

**The Effects of Rapport Building on Information Disclosure in Virtual  
Interviews**

by

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## THESIS EXAMINATION INFORMATION

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### Master of Science in Forensic Psychology

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An oral defense of this thesis took place on June 1<sup>st</sup>, 2022, in front of the following examining committee:

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

## **ABSTRACT**

Rapport-building has been identified as an effective tool when interviewing victims and witnesses of events that may be sensitive in nature. The objective of this study was to examine the rapport-building process within a virtual interviewing context. Participants (N = 94) were shown a sexual education video and then questioned about the content of the video in a live virtual interview using either a Rapport (e.g., empathy, personalization, smiling) or No-Rapport (e.g., flat tone, no smiling, no personalization) approach. Results showed that perceived rapport was much higher in the Rapport condition compared to the No-Rapport condition ( $d = 1.47$ ). Participants in the Rapport condition also provided substantially more dialogue ( $d = 0.85$ ) and reported more accurate details ( $d = 0.42$ ) in the substantive phase of the interview than those in the No-Rapport Condition. Implications of this study for investigative interviews conducted virtually will be discussed.

**Keywords:** *Virtual Interviews; Investigative Interviews; Rapport; Rapport-Building; Information Disclosure*

## **AUTHOR'S DECLARATION**

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## STATEMENT OF CONTRIBUTIONS

The work described in this thesis has been submitted as:

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I performed the majority of the designing, testing, and writing of the manuscript. I have used standard referencing practices to acknowledge ideas, research techniques, or other materials that belong to others. Furthermore, I hereby certify that I am the sole source of the creative works and/or inventive knowledge described in this thesis.

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## **LIST OF ABBREVIATIONS AND SYMBOLS**

CI	Cognitive Interview
NHST	Null-hypothesis significance testing
NICHHD	National Institute of Child Health and Human Development
NVB	Non-verbal behaviour
PEACE	P (Preparation and Planning) E (Engage and Explain) A (Account) C (Closure) E (Evaluation)
VR	Virtual reality
SSM	Searchable Systematic Map
OSF	Open Science Framework

## **CHAPTER 1: INTRODUCTION**

Investigative interviews are a key source of information for law enforcement when investigating a criminal event (Fisher et al., 2011; Lassiter, 2004; Milne & Bull, 1999). Gathering details from interviewees can be difficult, however, given that the events of interest may be sensitive in nature, embarrassing, and/or traumatic to recall (Risan et al., 2016; Risan et al., 2017). One strategy that has been shown to facilitate the disclosure process is the building of rapport with the interviewee – defined as a productive working relationship based on mutual attention, positivity, and coordination – using verbal and non-verbal behaviours (e.g., self-disclosure, smiling, nodding; Gabbert et al., 2020; Tickle-Degnen & Rosenthal, 1990). Police officers view rapport as among the most effective interviewing techniques when working with witnesses (Dando et al., 2008), and research has demonstrated its effectiveness via anxiety reduction (Quas & Lench, 2007; Villalba et al., 2013), misinformation inoculation (Kieckhafer et al., 2014; Vallano & Shreiber Compo, 2011) and increasing accurate memory recall (Collins et al., 2002; Holmberg & Madsen, 2014; Kieckhafer et al., 2013; Vallano & Compo, 2011). While the rapport process has been studied extensively within in-person interviews, it is unclear how or if rapport-building behaviours lend themselves to a virtual context. The current study sought to examine how rapport building functions in virtual interviews with the hope of informing investigative interviewing practices in this context.

### **Rapport Building**

Definitions of rapport building vary widely according to the context in which rapport is established, and the nature of the relationship sought to be established (e.g., client-therapist, doctor-patient relationship, interviewer-interviewee relationship; Gabbert et al., 2020; Overholser, 2007). Among the most influential definitions found in the literature is Tickle-

Degnen and Rosenthal's (1990), which states that rapport is a combination of mutual attention, positivity, and coordination. Mutual attention refers to how behaviours such as nodding and utterances like "um hmm" allow for a cohesive, involved, and mutual interaction. Positivity refers to a certain level of caring, warmth and respect in an interaction. Lastly, coordination refers to how synchronized an interaction between two people is in the way that it allows for a pattern of predictability and fluidity. Tickle-Degnen and Rosenthal's (1990) definition presumes that rapport necessitates an interaction to exist and was derived from examining how individuals describe their experiences with it. Abbe and Brandon (2013) noted that Tickle-Degnen and Rosenthal's (1990) components of rapport fell mainly into the behavioural aspect of rapport, with all three components having a behavioural aspect, mutual positivity being both affective and behavioural, and mutual attention and coordination having a cognitive aspect. In their own work, the authors referred to the process of building rapport between two people as fostering a 'state of communicative alliance' (Abbe & Brandon, 2013, p.238).

