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ZOOM FATIGUE AND VIRTUAL INTERVIEWING: THE EFFECTS OF
INTERPERSONAL DISTANCE

by

LILLIAN ROSE SCHELL

A THESIS

Presented to the Faculty of the Graduate School of the
MISSOURI UNIVERSITY OF SCIENCE AND TECHNOLOGY

In Partial Fulfillment of the Requirements for the Degree

MASTER OF SCIENCE

in

INDUSTRIAL-ORGANIZATIONAL PSYCHOLOGY

2023

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ABSTRACT

This research examines breaches of interpersonal distance, one of the proposed causes of Zoom fatigue, within the context of a job interview. It is proposed that when an interviewer perceives a job applicant to be close to them, Zoom fatigue increases and ratings of the applicant decrease. Participants completed a Zoom Exhaustion and Fatigue scale before and after watching an asynchronous video interview in which the size of the job applicant's face varied between conditions. It was found that breaches of interpersonal distance did not influence self-reported Zoom fatigue. However, breaches of interpersonal distance did influence ratings of the job applicant such that when the applicant appeared closer to the participant, the participant rated the applicant as having less intellect, lower general impressions, and as less hireable. While interpersonal distance was found to influence ratings of the job applicant, Zoom fatigue was not. As organizations continue to increasingly rely on virtual interviewing, these findings could help address the ways in which the characteristics of video conferences influence ratings of job applicants.

ACKNOWLEDGEMENTS

I would first like to acknowledge and thank my incredible committee members: Dr. Clair Reynolds Kueny, Dr. Devin Burns, and Dr. Vahe Permzadian. Dr. Kueny's direction, feedback, and encouragement guided me through this undertaking. Her expertise and counsel were invaluable and inspiring. Dr. Burns pushed me to be a better data analyst and helped me see my research from multiple perspectives. Dr. Permzadian's instruction gave me a foundation and inspired my studies. My time as their student and mentee has been irreplaceable.

I would also like to thank my family. My Mom and Dad have always supported me and cheered me on. Thank you for always believing in me; your encouragement has made me the person I am today. Thank you to my sister, Liza, living with you made this project possible. Cooking, conversing, exercising, and just relaxing with you gave me the energy I needed. And thank you to my fiancé, Avery. Your unwavering love, support, and optimism have given me courage and confidence. Even from over 6,000 miles away, you gave me peace and clarity in the chaos.

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LIST OF ABBREVIATIONS

AVI	Asynchronous Video Interview
ID	Interpersonal Distance
MNT	Media Naturalness Theory
VC	Video Conference
ZEF Scale	Zoom Exhaustion and Fatigue Scale
ZF	Zoom Fatigue

1. INTRODUCTION

In the first month of 2020 on January 30, the World Health Organization declared a Public Health Emergency of International Concern due to the novel corona-virus outbreak now known as COVID-19. In the following months, countries around the world went into lockdown, a practice aimed at limiting the spread of the virus and included stay-at-home orders, quarantines, and curfews. By March 2020, more than half the world's population was in lockdown in over 90 countries and territories (Sandford, 2020). Students did not go to school, international and domestic travel ceased, and employees began to work from home. With 3.9 billion people in isolation, the use of video conferencing skyrocketed. Zoom Meetings saw an average of 350 million meeting participants every day during the year 2020, up from 10 million participants a day in 2019 (Iqbal, 2022). Similarly, Microsoft Teams saw 115 million daily users at the end of 2020, up from 20 million users in 2019.

Video conferencing was used by K-12 teachers and college educators to hold class, religious communities to worship, friends to socialize, professional societies to network, and doctors to treat patients. In companies and organizations, video conferencing was used to attend meetings, collaborate, conduct interviews, and even hold employee happy hours.

As company communication moved online, many workers attended and participated in multiple video conferences (VC) a day. Because of this, employees began experiencing what is now known as "Zoom Fatigue." Zoom fatigue can be defined as the exhaustion and burnout caused by the difficult nature and overuse of virtual

communication platforms (Fauville et al., 2021). This phenomenon is not limited to Zoom Meeting platforms, but any virtual communication platform (i.e., Microsoft Teams, Google Meet, or Cisco Webex).

Li and Yee (2022) identified four dimensions of Zoom fatigue in their meta-analysis of videoconference fatigue dimensions, antecedents, and theories. The researchers identified physical and emotional fatigue as well as social and cognitive dimensions as components of ZF. Physical fatigue encompasses the physical exhaustion felt after VCs including eyestrain (Amponsah et al., 2022; Doty et al. 2020) and drained energy (Fauville et al., 2021; Amponsah et al., 2022). Emotional exhaustion consists of feelings of being overwhelmed, moody, and irritable (Fauville et al., 2021) as well as anxious and nervous (Shahrkini et al., 2021; Vandenberg & Magnuson, 2021). The cognitive dimension of ZF includes a lack of motivation (Fauville et al., 2021), disengagement (Shahrkini et al., 2021; Shockley et al., 2021) and difficulty focusing (Shahrkini et al., 2021). Last, the social dimension of ZF consists of wanting to be isolated and alone (Fauville et al., 2021) and decreased voice (Shockley et al., 2021). All four of these dimensions are represented in the Zoom Exhaustion and Fatigue (ZEF) scale developed by Fauville et al. in 2021.

Researchers have begun to examine the consequences of Zoom fatigue. Deniz et al. (2022) found a positive and significant relationship between ZF and depression, anxiety, and stress as well as a significantly negative indirect relationship with academic well-being and life satisfaction through psychological distress.

2. THEORIES ON THE CAUSES OF ZOOM FATIGUE

Many psychologists have become interested in studying the causes and effects of Zoom fatigue. A number of theories as to why this phenomenon occurs have been proposed. Döring et al. (2022) developed a 4-dimensional model describing the causes of ZF, including personal, organizational, environmental, and technological factors. The personal factors involve any person-related variables that may influence a person's experience of ZF and includes individual factors like sociodemographic, personality, and cognitive traits as well as social factors like institutional meeting regulations, meeting management, and norms. Organizational factors that increase the likelihood of experiencing of ZF include factors relating to how videoconferencing is used like the number and duration of meetings, time of day, anticipated outcome, and meeting activities. Environmental factors include variables that describe the context in which videoconferencing occurs like work setting, conflicting work and home roles, feeling a loss of stability or control, and lack of physical movement and diverse inputs. Technological factors involve any features of the technology that may cause fatigue including visual display, audiovisual synchronicity, system usability, and problems with nonverbal cues, turn taking, social bonding, and being on camera (Döring et al., 2022). Many of the other proposed theories on the causes of Zoom fatigue focus on these technological factors.

Technological directed theories can be better understood through media naturalness theory (MNT; Kock, 2001). MNT proposes the more a mode of communication resembles face-to-face communication, the more natural it will be and

require less cognitive effort to use. There are five characteristics of communication that influence a mode's naturalness: (1) synchronicity and (2) co-location, as well as the ability to express and observe (3) facial expressions, (4) body language, and (5) speech. MNT differs from previous media theories in that it does not assume more is better. For example, media richness theory proposes that a mode of communication is best when it matches the purpose of the task and meets more of four criteria: immediate feedback, many cues, variety of language, and personal focus (Ishii et al., 2019). Another example, social presence theory, proposes a mode of communication is best when the person is perceived as present (Gunawardena, 1995) and presence can be increased with additional cues. But these theories have not been as successful in explaining communication effectiveness (Ishii et al., 2019). For example, virtual communication platforms have a high degree of synchronicity and provide meeting participants with the ability to express and observe facial expressions, body language, and speech. So, this does not explain why meeting participants experience Zoom fatigue. But under the media naturalness theory, media can be too rich and overload individuals (Karl et al. 2022). Bailenson's (2021) proposed causes of Zoom fatigue reflect this assumption. Bailenson suggests four causes of Zoom fatigue: increased cognitive load, increased self-evaluation, limited physical mobility, and excessive amounts of close-up eye gaze.

Bailenson's first proposed theory for the causes of Zoom fatigue concerns cognitive load and nonverbal cues. During virtual conferences, there are both fewer nonverbal cues and the meaning of those cues are less clear than they would be in-person. While video calls do have more nonverbal cues than emails, texts, or phone calls provide, the cues that are communicated during video calls are delayed and ambiguous due to

connection issues and platform design. Nonverbal cues like glances or facial expressions are easily understood in-person. But a glance to the side in a video conference could mean any number of things; for example, the individual is looking at another participant on their screen, at a notification on their computer, or a child that walked into the room. It takes time to try and decode these nonverbal cues during a video conference when it would have taken no effort in-person. This effortful interpretation increases cognitive load and could in turn increase fatigue after entire meetings of working to understand other's nonverbal cues.

In addition to taking more effort to interpret nonverbal cues, it also takes more effort to send nonverbal cues to others. Cues must be intentionally generated; Bailenson (2021) gives three examples including deliberately nodding, centering oneself on the screen, and looking directly at the camera rather than the screen to imitate eye contact. Croes et al. (2019) found that people talk 15% louder during virtual meetings as compared to in-person. Moralista et al. (2022) also found that Zoom fatigue was significantly and positively related to the cognitive load required in producing nonverbal cues. Sending, receiving, and interpreting all of these nonverbal cues is effortful during virtual meetings. Therefore, this increased work during virtual meetings can increase cognitive load and may be a cause of Zoom fatigue.

Bailenson (2021) calls the next theory “an all day mirror” (p. 4). Virtual communication platforms transmit and display live footage of each person, including oneself. This means that in addition to seeing the face of each meeting participant up-close, one also sees their own up-close face for the entire meeting. In 1972, researchers Duval and Wicklund found that participants experienced more self-evaluation when

viewing a mirror image of themselves. These findings were recently reviewed and supported by Gonzales and Hancock in 2011. A meta-analysis written by Fejfar and Hoyle (2000) reported small effect sizes between viewing oneself in a mirror and negative affect. More recently, Oducado et al. (2022) found that mirror anxiety significantly predicted videoconferencing fatigue in higher education faculty, and Ngien and Hogan (2022) found that having the camera on during Zoom had a significant and positive direct effect on Zoom fatigue. Seeing oneself in a mirror has not been found to lead to positive outcomes; these adverse effects may be exacerbated when viewing oneself for hours at a time and may manifest as Zoom fatigue.

