Psychologists' experience and management of Zoom fatigue

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Attestation of authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed:

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Candidate contributions to co-authored work

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Abstract

The COVID-19 pandemic has resulted in drastic changes to daily routines for psychologists. Driven by the need for remote and flexible ways of providing clinical services while keeping in line with stay-at-home orders, the pandemic has resulted in a rise in the use of videoconferencing tools for online therapy. The increasing use of videoconferencing has raised concerns around reports of feeling tired and exhausted following virtual meetings, termed "Zoom fatigue". The use of videoconferences in therapy is likely to continue beyond the pandemic, yet limited literature has examined the experiences of Zoom fatigue from psychologists' perspectives. Understanding how Zoom fatigue may be experienced and managed can provide strategies for more appropriate use of videoconferences and allow for more effective and productive working environments. The current study utilises a qualitative descriptive approach to explore psychologists' experiences and management of Zoom fatigue. Reflexive thematic analysis of six semi-structured interviews with New Zealand registered psychologists revealed themes that the experience of Zoom fatigue is related to mental, emotional and physical fatigue. Zoom fatigue may also be understood in relation to experiences of technical challenges, stressors of working from home, and difficulties cultivating a therapeutic relationship with clients. The findings of this study suggest that despite the reported challenges of Zoom fatigue, there are effective methods to mitigate the experiences of Zoom fatigue where future uses of videoconferences in therapy can be successfully implemented if it is applied appropriately.

Chapter 1. Introduction and Literature Review

Changes in context due to COVID-19

In March 2020, the World Health Organisation declared the novel coronavirus (COVID-19) outbreak a global pandemic (World Health Organisation, 2020). As a result, governments across the globe implemented public health measures, such as social distancing, quarantine, and lockdowns to contain the virus, thus shifting social and work lives online.

The ongoing spread of COVID-19 was not only a threat to physical health but has also severely impacted mental health and wellbeing. The pandemic had wide-reaching consequences within the population due to disruptions in social, occupational, relational, psychological and physical functioning. The pandemic has led to prolonged exposure to stress exacerbated by worries around health, increased loneliness and isolation, financial stressors, grief due to lost loved ones and overall increased levels of stress due to living through a global pandemic (Brooks et al. 2020; Fisher et al., 2021; Prout et al. 2020). This increased psychological distress has resulted in an increased prevalence of posttraumatic stress disorder (Liang et al., 2020; Preti et al., 2021;), anxiety, depression, drug and alcohol misuse, sleep problems, self-harm and suicidal behaviours (Ahmed et al., 2021; Saladino et al., 2020). Due to the above sequelae, the need for mental health support was and continues to be high (United Nations, 2020), with great demands placed on psychologists to be a part of the health response to COVID-19 (Malathesh et al., 2020).

Increased need for videoconferencing

The stay-at-home orders and restrictions on in-person activities during the pandemic meant that people worldwide had to replace in-person communication with computer-mediated interactions (Riedl, 2021), such as videoconferencing platforms, both for personal and professional interactions. Videoconferencing uses an online meeting platform that allows multiple individuals from various locations to engage in real-time audio-visual communication. This technology has been a crucial tool for education, businesses, healthcare, and private use with friends and family (Döring et al., 2022). As such, videoconferencing has rapidly increased in use in the pandemic (Karl et al., 2021). A prime example of the rapid rise in the use of

videoconferencing applications is subscriptions to Zoom (https://zoom.us/), going from 10 million users in December 2019 (pre-pandemic) to over 300 million daily users by April 2020 (post-pandemic announcement) (Chawla, 2020). Due to the availability of videoconferencing, individuals and organisations have been able to maintain communication, connect workplaces remotely and create a sense of togetherness while operating from home. Thus, allowing economies and societies to continue to function. For employers, employees, and the self-employed, benefits of remote working include saving travel costs and time (Wöhner, 2022), as well as allow greater flexibility, and contributing to environmental preservation (Maipas et al., 2021).

Like other professions, mental health professionals such as psychologists had to turn to remote and flexible delivery modes to continue their clinical services. The transition from in-office face-to-face delivery of therapy to online practice occurred overnight as the use of technology became the only way to continue providing psychological services (Figueroa & Aguilera, 2020). Telepsychology is the provision of psychological services using telecommunication technology, which include the use of email, text messages, internet or app-based interventions, telephone call and videoconferences (Cooper et al., 2019). There are typically two types of telepsychology: (1) synchronous telepsychology involves live, real-time communication between clients and psychologist via audiovisual technology, and (2) asynchronous telepsychologsy is a "store-and-forward" approach with the transmission of client clincal data to psychologist through secure electronic communication that is reviewed at a later point (O'Keefe et al., 2021). Psychologists typically conduct online therapy via synchronous videoconferences as it most closely replicates in-person therapeutic experiences (Sammons et al., 2020).

Acceptability and uptake of videoconferencing in therapy

The use of technology and videoconference in psychotherapy had been gradually increasing before the pandemic (Fernández-Álvarez, J., & Fernández-Álvarez, 2021). The incorporation of videoconferences in routine clinical practice primarily results from several practical benefits it brings. These benefits include removing geographical barriers to providing therapy in remote or rural areas and reducing barriers for those with limited physical mobility (Backhaus et al., 2012). Furthermore, clients can choose from a broader range of therapists

available that are more suited to their needs and preferences without concerns around travel (e.g., language or gender of psychologist, therapist expertise) (Singh & Sagar, 2022).

Videoconference-delivered therapy can help reduce the treatment-seeking stigma associated with visiting mental health clinicians in a hospital or clinic by providing enhanced privacy and anonymity (Sweeney et al., 2016). It can also increase the flexibility in scheduling sessions for clients and therapists. Overall, the use of videoconferencing technology within therapy can provide a means to psychological treatment by reducing barriers and increasing access to psychological interventions.

Research on remote delivery of therapy has increased with the increased use of videoconferencing within therapeutic spaces. A large body of pre-pandemic research has demonstrated the efficacy of delivering therapy via videoconferencing (Simpson, 2009), with promising results for anxiety, mood disorders, posttraumatic stress disorder, and adjustment disorder (Berryhill et al., 2019; Varker et al., 2018). Encouragingly, the evidence shows that videoconferencing not only reduces barriers but produces results comparable to in-person therapy regarding the therapeutic alliance and effectiveness (Backhaus et al., 2012; Batastini et al., 2020; Simpson & Reid, 2014).

However, despite empirical support, the use of videoconferences as part of routine practice has had limited uptake pre-pandemic. Uptake has largely been hindered by several individual and structural barriers (Connolly et al., 2020). Therapists' concerns have included ethical and confidentiality issues (Békés et al., 2020) and concerns around the efficacy of videoconference-delivered therapy with the belief that videoconference-delivered treatment is inferior to in-person approaches (Topooco et al., 2017). Therapists have reported doubts about the ability to build a strong therapeutic relationships in an online setting, with concerns that relationships may appear impersonal, thus limiting the ability to communicate emotions and demonstrate empathy (Roesler, 2017). The use of videoconferencing also raised concerns about the impact of technical obstacles, combined with challenges of poor digital literacy skills (Titzler et al., 2018). Thus, mental health professionals may be apprehensive about integrating online work into their everyday practices as many therapists have little training and experience in providing therapy via videoconference pre-pandemic (Békés et al., 2021). However, providing videoconference-delivered therapy became an accepted necessity in the current times. The involuntary shift to online practice during the pandemic meant therapists had to adapt to new ways of working regardless of their previous concerns or biases towards videoconference therapy.

The emergence of Zoom fatigue

With the enormous increase in videoconferencing usage as a day-to-day practice and avenue for communication in order to reduce the spread of the virus, a new phenomenon emerged as reports of exhaustion, frustration and tiredness were associated with the high level of use of videoconferences (Döring et al., 2022). This phenomenon was termed "Zoom fatigue" by popular media, with major news outlets such as the BBC, Harvard Business Review, Wall Street Journal, and the National Geographic covering this construct (Fosslien & Duffy, 2020; Jiang, 2020; Morris, 2020; Skylar, 2020). The ubiquity of the Zoom platform has resulted in the term "Zoom" being the generic verb to replace videoconferencing, with Zoom fatigue as a synonym for videoconference fatigue (therefore not only related to Zoom but all videoconferencing platforms). Zoom fatigue is the physiological, cognitive and emotional exhaustion resulting from intensive, prolonged and/or repeated use of videoconferencing tools. It can present with symptoms such as tiredness, worry, anxiety, burnout, discomfort, stress, and headaches (Riedl, 2021). A systematic review of understanding videoconferencing fatigue classified the experience of Zoom fatigue into four dimensions, including emotional, cognitive, social and physical fatigue (Li and Yee, 2022). Mood-related emotional understanding of Zoom fatigue was evident in feelings of stress, moodiness and irritability (Fauville et al., 2021a; Vandenberg & Magnuson, 2021). The cognitive facet of Zoom fatigue explains that videoconferences can reduce an individual's ability to focus, engage and can decrease motivation levels (Li & Yee, 2022; Shockley et al., 2021). A social dimension of Zoom fatigue explains that feelings of disconnectedness and depersonalisation can occur, where individuals may want to socially isolate from others after virtual meetings (Vandenberg & Magnuson, 2021). The physical dimension of Zoom fatigue describes extreme tiredness and exhaustion from videoconference use, noting negative impacts on the body from the prolonged and excessive screen use (Amponsah et al., 2022; Fauville et al., 2021a; Shklarski et al., 2021; Usta Kara & Ersoy, 2022).

Some researchers have recognised the significance of this problem by proposing a new diagnosis to be included in international diagnostic classifications termed Chronic Zoom (video meeting) Syndrome. This proposed new diagnosis was based on clinical observations of the impacts of video meetings on medical students and clinical staff, with a view that it is likely to affect the broader community (Anderson & Looi, 2020). To understand the mechanisms and psychological impacts of videoconferencing fatigue, researchers have developed and validated the Zoom Exhaustion & Fatigue Scale (ZEF Scale) that explores Zoom fatigue within five

dimensions (general, emotional, visual, motivational, and social fatigue) (Fauville et al., 2021a). Studies who utilised the ZEF Scale to explore the impacts of Zoom fatigue found that experiences of Zoom fatigue predicted greater levels of psychologiscal distress (depression, anxiety and stress), which in turn negatively impacts life satisfaction and academic well-being (Deniz et al., 2022).

Factors thought to be related to Zoom fatigue

Several factors have been linked to feelings of exhaustion related to videoconference use. Bailenson (2021) theorised that nonverbal overload as the potential cause of Zoom fatigue and argued that excessive amounts of eye gaze at a close distance, cognitive load, constraints on physical movement, and increased self-evaluation as possible justifications, which is further expanded below. Others suggest a lack of non-verbal cues (Ahlström et al., 2022), challenges with technology (Nadler, 2020) and multitasking behaviours (Karl et al., 2021) as possible explanations.

