2010). ABA providers did express occurrences of compassion fatigue, though they were far less prevalent than expressions of burnout. There were five posts which contained any keywords related to “*compassion fatigue*.” One hundred percent (all five) of these posts contained direct expressions of the term. Interestingly, three posts also contained expressions and or symptoms of burnout. The other two posts containing “*compassion fatigue*” or a related keyword were posted by users who indicated they had training or educational background in other professions such as social work, counselling or psychology. Compassion fatigue originated from the psychology and counselling fields (Figley, 1995) therefore, it could be inferred that those providers may have used the terms as they are more familiar with them from previous training and exposure to the term. ABA providers may not be as familiar with compassion fatigue and its symptoms. The term is not as widely used in the field and, therefore, not employed as frequently in online expressions. This theory supports research on the prevalence of the term among radiologists, a profession that is not commonly associated with or exposed to “*compassion fatigue*” (Robertson et al., 2022). Robertson et al. (2022) found that the term compassion fatigue is rarely used within radiology even though evidence can be found to show that it exists within the profession. This

may be due to a lack of understanding of what compassion fatigue is and how it can affect patient care.

One of the ways how ABA providers expressed experiences of burnout and compassion fatigue was through posts seeking advice and support from the online community. Among posts included in this theme, many users used the online platform to seek support and vent their frustrations to the community. Common sources of frustration stated by users included: wanting to leave their position due to unsatisfactory pay, lack of support and resources from management and supervisors, being unsatisfied with the daily duties involved in their position and committing years of experience and education to the field and feeling “stuck” in the sense that their skill set does not apply other careers and professions. This supports previous research by Yang (2020), who identified the following risk factors for ABA providers: clinicians were more likely to leave their employment when they were (a) unsatisfied with their pay, (b) did not receive enough supervision and (c) were overall unsatisfied with their job. Yang (2020) also found that symptoms of burnout can be minimized by employers focusing on competitive pay rates, supervisory support, fringe benefits, balanced caseload, and promotion of a healthy lifestyle, which was supported by the resources and coping strategies provided in the responses by users in this research.

One of the ways ABA providers shared expressions of burnout and compassion fatigue was by asking the online community for support by seeking advice on how to mitigate these threats to wellness. ABA providers received support from the online community in the form of responses, one of which was the sharing of resources and coping strategies. Many users shared self-care strategies; this supported the previous research by Spiker (2019), who found that ABA providers engaged in self-care practices but the type of care depended on the needs of the

practitioner. The three most common self-care strategies recommended and shared by users in this research included (a) engaging in boundary-setting behaviours (work-life balance and self-advocacy), (b) reducing caseload or the number of hours worked and (c) engaging in behaviours which are meaningful to the provider (mindfulness practice, increased physical activity, self-reflection). This supports previous research from Jethi (2020) and Slowiak & DeLongchamp (2021), who researched job-crafting practices and encouraged a work-life balance. None of the posts which met the inclusion criteria explicitly mentioned the use of ACT or BST strategies for self-care, as studied by Saint (2019) to mitigate the symptoms of burnout. It is possible that since ACT for ABA providers is a relatively new concept in the field, it is not yet recognized by the greater community as a traditional self-care practice. Three of the posts under the theme, 4.1 (Suggestions for Resources or Coping Strategies) recommended “accessing the literature” for self-care strategies so the ABA provider could find empirically based self-care practices. This recommendation aligns with the literature on self-care practices, emphasizing the importance of evidence-based strategies for promoting well-being and reducing burnout and compassion fatigue. Empirically-based self-care practices can include a wide range of strategies as previously mentioned. They can also encompass strategies which were not specifically mentioned, such as ACT or BST strategies (Saint, 2019).