Several researchers have defined rapport as a relationship, sometimes merely conversational but warm such as Siegman and Reynolds (1984), who has defined it as "friendly but relatively superficial conversation" (p. 71). In contrast, others, like Bernieri and colleagues (1996), who defined rapport as "a relationship marked by harmony, conformity, accord, and affinity" (p. 110), seem to have stressed a greater depth of involvement. Other definitions, such as Kelly and colleagues' (2013), emphasize the professional nature of the relationship built between the interviewer and interviewee: "working relationship between operator and source based on a mutually shared understanding of each other's goals and needs which can lead to useful, actionable intelligence or information" (p. 5).

Vallano and Schreiber Compo (2015), in their theoretical and empirical review, found that the cognitive interview (CI) protocol included the most specific breakdown of the purpose and means of rapport building in investigative interviews. This protocol recommended that interviewers make efforts towards rapport-building, which they described as a combination of both personalizing the interview and developing and communicating empathy. In their review, Vallano and Schreiber Compo (2015) also noted a distinction in the research between verbal and non-verbal elements of rapport-building, with both types of behaviours commonly being combined to establish rapport. The authors also noted that much of the literature seemed to have applied the clinical definition of rapport to the context of investigative interviews and that there lacked concern regarding the difference between the client-therapist relationship and the interviewer-interviewee relationship.

Since then, Gabbert and colleagues (2020), in discussing rapport within investigative interviews, have proposed the term ‘professional rapport-building.’ Indeed, they have conceptualized rapport in this context as having three components: (1) personalizing the interview to the context as well as to the interviewee, (2) presenting an approachable demeanour and (3) paying attention to what is being said to respond appropriately. To date, the literature on rapport-building has spanned different fields, from general relationship-building research to research on improving the effectiveness of investigative interviews with victims and witnesses. Rapport-building has become a ubiquitous component of the latter context. Specific behaviours corresponding to the different purposes of establishing rapport are described in the section below.

### ***Rapport Building in Investigative Interviews***

Investigative interviews are interpersonal interactions in which an interviewer, typically a police officer, questions an individual who has either experienced, witnessed, or was involved in a target event. The primary goal of an investigative interview is to gather as much information as possible from the interviewee. Law enforcement investigations rely heavily on information provided by victims and witnesses during investigative interviews, as they are often alone at the time of the target incident and forensic evidence, when present, requires context to aid the investigative process (Lassiter, 2004; Milne & Bull, 1999). Depending on the nature and scope of the events, reporting details can be difficult for victims and witnesses (Risan et al., 2016). The events in question can be sensitive in nature, embarrassing and traumatic to recall, and interviewers and police officers must adapt and accommodate these difficulties to optimize the information gathering process. One of the ways that have been identified as having the potential to make the process both easier and more effective is rapport building.

Rapport building is a key component of virtually all investigative models for both adults and children (e.g., Cognitive Interview, NICHD protocol, PEACE model, Reid technique; Geiselman & Fisher, 2014; Inbau et al., 2013; Lamb et al., 2007; Milne & Bull, 1999; Snook et al., 2010). The ultimate purpose of creating rapport within investigative interviews is to increase the amount of information that can be generated from interviewees, and research findings to date support the idea that the process is effective in accomplishing this goal (Collins et al., 2002; Holmberg & Madsen, 2014; Kieckhaefer et al., 2014; Vallano & Schreiber Compo, 2011; Villalba et al., 2013; for conflicting results see Kieckhaefer, 2014).

Research has supported the effectiveness of rapport building in reducing anxiety for both adult and child victims and witnesses (Villalba et al., 2013). Quas and Lench (2007) found that,

for children questioned by a supportive interviewer, arousal at encoding was not related to memory performance. In contrast, it was associated with reduced accuracy in the non-supportive condition. Others, such as Kieckhafer and colleagues (2013) and Vallano and Schreiber Compo (2011), found evidence supporting rapport building as a means for misinformation inoculation by decreasing the cognitive load associated with the interviewee's need to monitor their environment. Rapport building has also been studied regarding its association with increased accurate memory recall in adults. Researchers have found support for this association, suggesting that building rapport is beneficial to the information gathering purpose of the interview (Collins et al., 2002; Holmberg & Madsen, 2014; Kieckhafer et al., 2013; Vallano & Schreiber Compo, 2011). For example, in a laboratory study by Collins and colleagues (2002) in which they compared participants' information disclosure about a stimulus video across three conditions (i.e., rapport, neutral and abrupt), participants in the rapport condition recalled a greater number of accurate details compared to participants in other conditions.

Likewise, Vallano and Schreiber Compo (2011) conducted a laboratory study in which they interviewed adult participants in one of three conditions: no-rapport, uni-directional rapport (i.e., script created to elicit self-disclosure only from interviewee) or bi-directional rapport (i.e., the script created to elicit self-disclosure from both interviewee and interviewer). While there was no difference between the two rapport conditions, the authors found that they yielded a greater quality of witness recall (i.e., a comparatively lower percentage of inaccurate information). Others, such as Georges (2020), have found that witness interviews conducted by police officers who were instructed to build rapport resulted in words spoken by the witness as well as more pieces of information but not more accurate information than the interviews where police officers did not receive instructions to build rapport. Research has also supported the

benefits of rapport-building on the effectiveness of interviews conducted with suspects. Indeed, in their review of 418 videotaped intelligence interviews, Alison and colleagues (2013) found that a rapport-based approach led to increased information disclosure from interviewees in this context.