Mirror Anxiety

Mirror anxiety is a possible explanation for Zoom fatigue, which refers to negative self-focused attention that the self-view image can trigger in video conferences (Fauville et al., 2021a). Seeing one's self-image can lead to users being more self-conscious, leading to regular checking of one's appearance and behaviour; which can be psychologically taxing and lead to increased stress with negative affect, including anxiety and depression (Fejfar & Hoyle, 2000; Fosslien & Duffy, 2020; Ratan et al., 2022). Moreover, increased self-awareness can often disrupt natural automatic communication processes as attention shifts away from the interactions and switches to more controlled mental processes. This shift is accompanied by increased cognitive exhaustion and fatigue due to self-reflections and mentalising of how one is perceived by others (Riedl, 2021).

Reduced Mobility

Reduced mobility during a videoconference meeting may also contribute to feelings of fatigue. Reduced mobility refers to the sense of feeling physically trapped by the need to stay still and within the small field of view of the camera. While in-person meetings allow people to move and stretch, videoconferences limit people's mobility within a narrow window (Oducado et al., 2022). Researchers suggest that this may place physical strain to the body and result in experiences of physical fatigue due to a lack of movement during videoconferences.

Multitasking behaviours

It is also observed that videoconference participants often engage in multiple unrelated activities during an online meeting due to its easy access to switch between various tabs and the availability of instant messaging. This multi-tasking may lead to information overload as individuals attempt to multi-task or have to focus on multiple faces at the same time, all adding to the demands of information processing, thus contributing to feelings of fatigue (Karl et al., 2021).

Hyper-gaze

Another mechanism that is likely to contribute to the cause of Zoom fatigue includes hyper-gaze, which is the perceptual experience of constantly having prolonged directed eye contact with others (Fauville et al., 2021b). During traditional in-person conferences, direct eye contact is used sparingly, and meeting participants would not stare directly at the speaker for long periods of time. It is also rare for one listener to stare at another listener. However, in videoconferences, regardless of who is speaking, each person looks directly at the eyes of all the other participants in the meeting, where people typically stare more intensely and direct gaze often nonstop (Bailenson, 2021; Kershaw et al., 2021). Targeting others' gazes triggers bodily responses related to threat and stress (Takac et al., 2019). The sparked physiological arousal associated with this hyper-gazing can elicit a stress response, adding to fatigue (Fauville et al., 2021b). Videoconferencing not only leads to prolonged direct eye gaze, but the size of faces on a screen is also much larger, thus appearing much closer. This type of interpersonal distance and long stretches of sustained eye gaze are typically reserved for close relationships. Yet, within videoconferencing it is the way people interact with colleagues, causal

acquittances and strangers (Bailenson, 2021). This unnatural interaction, where images of other people appear too big and too close, can activate threat responses and increases stress levels (Riedl, 2022).

Cognitive Load

Increased cognitive load in managing nonverbal behaviour may also contribute to Zoom fatigue. Nonverbal cues are essential contributors to interpersonal communication, where most nonverbal communication occurs unconsciously and spontaneously during in-person meetings (Foley & Gentile, 2010). Yet, within videoconferences, intentional and additional effort is required to actively produce readable nonverbal cues in front of the camera, such as nodding to show engagement or exaggerating gestures in order to be visible on the screen (Bailenson, 2021).   During online meetings participants often speak louder than in face-to-face interactions (Croes et al., 2019). Participating in videoconference meetings, therefore, requires increased visual, auditory and vocal efforts (Döring et al., 2022). The constant monitoring and exaggeration of behaviour requires substantial effort and can add to overall fatigue.

Cognitive Effort

Cognitive effort is also required to interpret other people's nonverbal cues. Fewer communication cues may be available in an online setting or are distorted due to camera position or delayed feedback (Wiederhold,2020). Delays perceived during videoconferencing where facial expressions are frozen or out of sync, even if this occurs subconsciously in milliseconds, results in the brain having to work much harder to overcome the issue of asynchronous feedback (Riedl, 2022). This process may lead to increased frustration and stress with additional cognitive effort required to stay focused. Furthermore, Nadler (2020) suggests that stress can occur if the internet connection is unstable, or if the videoconference platform malfunctions.

Additional cognitive effort in receiving nonverbal cues is also due to the limited information around body language, as interactions on videoconferences mostly focussed on one's face. Again, the brain must work harder to overcome deficits in nonverbal behaviour,

increasing cognitive effort and may hamper the ability to rapidly and accurately perceive emotions (Riedl, 2022).

Reduced non-verbal communication

Non-verbal communication is particularly relevant within a therapeutic space as much emphasis is placed on listening to a client's verbal communication and observing nonverbal behaviours (Foley & Gentile, 2010). Nonverbal cues can offer psychologists valuable information about a client's mental state that the client may be unable or unwilling to put into words. Therefore, the loss of nonverbal nuances within an online setting can result in a loss of depth in information where therapists compensate by placing additional attention and effort into deciphering the client's states, resulting in fatigue (Ahlström et al., 2022).

Management of Zoom fatigue

By better understanding the root causes and factors contributing to the experience of Zoom fatigue, there may be some effective coping strategies to avoid and mitigate the adverse effects of videoconferencing tools. Research has investigated methods to manage the increased exhaustion associated with videoconferences. Döring et al. (2022) suggested that video conferences are particularly exhausting due to their number, duration and timing; thus, better time management of video conferencing sessions is needed. To schedule meetings wisely, including keeping them short, avoid back-to-back meetings and having sufficient breaks can help eliminate the main causes of Zoom fatigue (Epstein, 2020; Fosslien & Duffy, 2020; Nesher Shoshan & Wehrt, 2021; Wiederhold, 2020). Additionally, research on multi-tasking behaviour in videoconferencing meetings has found that the increased number of sessions led to increased multi-tasking behaviours during meetings to catch up on work, leading to reduced attention and mental fatigue (Cao et al., 2021). Thus, better management of videoconference session schedules can also help reduce energy-draining multi-tasking (Epstein, 2020). Döring et al. (2022) also suggested the need for all participants within a session to be actively involved in the interaction; having shared norms for videoconferneces and positive interpersonal relationships between participants can act as a buffer against exhaustion. Other factors such as stable internet connectivity, improved usability of videoconferencing systems, high quality technical equipment, comfortable seating, and familiarity with videoconferencing platforms could

help reduce a person's susceptibility to Zoom fatigue (Döring et al., 2022; Nesher Shoshan & Wehrt, 2021). To reduce mirror anxiety and information overload, participants may also turn off their cameras and minimise the meeting window (Epstein, 2020). Zoom fatigue may also be due to the conflicting roles and demands between work and home life, particularly when working from home. Thus, enhancement in coping with work-home interference may be a way to improve video conferencing fatigue (Döring et al., 2022). Others also suggested that videoconference participants consider whether a video meeting is necessary; instead, some meetings may be completed via a phone call (Bailenson, 2021; Nesher Shoshan & Wehrt, 2021).

Impact of Zoom fatigue on Psychologists

In a time where the need for psychological support is ever-increasing, it is essential to understand and ensure the wellbeing of psychologists. The work of psychologists is associated with multidimensional psychological distress and an emotionally taxing occupation with a constant demand for empathy (Simionato & Simpson, 2018), posing a significant risk for burnout. Burnout is a state of chronic stress defined by emotional exhaustion, depersonalisation, and reduced feelings of work-related personal accomplishment (Maslach, 1982; Maslach et al., 2001). Burnout is particularly prevalent in helping professions, where burnout in psychologists can be detrimental to the therapist, client and the profession. Not only does burnout impact the physical, psychological and social wellbeing of psychologists (Van Hoy & Rzeszutek, 2022; Rokach & Boulazreg, 2022), burnout also significantly affects the quality of care of clients as psychologists who are burnout out are no longer able to manage therapeutic processes and may even pose a risk to their clients (Berjot et al., 2013; Rokach & Boulazreg, 2022).

Psychologists, like everyone else, are not exempt from the pandemic's negative impacts and experience health concerns, social isolation, uncertainty and grief (Vostanis & Bell, 2020) while adapting to rapid changes in the transition to online therapy along with the associated challenges. Psychologists and psychotherapists can also experience Zoom fatigue while conducting their treatment online. Psychologists reported increased fatigue and tiredness associated with online therapy delivery during the pandemic, with physical strains on the body being particularly challenging (Békes et al., 2020; Geller, 2021). Psychotherapists described Zoom fatigue as a challenge of working online, that staring at a screen for long hours each day

was physically demanding and energy draining. Furthermore, a therapist's reduced ability to read their client's full body language meant that they had to compensate by paying close attiontion to other available cues, which can be cognitively taxing (Shklarski et al., 2021).

Rationale

As Zoom fatigue is a relatively new phenomenon, limited research has been conducted to understand the experience of Zoom fatigue, particularly from a psychologist's perspective. International research focuses on the experience of Zoom fatigue from the perspective University students and faculty staff (Amponsah et al., 2022; Fauville et al., 2021a; Shahrvini et al., 2021; Vandenberg & Magnuson, 2021), or from perspectives of remote working employees (Nesher Shoshan & Wehrt, 2021; Shockley et al., 2021). A gap in the literature exists where mental health professional's experiences of Zoom fatigue is not well understood. Furthermore, understanding from a New Zealand context is also limited. Online therapy continues to be the primary method of psychological therapy delivery in current times, and the use of videoconferences are likely to continue beyond the pandemic. Zoom fatigue will likely be relevant in post-pandemic hybrid work arrangements and thus deserves research attention on its impacts on psychologists and their therapeutic work. It is vital to better understand how psychologists experience Zoom fatigue to avoid short-term fatigue and long-term exhaustion or burnout. Furthermore, understanding how Zoom fatigue can be reduced and managed can provide strategies for more appropriate use of videoconferences and allow for more effective and productive working environments. Thus, the current research aims to understand the experiences and management of Zoom fatigue amongst psychologists in New Zealand. Two research questions were developed for the current study;

1. What are psychologists' experience of Zoom fatigue?

2. How do psychologists manage Zoom fatigue?

Chapter 2. Methodology and method

Methodological Framework

This study utilises a qualitative descriptive methodological approach to understand psychologists' experiences and management of Zoom fatigue. This approach was selected to provide insight into the poorly understood phenomenon, Zoom fatigue. Qualitative descriptive research aims to provide a rich description of the experience portrayed using straightforward and easily understood language (Sandelowski, 2010). Qualitative descriptive research generates data that focuses on describing the who, what, and where of events or experiences from a subjective perspective as experienced by individuals (Kim et al., 2017). This approach seeks to understand the phenomenon from the perspectives and worldviews of the people involved, where researchers strive to remain close to the surface of the data, using low-inference interpretation to describe the viewpoint of the participant (Sullivan-Bolyai et al., 2005). The role of the researchers is to provide an account of the experience where both the researchers and participants will agree as accurate, thus it is the researcher's responsibility to interpret experiences consistent with the research question while keeping near to participants' meaning by using their own words (Bradshaw et al., 2017).