5.2 Role of Technology and Online Communities

Online platforms such as Reddit have successfully brought together people with similar topics of interest and created online communities (Kapoor et al., 2018; Tadesse et al., 2019). This study demonstrates how the ABA/subreddit created a community where users shared their expressions and provided mental health support to each other. This was demonstrated by the themes which emerged in response to the research question, “How do ABA service providers

express experiences of burnout and compassion fatigue in an online community.” Three themes emerged: (a) direct expressions of “*burnout*” and “*compassion fatigue*,” (b) identified symptoms of “*burnout*” and “*compassion fatigue*,” and (c) seeking support and advice from others.

There are many factors which contribute to organizational issues leading to provider burnout, such as low collegial support (Plantiveau et al., 2018; Sellers et al., 2016). Using an anonymous social media forum, such as Reddit/ABA, provided an opportunity for front-line providers (RBT[®]'s and BI's) to connect with seasoned, experienced Behaviour Analysts in an unconventional way that would not otherwise have been possible. The researcher found that many frontline staff, often self-identified as BIs and RBT[®]s, demonstrated dimensions of job burnout due to lack of supervision from supervisors (BCBA[®]s).

Previous research on social media focused on the benefits of self-expression in online communities (Oherek & Human, 2017; Sadagheyani & Tatari, 2021). Research specific to Reddit found that the anonymous environment allows users to express their uninhibited opinions and beliefs, which they would not otherwise share with authority figures (Amaya et al., 2021). The findings from this study support this previous research. ABA providers could engage in self-expression, including opportunities for venting, which may not have been as well received or tolerated in the professional environment. This highlights the importance of providers having access to safe spaces for self-expression and social support, particularly for those in high-stress professions where confidentiality is of paramount importance.

The study's findings also highlight the importance of venting, or expressing emotions about a stressful situation or experience (Davis, 2012; Rime, 2009; Westen, 1994). Research suggests that venting can be a helpful coping strategy for managing stress and emotion, mainly

when done in a safe and supportive environment (Rime, 2009). In the context of the ABA subreddit, venting can provide ABA providers with a sense of validation and relief, as they can express their emotions and receive support and understanding from their peers. This contributes to the previous literature on the positive effects of self-expression in an online community (Oherek & Human, 2017; Sadagheyani & Tatari, 2021; Steele, 1988).

Part of education is on the healthy use of technology and digital wellness; this contributes to the greater literature on self-care practices. Social media sites such as Reddit can be helpful if they are used appropriately, and the users are aware of the risks. Awareness and education about risks are fundamental to attaining digital wellness. There were a few posts which could have been considered negative or dismissive. When discussing burnout, these negative posts can increase the symptoms of burnout. Within this research, there were only two posts (five percent) which contained any negative or dismissive posts. As discussed in the literature review, social media use also comes with some risk factors, including an increased risk of decline in mental well-being and higher rates of depression and anxiety in higher social media consumers (Scott et al., 2017). Though only five percent of the included posts met the criteria for negative or dismissive posts, ABA providers who shared their expressions of mental well-being online put themselves in a vulnerable position to receive support as well as receive negative feedback which may be detrimental to their mental health.

Therefore, users of online communities need to be mindful of the potential risks and negative consequences of sharing personal information and experiences online (Davis, 2012). While online communities such as Reddit can serve as valuable resources for ABA providers facing mental health challenges related to their work, it is essential to use caution when engaging in any online community. Education and awareness of the potential benefits and risks of social

media use can help individuals make informed decisions about how and when to utilize these resources to support their mental well-being.

SNT provides a valuable framework for understanding the dynamics of online communities and their role in supporting the mental health and well-being of ABA service providers. By recognizing the characteristics of relationships with the theoretical framework of weak and strong ties (Granovetter, 1973) and engaging with influential individuals and opinion leaders (Katz, 1957), online communities such as the ABA subreddit can provide valuable resources and support to those in need, contributing to greater resilience and wellness in the ABA profession.

The online community provided additional support and connection through weak ties, allowing ABA providers to access a broader range of perspectives and experiences in a safe and anonymous environment. This contributes to the existing literature highlighting the importance of weak ties in social networks. They can provide valuable resources and support that may not be available through one's existing strong ties network (Coulson, 2009).