The third theory proposed by Bailenson (2021) suggests that Zoom fatigue is caused in part by the reduced mobility required by being on camera. It has become a common experience to “bounce” from one virtual meeting to another without getting up and physically moving to the next meeting. Researchers have found that ZF is negatively correlated with the amount of time between meetings such that, as the amount of time between meetings decreased, ZF increased (Fauville et al., 2021; Oducado et al., 2022). Mobility has been shown to help creativity; Opezzo and Schartz (2014) found that people walking came up with more creative ideas than those who were sitting. Bailenson suggests that during in-person meetings, people are able to get up, stretch and move around. But in virtual meetings, people must stay seated in front of the camera so they are able to reach the computer keyboard and mouse and others in the meeting are able to clearly see them. This requires effortful restraint of physical movement which may be a source of Zoom fatigue.

The fourth theory proposed by Bailenson (2021) and the theory this study proposes to investigate concerns close-up eye gaze. During video calls, people have a straight-on, up-close view of everyone else's faces for the whole duration of the meeting. Seeing another's face from a front-on view simulates eye contact. If you are a listener in the meeting, this is an abnormal experience. During in-person meetings, if you are a listener, no one is looking at you for prolonged periods of time. Therefore, listeners in virtual meetings, with straight-on views of everyone's faces, may feel as if they are in the spotlight for the entirety of the meeting. Listeners are not the only meeting participants who are negatively influenced by close-up eye gaze; speakers in virtual meetings have been found to have physiological arousal due to being stared at while speaking (Takac et al., 2019). During virtual meetings, if everyone has their camera on and is looking at their screen, each participant is making eye contact with every other participant for the entire meeting. This is impossible to do during a face-to-face meeting.

For both listeners and speakers in virtual meetings, the faces of all other meeting participants are arranged onto the computer screen rather than spread out throughout a room. A viewer is able to see all of the meeting participants at once by looking at their computer screen. This leads to the faces being crowded onto the viewer's fovea where stimuli are especially arousing (Reeves et al., 1999; Detenber & Reeves, 1996).

The up-close eye gaze present in virtual meetings also signals to the viewer that the distance between the meeting participants and the viewer is small. This is because the size of a person's face on one's retina signals how close the other person is. This is a type of perceptual constancy known as size constancy: an object's size is perceived as constant even when the size of the object's retinal image changes due to its distance from

the eye (Myers & Dewall, 2021). Therefore, if the size of the other's face is very small on the viewer's retina, the person must be far away. But if the size of the other's face is relatively large on the viewer's retina, the person must be close. When people are closer than we are comfortable with them being, psychological arousal has been shown to increase (Wieser et al., 2010), this may lead to Zoom fatigue.

To discern why the size of an individual's face on our retina influences psychological arousal, interpersonal distance must be considered. Interpersonal distance describes how close two people are from one another and is often correlated with how familiar the two are with each other (Hall, 1959). Strangers interact in public space or more than 10 feet apart. People who are familiar but not close, for example colleagues, interact in social space, 6.5-10 feet apart. People who are close like friends and family interact in personal space, 3-6.5 feet. And very close individuals, such as romantic partners and close friends, interact in intimate space, less than 3 feet (Härmä, 2010). The familiarity between two people will determine how close they are willing to interact with one another. And the distance between two people will determine how large their face will be on the other's retina. If a person is in public space, their face will take up a small space on the retina. If a person is in intimate space, their face will take up a very large amount of space on the retina.

When video conferencing, the size of the other meeting participants' faces can vary considerably depending on the size of the monitor, the number of faces on the screen, and how far one sits from the monitor. During face-to-face meetings in the workplace, most people are in each other's social space because people are familiar with each other, but often do not have an affectionate relationship. But in virtual meetings,

depending on monitor size, the number of participants, or video layout (i.e., gallery view, speaker view), the size of the other meeting participant's faces could be quite large and signal to the viewer that those people are physically near and in their personal or even intimate space. When people are closer than we are comfortable, we decrease eye-contact. Researchers Argyle and Dean (1965) found that the closer two participants were, the less eye-contact was made and glances between the two were shorter. But during video conferences, although participants may be perceived as physically close, eye-contact is often consciously maintained throughout the meeting. Additionally, when individuals perceive a threat to their emotions, privacy, or physical being, the distance between them and the threat must increase to allow for escape. (Edney et al., 1976). However, when people are closer than we are comfortable, psychological arousal increases to prepare for confrontation because escape may not be feasible (Wieser et al., 2010). When in a virtual meeting, it is not necessary to prepare for conflict for the duration of the meeting. This increased psychological arousal may lead to the phenomenon Zoom fatigue (Bailenson, 2021).

This research aims to examine Bailenson's (2021) theory of close-up eye gaze.

3. VIRTUAL INTERVIEWING

One organizational process that may be particularly susceptible to possible Zoom fatigue effects is the selection of employees, particularly during the interview stage. The purpose of selection is to increase the likelihood that the individuals hired will significantly contribute to the organization (Stone et al., 2013). A meta-analysis of 66 studies found that human resources (hiring and training) have strong relationships with firm performance (Crook et al., 2011) and a longitudinal study found that over 12 years in 359 organizations, selective staffing and internal training significantly predicted the firm's profit growth mediated by labor productivity (Kim & Ployhart, 2014). Because of its significant implications on important organizational outcomes, it is critical that organizations make advantageous decisions during the selection process. Specifically, decisions based on candidate qualifications and not irrelevant external factors (e.g., Zoom fatigue).

Interviews are used during the selection process to ask the candidate questions and evaluate their answers in order to determine the candidate's quality (Madera & Hebl, 2012). Traditionally, interviews have been conducted face-to-face. But at the turn of the century, organizations found that conducting interviews via videoconferencing reduced costs and selection time as well as provided organizations access to a diverse pool of applicants (Hanover, 2000). The use of virtual interviews has also been found to reduce administrative burdens and allow applicants more flexibility (Stone et al., 2013). In 2012, Zielinski reported that 10% of organizations were using videoconferences for at least

some of their interviews. This number had increased to 86% of organizations at the onset of the COVID-19 pandemic (Gartner, 2020).

This drastic increase in the use of videoconferences for interviewing has prompted a considerable amount of research comparing face-to-face interviews to virtual interviews. Two topics within this research are of relevance to this study: applicant reactions to the interview and ratings of the applicant. Applicant reactions are important because, as organizations increasingly rely on virtual interviews, they must be aware of how their job applicants react to the new process. Straus et al. (2001) found that applicants were more comfortable and reported that regulating conversation was easier in the face-to-face interview. They also found that applicant ratings of interviewer likability were higher in the face-to-face interviews. The researchers concluded that these findings may be due to the fact that an applicant's goal, not an interviewer's goal, is to make a good impression which requires them to monitor reactions; this is made difficult due to video time lags. The researchers propose that applicant perceptions may influence job acceptance or performance.

Two years after the publication of the Straus et al. article, Chapman et al. (2003) studied whether interview medium influenced applicant job acceptance rate. They found that while face-to-face interviews lead to significantly higher job offer acceptance intentions than telephone interviews, the difference between face-to-face and videoconference was only marginal. The researchers also studied perceived fairness. They found that job applicants had higher perceptions of interview fairness and perceived more favorable outcomes in face-to-face interviews than videoconferences. Interestingly, the researchers found that self-monitoring significantly moderated the relationship

between face-to-face interviews and perceived fairness, but this relationship did not remain significant for videoconferences. The researchers concluded this may be due to the communication barriers present in videoconferences inhibiting applicant's ability to manage their impressions, therefore making it an insignificant factor.

A meta-analysis over 10 years later by Blacksmith et al. (2016) found that, in face-to-face interviews, applicant reactions were more positive. They came to a similar conclusion as Chapman et al. (2003); the researchers postulated that this finding may be due to the restricted ability to use impression management in virtual interviews. It does not appear that applicant reactions to virtual interviews are equal to face-to-face reactions. Organizations should be aware of these reactions moving forward when using virtual interviewing.

The second topic within the virtual interviewing research of particular relevance to this study is ratings of the applicant. Straus et al. (2001) found that, although interviewers had more difficulty understanding and regulating conversation with applicants by video as compared to face-to-face interviews, ratings of applicant likability were not different between the two mediums. However, Blacksmith et al. (2016) found that interviewer ratings were lower in virtual interviews and this was even more true for studies that used real interviews rather than simulated interviews.

Chapman & Webster (2001) examined how perceived media richness, a medium's ability to convey verbal and nonverbal cues, influenced ratings of applicants. They found that perceived media richness did not directly influence whether interviewers rated the applicant as hireable. However, they did find an indirect relationship. Low perceived media richness increased the likelihood that the interviewer made external

attributions about the applicant's performance, and higher external attributions increased the likelihood that applicants were rated as hireable.

Recently, Mechelotti et al. (2022) examined how interview medium influenced interviewer ability to assess a candidate's personality. They found that interviewers rated openness, conscientiousness, extraversion, and agreeableness higher, with neuroticism lower in the face-to-face as compared to the virtual interviews. This finding is supported by McColl and Mechelotti (2019) who found that videoconference features made it difficult to accurately assess candidates' qualifications and personality. Both authors concluded that interpreting unclear communication cues may have made it difficult to accurately assess candidates' personality (Mechelotti et al., 2022; McColl & Mechelotti, 2019), as well as the presence of technical issues (McColl & Mechelotti, 2019), and difficulty communicating emotion (Mechelotti et al., 2022). McColl and Mechelotti (2019) concluded that training specific to virtual interviewing is needed for those personnel conducting interviews online.

Finally, Baker et al. (2020) studied whether the interviewer's role in an interview (passive or active) influenced their ratings of the candidate. Passive interviewers watched the interview and active interviewers asked the job applicant interview questions. The researchers found that participants playing a passive, viewer role in a face-to-face interview did not rate the applicant differently than those playing an active role. However, passive interviewers in a virtual interview rated job candidates as less likable, less hireable, and less competent, as well as having less agency than passive participants in the face-to-face interview. Passive, virtual participants also reported having more trouble paying attention to the candidate than passive, in-person participants. The

researchers concluded that comparing applicants that were interviewed in a face-to-face setting to applicants interviewed in a virtual setting would be unfair as the medium has been shown to influence applicant ratings.