The qualitative descriptive approach was chosen as the current study aims to fill a gap in the literature in terms of understanding Zoom fatigue amongst psychologists. This methodological approach provided the researcher with the flexibility to obtain rich data without constraining the answers to structured materials, such as multi-choice questions, but rather explore the experiences of participants in rich and in-depth ways. Therefore, the use of semi-structured interviews to collect data was also appropriate for the methodological framework as it provides flexibility to collect in-depth descriptions from participants. This approach recognised the subjective nature of participant experiences and seeked to understand the experience of Zoom fatigue from psychologists' personal realities and worldviews.

The philosophical perspective of a qualitative descriptive approach draws from interpretative and naturalistic methods. Drawing from naturalistic inquiry, qualitative descriptive approaches imply a commitment to studying the phenomenon in its natural context without pre-selection of study variables, manipulation of variables or any prior theoretical understanding of the studied phenomenon (Lambert & Lambert, 2013). In this study, this means that psychologists are to discuss their experiences of Zoom fatigue as part of their normal everyday practice.

This view recognises the importance of the natural context while recognising the active role of researchers in the investigation where researchers become part of the phenomenon studied as they interact with the participants. The impact the researcher has on the phenomena is unavoidable not only due to subjectivity but also due to their value-bound interpretations (Sandelowski, 2000). As the researcher, my own values, worldviews, background and experience are likely to have influenced the data collection and data analysis process. The qualitative descriptive approach accepts that a value-neutral position cannot be adopted by researchers and that only through acknowledging the researcher's preconceptions and subjective interpretation can reality be uncovered (Bradshaw et al., 2017). Thus, researcher reflexivity was important in that critical self-reflection of the researcher's positionality and impacts on the research process were needed. This approach recognises the subjectivity of experiences for both the participant and researcher.

Participant recruitment

Participants of the study were New Zealand registered psychologists who have experienced Zoom fatigue. Research participants were recruited through online forums where advertisements were posted on a number of Facebook pages for New Zealand psychologists including The New Zealand Psychological Society Institute of Counselling Psychology Facebook Group, The New Zealand Psychological Society- Auckland branch Facebook group and Psychologists in New Zealand Facebook group. The social media posts included a short description of the primary researcher and the purpose of the current research. A definition of Zoom fatigue was provided, along with participant eligibility criteria consisting of: the participant must be a New Zealand registered psychologist; have experienced Zoom fatigue; and have access to the technology to participate in an online interview. A link to Qualtrics was attached to the advertisement that led to the participant information sheet which provided further details of the study, including purpose of the study, outline of what is involved, details on potential discomforts and risks, the voluntary nature of participation, the rights for participants to withdraw from the study at any time, and the ability to receive feedback on the results. A copy of the participant information sheet has been attached in appendix 2.

Once the potential participant had read through the online information sheet and wished to engage with the study, they were prompted to answer questions to confirm their eligibility to

participate before being asked to provide their contact details. From there, the primary researcher contacted the potential participants via email to set up an online interview time that was convenient to the participant, as well as give participants an opportunity to ask any questions before proceeding with the interview. A consent form was emailed to the participants and was signed and returned before commencing the interview. The consent form has been attached in appendix 3.

Additionally, the advertisement of the study was also sent to The New Zealand Psychological Society, the New Zealand College of Clinical Psychologists, and Institute of Health Psychology for further recruitment. The study details were sent to mental health organisations that employed psychologists to advertise the study. Following these recruitment efforts, snowball sampling was also used where existing study participants assist in recruiting others among their acquaintances and social networks. Participants were asked to pass on the study details to their networks at the end of their interview to other interested colleagues. In response to these recruitment efforts, a total of six participants took part in this study.

Data Collection

The method of data collection was through semi-structured interviews which were conducted via online videoconferencing platforms including Microsoft Teams and Zoom. This was to allow participants to save on travel time, transport and parking as well as allow greater flexibility in the time and place that interviews could be conducted. Furthermore, conducting the interviews online ensured that interviews could proceed safely within COVID-19 restrictions. By conducting the interviews by videoconference, it situated participants in the natural context of the studied phenomenon which may support the discussion around the topic by creating conditions to elicit reflections regarding their experience of Zoom faitgue. Allowing participants to draw parallels from their practice with clients during the interview as well as prompt discussion where psychologists can demonstrate certain features of videoconferencing that may be fatiguing.

Each interview lasted approximately an hour; which is the recommended length for interviews in order to minimise fatigue for both the interviewer and research participant (Adams, 2015). This is particularly relevant to the current research as it involves a sample of participants

that had experience with fatigue, thus it is vital to ensure the wellbeing of participants and minimise discomfort and risk experienced by participating in this study.

Semi-structured interviews typically consist of a relational interaction between researcher and participant, guided by a flexible open-ended interview guide and supplemented by follow-up questions, probes and comments (DeJonckheere & Vaughn, 2019). This data collection method was used as it allows the researcher to collect open-ended data, and to explore in-depth information regarding psychologists' personal thoughts, feelings and beliefs about their experiences of Zoom fatigue (Jamshed, 2014). This method is suitable to the methodology as it attempts to understand the world from the participants' perspective and gather in-depth subjective information generating rich data as required in qualitative description designs (Bradshaw et al., 2017).

Semi-structured interviews use an interview guide with a set of predetermined questions and topics needed to be explored by the researcher (Dicicco-Bloom & Crabtree, 2006). Interview guides are helpful as it seeks to collect similar types of information from all participants systematically and comprehensively, to keep the interview focused on the desired phenomenon and satisfy the aims of the research question (Jamshed, 2014). Semi-structured interviews are also flexible and use open-ended questions to explore topics that arise spontaneously that may not have been considered initially. The broad and open-ended approach encourages participants to express themselves freely without limiting responses. The researcher is free to seek further clarification, change the wording or order of questions depending on the flow of the conversation and ask additional follow-up questions (Doody & Noonan, 2013).

For the current study, a list of open-ended interview questions was prepared prior to the interview process. The questions were developed based on current research on Zoom fatigue and were finalised in consultation with the primary and secondary supervisors. The questions were listed in appendix 4. The interviews began by building rapport with the participants by introducing myself, and the purpose and process of the interview. Participants were asked if they have read and understood the consent form and any questions regarding the process were addressed before the interview started. Participants were also informed that they may choose to conduct the interviews with their cameras turned off to combat fatigue and were encouraged to take breaks as needed.

Demographic information was collected including age, gender, ethnicity, the scope of practice and years of professional practice of the participants. Initial questions were broad and

asked participants to describe their experience of videoconferencing fatigue. Followed by questions that ask participants to explore factors that may contribute to Zoom fatigue, as well as how Zoom fatigue may have impacted their wellbeing and their therapeutic work. The open-ended nature of the questions allowed participants to elaborate on their answers and reflect on their unique personal, organisational and environmental contexts.

All interviews were recorded with the consent of the participants. The audio recording of the interviews were transcribed word for word to prepare for analysis. Transcripts were checked multiple times to ensure accuracy and participants were also offered to review their transcripts if they wished. Data analysis commenced upon completion of all interviews and transcription.

Reflexive Thematic Analysis

Reflexive thematic analysis, a qualitative data analysis framework developed by Braun & Clarke (2006), was used to analyse the interview transcripts to identify themes and patterns within the qualitative data. Thematic analysis is a widely used qualitative analytic method within psychology, that systematically identifies and categorises meanings (themes) inside data (Braun & Clarke, 2006). This analytical method is a flexible approach which focuses on constructing meaning-based patterns (themes) across a qualitative data set allowing the researcher to engage in the interpretation of the meanings, experiences and reality of participants (Braun & Clarke, 2013). It organises and describes the data set in rich detail and is the recommended method of data analysis for conducting qualitative descriptive studies that seek an in-depth understanding of the phenomena from the perspectives of those who experience it (Vaismoradi et al., 2013). This approach also aligns with the qualitative descriptive methodology as it views meaning as individually situated and contextual, realities as multiple, and that researcher subjectivity is embraced and considered a resource (Braun et al., 2018). Reflexive thematic analysis places emphasis on researcher reflexivity and views the research's active role in knowledge production as central to the approach (Braun & Clarke, 2019). As themes are generated by the researcher through data engagement, the analysis cannot be viewed separately to the researcher and is influenced by the researcher's values, skills, experience and training (Braun & Clarke, 2020). Coding of data is a subjective process that requires reflexivity of the researcher who strives the reflect on assumptions underpinning the reading of their data and its impacts on the coding process.

Theme development is viewed as requiring analytic and interpretive work of the researcher to encompass data that captures both semantic (explicit or overt) and latent (implicit, underlying) meanings (Braun & Clarke, 2020). The analysis takes on an inductive process where findings are driven by the data. Themes are developed from codes and are conceptualised as patterns of shared meaning organised by a central concept (Braun & Clarke, 2022). This fits well with the current study as codes were generated based on the raw data obtained, rather than being driven by pre-existing theories, which facilitates the organic development of themes.

The focus of the data analysis was to obtain detailed and rich accounts of psychologists' experiences of Zoom fatigue, where themes were identified by collective data of topics, ideas and patterns of meaning that come up repeatedly across multiple participants. Themes emerged from significant and interrelated views and experiences of Zoom fatigue between participants. An in-depth description of predominant themes arising from participant interviews is reported.

The reflexive thematic analytic process is a six-phase process. It is important to note that this is not a linear process, rather it is a reflexive and recursive process where researchers may return to a previous phase as the analysis develops (Campbell et al., 2021). Practical guidelines outlining the steps to the six phases are reported by Braun and Clarke (2006, 2013).

The first step is to become familiar with the entire body of data by reading and re-reading the transcribed interviews. The researcher shifts focus from data generation to analysis. The researcher becomes immersed in the data by making causal notes of early impressions of the data, being thoughtful and curious without formal labels attached. To notice interesting snippets from the data, and possible connections between data, participants and existing literature adds depth and nuance to later coding (Braun et al., 2018).

Step two is to generate initial codes. Coding of data involves reducing large amounts of data into smaller chunks of meaning by organising data in a meaningful and systematic way (Braun & Clarke, 2013). Generating codes move to more detailed and structured engagement with the data. Opening coding will be used, where the researcher will not have a pre-set of code but develop and modify codes as they work through the coding process.

The next steps begin generating initial themes. A theme is a pattern that is built, moulded, and given meaning by the researcher to capture significant or interesting aspects of the data and research question (Braun et al., 2018). Themes are actively created by the

researcher and are not passively waiting in the data to be found. Codes are used as initial building blocks, by examining codes and identifying those that fit together allows codes to be organised into broader themes that tell a story about a particular aspect of the dataset.