Furthermore, the study supports the two-step flow of communication hypothesis, where information flows from media sources to opinion leaders to the broader public (Lazarsfeld et al., 1944). In the case of the ABA subreddit, experienced Behavior Analysts[®] and fellow providers served as opinion leaders, providing resources, advice, and support to other ABA providers in the online community. This supported previous research from Choi (2015), who found that the posts of opinion leaders were more widely distributed than non-opinion leaders. This highlights the importance of identifying and utilizing opinion leaders in social networks. They can be critical in disseminating information and shaping opinions among the broader public and online community.

5.3 Limitations

The limitations of the study included the researcher's positionality, a limited number of posts analyzed, and a small sample size. Positionality is an important consideration in research. The researcher identified their potential bias and took measures to minimize it. Efforts to mitigate potential positionality biases using a reflexive approach and feedback from the research supervisor were employed. Additionally, the use of a predetermined number of posts for inclusion (40 posts) and consulting with the research supervisor during the data collection process ensured that the sample was representative and the findings were accurate. This research had a narrow focus on a specific community and may not be generalizable to the greater public. However, as an exploratory study, it provides valuable initial information on expressions of burnout and compassion fatigue in the ABA provider community. By bringing awareness to this important issue, this research can help inform future efforts to support ABA providers and improve outcomes for individuals with ASD.

5.4 Recommendations

This research sought to explore how ABA providers expressed and received support for occurrences of burnout and compassion fatigue in the online community. ABA providers demonstrated that expressions and sharing resources for the presence of burnout were prevalent topics in the online community. The online community was a significant source of support for ABA providers in the study. Since the online community allows for anonymity and privacy, providers felt safe while sharing their experiences with others. There were two main recommendations that emerged from the study.

The first recommendation is the provision of additional support mechanisms for ABA providers experiencing burnout and compassion fatigue through the development of a psychoeducational program.

Psychoeducation is the process of educating individuals about mental health and wellness. It includes providing information and resources to help individuals understand mental health and wellness concerns, such as their symptoms, causes and treatment options (APA, 2013). Psychoeducation programs can be delivered in several different forms, such as workshops, conferences, online resources and individual or group sessions (Busby et al., 2012). Psychoeducational programs have previously been effectively used with ABA providers to decrease compassion fatigue and increase compassion satisfaction and occupational efficacy (Busby et al., 2012). ABA providers need to become familiar with mental health concerns that are less frequently discussed in popular culture and the field, such as compassion fatigue. Providers need to have self-awareness of what they are experiencing. This self-awareness could be developed through such a psychoeducational program. Once a provider can identify their experience, then they can choose the most appropriate self-care strategy. Some of the self-care strategies to treat burnout and compassion fatigue are similar such as counselling (Germer & Neff, 2015; Gregory, 2015; Horn & Johnston, 2020; Ifrach & Miller, 2016; Linder et al., 2000; O'Halloran & Linton, 2000; Skovholt & Trotter-Mathison, 2014; Utley & Garza, 2011; Williams, 2018) and yoga and mindfulness activities (Abernathy & Martin 2019; Duarte & Pinto-Gouveia, 2016; Flarity et al., 2013; Germer & Neff, 2015; Hevezi, 2016; Williams, 2018)

However, some self-care strategies differed from those for burnout. These strategies can include workshops and psychoeducational training on the topic of compassion fatigue (Boyle, 2011; Meadors & Lamson 2008), the use of art therapy (Boyle, 2011; Ifrach & Miller, 2016),

massage therapy (Boyle, 2011), and maintaining a balance between personal and professional boundaries through adequate sleep, nutrition and social support (Boyle, 2011, Gentry & Baranowsky, 2013; Keidel, 2002), managing stress by addressing social, spiritual, physical, cognitive, emotional, and vocational needs (Jones, 2005; O'Halloran & Linton, 2000). ABA providers must know these different self-care strategies and choose the ones that work best for them. By taking care of themselves, ABA providers can improve their overall well-being and provide better care to their clients. Selecting the appropriate self-care strategy is fundamental to treating the underlying condition.