A survey of 221 police officers in the UK also found that they view rapport as among the most effective interviewing techniques when working with witnesses (Dando et al., 2008). Similarly, Vallano and colleagues (2015), in the United States, found that all 123 law enforcement interviewers they surveyed indicated that rapport-building was important in their interviews, with nearly all of them mentioning that it is essential. More recently, Gabbert and colleagues, in their Systematic Review, found that more than 90% of the 35 studies on rapport building in their sample reported that it had a positive effect on information provided during investigative interviews (Gabbert et al., 2020). In their review, the authors separated rapport-building behaviours into three categories: verbal, non-verbal and para-verbal.

Verbal rapport-building behaviours included active listening (e.g., the use of minimal encouragers such as ‘um-hmm,’ other brief affirmative responses, and occasional paraphrasing and responses which are appropriate to what is being said; featured in 66% of studies), showing personal interest/reciprocity (e.g., explicitly interest or pointing out a shared experience; featured in 51% of studies:), use of self-disclosure (e.g., sharing personal information in order to establish trust and relatedness; featured in 40% of studies), empathic responses (e.g., demonstration of understanding on the part of the interviewer and/or indication that the interviewer appreciates the interviewee’s emotions and distress: featured in 37% of studies) and the use of the interviewee’s name (featured in 20% of studies). The authors found that verbal elements of rapport were generally used in the personalization of the interview to the interviewee, in relationship building

(e.g., showing personal interest, use of self-disclosure and the use of the interviewee's name) as well as in demonstrating that the interviewer is paying attention to what the interviewee is saying (i.e., specifically the empathic responses).

Non-verbal rapport-building behaviours included what Abbe and Brandon (2014) refer to as immediacy behaviours: smiling (featured in 14% of studies), open-body language (featured in 11% of studies), eye contact (featured in 11% of studies) and head-nodding (featured in 11% of studies). The authors found that these behaviours were used to help the interviewer present an approachable demeanour (e.g., smiling and open-body language) and demonstrate that they were paying attention (e.g., eye contact and head-nodding). Lastly, in the paper by Gabbert and colleagues (2020), para-verbal rapport-building behaviours referred to the interviewer's tone of voice (featured in 23% of studies). The authors found that tone of voice was used in presenting an approachable demeanour.

Other rapport-building behaviours described by Abbe and Brandon (2014), and included under the 'miscellaneous' informal category in Gabbert and colleagues' SSM, include mimicry (e.g., adopting similar non-verbal behaviours and para verbal cues such as tone and speech rate), contrast (e.g., displaying complementary behaviours or postures, emotional contrast such as rapidly transitioning from anger to happiness), common ground (e.g., identifying and emphasizing common goals or interests and similarities with the interviewee) and contact and persistence (e.g., maintaining contact with the interviewee – in cases where there are multiple encounters between the interviewee and interviewer).

In sum, rapport-building in investigative interviews involves a dynamic process of establishing a positive relationship with the interviewee such that they are able to provide the interviewer with as much accurate information as possible about a target event with the aim of

aiding the police in conducting an investigation about the said event. Although the literature reveals that rapport-building alone may not be sufficient to guarantee an effective interview, most of the research agrees that it remains a necessary component (Vallano & Schreiber Compo, 2015). Note that the definition of conceptualization of rapport-building in this thesis is that of Gabbert and colleague's (2020) professional rapport-building.

### ***Studying Rapport-Building***

Rapport has been researched using a variety of different approaches and definitions, however, to increase the chances that rapport has the desired effect, there are three critical elements needed to ensure that it is maximally effective and matches real-world conditions. First, the interactions between the interviewer and interviewee should be genuine and go beyond the pre-determined script (Collins et al., 2002). Second, the distinction between rapport and control conditions must be clear and well defined, and rapport interactions should occur throughout the interview process (Holmberg & Madsen, 2014; Walsh & Bull, 2011). Third, reporting on the event under investigation must cause a certain level of unease for the interviewee to create a situation in which rapport is needed to help make the interviewee more comfortable (Risan et al., 2016). As outlined below, our experimental paradigm was set up to achieve these three criteria.

### **Virtual Interviews**

In the context of the ongoing COVID-19 global pandemic, many investigative interviews have had to make their way online into a virtual platform (e.g., interviewing via Zoom or similar videoconferencing software; Vieth et al., 2020). While the impetus for the change may have been the pandemic, virtual interviews may continue to be popular moving forward. Interviewers have pointed to the fact that interviewing witnesses remotely, as opposed to bringing them to the police station, has allowed them to save time and resources and question witnesses within shorter

delays of the incident in question (Hager, 2020). Additional advantages include removing the cost and difficulty associated with travel for interviewees and allowing interviewees to be questioned in the comfort of their own environment (Hoogesteyn et al., 2020).