The next step is to review, modify and continue to develop the preliminary themes. At this stage, the researcher would re-read the data to ensure that the themes are supported in the context of the entire data set. To consider how the themes fit not only within a single interview but also across all interviews. This process is a form of quality checking to ensure the developed themes align with the content and meaning of the data set while relevant to the research question and capturing the meaning of the wider whole (Braun & Clarke, 2013). This involves a process of altering, combining, creating new and discarding themes.

Step five is the final refinement of themes and defining the themes. The aim is to identify the essence of what each theme is about and to ensure that the naming of themes is close to the participants' own words. It seeks to identify the story of each identified theme while making sure it fits with the broader discourse of the dataset and is relevant to the research question.

Finally, step six is to write up the analysis process and findings from the data. To address and explain each theme including example excerpts from the data as evidence. It aims to present a concise and interesting account of the story derived from the data.

Ethical considerations

Ethics approval was required as the current research involves human participants. Ethical approval was granted by the Auckland University of Technology Ethics Committee on 26 July 2022 (AUTEC 22/125). See appendix 1. Participation in the study was voluntary, participants were made aware that whether or not they choose to participate will neither advantage nor disadvantage them. Participants were able to withdraw from the study and choose to remove any data belonging to them prior to the findings being produced. Adequate information was provided to participants for informed consent, with opportunities to address and clarify questions prior to the interview commencing.

The anonymity of the participants could not be guaranteed due to the use of interviews, however participant privacy was maintained by removing all personally identifiable information in the data analysis and reporting process. Interview recordings and raw data were only accessible

by the primary researcher and the data was kept in a secure location that is password protected. Data will be permanently deleted after six years. Confidentiality was maintained as quotes from the participants were used with identifying markers removed. Interview numbers were used for participants and all personal information was kept confidential to the research team.

The community of psychologists in New Zealand is relatively small, the primary researcher is currently studying to become a psychologist and may at a later date be a professional peer and hold information regarding the participants' experience of Zoom fatigue. If participants meet with the researcher professionally at a future point, the interview will not be discussed with the participant, or with anyone else. The participants were informed of this and discussion with participants suggests that is unlikely to be an issue.

The study did not involve deception and all participants were fully informed of the research propose and process. There were also no participants who identified with any vulnerable categories. The interview was relatively short (1 hour), and participants were offered to conduct the interview with the cameras turned off and to take breaks to combat fatigue and minimise the discomfort of conducting interviews via videoconferencing platforms.

Rigour

Demonstrating the quality of the research process and data collection process is an important element when conducting qualitative research. Traditional standards of reliability and validity in quantitative studies may not translate accurately into qualitative studies (Cypress, 2017). Thus, qualitative rigour is typically demonstrated in the study's trustworthiness including the principles of dependability, transferability, credibility, and confirmability.

Credibility refers to being able to capture and present participants' perspectives in an accurate manner, allowing others to recognise the experiences (Thomas & Magilvy, 2011). To establish credibility, the research reviewed transcripts seeking similarities within and across participants. Credibility was ensured by the researcher establishing rapport and developing a trusting relationship with the participants that led to a willingness to provide information (Bradshaw et al., 2017). The primary researcher took time at the beginning of each interview to introduce herself and establish a connection with the participants. The use of open-ended questions, exploration questions and minimal encourages expressed curiosity and supported

engagement with the participant. Member checking was also used to enhance credibility, where the researcher offered to return transcripts back to the participants to check the accuracy.

Dependability occurs when other researchers are able to follow the decision trail of the researcher (Thomas & Magilvy, 2011). This was ensured by providing detailed description of the study protocol, and establishing an audit trail describing the study's procedures and process should another study wish to replicate this.

Transferability refers to the applicability to transfer the current research findings in other contexts and with other participants (Thomas & Magilvy, 2011). Transferability was enhanced by describing participants' demographic details and ensuring a diverse sample. Providing sufficient study details, with ample data from participants such as quoted material can also allow readers to determine whether findings may be transferred to other contexts.

Confirmability occurs when credibility, transferability, and dependability have been established (Thomas & Magilvy, 2011). This was ensured by keeping notes in a reflective journal of feelings, thoughts and assumptions following interviews and during the data analysis process. This involved a practice of reflexivity, where the researcher maintains critical self-reflection of the way the researcher's background, assumptions, theoretical orientation, and values may affect the research process (Bradshaw et al., 2017).

Chapter 3. Findings

Demographic information

A total of six psychologists practising in Aotearoa participated in the study. Three participants identified as male and three identified as female, with ages ranging from 27 to 57 years old. Two participants identified as New Zealand European, while the remainder identified as New Zealand European/Māori, Taiwanese, British, and American. Two participants were registered as counselling psychologists, two registered as educational psychologists, one registered under both general and counselling scopes and one psychologist was registered under the clinical scope. The length of time in professional practice ranged from one and a half years to 33 years.

Themes

A total of five themes were identified from the reflexive thematic data analysis. Theme 1 discussed the experience of Zoom fatigue as related to mental, emotional and physical fatigue. Theme 2 discussed psychologists' experience of Zoom fatigue in relation to the challenges of cultivating the online therapeutic bond. Theme 3 discussed Zoom fatigue in relation to frustrating technical challenges and interruptions. Theme 4 discusses the impacts of working from home and the additional stressor of the pandemic as contributors to the experience of Zoom fatigue. Theme 5 explored the views that Zoom fatigue is considered manageable, and discussed management strategies proposed by psychologists. These themes and relevant subthemes have been presented in Table 1. When quoting participants, their names have been replaced with a participant number to protect their privacy.

Table 1. Summary of themes and sub-themes

Themes	Sub-themes
1. The experience of Zoom fatigue	1.1 Mental fatigue
	1.2 Emotional fatigue
	1.3 Physical fatigue

2. Psychologists' experience of the online therapeutic bond as related to Zoom fatigue	
3. Zoom fatigue related to experiencing technical challenges and interruptions	
4. Zoom fatigue may be related to working from home	
5. Zoom fatigue is manageable	5.1 Taking breaks
	5.2 Improve equipment
	5.3 Self-care
	5.4 Increase awareness

Theme 1. The experience of Zoom fatigue

The first theme relates to psychologists' experiences of Zoom fatigue in terms of mental, emotional and physical aspects related to using video conferencing. Experiences included the need for greater cognitive attention when working online, the work of psychologists is emotionally taxing which is further exaggerated by the unique challenges of the online environment. As well as the physical challenges associated with the confinements linked to the computer screen.

Theme 1.1 Mental fatigue

The impact of Zoom fatigue on psychologists was experienced on a cognitive and attentional level. Participants described requiring more cognitive effort to connect with clients through videoconferences because of the need to exert a greater level of energy in order to stay present and focused, which can add to exhaustion and fatigue. Participants used words such as "very draining", "exhausting", "tiring", and "stressful" to describe experiences after videoconferences. Participants acknowledged that it can be more difficult to stay alert and present in online mediums in comparison to face-to-face interactions.

> *"I have to pay extra attention. So, you have to pay extra energy… you do find yourself having to be always switched on …because you're not there physically… you have to make that extra effort to appear present...facial expressions or body expressions gets washed out so much by the screen… you have to be more animated" (P2).*

Psychologists discussed the need to exaggerate facial expressions and intentionally produce readable gestures in order to demonstrate to clients that they are listening and present can be tiring long-term. This also reflects psychologists' awareness that virtual meetings limit the breadth of non-verbal communication that can be used due to the camera being framed to only show one's face and shoulders. Participants reported that videoconferences can limit nonverbal communication thus leading to increased cognitive effort in order to pick up the subtle cues that help psychologists identify the clients' thoughts, emotions and behaviours. A number of participants discussed having to place additional energy to overcome missed information from a lack of visual cues.

> *"you can easily lose those cues, those nonverbal cues, when you're on Zoom or online. And I find that I become more fatigued compared to being face to face because I'm scanning and looking for those cues a lot more when I'm online"* (P1)

> "*the little subtle cues that you would see in a face to face setting, you will have to pay extra attention on Zoom. ... There might be miss opportunities or important information that we might have missed out on"* (P2).

> *"this is a classic anxiety thing, they're bouncing their leg. You know, how are you going to see that?... They could be doing something with their hands. You're not going to see it. There's a whole bunch of stuff you're going to miss. And I don't know, it's easy to present a lot better than you're going to be and they'll do that in therapy as it is, but it's just going to be that much more accentuated online. So yeah, you miss a lot."* (P6)

The above excerpts signal that information regarding the client's mental states can be distorted and missed in online environments, where it may be easier for to clients mispresent their symptoms. Thus, psychologists must place greater cognitive effort to decipher their client's presentation with the limited available information.

By placing additional effort in sending and receiving signals during videoconferences, often subconscious behaviours are now consciously monitored and produced. Being able to see their own reflection within videoconferences can make psychologists more hyper-aware and self-conscious of their facial expressions and how they are presenting to their clients.

> *"like you have to be very mindful of your facial expressions, your level of engagement, and all of that. …. that's really tricky"* (P2).

This leads to greater monitoring of their reflections which increases the cognitive load and can lead to greater mental fatigue. One psychologist also commented that clients who experience body dysmorphia can feel uncomfortable seeing their own reflections in the self-view, thus often opting to conduct therapy with the camera turned off to combat the hyper-awareness of their own reflections.

Participants report that experiencing videoconferencing fatigue makes it difficult to maintain attention and focus on clients. This can lead to difficulties processing information cognitively, difficulties with focus and attention, and impact on the therapeutic work.

"*it's really just a cognitive overload. So, what I mean by that is that it interrupts my concentration. So, I become inattentive, maintaining concentration becomes really challenging. Which really has an impact on my ability to be a reflective listener as well. So, it kind of impacts the interactions.*" (P1)

"*like the attention can wander, I can daydream and I think it's harder to click back in, through Zoom... I'm so drained that I can't do anything else, it kind of takes a whole lot of thought, kind of my brain is a bit of a mush then.*" (P3)

Theme 1.2 Emotional fatigue

The fatigue from videoconferencing can also be experienced as emotional fatigue where participants reported feeling more irritable when feeling tired.

"*If I get fatigued, I guess it can make me a lot more irritable. Because and again, I'm inattentive as well so if I don't have that same attention span, I'm not engaging or participating in the conversations or relationships in the same way*" (P1).

Participants emphasised that the nature of the occupation requires high attentional demand, and is emotionally taxing and costly in terms of fatigue. Challenges within the online environment can compound the emotional exhaustion where more energy is required to pay attention and ensure the client's needs are met.

"*… I don't know of many professions that require you to have that degree of attention on a single person for such a long period of time. Where you're expected to take in most of what's happening in the room*" (P5).

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"more work to put your energy into the screen and to somehow try to sense what's going on. Because you don't have all the input that you would have in person, and you can't sense the energy in the room" (P6).