This study will help examine why virtual interviews lead to lower ratings by examining the difference between ratings from three asynchronous video interviews (AVIs). AVIs are a passive form of virtual interviews in which the interviewee records answers to a list of interview questions to be sent in and reviewed by the organization. The interview questions are presented one at a time. Interviewees are given a set period of time to think about the question before they must begin recording their answer. Some AVI formats also give interviewees the option of reviewing and/or rerecording their answer before moving onto the next question (Lukacik et al., 2022).

4. HYPOTHESES

After reviewing research on the ways in which technology influences the selection process, authors Johnson et al. (2017) concluded that the design and interface of the selection technology may help alleviate some of the effects technology has on the selection process. Design features that mitigate or intensify Zoom fatigue are one of these features that requires more research.

First, whether the size of the applicant's face on the screen is related to fatigue is examined. If the applicant's face is large on the screen, the applicant's face will also be large on the interviewer's retina. This size signals how close the job applicant is from the interviewer. It is appropriate for the applicant to be in the interviewer's public or social space because they do not know each other (Hall, 1959). It is less appropriate for the applicant to be in the interviewer's personal space. The type of interpersonal space the applicant is in is proposed to influence the interviewer's level of fatigue (Bailenson, 2021).

Hypothesis One: Participants will be more fatigued when the size of the job applicant's face indicates they are in the participant's personal space and least fatigued when the size of the applicant's face indicates they are in the participant's public space.

Personal Space	→	Highest Fatigue
Social Space	→	Medium Fatigue
Public Space	→	Lowest Fatigue

In order to explore whether this feature of virtual interviewing (breaches of interpersonal space) influences interviewer ratings, the following is proposed:

Hypothesis Two: Participants will rate the job applicant's intellect, hireability, and general impressions of the applicant lowest when the size of the applicant's face indicates they are in the participant's personal space. Participants will rate the applicant's intellect, hireability, and general impressions of the applicant highest when the size of the applicant's face indicates they are in the participant's public space.

Personal Space	→	Lowest Ratings
Social Space	→	Medium Ratings
Public Space	→	Highest Ratings

Zoom fatigue has been found to have a significant positive relationship with depression, anxiety, and stress. It has also been found to have a significant negative indirect relationship with academic well-being and life satisfaction through psychological distress (Deniz et al., 2022). Because it has been found to influence some aspects of psychological functioning, it is proposed that Zoom fatigue will relate to interviewer's perceptions of job applicants.

Hypothesis Three: Participants with the highest level of fatigue will rate the job applicant's intellect, hireability, and general impressions of the applicant lowest. Participants with the lowest level of fatigue will rate the job applicant's intellect, hireability, and general impressions of the applicant highest.

High Fatigue	→	Lowest Ratings
Low Fatigue	→	Highest Ratings

5. METHOD

5.1 PARTICIPANTS

University students were recruited as participants from a small mid-west STEM university through Sona-Systems, a website used to set-up, recruit, and administer research participation credit. Participants were undergraduate students enrolled in a Psychology course. Each student's participation was reported to their psychology professor and course credit was allocated based on the professor's policy.

Data was collected from 121 participants. However, after data cleaning, 102 participants were retained. Three participants were removed for not completing both the pre- and in-lab surveys; three participants were removed due to the size of the screen being set up incorrectly as they watched the video; six participants were removed due to priming concerns: these participants did not complete the pre-study survey at least one hour before their in-lab appointment. Finally, seven participants were removed for incorrectly answering the attention check: What color shirt was the applicant wearing? 35 participants remained in the public space condition, 32 remained in the social space condition, and 35 remained in the personal space condition.

Participants' ages ranged from 18 to 34 with a mean of 20.41 ($sd = 2.64$). There were over twice as many male participants in the sample ($N = 72$) as compared to female participants ($N = 28$). One participant reported being non binary and one participant preferred not to respond. The sample reported being White ($N = 80$), Asian ($N = 10$), Hispanic ($N = 4$), Multiracial ($N = 4$), Black ($N = 3$), and Native American ($N = 1$).

5.2 PROCEDURE

When participants signed up for the study on SONA, they were asked to complete the pre-study survey before they came in for the in-lab portion of the study. The pre-study survey included a Zoom Exhaustion and Fatigue scale and a Big Five personality scale (for details, see section 5.3 Measures). This information was collected from participants to control for various individual participant differences. The pre-study survey also prompted participants to create a unique code (the last four digits of their phone number followed by their favorite animal). This code was used to match up participant's pre-study survey to their in-person survey.

For the in-person portion of the study, participants were reminded of the informed consent information upon entering the lab and asked for verbal consent before continuing. Then participants were asked to walk up to a life-size face (Figure 5.1.) taped on the wall and stop at a distance they felt comfortable having a conversation.

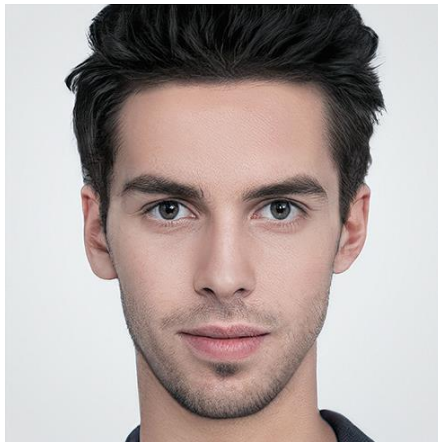


Figure 5.1. Life-Size Face

This was done to measure participant's preferred interpersonal distance (Dosey & Meisels, 1969; Uzzell & Horne, 2006). This distance was written on a sticky note and given to the participant to enter into the survey. Participants' preferred interpersonal distance ranged from 15 to 38 inches with a mean of 34.34 inches ($sd = 9.14$).

Participants were then asked to take a seat at a computer station. In order to keep participants a consistent distance from the computer screen, they were asked to keep the chair legs on the floor markings when they took a seat. After entering their unique code (last four digits of their phone number followed by their favorite animal) and the distance written on a sticky note, participants read an introduction to the study (Appendix A). The introduction informed participants that they were participating in a study on the effectiveness of asynchronous video interviews (AVIs). This interview format was selected for the study because AVIs do not require any back-and-forth interaction between the interviewee and the interviewer. This allowed participants to view a pre-recorded interview rather than interacting with an interviewee during the study. This also eliminated the possibility that the participants would experience Zoom fatigue from another cause: participants would not be working to deliberately send nonverbal cues such as deliberately nodding or imitating eye contact by directly staring at the camera (Bailenson, 2021). Additionally, participants would not be watching themselves on the screen, working to center themselves on camera or reduce gestures because they were not interacting live with another person. This helped us focus in on just the effects of interpersonal distance.

In addition to informing participants that they were participating in a study on the effectiveness of AVIs, the introduction gave participants context for the video including

what role they were playing (interviewer), what position the interviewee was applying for (peer mentor), a job description of the position (Appendix B), and what questions the interviewee was asked in the interview (Appendix C). The interview questions include two biodata questions, six behavioral interview questions, and five situational interview questions. These questions were developed based on a peer mentor job description from Hiram College (2018) and the psychometrically sound interview question characteristics outlined in Landy & Conte (2016). Examples of the questions include “Share an example of how you were able to motivate a peer” and “How would you build a peer relationship with a virtual/distance student?”

The introduction also informed the participants that they would be evaluating the intellect, hireability, and general impressions of the interviewee at the end of the video.

After reading the introduction, participants watched the AVI video. Participants watched one of three videos: the personal space, social space, or public space video. Participants were randomly assigned to one of these three conditions by alternating which video was presented each time a participant came in. Participants assigned to the public space condition watched a video in which the interviewee’s face cast the same size image on the retina as if the interviewee were 13 feet from the participant (Figure 5.2.). Participants assigned to the social (Figure 5.3.) and personal space (Figure 5.4.) conditions watched videos in which the interviewee’s face cast the same size image on their retina as if the interviewee were eight feet and three feet, respectively, from the participant.



Figure 5.2. Public Space Example

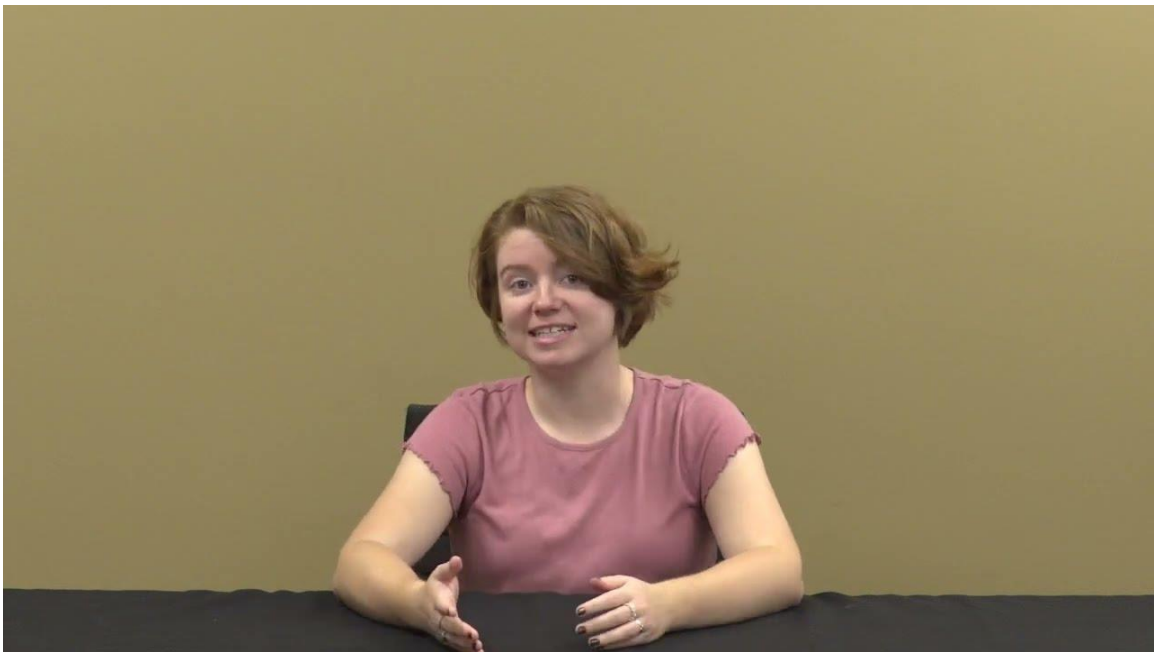


Figure 5.3. Social Space Example



Figure 5.4. Personal Space Example

To ensure the size of the interviewee's face was constant within conditions, monitors of the same size were used for each participant. Additionally, the chairs were kept at a consistent distance from the desk by marking the distance on the floor (Figure 5.5.).