While conducting virtual investigative interviews may have benefits, they also raise potential challenges related to the ability to create rapport. There are at least three concerns regarding rapport-building in the context of virtual interviews. First, common non-verbal elements of rapport building in investigative interviews are physical proximity, orienting one's body towards the interviewee, posture mirroring and eye contact (Saywitz et al., 2015). Remote and virtual interviews do not allow for any form of physical proximity between the interviewee and interviewer. The most that interviewers may be able to do is make a conscious effort to remain facing the screen and keep their gaze towards the screen and potentially towards the webcam. Making direct eye contact with the interviewee simply becomes impossible when conducting virtual interviews.

Second, many anticipated barriers to building rapport pertain to the interviewer's inability to control the environment in which the interviewee joins the virtual meeting (i.e., physical environment, surveillance, and access to efficient technology). Physical elements of rapport-building include manipulating the environment to make it more welcoming and meeting the interviewee's physical needs (i.e., bathroom breaks and offering food and drink) (Saywitz et al., 2015). While the fact that the interview takes place in a location where they are likely to be more familiar with (i.e., their own home office, bedroom, living room or kitchen table) might make the interviewee feel more at ease, this ease does not necessarily translate into a greater disclosure or accuracy of the information disclosed (Hoogesteyn et al., 2020). Hoogesteyn and colleagues (2020) found that participants interviewed in their homes felt more at ease and had a greater

sense of control but did not report higher perceived rapport with their interviewer or lower anxiety levels.

Third, the virtual nature of the interview lends itself to a plethora of technology and connection-related problems that might lead to interruptions and issues with the visual cues the video interviews provide. Part of the hypothesized benefits of rapport building lies in giving the interviewee a sense of control by partially shifting the power imbalance in a context where the interviewer typically has more authority than the interviewee (Saywitz et al., 2015). As such, interviewers are trained not to interrupt interviewees and allow for moments of silence to enable the interviewee to process the questions and prepare how they will answer (Roberts et al., 2004). The reliance on technology lends itself to technical issues such as connection interruptions and issues with hearing one another during the video call, especially in the context where not every interviewee is guaranteed access to a strong internet connection and a high-quality computer and webcam. These interruptions might also result in longer online meetings (e.g., having to start over for certain questions, needing to log off to reconnect, etc.), which can potentially interfere with both the rapport-building process and the outcome of the interview.

It is also important to note that, while virtual interviews use webcams and allow for a visual component, technology issues can interfere with the ability to have both parties' cameras be open, thus eliminating all visual cues. Siegman and Reynolds (1983) found that reducing visual feedback between two individuals engaged in a conversation did not interfere with the synchronization of their behaviours, suggesting that it might not interfere with the coordination aspect of rapport building but that it was found to reduce the productivity of the conversation and to increase anxiety as well as feelings of discomfort when discussing intimate topics. The authors concluded that the lack of visual feedback from the individual they were communicating with

interfered with their needs to self-monitor and censor when discussing personal issues (Siegman & Reynolds, 1983). This is especially important when it comes to interviewing individuals who are victims and witnesses of crimes as they, being more likely to have suffered from trauma or maltreatment than individuals who are not victims or witnesses of crimes, tend to rely heavily on the visual feedback and facial cues of the individuals they are interacting with. Once again, this is especially the case when they are speaking of intimate topics (Pollak & Tolley-Schell, 2003). These limitations related to the virtual nature of the interview and the impossibility of proximity or contact, the inability to control and monitor the environment, and the possibility for technology and connection-related issues present potential barriers to establishing virtual rapport. Given these three issues, it is unclear whether (1) rapport can be built successfully in a virtual context and (2) if so, whether it will lead to increased disclosure for difficult-to-discuss events as has been found in in-person contexts.

To date, the only study that appears to have addressed the topic of rapport-building within virtual interviewing was conducted by Meijer and colleagues (2021). In this study, the authors showed participants a virtual reality (VR) stimulus video and then compared the impact of in-person and online rapport building using the chat function on Skype. They found that participants interviewed using online chat reported lower levels of certain aspects of rapport (i.e., attentiveness, trust/respect and expertise; measured on Duke and colleagues' (2018) Rapport Scales for Investigative Interviews and Interrogations-Source – RS3i-S) compared to those interviewed in-person. They also found, however, that participants interviewed using online chat did not differ from those interviewed in-person in terms of crime-relevant details provided about the VR mock-crime video. While an interesting first step, the virtual condition consisted of

chat/written communication only, making it difficult to compare against live virtual video interviews.

## **CHAPTER 2: THE CURRENT STUDY**

The purpose of the current study was to examine the rapport process within virtual investigative interviews. Specifically, we sought to answer two questions related to rapport in this context. First, given the constraints of the virtual setting, is it possible to build rapport effectively within a virtual investigative interview? Second, does increased perceived rapport within this context lead to increased disclosure of a difficult-to-discuss event? While research within the virtual context is limited, based on the research from the in-person literature, we hypothesized that:

1. Participants within the Rapport condition would report higher perceived rapport with the interviewer than those in the No-Rapport condition.
2. Participants within the Rapport condition would provide more information disclosure as well as more accurate information than participants in the No-Rapport condition.