Zoom fatigue may also be experienced due to the closeness of clients' faces to the screen. When strong emotions are projected from clients, it can be overwhelming to be confronted directly in such an intimate way. Participants

"if people are very distressed then you know, they're right in your face and you can see it quite closely. And that can be quite something. I was always taught, like, if people were talking about trauma or grief or things like that, to be careful not to lean in, to lean out. But of course, if they are a giant picture on the screen, to do that… so it can be a bit overwhelming" (P4)

The experience of fatigue as a result can lower productivity. Psychologists report lower work capacity, and sometimes have to shorten the length of their online sessions or reduced the number of clients they see per day when delivering therapy via videoconferences. Fatigue can impact the quality of psychologists' therapeutic work.

"my volume is definitely lower than it was when I was seeing people face to face. There's no doubt about that. It's just so much harder to wrap your head around. I'm seeing people, you know, back-to-back especially, there's just not the capacity. I wouldn't be doing the second client justice, and probably not the first client to be honest. You know, if I was so tired with the work. And focusing is draining" (P5).

Theme 1.3 Physical fatigue

The physical fatigue experienced as related to Zoom fatigue was described as particularly challenging for participants.

"there can be a real physical side to it. I think that's the big thing for me, is because I'm just sitting down in one spot, you know, for a lot of time consecutively…. which means that I have one less protective factor" (P3).

Participants discussed that they felt trapped within their space and had to limit movement in order to stay within the visual field of the camera. Movement is viewed as distracting and may disrupt the flow of the conversation. Excessive movement may also cause clients to misinterpret movement as boredom or disengagement. Thus, in order to limit

movement, psychologists reported extra preparations are required to ensure everything they may need in a session is within reach. Other participants described that significant movement from clients cans also be distracting, that if a client walks around with a phone can result in feelings of "motion sickness".

Aside from a restriction in natural physical movement during a videoconferencing session, participants also described that they had fewer opportunities to get up and walk around during the day as all their work is completed on the computer.

"I don't even have to get up out of my seat to go out to the waiting room to collect them and bring them back. Even that's a little bit of exercise." (P3).

Participants found that they are kept in their seats all day, and it becomes a habit to continue to remain in their seats. Participants stated that this had led to issues with their physical health, particularly with body aches and muscle aches, with head, neck and back pains.

"I am prone to migraines if I've been sitting too much or if I've been sitting on an odd angle. My back goes out and it starts the tension headache and that can lead to a migraine" (P5).

All participants also discussed that eye strain was particularly challenging, and that staring at a bright screen for long stretches a day, day after day, has had negative impacts on their vision. Often having to break away their gaze and look off to the side in order to relieve tension in the eyes.

"… *by the end of the day, my eyes will just hurt from just looking at the screen all day and that's hard. So, I will just want to go to sleep…. it'll make you visually tired, which then makes your brain tired, so you have to have some kind of other visual stimulation. I'll find myself looking around to try to keep myself, you know, kind of alert.*" (P6)

The physical impacts often make participants feel tired and lack the energy to engage in meaningful activities, that they are spending significant amount of time after work trying to recover from Zoom fatigue instead of relaxing and engaging in recreation. Participants also found that breaks are often not well utilised, where other clinical work as well as leisurely activities are also spent in front of the computer or on another screen. Continue to compound the physical and mental fatigue experienced by the psychologists.

"like I don't have that urge to get up. I'll usually play on my phone, which is again another screen. And so, I think it's an unhelpful pattern that I'm trapping myself in, just naturally" (p3)

Theme 2. Psychologists' experience of the online therapeutic bond as related to Zoom fatigue

The second theme focused on psychologists' experiences of a change in the therapeutic relationship in videoconferencing and how this might relate to Zoom fatigue. Psychologists found that videoconferences were more tiring because of a lack of engagement and the need to use more energy to build the therapeutic bond. Psychologists emphasised the importance of the therapeutic relationship within the therapeutic process and found that the dynamic and interactions with clients online are not as strong and can appear flat.

"you hate to admit this, but you know, you just don't have the same therapeutic bond that you do when you're in person" (P6).

Communication feels unnatural and there is a lower level of interaction and engagement from clients. Participants explained that when conversations are face-to-face, there is a back and forth to the interaction where both parties are responsible for that conversation, yet in an online setting energy input can appear one-sided. The limited engagement can be exhausting for psychologists when there does not seem to be any input and effort from clients. Psychologists can question if they have been heard and understood. Lack of engagement from clients was reported as particularly relevant in larger group settings and in online group therapies. Group members appear much more reluctant to engage and speak up, which is a source of fatigue.

"I've never been more exhausted than when we've had a quiet group.... you feel like you're talking to a wall sometimes" (P5).

Participants described that in comparison to in-person interactions, videoconferences are a two-dimensional image that loses the intimacy of human connection and can result in difficulty emotionally connecting with the client due to the perceived barrier created by the screen. Participants explained that there is an additional guardedness to clients in an online setting, where they can hide behind the "digital wall" making it difficult to connect to clients in the

virtual room. Participants described it can be emotionally draining when clients lack interest to engage with the conversation. The psychologist explained that it can impact both the psychologist and clients' affect when there is a lack of interpersonal relationship between the videoconference participants.

> *"we're holding quite a lot of emotional energy in the room. And it's quite hard to hold that emotional energy through Zoom, and because of that digital wall that's there, that they can hide behind or they can use, as an extra thing to be trying to wrap your arms around. So, I think because of that difficulty in that, that can contribute towards fatigue" (P3)*

> *"on Zoom ... there's like a very monotonous tone which can provide like a flat affect from myself or flat affect from the client, which is just fatiguing to work with that" (P3).*

Theme 3. Zoom fatigue related to experiencing technical challenges and interruptions

Participants explained that videoconferences can be particularly fatiguing due to experiences of technical challenges and interruptions. Several participants discussed that videoconferences are full of technical hassles. Participants described that it can be incredibly frustrating dealing with unstable internet connection issues where video meeting participants drop out, freeze or lag, often needing to repeat themselves which can take away valuable time within a session. This can lead to increased levels of fatigue as it places additional stressors in trying to overcome technological challenges. It can also be stressful for psychologists to try and complete the same amount of meaningful therapeutic work in the limited available time.

> *"...at times you're having to ask people to repeat themselves or people are saying "oh you're frozen" or "I can't hear you". So, I'm having to repeat myself. And it can literally add on time" (P1).*

> *"... it's often clients don't say what they want to say, you know, they beat around the bush before they get to it. And so you can end up having a whole session of them beating around the bush and they don't get to it because you said "what, what?" too many times. And they're getting frustrated too" (P5).*

Psychologists explained that technical glitches can interrupt the conversational flow and break down the rapport-building process. This can be particularly problematic when clients open

up about difficult topics. One participant described a situation where technical issues led to the psychologist missing important information in the conversation, which can have significant issues to the therapeutic relationship in terms of maintaining trust and demonstrating genuine care. This can be exhausting as it is another source of stress and worry for the psychologist to consider during therapy, and can prevent the psychologist from fully focusing on the client and their story.

> "*Like I had a client... he said something which he thought would be shocking, as in "this is my secret, and this is the first time I've told anyone". And I missed it. And that's not great for the therapeutic relationship. Like when someone says, you know, reveals this hidden shame and you're like, "I'm sorry, what was that*?"* (P5).

Participants also expressed that it was important that clients were technically literate and able to navigate online videoconferencing platforms and solve technical problems when it occurs. As this can reduce stressors created by technical issues and support psychologists in managing their Zoom fatigue.

Another source of fatigue from videoconferencing is interruptions in both the client and psychologist's environments. In a home environment, there is more of a chance for disruptions to occur, such as children and pets, that interrupt the therapy process which can break the momentum of the interaction and place strain on the ability to concentrate. Having to re-engage the client can be a source of fatigue, additional to the energy it takes to manage distractions while focusing on the client.

> "*not only do I need to block out the background noise for my client but I actually need to block out the background noise for myself as well. Because otherwise I have distractions and it becomes difficult for me to hear my client*" (P1).

Theme 4. Zoom fatigue may be related to working from home

Participants urged that it is important to recognise the impacts of Zoom fatigue against the backdrop of the pandemic. Transition to online therapy had been involuntary, where choices and willingness to conduct therapy online may have changed the experience and perspective of Zoom fatigue.

Many participants had little experience using videoconferences prior to COVID-19. Due to how easily accessible online videoconferences are, and the lack of travel required, it was easy to fall into the rhetoric that "it's just Zoom" when scheduling meetings, with psychologists describing that it was easy to overschedule and overbook meeting throughout the day. As a result, psychologists may have back-to-back meetings all day without breaks.

Participants reported that online practice has now become expected of individuals. Yet not enough recognition is given to the added contextual stressors that are associated with having to work from home. Experiences of Zoom fatigue may be related to conflicts with work-life balance, where greater levels of fatigue are experienced due to being seen as more accessible while balancing other personal responsibilities. Clients may have a false narrative that psychologists are more available than they are and expect immediate responses. Which can add pressure on psychologists as there are unrealistic expectations to be constantly present.

> *"There is a lot of implicit rules around this now, it's far more acceptable and almost expected that people will be working from home for a portion of time. So, it's kind of shifted everyone's mindset. And I think that can put financial and family pressures on people, which add to that stress as well. Which would equally add to the fatigue. Not everyone's home is well equipped and set up for a home office. So if there's an implicit expectation or that requirement, that can easily be reshuffling the dynamics of family and their routines."* (P1)

> *"one thing about that Zoom is it gives the sense of immediacy, so you don't have to drive across Auckland and park your car and come into my practice. You can see me via Zoom. So that sometimes gives the mistaken belief that I'm actually more available than I am… they can imagine that you have a more of an immediate response available than you do"* (P4).

Participants expressed that COVID-19 in and of itself has created a high level of stress for people. That it can also be difficult to differentiate differences between fatigue caused by Zoom and the pandemic. Participants expressed that many are entering videoconferencing meetings in an already fatigued state and that the window of tolerance for stress is far smaller in the global pandemic context and therefore more vulnerable to experiencing fatigue.

"So, I think that video conferencing has increased immensely since we've been in a pandemic, and of course that's a different way of working and being and interacting and so it does bring its own level of fatigue. But I think in reality, actually we're all living at a higher level of stress. We're functioning from a higher baseline level of stress. Because we are all in a pandemic, globally. And I think that would have a significant impact on our levels of fatigue. Regardless of whether we are video conferencing or not. I think the video conferencing just adds another layer to that. And I think the part that is missed, is that we actually all have a shared trauma that is brought about various levels of stress for individuals, various levels of resilience, but I think because it's a common experience of the trauma and the stress that's increased immensely, is that it's now become invisible. And now that it's invisible, it's not getting addressed" (P1)

Theme 5. Zoom fatigue is manageable

While the psychologists in the study recognise some of the negative impacts of using videoconferences including Zoom fatigue, they also recognise the benefits of the increased flexibility and accessibility of videoconferencing. Most psychologists expressed that they will incorporate videoconferences in some form into their future clinical practice. Participants viewed that it was important to recognise both benefits and challenges of working online. To find a middle ground that works for themselves and be aware of their own limits. Participants believed that the right hybrid structures can be identified and implemented.