Figure 5.5 Marked Distance

The same recordings were used across each condition, the only difference being the video was cropped to increase the size of the actor's face on the screen in the personal and social space conditions. This ensured a number of things. First, the quality of the AVI actor's responses were equal across each condition. Second, the race and sex of the actor were held constant across each video. Recent studies examining the effects of race and sex similarities on interviewer ratings have found that when interviews are highly structured, race and sex similarities between the interviewer and interviewee do not influence the scores administered to interviewees (Sacco et al., 2003; McCarthy, 2010; Michelotti et al., 2022). However, for this study, the race and sex of the actor were kept constant across participants and conditions for simplicity.

The AVI video lasted a total of 21 minutes (<https://youtu.be/rWLg2jvsYqI>). Researchers Berens and Sells (1944) found that participants experienced accommodation fatigue in which vision becomes blurred after 30 minutes of viewing a stimulus up close. Over 80 years later, Jaiswal et al. (2019) found that participants reading from a smartphone for 12 to 30 minutes experienced greater accommodation lag in which their vision was less responsive to changing distances than those that read printed text. Doty et al. (2020) also found that the duration of a video meeting significantly predicted visual discomfort such that as the duration of a video conference increased, the visual discomfort symptoms experienced also increase. Therefore 21 minutes was chosen to increase the likelihood participants may feel fatigue, but not assure fatigue.

After viewing the video, the participants rated the interviewee, completed a measure to evaluate their fatigue, provided information on their previous interview

experience and recent video conferencing activity, and provided demographic information.

5.3 MEASURES

5.3.1 Pre-Study Survey. The pre-study survey included a measure of personality and a measure of Zoom Fatigue.

5.3.1.1 Personality. Before entering the lab, participants completed the pre-study survey. The first scale in the pre-study survey was a Big Five personality survey (Goldberg, 1992; Appendix D). The survey examined extraversion (Cronbach's $\alpha = .92$; "Am the life of the party"), agreeableness (Cronbach's $\alpha = .84$; "Am interested in people"), conscientiousness (Cronbach's $\alpha = .81$; "Am always prepared"), emotional stability (Cronbach's $\alpha = .87$; "Am relaxed most of the time"), and openness (Cronbach's $\alpha = .79$; "Have a vivid imagination"). Participants rated how accurate the items described themselves on a 9-point scale ranging from "Very Inaccurate" to "Very Accurate." Assessing personality allowed us to control for the ways various personalities react to job applicants differently (Hilliard & Macan, 2009).

5.3.1.2 Zoom fatigue. After participants completed the Big Five personality scale, participants' fatigue was assessed with the Zoom Exhaustion and Fatigue (ZEF) Scale (Fauville et al., 2021; Appendix E). The ZEF Scale was developed in 2021 in reaction to the COVID-19 pandemic and to the increased interest in studying the causes and effects of the Zoom fatigue phenomenon. Researchers had no way of paring out fatigue due to video conferencing from worker's general fatigue. Therefore, researchers

at Stanford University developed the ZEF Scale for psychologists studying the phenomenon (Fauville et al., 2021).

The wording of the questions was modified to fit the context of this study. Questions were assessed using a 9-point Likert type scale with anchors ranging from “Not at all” to “Extremely.” The modified ZEF scale has 15 items including: “How much do you want to be alone?” “How blurred is your vision?” and “How emotional drained do you feel?” The measure had high reliability (Cronbach’s $\alpha = .91; .93$). Assessing ZF before the in-lab portion of the study provided a baseline level of each participant’s fatigue and allowed us to see change in participant’s ZF level after the manipulation.

5.3.2 In-Lab Survey. The in-lab survey included an assessment of the job applicant and a measure of the participant’s Zoom Fatigue.

5.3.2.1 Applicant assessment. During the in-lab portion of the study, after watching the AVI video, participants rated the applicant’s level of intellect, general impressions of the interviewee, and the interviewee’s level of hireability with questions adapted from Schroeder and Epley (2015) and Baker et al. (2020).

Level of intellect was assessed with three items: participants rated (1) How competent did the applicant seem, (2) How thoughtful did the applicant seem, and (3) How intelligent did the applicant seem. Each question was rated on a 9-point scale from 1 to 9. Anchors for the three items range from “Not at all Competent,” “Not at all Thoughtful,” and “Not at all Intelligent” to “Extremely Competent,” “Extremely Thoughtful,” and “Extremely Intelligent” (Appendix F). Thoughtfulness, intelligence, and competence were averaged to form a composite score of intellect (Cronbach’s $\alpha = .77$).

General impressions of the interviewee were assessed with three items: participants rated (1) How much did you like the applicant, (2) How positive is your overall impression of the applicant, and (3) How negative is your overall impression of the applicant? Each question was rated on a 9-point scale from 1 to 9. Anchors for the three items range from “Did not like at all,” “Not at all Positive,” and “Not at all Negative” to “Liked Extremely,” “Extremely Positive,” and “Extremely Negative” (Appendix G). Positive and negative impression (which was reverse scored) were averaged with liking ratings to form a composite score of general impressions (Cronbach’s $\alpha = .87$).

Hireability was assessed with one item: participants rated “How likely would you be to hire the applicant for the job?” on a 9-point scale with anchors ranging from “Not at all Likely” to “Extremely Likely” (Appendix H).

5.3.2.2 ZEF Scale. After participants rated their general impressions of the applicant as well as the applicant’s intellect and hireability, participants’ fatigue was assessed with the same ZEF Scale used in the pre-study survey (Fauville et al., 2021; part 5.3.1.2).

5.3.3 Control Variables. The control variables included measures of interviewing experience and the number of recent video conferences attended.

5.3.3.1 Interviewing experience. After completing the ZEF scale, participants were also asked about their previous interview experience. They were asked: “How many interviews (in person and virtual) have you conducted in the past? (As an interviewer NOT an interviewee).” Assessing participants’ previous interview experience will allow

us to control for any difference that interviewing background may have on the participants in the lab (Blacksmith et al., 2016).

5.3.3.2 Number of video conferences. Finally, participants were also asked to report the average number of video conferences (VC) they attend a week and how many VCs they have attended in the past 24 hours. This information will be used as a control measure as Fauville et al. (2021) found that ZEF scores were positively correlated with the number of VCs a participant attended [$r(2724) = 0.27, p < .001$] such that as the number of VCs participants attended each week increased, ZEF scores increased. Including the average number of VCs will allow us to control for participants that may enter the study with higher levels of Zoom fatigue.

6. RESULTS

Each hypothesis was tested using a multiple linear regression analysis. The public and personal space conditions were compared to the social space condition. Control factors included interview experience, baseline Zoom fatigue, Big Five Personality factors, the average number of VCs attended in one week, the number of VCs attended in the past 24 hours, and participant's preferred interpersonal distance.

6.1 HYPOTHESIS ONE

The first hypothesis states that participants will experience greater Zoom fatigue when the size of the applicant's face indicates they are in the participant's personal space as compared to social space as well as less Zoom fatigue when in the public space condition as compared to the social space condition. A multiple linear regression was performed to examine the effects of condition and the control variables on Zoom fatigue (Table 6.1.). The full model was significant, $F(12, 89) = 12.44$, $p < .0001$, and explained 63% of the variance (R^2).

Table 6.1. Results of Hypothesis One

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Condition				
Public space	-0.02	-0.05	0.22	0.834
Personal space	0.23	0.07	0.23	0.753
Control Variables				
Baseline ZF	0.61	0.64	0.10	<0.0001***
Preferred ID	0.002	0.0003	0.01	0.980
Extraversion	0.02	0.02	0.07	0.823

Table 6.1. Results of Hypothesis One (cont.)

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Control Variables				
Agreeableness	-0.04	-0.05	0.09	0.590
Conscientiousness	-0.005	-0.006	0.08	0.945
Emotional Stability	-0.22	-0.20	0.08	0.016*
Openness	-0.00006	-0.00008	0.09	0.999
Interview experience	-0.06	-0.02	0.02	0.337
VC in past 24hrs	0.09	0.16	0.13	0.205
VC in past week	-0.03	-0.03	0.06	0.659

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Two control variables were significant predictors of Zoom fatigue after watching the AVI: baseline ZF ($t(89) = 6.734, p < .0001$) and emotional stability ($t(89) = -2.445, p = .016$). Baseline ZF has the largest effect on ZF after watching the AVI ($\beta = 0.61$).

Participants with a high baseline level of ZF reported higher levels of ZF after watching the AVI. Emotional stability was also shown to have an effect on ZF ($\beta = -0.22$).

Participants who reported to be more emotionally stable reported lower levels of ZF after watching the AVI.

Neither the public or personal space conditions had a significantly different level of Zoom fatigue as compared to the social space condition. However, the results were in the predicted direction; those in the personal space condition experienced the most ZF ($\bar{x} = 3.21, sd = 1.41$), then those in the social space condition ($\bar{x} = 3.19, sd = 1.14$), and those in the public space condition experience the lowest level of ZF ($\bar{x} = 2.95, sd = 1.41$). Nevertheless, condition was not a statistically significant predictor of Zoom fatigue. Therefore, hypothesis one is not supported.

6.2 HYPOTHESIS TWO

The second hypothesis states that participants will rate the job applicant lowest when the size of the applicant's face indicates they are in the participant's personal space as compared to public space. But first, to determine whether the ratings (intellect, hireability, and general impressions) hang together and should be combined into one scale or whether they should be treated separately, as individual constructs, a confirmatory factor analysis was performed. This was done because Baker et al. (2020) performed a similar analysis with the same items in order to see whether a single factor model was appropriate. Additionally, the internal consistency between the seven items (Cronbach's $\alpha = .95$) was very high indicating that all items were a consistent measure of the concept overall impressions of the applicant.