### **Methodology**

#### **Participants**

Participants consisted of 96 undergraduate students from a Canadian university. Two interviews were dropped due to technology issues (one interview was not recorded and one participant was not able to view the stimulus video), meaning that 94 interviews ( $M_{\text{age}} = 21$  years old, Range = 17-39 years old) were kept for the final sample. Of the 94 participants, 51 identified as female and the remaining 43 identified as male. The self-report demographic breakdown was as follows: Aboriginal (1%), Arab (3.1%), Black (14.6%), White (35.4%), Chinese (2.1%), Filipino (5.2%), West Asian (4.2%), South Asian/East Indian (30.2%), Southeast Asian (1%), Person of

Mixed Origin (2.1%) and Other (6.3%). Participants were assigned randomly to one of two conditions: Rapport (46 participants) or No-Rapport (48 participants).

## **Materials**

### *Online Questionnaire*

An online questionnaire was created using the Qualtrics survey software. The survey consisted of 13 pages. The first page contained a Consent Form that outlined the purpose and procedures of the study. The second page consisted of three demographic questions (i.e., age, gender, and ethnicity). The third and fourth pages consisted of instructions about how to watch the video and a request for the participant to pay attention to the video. The fifth page contained the embedded stimulus video, followed by two attention check questions for the stimulus video on page six. The seventh page consisted of instructions on how to join the meeting and the link for the Zoom virtual meeting room where they would undergo their interview.

The eighth page consisted of text thanking the participants for their participation in the interview and prompting them to continue working through the remainder of the survey. The ninth page asked participants to indicate their participant and group numbers as provided by the interviewer. The tenth page of the questionnaire consisted of a three-question manipulation check which asked participants whether they felt that the video content was awkward to talk about, were comfortable talking to the interviewer about the video and reported everything that they could remember about the video. On the eleventh page, the questionnaire presented a definition of rapport and asked participants to indicate their degree of perceived rapport with the interviewer using a slider (0-100) and an open textbox asking them to justify their answer. The last two pages of the questionnaire consisted of questions about the device and setting with which they joined the meeting, as well as a debriefing statement. See the Open Science

Framework (OSF) portal or Appendix A for the questions and prompts included in the Qualtrics questionnaire (<https://osf.io/hnq4g/>).

### *Stimulus Video*

The stimulus video consisted of an Irish Catholic sexual education video from the 1980s and was 2 minutes and 24 seconds in length. In the video, a woman briefly describes male and female reproductive anatomy and explains the concept of sexual intercourse to an intended audience of children and adolescents. The nature of the stimulus video was chosen in an attempt to create a target event that was awkward and inherently uncomfortable to discuss, as rapport is likely to be most effective and necessary when discussing target events that involve a high level of unease (Risan et al., 2016). See the OSF portal or Appendix B for the stimulus video links as well as a storyboard (<https://osf.io/hnq4g/>).

### *Interview Guides*

**Rapport Condition.** The interview guide for this condition consisted of a rapport-building sequence followed by the substantive phase of the interview where the participants were asked to tell the interviewer “everything they could remember about the stimulus video”. In this study, rapport was operationalized according to Tickle-Degnen and Rosenthal’s (1990) and Gabbert and colleagues’ (2020) definition of the concept. The rapport condition employed personalization of the interview, presentation of an approachable demeanor, paying careful attention to what is said (Gabbert et al, 2020) as well as a combination of mutuality, coordination and positive regard (Tickle-Degnen and Rosenthal, 1990). Rapport was built using conversational methods as well as physical displays of warmth and openness to the extent possible and visible on screen (e.g., smiling, looking at the camera, nodding, etc.).

Rather than a strict script, a structured interview guide was used that allowed for flexibility and personalization of the interview depending on the individual interviewee's behaviour and responses. The guide was designed to ensure that (1) the interaction between the interviewer and interviewee were genuine and went beyond a pre-determined script (Collins et al., 2002) and (2) the rapport interactions occurred throughout the interview process and not just at the beginning (Holmberg & Madsen, 2014; Walsh & Bull, 2011). To build rapport, interviewers were instructed to start the interview with attempts to show empathy and self-disclosure by asking participants about their experiences with online learning during the pandemic and to self-disclose by speaking on their own experiences. Throughout the interview, the interviewer addressed the participant by their first name, used a gentle tone, smiled, and attempted to keep their gaze toward the screen and the webcam when possible (Quas & Lench, 2007). The interviewer was also instructed to sit upright in a visibly relaxed and open posture.