Participants reported that Zoom fatigue is manageable, as they have the strategies to combat fatigue and that the strategies to minimise fatigue are within their control.

"in terms of influencing my decision to work online, I don't see Zoom fatigue being an overall issue. Because it's something that's also mostly in my control…Because for me personally and professionally, the benefits of being online outweigh those challenges… it's far more time and cost effective and gives me a lot more flexibility. When I decide to manage it, it is manageable and it is effective" (P1).

Theme 5.1. Taking breaks

Participants emphasised the importance to schedule breaks in between videoconferencing meetings and to avoid back to back meetings. That not only is it important to schedule breaks, but to also remember to take them. Furthermore, it was important to have breaks where individuals step away from the computer and not go onto another screen.

> *"When you're practicing on Zoom, you're doing your notes, you're organizing things with the computer, then you're still in the computer. And increasingly, I've had to fight the urge to have my breaks on the computer" (P5).*

One psychologist mentioned the importance of switching contexts and engaging in some ritualistic behaviour that separates Zoom and life.

> *"… have a bit of a break for some kind of ritual, you know, bit of housework always works. You know, just something boring. Play with… the animals" (P4).*

Theme 5.2. Improve equipment

To combat issues with technological challenges and physical fatigue, participants suggested that technical improvements and more comfortable physical environments can help reduce Zoom fatigue. Participants suggested improving office equipment such as more comfortable chairs, standing desks and foot supports. Others also suggested strategies to improve their physical environment, such as sitting next to windows with natural light, having an organised workspace with fewer distractions, and having a quiet space with little background noise. Participants also emphasised technical improvements such as stable internet connection, high-quality audio, high-quality monitors for clear pictures and screen filters to combat eye strain.

> "I *have a kneeling chair rather than the standard office chair and I also have a standing desk. And I find that helps me hugely to allow myself to be comfortable*" (P1)

Theme 5.3. Self-care

Participants emphasised the importance of engaging in self-care and having self-compassion. Many discussed the importance in doing some form of physical activity to help relieve physical fatigue, such as going to the gym, stretching or going for a walk. Participants particularly discussed being out in nature and getting fresh air with a change in scenery is helpful to combat fatigue.

Participants also discussed that it can be isolating to work alone in an online setting without social interactions, where a lack of interpersonal connection can result in social disconnect and

withdrawl which manifest as social Zoom fatigue. Thus, psychologists emphasised the importance to connect with others, particularly outside of online settings.

> *"We just need time to get out of the house. And just go for a walk. Go get a drink of water and also making sure that we are actually talking to people... If people find themselves doing Zoom all day... making sure that they get human interactions as well, like real face to face human interactions. That's really important" (P2).*

Theme 5.4. Increase awareness

Participants discussed that greater awareness and a shared understanding of Zoom fatigue and its impacts can support better management of Zoom fatigue. Some participants discussed the importance of being supported by their workplace as they understood the difficulties of working online, as well as for workplaces to provide their employees with ongoing resources and support to manage fatigue.

> *"the management here has been really supportive through this and aware of the problem. When we're in lockdown…our manager… actually negotiated for us to have an extra half hour worth of breaks each day. Upper management was just like "sure, why not?" Because they understood that" (P5).*

One psychologist discussed that greater compassion can be achieved when there is a shared understanding of the challenges of Zoom fatigue, where people aren't left in a position where they're needing to explain or justify needing to take breaks. It was discussed that widespread educational and awareness movements from the government may be needed to encourage a shared understanding of the impacts of Zoom fatigue and ways to manage this phenomenon.

> *"So if you are going to be video conferencing all day everyday for example, it needs to be implicitly understood by everybody as a shared understanding that we all need to take our breaks. And for what reasons and what the benefits are. Because then you have that understanding and that buy in from everybody. So it's not a selfish need that you're meeting, it's actually essentially, a form of both self-compassion and being compassionate for others"* (P1).

> *"But I think that what is required, from a level of government really, is the acknowledgement of the impacts, and by having that then we can all have a shared awareness and therefore understanding."*

Chapter 4. Discussion

The emergence of the COVID-19 global pandemic and social distancing measures drastically changed the way psychologists work. The necessity of providing mental health care during lockdowns meant that many in-person activities had to be shifted to remote settings, with videoconferencing used as the main form of communication for psychologists (Sammons et al., 2020). The abrupt transition to online videoconference psychotherapy during the pandemic presented a number of challenges, with fatigue related to the use of telehealth platforms (termed Zoom fatigue) among some of the most significant challenges faced by therapists (Shklarski et al., 2021). The study aimed to understand psychologists' experiences and management of Zoom fatigue.

This reflective thematic analysis identified that the experience of Zoom fatigue was associated with (1) mental, (2) emotional and (3) physical fatigue. This is consistent with the literature on Zoom fatigue where Zoom fatigue is characterised by both physical and mental exhaustion (Abdelrahman, 2021; Ebner & Greenberg, 2020; Riedl, 2021), and is linked to emotional constructs such as anxiety, stress, worry, and frustration (Wiederhold, 2020).

Mental fatigue

Thematic analysis indicated that psychologists experienced mental fatigue associated with the use of videoconferencing platforms due to greater cognitive and attentional demands required to observe and process the nonverbal cues of clients. During face-to-face conversations, nonverbal cues can be subconsciously processed and are often effortless whereas nonverbal communicational flows naturally (Fauville et al., 2021a). However, within the camera view, the focus is on the communicator's face where verbal and non-verbal behaviours are reduced and restricted, which can limit a therapist's ability to obtain in-depth information regarding a client's mental state (Ahlström et al., 2022). This may result in increased cognitive demand to overcome information deficits and to pay attention to clients verbally while processing the limited visual cues (Li & Yee, 2022). Verbal and nonverbal communication may also be delayed and distorted by technological limitations and glitches which can be cognitively taxing as the brain must overcome asynchronous feedback, where lags in transmission create a sense of cognitive dissonance for users, which requires increased mental effort to process

(Riedl, 2022; Schroenenberg et al., 2014). This leads to greater energy expenditure and can lead to increased fatigue. Participants in the current study highlighted that as a psychologist, there were implicit expectations they needed to be aware of what was going on in the room, yet the reduced input from clients can contribute to therapists' experience of lack of control within the therapeutic space which can be anxiety-provoking, and harm the therapeutic relationship in terms of maintaining trust (Smith & Gillion, 2021). Psychologists' perceptions of others' expectations of their behaviour are likely to add an additional layer of cognitive load that is over and above the cognitive effort needed to overcome a lack of non-verbal cues.

Participants also described a greater cognitive load to appear engaged in videoconferences, with a need to project their energy into the screen to remain present and engaged. Psychologists explained they often increased visual, auditory and vocal efforts to communicate with clients via videoconference, consistent with international research that videoconference participants often require intentional and additional efforts to produce exaggerated and readable signals that come naturally in face-to-face interactions, yet can be distorted through screens (Bailenson, 2021). Substantial effort is required to appear constantly switched on, increasing cognitive load and potentially adding to fatigue.

Participants reported seeing themselves on the screen as another potential factor contributing to Zoom fatigue. Seeing one's own self-image can lead to the perpetual surveillance of themselves, their appearance, attentiveness and concentration (Ratan et al., 2022; Li & Yee, 2022). Hyper-awareness of their self-image can lead to feelings of self-consciousness (Karl et al., 2021), and be a distraction for both clients and psychologists as their attention is pulled away from the therapy process. Exerting constant effort in impression management involves significant cognitive energy and can contribute to Zoom fatigue.

Zoom mental fatigue can impact psychologists' ability to maintain attention and focus during online meetings. Participants discussed that disruptions to concentration can lead to issues with information processing and can harm the therapeutic relationship due to the reduced ability to be a reflective listener. This is similarly reported in research where videoconference participants can experience cognitive processing overload, resulting in the inability to focus (Amponsah et al., 2022; Shahrvini et al., 2021). Research also suggests that heightened cognitive load and effort can lead to individuals being more error-prone in work tasks (Li & Yee, 2022). Zoom fatigue can also impact motivation, where depleted energy from the overuse of videoconferences may result in individuals experiencing a reduced inclination to engage in activities after videoconferencing, resulting in feelings of disinterest and disconnect (Fauville et

al., 2021b; Shockley et al., 2021). This was similarly reflected in the current study where psychologists lacked lack energy to engage in meaningful activity after work, instead often turning to another screen such as their phone or television. If individuals are unable to recover and re-energize during their free time, it is likely to continue to compound the physical and mental fatigue experienced by the psychologists, resulting in prolonged negative impacts on health (Bullock et al., 2022).

Emotional fatigue

The second area of understanding the experience of Zoom fatigue reported by psychologists is related to emotional fatigue that may arise from videoconferencing, which can include feelings of irritability, moodiness, emotional overextension, nervousness and anxiety (Fauville et al., 2021b; Shahrvini et al., 2021; Vandenberg & Magnuson, 2021), and where technological difficulties can be particularly anxiety provoking for both therapist and client (Rochlen et al., 2004). The emotional aspect of Zoom fatigue may be related to therapists experiencing stress from a lack of control over their circumstances (Li & Yee, 2022), as well as explained by the depersonalising experience where videoconference participants lose interpersonal connections with one another (Amponsah et al., 2022).

Findings from the current study suggest that the work of psychologists is emotionally taxing at the best of times, yet the reduced ability to form emotional connections with clients due to an increased guardedness from videoconferences can further add to the emotional toll experienced by psychologists. The physical barrier of a screen can also aggregate the client's avoidance of uncomfortable affects where distance impedes emotional engagement with the therapist, which is key to the process of change (Markowitz et al., 2021). The literature suggests that emotional connection, which includes the ability to connect with clients, read emotions, express and feel empathy, can be impacted in online environments (Békés et al., 2021). This is likely to contribute to increased experience of emotional fatigue experienced by psychologists as they attempt to compensate for the reduced emotional connection by placing additional energy to empathise and connect with clients.

Images of other's faces on the screen can sometimes appear too close and big, psychologists in the study explained that it can be overwhelming to be confronted with strong negative emotions from clients when it is directly in front of them. Participants found that

individuals were also staring more intensely throughout the entire meeting. Size and proximity and others' faces, as well as prolonged direct eye gaze can trigger increased physiological activity associated with high-alert stress responses (Fauville et al., 2021b; Riedl, 2022; Takac et al., 2019). This may be due to perceived violations of personal space that is viewed as threatening, thus eliciting a stress response that can add to fatigue (Karl et al., 2021).