The confirmatory factor analyses suggested that an appropriate fitting model for applicant impressions was a three-factor structure ($\chi^2 (12) = 16.512$, $p = 0.169$, CFI = .990, RMSEA = .060 [.000, .124], SRMR = .032) where factors reflected intellect (e.g., "How competent did the applicant seem?", $\alpha = .773$), hireability (e.g., "How likely would you be to hire the applicant for the job?"), and general impressions (e.g., "How much did you like the applicant?", $\alpha = .868$).

A single factor model with all applicant impression items loading onto a single impression factor was also tested. This model also presented an appropriate fit ($\chi^2 (14) = 20.504$, $p = .115$, CFI = .986, RMSEA = .067 [.000, .124], SRMR = .037).

While both models had acceptable fit, a chi-square difference test was utilized to determine if one model had a better fit. Notably, the models were not significantly different ($p = 0.136$); however, the three-factor chi-squared (16.512) was smaller than the

single factor chi-squared (20.504). Therefore, the three-factor structure may be a slightly better option. However, the hypothesis was examined with both the three-factor and single factor model.

6.2.1 Hypothesis Two: Intellect. To test the three-factor structure, three multiple linear regressions were performed to examine the impact of condition and control variables on intellect, hireability, and general impressions separately. The first multiple linear regression examined the effects of condition and the control variables on ratings of applicant intellect (Table 6.2.). The full model was approaching significance, $F(12, 89) = 1.775$, $p = .064$, and explained 19% of the variance (R^2).

Table 6.2. Results of Hypothesis Two: Intellect

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Condition				
Public space	0.291	0.538	0.220	0.017 *
Personal space	0.129	0.238	0.221	0.285
Control Variables				
Baseline ZF	0.223	0.157	0.094	0.099 .
Preferred ID	-0.111	-0.011	0.010	0.294
Extraversion	-0.092	-0.054	0.068	0.426
Agreeableness	0.197	0.157	0.089	0.080 .
Conscientiousness	-0.150	-0.116	0.082	0.164
Emotional Stability	0.078	0.048	0.082	0.562
Openness	-0.003	-0.002	0.090	0.981
Interview experience	0.161	0.032	0.020	0.118
VC in past 24hrs	-0.185	-0.217	0.127	0.091 .
VC in past week	-0.033	-0.018	0.058	0.761

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Condition was a significant predictor of intellect ratings. The public space condition was significantly different than the social space condition ($t(89) = 2.443$, $p = .017$, $\beta = 0.29$). Participants in the public space condition rated the applicant as having significantly higher intellect ($\bar{x} = 7.82$, $sd = .89$) than those in the social space condition ($\bar{x} = 7.33$, $sd = .88$). This is in the hypothesized direction; participants rated the applicant as having less intellect when the face was larger on the screen. However, the personal space condition was not significantly different than the social space condition ($t(89) = 1.076$, $p = .285$, $\beta = 0.13$). Participants in the personal space condition ($\bar{x} = 7.49$, $sd = 0.83$) did not rate the applicant significantly different than those in the social space condition like hypothesized.

Three control variables were approaching significance: baseline Zoom fatigue ($t(89) = 1.665$, $p = .099$, $\beta = 0.22$), agreeableness ($t(89) = 1.772$, $p = .080$, $\beta = 0.20$), and video conferences attended in the past 24 hours ($t(97) = -1.706$, $p = .091$, $\beta = -0.19$). Participants who reported greater levels of baseline ZF and agreeableness tended to rate the applicant as having more intellect, while participants who attended more VCs in the past 24 hours rated the applicant as having less intellect.

6.2.2 Hypothesis Two: Hireability. The second multiple linear regression examined the effects of condition and the control variables on ratings of applicant hireability (Table 6.3.). The full model was significant, $F(12, 89) = 2.240$, $p = .016$, and explained 23% of the variance (R^2).

Table 6.3. Results of Hypothesis Two: Hireability

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Condition				
Public space	0.326	0.879	0.313	0.006 **
Personal space	0.129	0.346	0.314	0.274
Control Variables				
Baseline ZF	0.154	0.157	0.134	0.243
Preferred ID	-0.026	-0.004	0.014	0.798
Extraversion	-0.326	-0.282	0.096	0.004 **
Agreeableness	0.307	0.356	0.126	0.006 **
Conscientiousness	-0.099	-0.112	0.117	0.342
Emotional Stability	0.126	0.113	0.116	0.335
Openness	-0.093	-0.119	0.127	0.352
Interview experience	0.024	0.007	0.029	0.810
VC in past 24hrs	0.011	0.019	0.180	0.915
VC in past week	-0.040	-0.031	0.082	0.708

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Again, condition was a significant predictor, the public space condition was significantly different than the social space condition ($t(89) = 2.811$, $p = .006$, $\beta = 0.33$). Participants in the public space condition rated the applicant as having significantly greater hireability ($\bar{x} = 8.1$, $sd = .91$) than those in the social space condition ($\bar{x} = 7.13$, $sd = 1.66$). This is in the hypothesized direction; participants rated the applicant as less hireable when the face was larger on the screen. However, the personal space condition was not significantly different than the social space condition ($t(89) = 1.101$, $p = .274$, $\beta = 0.13$). Participants in the personal space condition ($\bar{x} = 7.51$, $sd = 1.07$) did not rate the applicant significantly different than those in the social space condition like hypothesized.

Two control variables significantly predicted ratings of hireability: extraversion ($t(89) = -2.921, p = 0.004, \beta = -0.28$), and agreeableness ($t(89) = 2.827, p = .006, \beta = 0.36$). The results show that as participant's extraversion increases, their ratings of the applicant's hireability decrease. Moreover, as agreeableness increases, ratings of the applicant's hireability increase.

6.2.3 Hypothesis Two: General Impressions. The third multiple linear regression examined the effects of condition and the control variables on ratings of the applicant's general impressions (Table 6.4.). The full model was not significant, $F(12, 89) = 1.403, p = 0.179$, and explained 16% of the variance (R^2).

Table 6.4. Results of Hypothesis Two: General Impressions

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Condition				
Public space	0.271	0.645	0.289	0.028 *
Personal space	0.197	0.468	0.291	0.111
Control Variables				
Baseline ZF	0.057	0.052	0.124	0.677
Preferred ID	-0.047	-0.006	0.013	0.660
Extraversion	-0.207	-0.158	0.089	0.080 .
Agreeableness	0.215	0.220	0.116	0.061 .
Conscientiousness	-0.132	-0.132	0.108	0.227
Emotional Stability	0.063	0.050	0.106	0.646
Openness	-0.037	-0.044	0.118	0.712
Interview experience	0.005	0.001	0.027	0.962
VC in past 24hrs	-0.039	-0.058	0.167	0.729
VC in past week	-0.109	-0.074	0.076	0.334

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Again, condition was a significant predictor, the public space condition was significantly different than the social space condition ($t(89) = 2.228, p = .028, \beta = 0.27$). Participants in the public space condition rated the applicant as having significantly better general impressions ($\bar{x} = 7.71, sd = 1.01$) than those in the social space condition ($\bar{x} = 7.00, sd = 1.35$). This is in the hypothesized direction; participants rated the applicant as having better general impressions when the face was smaller on the screen. However, like the intellect and hireability models, the personal space condition was not significantly different than the social space condition ($t(89) = 1.610, p = .111, \beta = 0.20$). Participants in the personal space condition ($\bar{x} = 7.41, sd = 0.95$) did not rate the applicant significantly different than those in the social space condition like hypothesized.

Two control variables were approaching significance: extraversion ($t(89) = -1.771, p = 0.080, \beta = -0.21$), and agreeableness ($t(89) = 1.895, p = .061, \beta = 0.22$). Like hireability, as participant's extraversion increases, their ratings of the applicant's general impression decrease. Finally, as agreeableness increases, ratings of the applicant's general impressions increase.

In sum, the three-factor structure was examined with three multiple linear regressions that had slightly different outcomes. Intellect, hireability, and general impressions were all significantly predicted by condition. Participants in the public space condition rated the applicant as having higher intellect, hireability, and general impressions than participants in the social space. However, participants in the personal space condition did not rate the applicant any differently than participants in the social space did. This provides partial support for hypothesis two.

Finally, ratings of hireability were significantly predicted by extraversion and agreeableness. Extraversion and agreeableness were approaching significance to predict ratings of general impressions. Additionally, agreeableness, baseline Zoom fatigue, and video conferences in the past 24 hours were approaching significance to predict ratings of intellect.

6.2.4 Hypothesis Two: Overall Impressions. A fourth linear regression was performed because the confirmatory factor analysis did not indicate that the three-factor structure was significantly better than the single factor model. To examine whether condition and the control variables predict one overall impression score of the applicant, a linear regression was performed (Table 6.5.). The full model was significant, $F(12, 89) = 1.940$, $p = 0.040$, and explained 21% of the variance (R^2).

Table 6.5. Results of Hypothesis Two: Overall Impressions

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Condition				
Public space	0.326	0.687	0.249	0.007 **
Personal space	0.166	0.351	0.251	0.164
Control Variables				
Baseline ZF	0.152	0.122	0.106	0.255
Preferred ID	-0.061	-0.007	0.011	0.557
Extraversion	-0.244	-0.165	0.077	0.035 *
Agreeableness	0.269	0.2442	0.100	0.017 *
Conscientiousness	-0.136	-0.120	0.093	0.202
Emotional Stability	0.100	0.070	0.092	0.451
Openness	-0.055	-0.055	0.101	0.589
Interview experience	0.059	0.013	0.023	0.560
VC in past 24hrs	-0.0634	-0.085	0.143	0.554
VC in past week	-0.068	-0.041	0.065	0.534

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Once again, condition is a significant predictor, the public space condition was significantly different than the social space condition ($t(89) = 2.762, p = .007, \beta = 0.33$). Participants in the public space condition rated the applicant as having significantly better overall impressions ($\bar{x} = 7.86, sd = 0.84$) than those in the social space condition ($\bar{x} = 7.15, sd = 1.21$). This is in the hypothesized direction; participants rated the applicant as having better overall impressions when the face was smaller on the screen. And once again, the personal space condition was not significantly different than the social space condition ($t(89) = 1.403, p = .164, \beta = 0.17$). Participants in the personal space condition ($\bar{x} = 7.50, sd = 0.85$) did not rate the applicant significantly different than those in the social space condition like hypothesized.