The psychoeducational training for ABA providers would include the following components: (a) an overview of burnout, and compassion fatigue, including the symptoms and signs of both conditions, and how they differ, (b) an explanation of evidence-based self-care strategies for ABA providers, including strategies to reduce stress, opportunities for safe self-expression, mindfulness relaxation techniques, and setting boundaries, and (c) the importance of venting and debriefing after a highly stressful occupational scenario. It is essential for ABA providers to have a safe space to express their thoughts, feelings, and experiences (Steele, 1988). The training program would discuss the importance of peer support, supervision, and counselling as methods to prevent burnout and compassion fatigue.

The psychoeducational resource would be developed by an experienced ABA provider, that is familiar with current research in mental health and wellness within the field. Though it is important to have an ABA provider involved in the training development, it is also critical to ensure that the training is evidence-based and supported by mental health professionals who are experts in the field. It would be beneficial for the training developer to consult with mental health professionals to ensure the accuracy and effectiveness of the program.

The training would be administered in person or online as a part of a professional development program. In addition, ongoing support and follow-up would be provided to ABA professionals who complete the training program. These supports would include access to mental health resources, regular check-ins with supervisors or colleagues and additional training or workshops if necessary.

The second recommendation is continued research on how ABA providers use social media with a larger sample size; in a non-anonymous environment.

Continued research on how ABA providers use social media in a non-anonymous environment with a larger sample size is extremely important. Future research questions should explore if the content posted online by providers on a non-anonymous social media platform, supports the themes uncovered in this study. This type of research can help to identify the effects of various social media platforms, what types of information they are sharing, and how support from online communities may affect their performance and the field of ABA overall. At the time this research was conducted, this was the only study which examined the social media use of any ABA providers. As this research is foundational, continued research should take place to further contribute to the growing body of evidence.

5.5 Conclusion

This chapter presented a summary of the research findings, the implications, the role of technology in online communities as well as recommendations for future research. The following research questions and findings were discussed: 1) “How do ABA service providers express experiences of burnout and compassion fatigue in an online community” and 2) “How do ABA providers receive feedback and support from these expressions in the online community?” The findings suggested that ABA providers expressed experiences of these mental health conditions

through (a) direct expressions of “*burnout*” and “*compassion fatigue*,” (b) seeking support and advice from others, and (c) identified symptoms of “*burnout*” and “*compassion fatigue*.” ABA providers received support and feedback for these expressions by (a) suggestions for resources or coping, (b) sharing similar experiences, (c) validation and (d) negative or dismissive responses.

Based on the findings from this research and the implications the following recommendations for future research were made:

1. The development of a psychoeducational program to support the mental health and well-being of ABA providers experiencing burnout and compassion fatigue
2. Continued research on how ABA providers use social media with a larger sample size; in a non-anonymous environment

ABA providers must be aware of mental health concerns such as burnout and compassion fatigue and develop self-awareness of their own experiences. This awareness can be developed through psychoeducational programs. Once they can identify their experience, providers can choose the most appropriate self-care strategies.

It is important for ABA providers to prioritize their mental health and well-being, and seek support resources when needed. Burnout is a common occupational hazard in the field of ABA, and addressing these issues can improve job performance and overall well-being. It is also important for future research to explore and address the challenges and complexities of the ABA profession, and continue to promote self-care strategies for ABA providers.

Overall, the study highlights the importance of online communities and anonymous forums in supporting ABA service providers who may be facing mental health challenges related to their work. The findings suggest that ABA providers can benefit from opportunities to share and explore their experiences of burnout and compassion fatigue and receive validation and

support from others who understand their unique challenges. The study also highlights the importance of promoting self-care and mental wellness among ABA service providers and developing strategies to reduce stress and improve well-being in this population. As stated by P38: *"It is so easy to be a martyr in this profession. You will never be able to give as much as this job is willing to take. Accepting that you cannot do everything is a very important step for work life balance."*

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