Physical fatigue

Experiences of physical fatigue including eye strain, body and muscles, and headaches were reported by psychologists in the current study, findings similar to those reported in the international literature Usta Kara and Ersoy (2022) where the majority of their participants reported issues with their physical health including complaints of head, neck, back and eye pains associated with the use of videoconferences. Psychologists in the current study mentioned reduced natural movement during videoconferences as well as limited opportunities to engage in physical activity as likely to contribute to the experience of Zoom physical fatigue. Reduced mobility may indeed be a factor influencing the experience of Zoom fatigue, where videoconference meetings reduce movement and confine individuals' mobility within a narrow camera view compared to in-person meetings which allow individuals to naturally move, walk around and stretch (Bailenson 2021). Sitting in front of a screen all day can be considered sedentary behaviour. Sedentary behaviours are associated with a higher risk of mortality (Patel et al., 2018; Stamatakis et al., 2019), and unfavourable psychological outcomes with decreased subjective energy (Oswald et al., 2020).

The cognitive, emotional and physical aspects of Zoom fatigue experienced by psychologists are likely to interact to contribute to the overall experience of fatigue. For example, experiences of physical fatigue from prolonged and intensive videoconference use are likely to impact a psychologist's emotional state. This in turn may impact their ability to focus and sustain attention thus creating a cycle that maintains fatigue. The impact of this for participants in this study was lowered work capacity and reduced daily client capacity when delivering therapy via videoconferences. Psychologists also explained that irritability, inattention and lack of engagement due to Zoom fatigue could impact the quality of their therapeutic work, potentially affecting the therapeutic processes, outcomes and change. International literature has found that therapist's experience of fatigue, exhaustion and burnout is likely to influence the quality of work and the standard of care provided to clients.

Therapeutic relationship and Zoom fatigue

Psychologists emphasised that videoconferences changed the dynamic of the therapeutic relationship as passive engagement and reduced emotional connection can result in psychologists needing to place more energy to engage with clients thus feeling more tired and fatigued. Psychologists found that the level of engagement from clients is lower in remote online settings, this is particularly relevant in group therapy, where individuals act more as a silent observer than an active participant in conversations. This is similarly demonstrated in the literature where individuals tend to have a lower motivation to engage both behaviourally and cognitively when participating in a videoconference than face-to-face interactions (Karl et al., 2021). Some scholars argued the limited engagement and connection in online settings may be due to the lack of physical proximity and absence of visual cues (Robson & Robson, 1998). Suggesting that a lack of physical presence can impact the therapeutic relationship as videoconferencing platforms are unable to fill the physical vacuum created (Amponsah et al., 2022). Thus, psychologists often have to work harder to cultivate and maintain the therapeutic alliance within online platforms (Fernández-Álvarez & Fernández-Álvarez, 2021), which can contribute to the experience of fatigue.

Technical challenges and Zoom fatigue

Experience of technical challenges is commonly reported in the literature as an obstacle for remote work during the pandemic that contributes to Zoom fatigue (Amponsah et al., 2022; Nesher Shoshan & Wehrt, 2021). Technical challenges and interruptions to the communication process were reported by psychologists in the current study as adding to their overall experience of Zoom fatigue. Technical issues with unstable internet connections can often occur, resulting in videoconference participants dropping out of sessions, frozen screens, network latency issues, silences or distorted images and voices. This often disrupts the flow of the session where psychologists must repeat themselves, or solve the technical interruptions, which can result in frustration, anxiety and stress and ultimately add more energy and time to the communication process, increasing fatigue (Li & Yee, 2022; Shklarski et al., 2021; Vandenberg & Magnuson, 2021). In addition, psychologists found that technical disruptions can be particularly challenging and stressful when clients are disclosing sensitive information, where

missing vital information such as risk can have detrimental impacts on the care of the clients. Further adds a layer of complexity when working online can add to psychologist's fatigue. Psychologists also discussed that an individual's videoconferencing literacy and ability can navigate videoconferencing platforms can influence their susceptibility to experiencing exhaustion and Zoom fatigue (Döring et al., 2022). This could include being able to negotiate the use of the microphone and mute buttons to help limit distractions in their physical environment (Li & Yee, 2022). A review of the impact of the working environment on wellbeing found that high levels of background noise negatively affect both physical and psychological well-being and cause higher levels of fatigue (Colenberg et al., 2021). Psychologists discussed that background noise and distractions in both the therapist's and client's background can interrupt the flow of conversation, which can be energy-draining to have to constantly re-engage in the therapy process as well as having to focus on the task at hand while juggling these interruptions.

Zoom fatigue and the context of working from home

The findings of the study suggest that psychologists' willingness to use videoconferences was likely to have impacted their experience of Zoom fatigue. The transition to online therapy was involuntary, with many psychologists including those in the present study having little to no experience conducting therapy via conference prior to the pandemic (Békés et al., 2021). The literature suggests many psychologists were apprehensive to work online with concerns regarding the efficacy of online therapy (Topooco et al., 2017), its impacts on the therapeutic relationship (Roesler, 2017), and ethical and confidentiality issues (Békés et al., 2021). Research on predictors of Zoom fatigue found that attitudes towards videoconferences were the strongest predictor of videoconference fatigue (Oducado et al., 2021). Negative attitudes towards Zoom meetings were associated with greater levels of Zoom fatigue (Fauville et al., 2021a).

Findings from the study suggest that the experience of Zoom fatigue needs to be examined under the context of the COVID-19 pandemic. This new psychological phenomenon emerged from the increased usage of videoconferences as a result of the stay-at-home orders that limited face-to-face interactions. Experiences of Zoom fatigue are likely inseparable from stressors related to the challenges and disruptions of working from home. Psychologists discussed that symptoms of Zoom fatigue can be difficult to separate from the fatigue

associated with the high-stress environment of the pandemic. The need for safety and stability is important for wellbeing, yet due to the pandemic, many have experienced a sense of losing control, with major disruptions to daily routines possibly causing higher levels of insecurity and unpredictability (Döring et al., 2022). Psychologists discussed that working from home also meant that many individuals had difficulty distinguishing between work and personal life (DeFilippis et al., 2022), with added family responsibilities and financial stressors to set up a suitable home office. Working parents in particular experienced greater levels of Zoom fatigue, where a constant request for videoconference meeting is viewed as intrusive and noting increased role conflict due to the blurring of work-life boundaries (Karl et al., 2021). Due to the accessibility of videoconferences, psychologists also expressed that greater levels of Zoom fatigue can be experienced as clients had greater expectations to be available thus can lead to overscheduling of videoconference meetings. The increased stressors of the pandemic meant many psychologists were likely entering Zoom meetings already at a more fatigued level, thus are more vulnerable to experiencing Zoom fatigue. It is likely that the societal unrest and high-stress context influenced the experiences of Zoom fatigue.

Strategies to manage Zoom fatigue

Despite the challenge of Zoom fatigue experienced by psychologists, participants of the study expressed that this would not deter their decision to include videoconferencing platforms in their future practice. Zoom fatigue is considered manageable, with psychologists engaging in a number of effective strategies to minimise the impacts of videoconferencing. Participants emphasised the importance of taking breaks and avoiding back-to-back meetings. This is consistent with research that found frequency and duration of meetings to be significant predictors of videoconference fatigue (Fauville et al., 2021a), thus setting meeting agendas and effective use of meetings time, reducing the number of unnecessary meetings and having sufficient breaks can help eliminate experiences of Zoom fatigue (Epstein, 2020; Nesher Shoshan & Wehrt, 2021; Wiederhold,2020). Psychologists also discussed the improvement of technology and equipment as a way to combat technical issues associated with Zoom fatigue, including stable internet connection, high-quality visual and audio, and comfortable working environments. This was similarly discussed by Nesher Shoshan and Wehrt (2021). Psychologists also discussed engaging in relaxing and enjoyable activities as a form of self-care, emphasising the need to stay away from digital tools to relieve their mental and physical

fatigue. Research has documented that psychologists in general tend to neglect their own self-care and mental health, despite serving in a field that promotes the well-being of others (Dattilio, 2015). Therapists often continue their work with clients despite experiences of personal distress, which reinforces the value of self-care in mental health professionals (Baker & Gabriel, 2021).

Overall, the participants found it is important to recognise the advantages and challenges of online videoconferencing therapy. With an understanding of the experience of Zoom fatigue and contributing factors, effective strategies to manage videoconference fatigue can be implemented and a hybrid structure to future videoconference therapy can be a successful approach.

In summary, psychologists' experiences of Zoom fatigue are associated with increased cognitive demand to process nonverbal cues, with a need to exert greater levels of energy to remain engaged and present which is likely to lead to difficulties with focus and attention. Zoom fatigue is also related to the experiences of an increased emotional toll and physical challenges which all contribute to negative impacts on the quality of a psychologist's therapeutic work. Psychologists' experiences of Zoom fatigue are also linked to experiences of technical obstacles, stressors related to working from home and difficulty building a therapeutic with clients in online settings. Nonetheless, psychologists have been able to utilise a number of effective strategies to minimise the experience of Zoom fatigue.

Limitations and future research

While the current research contributes to the literature by highlighting the psychologist's experiences of Zoom fatigue, there are several limitations that should be considered when interpreting the study's findings. The small sample size of six participants may be considered adequate for a small qualitative design (Braun & Clarke, 2013), yet could limit the capacity for this study's findings to be generalisable across psychologists in New Zealand due to the homogeneity of the sample. The current study is also limited as it only recruited psychologists who had experienced Zoom fatigue and it is possible that not all psychologists experienced this phenomenon. Participants were self-selected to be a part of the study and were likely drawn to the topic, which may result in the sample experiencing particularly high levels of Zoom fatigue.

The present study did not explore personal factors and other contextual factors of psychologists that may have influenced the experience of Zoom fatigue. Participants in the

study included a range of New Zealand registered psychologists under various scopes of practice, years in professional practice and varying ages and ethnicities. Socioeconomic and cultural factors may also influence how Zoom fatigue is experienced. Future research could examine how individual differences may influence the experience of Zoom fatigue.

Since this study is exploratory in nature, the findings imply several avenues for future research to gain additional insights about the nature of videoconferencing fatigue. Follow-up research from a quantitative perspective such as establishing the percentage of psychologists who experiences Zoom fatigue as well as predictors that may make a psychologist more vulnerable to experiencing Zoom fatigue could be useful to investigate.

The present study examined psychologists' experience of Zoom fatigue and discussed associated physical, cognitive and emotional fatigue. Future research could explore the experience of Zoom fatigue from a client's perspective and its influence on the therapeutic process.

Another area for further investigation includes examining the experience of Zoom fatigue across different contexts. As the current study mostly examined the use of videoconferencing for work related proposes, investigation on whether Zoom fatigue is also experienced in nonwork meetings such as in social settings is warranted. As it is possible that meeting via videoconference in other contexts may impact participants positively given it can provide a feeling of social connection and support during periods of isolation. Or conversely, individuals who use videoconferences outside of work environments may be more vulnerable to experiencing Zoom fatigue due to the increased frequency of videoconference use.