Significant control variables include extraversion ($t(98) = -2.146, p = .035, \beta = -0.24$) and agreeableness ($t(98) = 2.442, p = .017, \beta = 0.27$). As participant's extraversion increases, their ratings of the applicant's overall impressions decrease. Finally, as agreeableness increases, ratings of the applicant's overall impressions increase. These results mirror the results of the hireability and general impression regression models.

6.3 HYPOTHESIS THREE

The third hypothesis states that participants will rate the job applicant lower when they experience higher levels of Zoom fatigue. As indicated by the confirmatory factor analysis, the three-factor structure of applicant intellect, hireability, and general impressions may be a slightly better option. However, the hypothesis was examined with both the three-factor and single factor model.

6.3.1 Hypothesis Three: Intellect. To test the three-factor structure, three multiple linear regressions were performed to examine intellect, hireability, and general impressions separately. The first multiple linear regression examined the effects of Zoom fatigue and the control variables on ratings of applicant intellect (Table 6.6.). The full model was not significant, $F(11, 90) = 1.348$, $p = .212$, and explained 14% of the variance (R^2).

Table 6.6. Results of Hypothesis Three: Intellect

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Zoom Fatigue				
ZEF Score	0.085	0.057	0.107	0.595
Control Variables				
Baseline ZF	0.142	0.091	0.118	0.401
Preferred ID	-0.128	-0.012	0.010	0.231
Extraversion	-0.113	-0.067	0.069	0.337
Agreeableness	0.233	0.185	0.090	0.043 *
Conscientiousness	-0.148	-0.115	0.084	0.176
Emotional Stability	0.092	0.056	0.086	0.514
Openness	0.040	0.035	0.091	0.699
Interview experience	0.119	0.024	0.021	0.251
VC in past 24hrs	-0.159	-0.185	0.130	0.159
VC in past week	-0.057	-0.030	0.056	0.595

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Zoom fatigue was not a significant predictor of intellect ratings ($t(90) = 0.533$, $p = .595$, $\beta = 0.09$). Those that were more fatigued after watching the AVI did not rate the applicant as having more or less intellect than those participants that felt little fatigue.

One control variable was a significance predictor of intellect ratings: agreeableness ($t(90) = 2.058, p = .043, \beta = 0.23$). Participants who reported greater levels of agreeableness tended to rate the applicant as having more intellect.

6.3.2 Hypothesis Three: Hireability. The second multiple linear regression examined the effects of Zoom fatigue and the control variables on ratings of the applicant's hireability (Table 6.7.). The full model was approaching significance, $F(11, 90) = 1.668, p = 0.0937$, and explained 17% of the variance (R^2).

Table 6.7. Results of Hypothesis Three: Hireability

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Zoom Fatigue				
ZEF Scale	0.133	0.129	0.153	0.399
Control Variables				
Baseline ZF	0.038	0.039	0.169	0.817
Preferred ID	-0.048	-0.007	0.015	0.647
Extraversion	-0.351	-0.303	0.099	0.003 **
Agreeableness	0.347	0.402	0.129	0.002 **
Conscientiousness	-0.096	-0.109	0.121	0.371
Emotional Stability	0.148	0.132	0.123	0.287
Openness	-0.044	-0.057	0.130	0.663
Interview experience	-0.020	-0.006	0.029	0.847
VC in past 24hrs	0.036	0.062	0.186	0.740
VC in past week	-0.071	-0.054	0.081	0.502

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Once again, Zoom fatigue was not a significant predictor of hireability ratings ($t(90) = 0.848, p = .399, \beta = 0.13$). Those that were more fatigued after watching the AVI did not rate the applicant as being more or less hireable than those participants that felt little fatigue.

Two control variables were significant predictors of hireability ratings: extraversion ($t(90) = -3.046, p = .0003, \beta = -0.35$) and agreeableness ($t(90) = 3.12, p = .0004, \beta = 0.35$). Participants who reported greater levels of extraversion tended to rate the applicant as being less hireable and participants who were more agreeable tended to rate the applicant as being more hireable.

6.3.3 Hypothesis Three: General Impressions. The third multiple linear regression examined the effects of Zoom fatigue and the control variables on ratings of applicant general impressions (Table 6.8.). The full model was not significant, $F(11, 90) = 1.035, p = .426$, and explained 11% of the variance (R^2).

Table 6.8. Results of Hypothesis Three: General Impressions

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Zoom Fatigue				
ZEF Score	0.088	0.076	0.140	0.589
Control Variables				
Baseline ZF	-0.017	-0.015	0.155	0.921
Preferred ID	-0.055	-0.007	0.013	0.611
Extraversion	-0.227	-0.173	0.091	0.060 .
Agreeableness	0.255	0.261	0.118	0.029 *
Conscientiousness	-0.137	-0.137	0.110	0.219
Emotional Stability	0.089	0.070	0.113	0.534
Openness	-0.004	-0.004	0.118	0.972
Interview experience	-0.036	-0.009	0.027	0.734
VC in past 24hrs	-0.008	-0.012	0.170	0.943
VC in past week	-0.106	-0.072	0.074	0.331

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Again, Zoom fatigue was not a significant predictor of general impression ratings ($t(90) = 0.543, p = .589, \beta = 0.09$). Those that were more fatigued after watching the AVI

did not rate the applicant as having better general impressions than those participants that felt little fatigue.

One control variable significantly predicted ratings of general impressions, again agreeableness ($t(90) = 2.218$, $p = 0.029$, $\beta = 0.26$). As agreeableness increases, ratings of the applicant's general impressions also increase.

In sum, the three-factor structure was examined with three multiple linear regressions that had slightly different outcomes. None of the three applicant ratings (intellect, hireability, and general impressions) were significantly predicted by Zoom fatigue. Therefore, there was no support for hypothesis three.

All three applicant ratings were significantly predicted by agreeableness. Extraversion significantly predicted hireability and was approaching significance to predict general impressions.

6.3.4 Hypothesis Three: Overall Impressions. A fourth linear regression was performed because the confirmatory factor analysis did not indicate that the three-factor structure was significantly better than the single factor model. To examine whether condition and the control variables predict one overall impression score of the applicant, a linear regression was performed (Table 9). The full model was not significant, $F(11, 90) = 1.380$, $p = 0.196$, and explained 14% of the variance (R^2).

Table 6.9. Results of Hypothesis Three: Overall Impressions

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
	Zoom Fatigue			
ZEF Score	0.115	0.087	0.121	0.474

Table 6.9. Results of Hypothesis Three: Overall Impressions (cont.)

Predictor	Standardized Coefficient	Unstandardized Coefficient	Standard Error	p-value
Control Variables				
Baseline ZF	0.052	0.041	0.135	0.760
Preferred ID	-0.079	-0.009	0.012	0.460
Extraversion	-0.268	-0.181	0.079	0.024 *
Agreeableness	0.312	0.283	0.102	0.007 **
Conscientiousness	-0.136	-0.120	0.096	0.214
Emotional Stability	0.123	0.086	0.098	0.380
Openness	-0.009	-0.009	0.103	0.934
Interview experience	0.013	0.003	0.023	0.900
VC in past 24hrs	-0.034	-0.045	0.148	0.760
VC in past week	-0.087	-0.052	0.064	0.418

. $p < .10$ * $p < .05$. ** $p < .01$. *** $p < .001$

Like the first three models, Zoom fatigue was not a significant predictor ($t(90) = 0.720$, $p = 0.473$, $\beta = 0.12$). Those that were more fatigued after watching the AVI did not rate the applicant as having better overall impressions than those participants that felt little fatigue.

Extraversion ($t(90) = -2.290$, $p = .024$, $\beta = -0.24$) and agreeableness ($t(90) = 2.761$, $p = 0.007$, $\beta = 0.31$) were once again significant control predictors. As participant's extraversion increases, their ratings of the applicant's overall impressions decrease. Finally, as agreeableness increases, ratings of the applicant's overall impressions increase. These results mirror the results of the three-factor structure.

7. DISCUSSION

The present study found that Zoom fatigue did not significantly increase as the size of the applicant's face increased on the screen. Therefore, Bailenson's (2021) proposed theory that close-up eye gaze leads to ZF was not supported. However, the difference between participant's level of ZF in each condition was in the hypothesized direction. Participants that watched the video in which the applicant's face was very small experienced the least amount of fatigue ($\bar{x} = 2.91$, $sd = 1.41$) while the participants that watched the video in which the applicant's face was very large experienced the most fatigue ($\bar{x} = 3.21$, $sd = 1.41$).

While the size of the applicant's face did not significantly predict participant's ZF, two control variables did: baseline ZF and emotional stability. Baseline ZF had a large effect ($\beta = 0.61$) on ZF in which participants with a high baseline level reported higher levels of ZF after watching the AVI. Additionally, people characterized by emotional stability are generally relaxed, not moody, and manage stress easily. Therefore, it is unsurprising that participants who reported being more emotionally stable, who do not get stressed quickly, reported lower levels of ZF after watching the AVI as compared to those who are not emotionally stable.

That being said, it is surprising that the number of VC attended in the past week and the past 24 hours did not significantly predict ZF. This is unexpected as other research has found that the number of VC attended in a week is positively related to ZF (Fauville et al., 2021). However, upon closer inspection, in this data set, there was very little variability between participants; 80% of participants had attended zero VC in the

past 24 hours (Figure 7.1.) and 60% had attended zero in the past week (Figure 7.2.). The sample likely did not have many opportunities to attend VC frequently as only 12% of the total classes/sections offered at the university were offered online in the Spring of 2023 (the semester in which 89% of the data was collected; the other 11% was collected during the Fall 2022 semester). Therefore, in a sample of individuals who attend more VCs in a week, we would likely find that the number of VC attended is a significant predictor of ZF (Fauville et al., 2021).