As the participant entered the virtual meeting room, the interviewer introduced themselves and let the participant know what they should call them: e.g., "My name is Cassandre Dion Larivière, but you can call me Cass. I am a research assistant in Dr. Eastwood's lab and I will be running the study with you today." In an effort to adapt rapport to the pandemic context, the rapport building in the rapport condition addressed and recognized how the pandemic has disrupted and continues to disrupt the participant's routines and normal functioning of everyday life (Vieth et al., 2020). The interviewer also empathized with the interviewee as well as self-disclosed about their own experience and struggles relating to the current situation. The interviewer asked the participant what year of their program they are in and followed up by asking what their experience had been learning online during the pandemic and discussing their hobbies by asking personal but non-intrusive questions (e.g., "[Participant's name], have you

picked up any hobbies in the last year?”). This part of the interview was designed to be flexible and to allow for the interviewer to be genuine in the way that they self-disclose and in the way that they related to the participant. These behaviours were to be maintained throughout the entire interview. See the OSF portal or Appendix C for the specifics of the interview guide for both conditions (<https://osf.io/hnq4g/>).

**No-Rapport Condition.** The interview guide for the No-Rapport condition began with five close-ended filler questions that did not emphasize personal interest (e.g., “Is the webcam integrated into this computer?”) to lessen the time difference and replicate the presence of questions asked between watching the stimulus video and the substantive phase in Rapport condition. This was followed by the substantive phase of the interview, which was identical to that in the Rapport condition. In terms of mannerisms and approach, the no-rapport condition was designed to be neutral and professional as opposed to negative or confrontational. There were no confrontations, negative references about the participant’s behaviour or warning about negative consequences related to the outcome of the interview. This condition served as a control condition with an interviewer that is mostly indifferent, straightforward and systematic. Throughout the interview, the interviewer did not address the participant by their first name. They used a flat tone of voice and made no effort to smile or attempt to keep their gaze toward the screen and the webcam (Quas & Lench, 2007). The interviewer was sitting upright and was facing slightly offscreen. The interviewer was instructed only to make comments that helped progress the interview and ask clarification questions only when needed (Quas et al., 2007).

## **Procedure**

Participants were first sent the URL to access the Qualtrics survey. After reading the consent, form participants worked through the first six pages of the survey. Participants then

clicked on the link within the survey to begin the live interview in Zoom (i.e., an online video conference platform). Interviews were conducted by either myself or an RA, and interviewers were assigned randomly to both condition and interviewee. The interviewer then gathered the participants' recall of the stimulus video using either the Rapport or No-Rapport interview guide. After the interview concluded, participants returned to their web browser to complete the remaining seven pages of the Qualtrics survey. Participants were granted one credit in an undergraduate psychology course for their participation in the study.

### ***Interview Training***

Prior to conducting the live virtual interviews, an RA and I were trained by my supervisor for this project (Dr. Eastwood). Dr. Eastwood is a content expert in the interviewing field who has experience delivering interview training courses to law enforcement and investigative agencies. The training consisted of an individual practice interview between each interviewer and Dr. Eastwood, followed by a feedback session. Each interviewer then conducted two practice interviews with lab volunteers and received feedback on their recorded interviews in a feedback session with Dr. Eastwood. This training process also served to refine the interview guide developed for this study.

### ***Measures and Coding***

The interviews were screen and audio recorded using the Zoom videoconferencing software and transcribed verbatim by the first author. A coding guide was created using an iterative process in which I first read through the substantive phase of each interview (i.e., the participants' free recall of the target event) and compiled an exhaustive list of every individual unique detail mentioned by participants. The finalized coding guide, consisting of 369 variables, was then used to code each participant's recall of stimuli video. Each detail mentioned was

categorized as correct, incorrect, or unverifiable. See Appendix E for screenshots of the codebook used to code the data.

**Inter-Rater.** To assess the reliability of the coding, an undergraduate laboratory volunteer was trained by the first author to code the substantive portions of the interview. The volunteer first coded ten random transcripts, after which we met to discuss the process and I provided feedback on their results. The volunteer then proceeded to code all 94 participant interviews independently. Cohen's Kappa was used to measure inter-rater reliability, and the final value across all 34,686 comparisons was ( $K = 0.731$ , % agreement = 96%), suggesting substantial agreement between the two coders (Landis & Koch, 1977).

### **Philosophy of Statistics**

The following result section does not include null hypothesis significance testing (NHST) results. Instead, results are presented using confidence intervals, effect sizes and figures. Over the last few decades, there has been questioning and debate surrounding the exclusive use of NHST in scientific research. Reporting NHST does not provide all of the information necessary to support the deductive claims that most researchers make using them (Cohen, 1994). Swayed by the wave that also shed light on the importance of open science and preregistration of studies and experiments, the APA has now recommended the inclusion of confidence intervals (Cumming & Finch, 2005) as well as effect sizes and has cautioned researchers with regards to the sole use of NHST. Along with the choice to omit NHST results in the final analysis, the decision to conduct the simplest analyses was made consciously and to favour parsimony.

## CHAPTER 3: RESULTS

We found minimal differences between the two interviewers across our dependent variables. The only variable that had more than a small effect size was the total length of the interview ( $d = 0.45$ ), and the 95% Confidence Intervals (CIs) for all comparisons overlapped.

There were also no meaningful differences in the dependent variables for participants' demographic characteristics other than males rating the content of the video as more awkward to talk about than females ( $d = 0.42$ ). Across all participants, the average rating for the awkwardness of the video, rated on a 5-point scale, was 3.34 ( $SD = 1.11$ , CI [3.11 – 3.57]).