Implications for practice

Overall, the results of the current study have important practical implications for psychologists. COVID-19 has led to the widespread use of videoconferencing platforms which have been a crucial communication tool to continue to engage in daily tasks, however, it also gave rise to the experience of Zoom fatigue. It is likely that video conferencing will continue to play a large role in clinical practice post-pandemic, thus acknowledging and addressing challenges of Zoom fatigue in online therapy sessions should now be a central part of therapist training, supervision, and continued education. This is particularly important to address due to its impacts on therapeutic work and the wellbeing of the psychologist.

There are several strategies that can be implemented to combat Zoom fatigue and ensure it does not negatively impact work productivity and wellbeing. Recommendations include setting up the computer and camera in a comfortable position that includes natural light. Avoid the use of phones during Zoom meetings and other multitasking behaviours. Taking micro-breaks from long conference calls by minimising the window and looking away from the screen for a few seconds. Setting boundaries between work and personal lives by physically leaving the office space, turning off the computer and engaging in ritualistic behaviours such as changing out of work clothes, completing housework or taking a shower once work tasks are completed. To not hold unnecessary videoconference meetings, reduce the length of conversations, and incorporate sufficient breaks within a session. Organisations and clinical training programmes could ensure training are available to increase psychologists' technical competencies with videoconferencing platforms and have resources and equipment available to reduce technical issues that can exacerbate Zoom fatigue. Support from managers with a shared understanding of the experience of Zoom fatigue can cultivate a culture of self-care and self-compassion for their employees, that recognises the need for breaks and support the implementing health and wellbeing initiatives.

Findings from the current study in particular emphasised the need for greater awareness and education of the challenges of Zoom fatigue. In particular, from a wider scale government level, increased education and resources could be developed that establishes shared norms of how individuals could conduct videoconferencing meetings effectively.

Conclusion

As psychologists continue to rely on videoconferences to conduct therapy, experiences of Zoom fatigue may become increasingly likely. Remote therapy will remain a common method of work and perhaps even become the preferred method. Therefore, psychologists will need to develop strategies to mitigate experiences of Zoom fatigue in order to avoid longer-term consequences such as burnout. The findings of the current study discussed the experience of Zoom fatigue as associated with cognitive, emotional and physical fatigue; technological challenges; the therapeutic bond; and working from home. The study suggests that Zoom fatigue is manageable where videoconferencing can be used as a valuable method for online therapy if it is applied appropriately.

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Appendix 1. Ethics Approval

26 July 2022

Liesje Donkin
Faculty of Health and Environmental Sciences

Dear Liesje

Re Ethics Application: **22/125 Psychologists' experiences and management of Zoom fatigue**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 26 July 2025.

Non-Standard Conditions of Approval

1. In the Information Sheet explain what snowballing is. For example, you may have contacted me to express interest study after someone passed on details of the study.

Non-standard conditions must be completed before commencing your study. Non-standard conditions do not need to be submitted to or reviewed by AUTEC before commencing your study.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the Auckland University of Technology Code of Conduct for Research and as approved by AUTEC in this application.
2. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
3. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
4. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
5. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
6. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.
7. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard and that all the dates on the documents are updated.
8. AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

Please quote the application number and title on all future correspondence related to this project.

For any enquiries please contact ethics@aut.ac.nz. The forms mentioned above are available online through http://www.aut.ac.nz/research/researchethics

(This is a computer-generated letter for which no signature is required)

The AUTEC Secretariat
Auckland University of Technology Ethics Committee

Cc: Fzg2677@autuni.ac.nz; kvankess@aut.ac.nz

Appendix 2. Participant Information Sheet

28 April 2022

Project Title

Psychologists' experiences and management of Zoom fatigue

An Invitation

This research aims to investigate psychologists' experiences and management of Zoom fatigue. Zoom fatigue is defined as the physiological, cognitive and emotional exhaustion as a result of prolonged and inappropriate use videoconferencing tools. As a registered New Zealand psychologist who has experienced Zoom fatigue, you are invited to be involved in this research project.

I (Kelsey Cornthwaite) am undertaking this project as part of the research component of the Master of Health Science in Psychology. I have a background of studying psychology and working in mental health and aim to become a psychologist.

What is the purpose of this research?

It is hoped that this research will give insight into the experiences of psychologists who have experienced Zoom fatigue in New Zealand. Findings may help inform supports and strategies to elevate the experience of Zoom fatigue.

This study forms the basis of the researcher's Master's practice research project and the findings of this research may also be used for academic publications and presentations.

How was I identified and why am I being invited to participate in this research?

You have been invited to participate via advertisements posted in relevant psychologist forums. You may have contacted me to express interest with the study after someone passed on details of the study. A Qualtrics link has been provided to register your interest where this information sheet is provided.

To participate in this study, you will need to be a New Zealand registered psychologist and have experienced Zoom fatigue. You will also need access to the technology to participate in a video call for the purpose of the research.

How do I agree to participate in this research?

Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You will be asked to give consent prior to the interview by completing a consent form and consent will be re-checked at the start of the interview. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed or allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

What will happen in this research?

You will be asked to participate in an individual interview. Interviews will take place via videoconferencing platforms at a time suitable for you. Each interview will last for approximately one hour and focus your experiences and management of Zoom fatigue. You should avoid providing identifiable client stories. After the interview, the interview will be transcribed and used for a qualitative analysis. You are able to review your transcript after it has been transcribed if you wish. If you wish to review your transcript you will have two weeks to review it and correct any errors.

What are the discomforts and risks?

Some discomfort or embarrassment may arise if you have difficulty talking about your experiences. As the primary researcher aims to be a psychologist, there is a possibility I will be a professional peer in the future and will hold information about the experience of your Zoom fatigue.

As the current research aims to recruit psychologists who have experienced Zoom fatigue, conducting interviews via videoconferencing platforms may add to your online fatigue. However, the interview will be relatively short (1 hour), with sufficient breaks in between if you need it. You may also opt to complete the interview with your camera turned off.

How will these discomforts and risks be alleviated?

Although not anticipated, if you find any part of the interview process distressing, you are encouraged to let the student researcher know and the interview will pause or end on your request. You should also discuss concerns with your professional supervisory support.

What are the benefits?

Zoom fatigue is a relatively new phenomenon exacerbated by the COVID-19 pandemic. Little is known about how it is experienced and managed by psychologists. It is a timely and relevant topic where understanding may assist psychologists avoid short-term fatigue and long-term exhaustion or burn-out and may provide strategies to improve use of videoconferencing and allow for more effective and productive working environments.

You will have an opportunity to share your experiences and help develop knowledge in this area, the researcher will gain understanding of psychologists' experiences and assist in gaining the qualification Master of Health Science in Psychology.

How will my privacy be protected?

You will not be identified in any publications, reports or presentations that result from the research. Any quotes used will have identifying markers removed. Pseudo-names or interview numbers will be used.

Your personal information will not be shared with anyone outside the research team. All information will be kept confidential to the research team. The recording of the interview will be transcribed by the student researcher who is also the interviewer. All recordings and data taken will be stored securely in password protected electronic files.

What are the costs of participating in this research?

You will need to give up approximately 60 minutes of your time to participate in this research.

What opportunity do I have to consider this invitation?

If you are interested in being part of this research, please register your interest by providing your contact details in Qualtrics or contact the research team directly. You will have 2 weeks to consider the invitation. You will have the opportunity to ask questions and if you are happy to take part, we will obtain your consent. Interviews are planned to occur in June/July/August 2022.

Will I receive feedback on the results of this research?

If you would like to receive feedback on the results of this research, please indicate this on the consent form and you will be sent a summary of findings at the end of the study.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr Liesje Donkin (Project supervisor) liesje.donkin@aut.ac.nz or phone 09 921 9999 ext. 8164 or Dr Kirsten van Kessel (Project supervisor) kirsten.vankessel@aut.ac.nz or phone 09 921 9999 ext. 7691.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEC, *ethics@aut.ac.nz* , (+649) 921 9999 ext 6038.

Whom do I contact for further information about this research?

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

Researcher Contact Details:

Kelsey Cornthwaite (Primary researcher) fzg2677@autuni.ac.nz.

Project Supervisor Contact Details:

Dr Liesje Donkin (Project supervisor) liesje.donkin@aut.ac.nz or phone 09 921 9999 ext. 8164.

Dr Kirsten van Kessel (Project supervisor) kirsten.vankesse@aut.ac.nz or phone 09 921 9999 ext. 7691.

Approved by the Auckland University of Technology Ethics Committee on *26 July 2022*, AUTEC Reference number *22/125*.

Appendix 3. Consent Form

Consent Form

Project title: ***Psychologists' experiences and management of Zoom fatigue***
Project Supervisor: ***Dr Liesje Donkin and Dr Kirsten van Kessel***
Researcher: ***Kelsey Cornthwaite***

○   I have read and understood the information provided about this research project in the Information Sheet dated 28 April 2022.
○   I have had an opportunity to ask questions and to have them answered.
○   I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed.
○   I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
○   I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
○   I understand that the primary researcher is a student with the intention of becoming a registered psychologist and may be a peer in the future
○   I agree to take part in this research.
○   I wish to receive a summary of the research findings (please tick one): Yes○   No○·

Participant's signature: ....…………………………………………………

Participant's name: ....…………………………………………………
Participant's Contact Details (if appropriate):
……………………………………………………………………………………..
……………………………………………………………………………………..
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……………………………………………………………………………………..
Date:
Approved by the Auckland University of Technology Ethics Committee on *26 July 2022* ***AUTEC Reference number 22/125***.
Note: The Participant should retain a copy of this form.

Appendix 4. Interview Questions

Demogrpahic Questions

1. Which gender(s) do you identify with?
2. What is your age?
3. Which ethnicity/ethnicities do you identify with?
4. How many years have you been in professional practice?
5. What scope of practice are you registered under?

Indicative Questions

1. How have you been using videoconferencing platforms while working remotely?
2. How do you feel after using videoconferences?
3. How does your experiences of fatigue differ when doing face-to-face sessions?
4. What does the experience of Zoom fatigue look like for you?
5. How does Zoom fatigue impact your wellbeing?
6. What factors may impact your experience of Zoom fatigue?
7. What role do you believe COVID-19 plays on Zoom fatigue?
8. How does the experience of Zoom fatigue differ to other forms of fatigue?
9. Are there times you are more vulnerable to experiencing Zoom fatigue?
10. How does Zoom fatigue impact your delivery of online therapy?
11. How does Zoom fatigue impact the therapeutic relationship?
12. How has Zoom fatigue influenced your views about using online therapy as an ongoing part of your clinical practice?
13. What have you found useful to combat Zoom fatigue?
14. What supports or resources would help facilitate your management of Zoom fatigue?