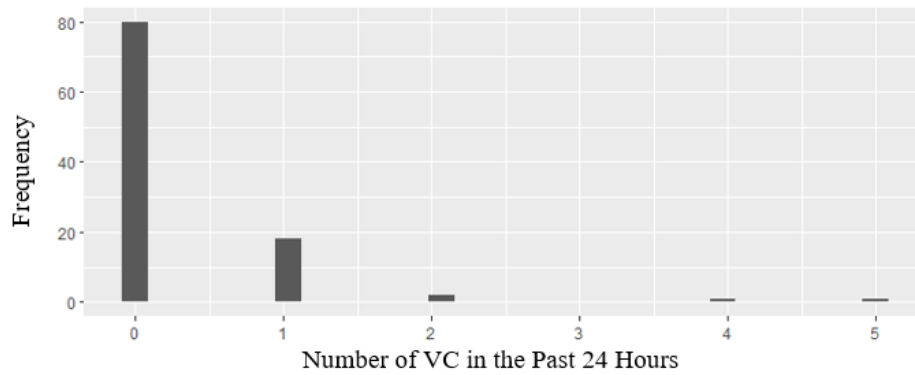


Figure 7.1. Number of Video Conferences in the Past 24 Hours

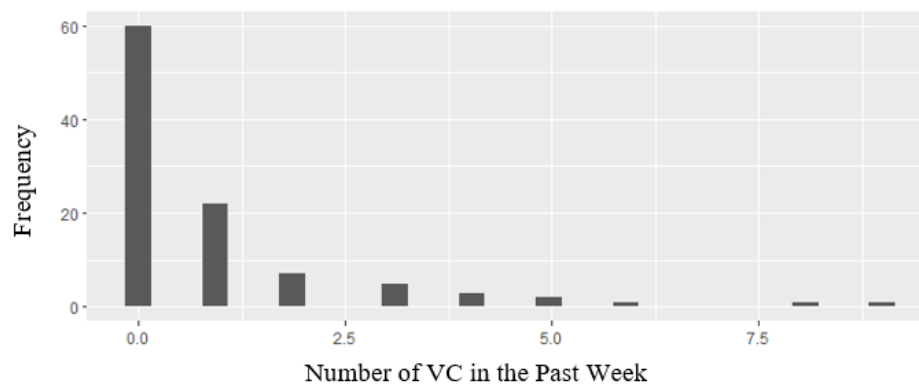


Figure 7.2. Number of Video Conferences in the Past Week

The present study also found that ratings of the applicant decreased as interpersonal distance decreased. Participants that watched the video in which the applicant's face indicated that they were 13 feet away rated the applicant better than those that watched the video in which the applicant's face indicated they were 8 feet away. However, those in the three feet condition did not rate the applicant differently than those in the 8 feet condition. Both the three-factor structure and single factor model provide partial support for hypothesis two in this pattern.

It is unclear why the personal and social space conditions were not significantly different. It is likely that those in both the personal and social space conditions rate applicants significantly lower than those in the public space condition. If participants felt their interpersonal space had been breached in both conditions, this may lead them both to give decreased applicant rating. If the participant did not feel it was appropriate in an interview setting for the applicant to be within 3 and 8 feet, then this is possible.

Two personality factors also significantly predicted ratings of the applicant: agreeableness and extraversion. Agreeableness significantly predicted ratings of hireability and overall impressions as well as approached significance in the general impressions and intellect models. This may have been found because individuals high in agreeableness are often supportive and trustworthy. Hilliard and Macan (2009) found that those who were more agreeable rated a job applicant as being more helpful and obedient. In addition to agreeableness, extraversion significantly predicted ratings of hireability and overall impressions as well as approached significance in the general impressions model. As participant extraversion increased, their ratings of the applicant decreased. There is less previous support for this finding. However, extraverted individuals are often

outgoing and feel comfortable sharing their opinions. So, it may be likely that the extraverted participants felt they could use the lower end of the scale more freely than the introverted participants. Additionally, it could be possible that, because extraverted individuals are social and open, they expect more from job applicants in terms of how they act, leading the participant to rate the applicant lower than those introverted participants.

Finally, this study did not find any support that applicant ratings were influenced by the participant's level of Zoom fatigue. This hypothesis was proposed as ZF has been found to influence some aspects of psychological functioning like stress and academic well-being (Deniz et al., 2022). However, it does not appear that ZF (as measured here) relates to the interviewer's perceptions of job applicants.

7.1 LIMITATIONS

This study had several limitations that should be considered. First, the sample was highly homogeneous. All of the participants were undergraduate college students studying in America. And most of the participants were white males (50.4% of the sample). These demographic characteristics should not influence how close or far away the participant perceives the job applicant to be; all humans use size constancy to help them determine the distance between themselves and an object. However, these demographic characteristics did limit our ability to measure various control variables. There was very little variation between participant's interview experience; almost all participants had no interview experience (62%). It is likely that the way the applicant's intellect, hireability, and general impressions is perceived is influenced by interview

experience. Those that have conducted many interviews have practice, and even training, determining what candidate fits the job description the best. Our sample does not capture these differences.

Next, participants did not use the lower end of the applicant rating scales (Figure 7.3.). Only two participants rated the applicant lower than 5 for overall impressions on a 1- to 9-point scale. This limits our ability to detect differences between ratings when the data is negatively skewed due to participants not using the lower end of the scales. One reason this may have occurred is because participants were not explicitly informed that their ratings of the job applicant had no real-world consequences. It is possible that some participants worried that their ratings of the applicant would result in the actor receiving, or not receiving, a job offer. If the participant were to believe this, they would likely administer high ratings to the applicant as to not cause harm to the actor.

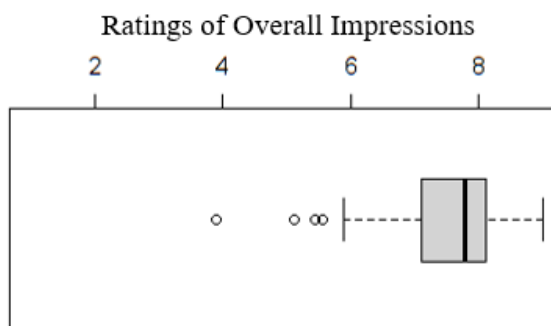


Figure 7.3. Distribution of Ratings of Overall Impression

The next limitation concerns the method. When participants sat down at the computer, they were asked to read an introduction to the study. This introduction

informed the participant that they were taking part in a study about perceptions of job candidates in asynchronous video interviews and would be playing the part of the interviewer for the study. The introduction also outlined what an AVIs is, the job description of the position the applicant was applying to, and the job's responsibilities. Although, the researcher asked participants to carefully read the introduction, there was no way to ensure the participant thoroughly read through (or read it at all) and understood their role in the study. This could have influenced the results of the study. The study could have been introduced verbally to assure the participant clearly recognized their role. However, verbal information is not necessarily better understood than visual information, so this is likely not a strong limitation (Baggett, 1989).

The final limitation concerns the AVI stimulus. An AVI was selected for a number of different reasons. First, this interview format does not require any back-and-forth interaction between the interviewee and the interviewer. Second, participants do not watch themselves on the screen or work to center themselves on camera (Bailenson, 2021). These features of an AVI allow us focus in on just the effects of interpersonal distance. However, AVIs may not resemble a video conference enough to influence Zoom fatigue. This may also limit the AVI's ability to influence ZF. In fact, participant's ZF levels were lower after watching the video ($\bar{x} = 3.09$, $sd = 1.32$) than their baseline ZF ($\bar{x} = 3.34$, $sd = 1.26$; $t(101) = 2.934$, $p = 0.004$, $d = 0.29$). It is possible that, because participants did not have to actively interact with the actor, they became more relaxed after watching a 20-minute video.

7.2 IMPLICATIONS

If the present study had found support for hypothesis one, breaches of interpersonal distance led to ZF, then platform design suggestions and suggestions for best practices could be made. However, hypothesis one was unsupported by this study.

While breaches of interpersonal distance did not lead to increased ZF, there was partial support that these breaches led to reduced ratings: participants in the social space condition rated the applicant lower than those in the public space condition. Therefore, organizations should consider how they conduct virtual interviews. Interviewers should move their computer screens back and not sit too close. If a job applicant is sitting very close to their camera and their face is taking up a large amount of space on the screen, the interviewer can exit full screen and make the VC window smaller on their screen to decrease the size of the applicant's face. Additionally, organizations could give applicants instructions about how to center themselves on the screen when recording answers or joining a VC interview. Guidance could be given asking applicants to sit a certain, consistent distance from their camera in order to keep the size of job applicants' faces consistent across applications.

Finally, organizations may not need to worry that the rating administered by interviewers experiencing ZF are any different from those administered by interviewers not experiencing ZF. The present study found no support that ZF leads to changed ratings. However, organizations should still be concerned about other consequences of ZF. Researchers have found that ZF is related to depression, stress, and anxiety (Deniz et al., 2022). These are not reactions organizations should take lightly as they can lead to negative employee attitudes and behaviors (Weiss & Cropanzano, 1996). Therefore, to

address ZF, organizations can increase the time between VC and reduce the number of VC employees must attend by limiting VC use to only when a VC will enhance the exchange between employees (Fauville et al., 2021; Oducado et al., 2022).

7.3 FUTURE RESEARCH

Future research should further examine the relationship between breaches of interpersonal distance (ID) and applicant ratings. This study found that ratings of the applicant decreased when the applicant's face was large on the screen. Future research can examine whether the relationship between ID and applicant ratings remains consistent when the interview is conducted over a live video conference. It is possible that interacting with the applicant could lessen the effects of ID on ratings because the interviewer has the opportunity to develop a more personal relationship with the applicant, thus making the interviewer more comfortable being close to the applicant. Future research should also determine what the ideal level of ID is for virtual interviews with the outcome being the most accurate ratings of the applicant. Only three specific distances were evaluated during this study. Examining a more continuous range of distances would give more detailed picture of the ideal ID between an interviewer and applicant in a virtual setting. Finally, future research examining the relationship between ID and applicant ratings could look at whether applicant characteristics moderate the relationship. It is possible that some applicants could overcome the effects of breached ID based on their personality or interview experience. For example, interviewers may be more comfortable being close to applicants high in extraversion or applicants with a high level of interview experience.

Next, the relationship between ZF and interpersonal distance should be further examined. While the size of the applicant's face did not predict participant's level of ZF, ZF was lowest in participants that were in the public space condition and highest in participants in the personal space condition as hypothesized. It is likely that in a more engaging environment, the effects of interpersonal distance on ZF would be greater.