**Hypothesis 1.** *Participants within the Rapport condition would report higher perceived rapport with the interviewer than those in the No-Rapport condition.*

The overall mean rating on the question of perceived level of rapport with the interviewer was 72.37 ( $SD = 26.79$ , CI [66.88 – 77.86]). Participants in the Rapport condition reported perceiving a greater level of rapport with the interviewer ( $M = 88.63$ ,  $SD = 14.01$ , CI [84.47 – 92.79]) than did those in the No-Rapport condition ( $M = 56.89$ ,  $SD = 26.94$ , CI [49.10 – 64.65], Cohen's  $d = 1.47$ , CI [1.01 – 1.93]; see Figure 3). Participants in the Rapport condition also reported a greater level of comfort talking about the video with the interviewer ( $M = 3.83$ ,  $SD = 1.00$ , CI [3.53 – 4.12]) than did those in the No-Rapport condition ( $M = 3.31$ ,  $SD = 0.99$ , CI [3.02 – 3.60], Cohen's  $d = 0.52$ , CI [0.10 – 0.93]; see Figure 4).

**Hypothesis 2.** *Participants within the Rapport condition would provide more information disclosure as well as more accurate information than participants in the No-Rapport condition.*

The mean length of the substantive portion of the interview (in seconds) across all participants was 109.17 ( $SD = 50.82$ , CI [98.82 – 119.52]). The length of substantive phase of the interview (in seconds) was longer for participants in the Rapport condition ( $M = 133.22$ ,  $SD$

=55.12, CI [116.85 – 149.59]) compared to participants in the No-Rapport condition ( $M = 86.59$ ,  $SD = 33.69$ , CI [76.91 – 96.27],  $d = 1.02$ , CI [0.60 – 1.45]; see Figure 5). Participants in the Rapport condition also spoke more words in the substantive portion of the interview ( $M = 237.96$ ,  $SD = 122.48$ , CI [201.58 – 274.33]), than did those in the No-Rapport condition ( $M = 153.63$ ,  $SD = 71.17$ , CI [133.20 – 174.10],  $d = .85$ , CI [0.43 – 1.27]; see Figure 6). There was a 43% difference in number of words spoken between participants in the Rapport and No-Rapport condition.

The mean total number of details reported across all participants was 26.63 ( $SD = 11.34$ , CI [24.32 – 28.94]). Participants in the Rapport condition reported a greater total number of details about the stimulus video ( $M = 29.57$ ,  $SD = 12.18$ , CI [25.95 - 33.18]) than did those in the No-Rapport condition ( $M = 23.88$ ,  $SD = 9.84$ , CI [21.05 - 26.70], Cohen's  $d = .52$ , CI [0.11 – 0.92]; see Figure 7). Participants in the Rapport condition also reported a greater number of accurate details about the stimulus video ( $M = 27.04$ ,  $SD = 11.59$ , CI [23.60 – 30.50]) than did those in the No-Rapport condition ( $M = 22.55$ ,  $SD = 9.68$ , CI [19.77 – 25.33], Cohen's  $d = .42$ , CI [0.01 – 0.83]; see Figure 7). Participants in the Rapport condition also reported a greater number of inaccurate details about the stimulus video video ( $M = 0.63$ ,  $SD = 0.74$ , CI [0.41 – 0.85]) than did those in the No-Rapport condition ( $M = 0.27$ ,  $SD = 0.64$ , CI [0.10 – 0.45], Cohen's  $d = .53$ , CI [0.12 – 0.94]; see Figure 7).

## CHAPTER 4: DISCUSSION

The objectives of this study were to examine the rapport-building process in a virtual interviewing context. Overall, our results suggest that (1) rapport can be built successfully in a virtual interview using many of the tactics suggested for in-person interviews and (2) building rapport led to increased information disclosure from interviewees regarding a difficult-to-discuss

target event. These findings can help inform both the existing literature on rapport and professional practice for those conducting virtual interviews.

We found support for our first hypothesis as participants in our Rapport condition reported substantially more perceived rapport with the interviewer compared to those in the No-Rapport condition. There was more than a 30% difference on our perceived rapport scale (56.8% versus 88.6%), the CIs did not overlap, and the standardized effect size was large ( $d = 1.47$ ). While only a single study, these results provide strong evidence that rapport can be built within this context. We believe these findings are particularly impressive given the constraints present within virtual interviews (e.g., technological issues, absence of physical interaction).

Although speculative, we believe that the strong ratings of perceived rapport resulted from the flexible interview guide that we utilized in the study. Our guide allowed interviewers to personalize the approach for each interviewee and included key aspects of effective rapport building, including demonstrations of empathy, self-disclosure, and genuine expressions of interest in the interviewee throughout the interview process (Matsumoto & Hwang, 2021). For our sample, this led to a discussion of topics ranging from personal experience with online learning to hobbies and career aspirations. This speculation is also supported by comments in the open-ended responses, as many participants in the Rapport condition mentioned that they felt that the interviewer was personable, friendly, made them feel comfortable and showed interest in getting to know them before asking about the video (e.g., “The interviewer opened the discussion by asking for basic information and random social conversation which made me comfortable talking about the video” and “The interviewer was very nice and made several connections with me. She connected what was going on in my life to her life. This made me feel very comfortable with her because I felt like we were alike because of our situations with school and so on”).