Additionally, future research should examine the effects of interviewer personality on job applicant ratings. Only one journal article was identified examining how an interviewer's personality influences the way they rate a job applicant (Hilliard & Macan, 2009). However, the present study found that extraversion and agreeableness consistently predicted ratings of the applicant. Therefore, it is likely that an interviewer's personal personality characteristics influence their perception of a job candidate. Future research should pay close attention to extraversion and agreeableness.

Finally, future research should continue to examine other proposed causes of Zoom fatigue. To effectively address the consequences of ZF, we must first understand the underlying mechanisms causing it. Once we have a clear understand of ZF, we can make more effective recommendations as to VC best practices and platform design suggestions. As organizations continue to increasingly rely on video conferencing, these findings could help address the negative effects of Zoom fatigue such as depression, anxiety, and stress (Deniz et al., 2022). These finding may also help us better utilize the benefits of using virtual communication platforms such as bridging long distances, facilitating collaboration, and reducing costs.

APPENDIX A.
STUDY INTRODUCTION

Study Introduction

You are invited to participate in a research study about perceptions of job candidates in asynchronous video interviews (AVIs).

AVIs are a new form of virtual interviews in which the job applicant records their answers to a list of interview questions. The recordings are then sent in and reviewed by the organization.

For the purposes of this study, you will play the part of the interviewer. You will watch an AVI and then rate the job applicant on their level of intellect and hireability as well as your general impressions of the applicant.

The job applicant has applied for a Peer Mentor position at a university. The job description for the position reads as follows:

Peer Mentor Job Description

Peer Mentors serve to support and encourage new first year student in their adjustment to the university and the expectations of college in general. Through one-on-one interactions and group meetings, Peer Mentors are knowledgeable guides for new students, a thoughtful facilitator who provides access to people and resources and ultimately a role model and success advocate.

Responsibilities

- Serve as a sincere and positive source of support to help first-year students adjust to campus
- Develop and maintain a peer relationship focused on helping new students make a smooth transition, acclimate to campus, and establish a sense of belonging.
- Serve as a resource for students helping them identify and use appropriate campus services
- Help facilitate and encourage mentee attendance at campus programs and events
- Participate in training, programs and activities
- Attend group meetings
- Serve as a positive role model, both in the classroom and within the community at large

During the asynchronous video interview, the computer presented one interview question to the applicant at a time. The applicant was given one minute to prepare before recording their answer. The applicant was asked to answer the following questions:

- In school, have you participated in any activities or clubs that are related to the job for which you are applying?
- What drew you to your college?
- You started a work assignment yesterday, but today you are not sure you are doing it correctly. What would you do at this point?
- Tell me how you would encourage a friend who was feeling overwhelmed with school.
- How would you respond to a friend asking for help the night before you have a big test?
- How would you encourage a student to attend campus programs and events if they are feeling nervous?
- How would you build a peer relationship with a virtual/distance student?

The answers to the following questions could be related to work, school, community activities, or the military.

- Can you talk about a time when you were unable to get your point across effectively?
- Share an example of how you were able to motivate a peer.
- Describe a time you disagreed with a friend, peer, or co-worker. How did you manage the disagreement?
- Tell me a situation where you took the initiative to fix a problem.
- Give an example of a time you managed numerous responsibilities. How did you handle that?
- Describe a time you felt you were a good friend.

APPENDIX B.
JOB DESCRIPTION

Job Description adapted from Hiram College (2018)

Peer Mentor Job Description

Peer Mentors serve to support and encourage new first year student in their adjustment to Hiram and the expectations of college in general. Through one-on-one interactions and group meetings, Peer Mentors are knowledgeable guides for new students, a thoughtful facilitator who provides access to people and resources and ultimately a role model and success advocate.

Responsibilities

- Serve as a sincere and positive source of support to help first-year students adjust to campus
- Develop and maintain a peer relationship focused on helping new students make a smooth transition, acclimate to campus, and establish a sense of belonging.
- Serve as a resource for students helping them identify and use appropriate campus services
- Help facilitate and encourage mentee attendance at campus programs and events
- Participate in training, programs and activities
- Attend group meetings
- Serve as a positive role model, both in the classroom and within the community at large

APPENDIX C.
INTERVIEW QUESTIONS

Biodata questions:

- In school, have you participated in any activities or clubs that are related to the job for which you are applying?
- What drew you to your college?

Behavioral interview questions: The answers could either be in work, school, community activities, or the military.

- Can you talk about a time when you were unable to get your point across effectively?
- Share an example of how you were able to motivate a peer.
- Describe a time you disagreed with a friend, peer, or co-worker. How did you manage the disagreement?
- Tell me a situation where you took the initiative to fix a problem.
- Give an example of a time you managed numerous responsibilities. How did you handle that?
- Describe a time you felt you were a good friend.

Situational interview questions:

- You started a work assignment yesterday, but today you are not sure you are doing it correctly. What would you do at this point?
- Tell me how you would encourage a friend who was feeling overwhelmed with school.
- How would you respond to a friend asking for help the night before you have a big test?
- How would you encourage a student to attend campus programs and events if they are feeling nervous?
- How would you build a peer relationship with a virtual/distance student?

APPENDIX D.

BIG FIVE PERSONALITY MEASURE

Anchors:

1	3	5	7	9
Very Inaccurate	Inaccurate	Neither Accurate nor Inaccurate	Accurate	Very Accurate

Instructions:

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Indicate for each statement how accurate it is as a description of you.

Questions:

- | | | | |
|--|------|---|------|
| 1. Am the life of the party. | (1+) | 26. Have little to say. | (1-) |
| 2. Feel little concern for others. | (2-) | 27. Have a soft heart. | (2+) |
| 3. Am always prepared. | (3+) | 28. Often forget to put things
back in their proper place. | (3-) |
| 4. Get stressed out easily. | (4-) | 29. Get upset easily. | (4-) |
| 5. Have a rich vocabulary. | (5+) | 30. Do not have a good
imagination. | (5-) |
| 6. Don't talk a lot. | (1-) | 31. Talk to a lot of different
people at parties. | (1+) |
| 7. Am interested in people. | (2+) | 32. Am not really interested in
others. | (2-) |
| 8. Leave my belongings around. | (3-) | 33. Like order. | (3+) |
| 9. Am relaxed most of the time. | (4+) | 34. Change my mood a lot. | (4-) |
| 10. Have difficulty understanding
abstract ideas. | (5-) | 35. Am quick to understand
things. | (5+) |
| 11. Feel comfortable around
people. | (1+) | 36. Don't like to draw attention to
myself. | (1-) |
| 12. Insult people. | (2-) | 37. Take time out for others. | (2+) |
| 13. Pay attention to details. | (3+) | 38. Shirk my duties. | (3-) |

14. Worry about things.	(4-)	39. Have frequent mood swings.	(4-)
15. Have a vivid imagination.	(5+)	40. Use difficult words.	(5+)
16. Keep in the background.	(1-)	41. Don't mind being the center of attention.	(1+)
17. Sympathize with others' feelings.	(2+)	42. Feel others' emotions.	(2+)
18. Make a mess of things.	(3-)	43. Follow a schedule.	(3+)
19. Seldom feel blue.	(4+)	44. Get irritated easily.	(4-)
20. Am not interested in abstract ideas.	(5-)	45. Spend time reflecting on things.	(5+)
21. Start conversations.	(1+)	46. Am quiet around strangers.	(1-)
22. Am not interested in other people's problems.	(2-)	47. Make people feel at ease.	(2+)
23. Get chores done right away.	(3+)	48. Am exacting in my work.	(3+)
24. Am easily disturbed.	(4-)	49. Often feel blue.	(4-)
25. Have excellent ideas.	(5+)	50. Am full of ideas.	(5+)

Scoring:

Personality Factor: (1) Extraversion, (2) Agreeableness, (3) Conscientiousness, (4) Emotional Stability, (5) Intellect/Imagination

Direction of scoring: (+) Normal Scoring, (-) Reverse Scoring

(https://ipip.ori.org/New_IPIP-50-item-scale.htm)

APPENDIX E.

ZOOM EXHAUSTION AND FATIGUE SCALE QUESTIONS

Anchors: 1 – Not at all 3 – Slightly 5 – Moderately 7 – Very 9 – Extremely

Respond to the following questions in reference to how you are currently feeling.

Original Questions	Modified Questions
How tired do you feel after video conferencing?	How tired do you feel?
How exhausted do you feel after video conferencing?	How exhausted do you feel?
How mentally drained do you feel after video conferencing?	How mentally drained do you feel?
How blurred does your vision get after video conferencing?	How blurred is your vision?
How irritated do your eyes feel after video conferencing?	How irritated do your eyes feel?
How much do your eyes hurt after video conferencing?	How much do your eyes hurt?
How much do you tend to avoid social situations after video conferencing?	How much do you want to avoid social situations?
How much do you want to be alone after video conferencing?	How much do you want to be alone?
How much do you need time by yourself after video conferencing?	How much do you need time by yourself?
How much do you dread having to do things after video conferencing?	How much do you dread having to do things?
How often do you feel like doing nothing after video conferencing?	Do you feel like doing nothing?
How often do you feel too tired to do other things after video conferencing?	Do you feel too tired to do other things?
How emotionally drained do you feel after video conferencing?	How emotionally drained do you feel?

How irritable do you feel after video conferencing?

How irritable do you feel?

How moody do you feel after video conferencing?

How moody do you feel?

APPENDIX F.

APPLICANT INTELLECT MEASURE

1. How competent did the applicant seem?

1	2	3	4	5	6	7	8	9
Not at all Competent							Extremely Competent	

2. How thoughtful did the applicant seem?

1	2	3	4	5	6	7	8	9
Not at all Thoughtful							Extremely Thoughtful	

3. How intelligent did the applicant seem?

1	2	3	4	5	6	7	8	9
Not at all Intelligent							Extremely Intelligent	

APPENDIX G.

APPLICANT GENERAL IMPRESSIONS MEASURE

1. How much did you like the applicant?

1	2	3	4	5	6	7	8	9
Did not like at all								Liked extremely

2. How positive is your overall impression of the applicant?

1	2	3	4	5	6	7	8	9
Not at all positive								Extremely positive

3. How negative is your overall impression of the applicant?

1	2	3	4	5	6	7	8	9
Not at all negative								Extremely negative

APPENDIX H.

APPLICANT HIREABILITY MEASURE

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VITA

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