Overall, these findings suggest that interviewers can build rapport effectively in a virtual environment using approaches like those found effective in in-person interviews.

We also found support for our second hypothesis, as the increased perceived rapport in the Rapport condition led to participants providing increased information disclosure as well as a greater number of accurate details compared to those in the No-Rapport condition. Both the length and the words spoken during the substantive phase of the interview were much higher in the Rapport condition ( $d = 1.02$  and  $d = 0.85$ , respectively). Participants in the Rapport condition also provided a greater number of total and accurate unique details about the video to the interviewer ( $d = 0.52$  and  $d = 0.42$ , respectively). They also provided a great number of inaccurate details ( $d = 0.53$ ) in the Rapport condition, however, the means for both Rapport and No-Rapport conditions were lesser than one inaccurate detail. We purposefully chose a stimulus (i.e., sexual education video) that would be uncomfortable to discuss, and participants rated the video as awkward to discuss. Anecdotally, interviewees were also often reluctant to use the words contained in the video (e.g., penis, vagina) and would instead paraphrase the content instead of reporting it verbatim (e.g., the female's parts, the privates). Although all participants found the video awkward to discuss, those in the Rapport condition were more willing to discuss the content of the video, as evidenced by the marked increase in interview length and words spoken.

Given the experimental nature of our design, we believe that the increased disclosure is a direct result of the rapport built with interviewees in this condition. This is supported by the open-ended responses as well, as participants in the Rapport condition explicitly mentioned that having the interviewer take the time to try and connect with them made them more comfortable discussing the content of the video (e.g., "The interviewer was inviting and gave off very

comforting energy, therefore I felt comfortable and trusting enough to talk about the video and situation” and “This level of rapport was [because] the interviewer made sure to talk with me beforehand and to get to know me better before asking me about the questions, therefore, I was more comfortable when talking about the video”). Overall, these findings support the idea that building rapport within virtual interviews will lead interviewees to be more comfortable discussing the details of uncomfortable or distressing events.

### **Limitations**

This study has several limitations that may impact the generalizability of the findings. First, the fact that this study is a laboratory study means that the topic discussed is not a real event that the interviewee experienced and therefore lacked realism. Second, the interviewers were peers to the participants as opposed to a person of authority, as they would be in a real-life scenario, which may have made it easier for participants to discuss the event compared to being interviewed by a police officer. Third, while we purposely chose our stimulus to represent a difficult-to-discuss event, it was not a video of a crime; therefore, it is difficult to extrapolate directly to a real-world interview about a criminal event. However, we should note that as the video did not contain a typical criminal event, many participants did not report details that they presumably would have if asked to recall a criminal event (e.g., a description of the main character(s) in the video). Although speculative, given the large disparity in length and words spoken in the substantive phase we found for our stimulus, we believe that the increase in the number of details reported would be even greater for a difficult-to-discuss criminal event.

Although the use of this stimulus video successfully caused unease in participants in a way that allowed us to observe the effects of rapport-building on markers of effective interviewing, the use of this stimulus video also presented several drawbacks, specifically

regarding the coding of the video content. Compared to most traditional mock-crime videos, the sexual education video did not depict a linear or narrative series of events. Instead, the video shows the same subject (i.e., an older adult woman) in three different sets (i.e., standing, and sitting in two different places) speaking about sexual anatomy and intercourse. Throughout the video, the subject repeats herself, meaning that certain topics are mentioned more than once. This made the participant reports challenging to code in a consistent way.

Nonetheless, after a few iterations of the codebook, we were able to separate and categorize details in a way that was appropriate for this video. Additionally, due to the video not being about a crime, the details that are relevant to mention may have seemed far less obvious to participants. Whereas it may be obviously relevant for participants or witnesses to mention that the subject of a mock-crime video pulled out a gun or was wearing a red shirt, it may seem less relevant to mention that the older adult woman in the sexual education video was wearing a floral dress or that she used a pointer stick to show different parts of male genitalia on a flipboard. As previously mentioned, the interviewers in this study also noticed that interviewees were reluctant to use the words used by the subject of the video. Instead, they would often use different words or phrases (e.g., instead of saying the words ‘penis’ or ‘vagina,’ participants would often say ‘the female part’ or ‘the male part’), paraphrase what the subject said or simply summarize the content discussed in one vague sentence (e.g., “And then she to talk about how this thing is going to be completed”). This made the participants’ reports difficult to code, given that while they may have recalled a particular specific detail about the video, they may have felt too uncomfortable to report or repeat it. This reluctance to use the exact vocabulary or elaborate on the topics discussed, while it made the processes more tedious, is also a strength of this study.

It may be the case, in a real-life scenario, that interviewees are reluctant to use such words or describe different acts.

## **CHAPTER 5: CONCLUSION AND FUTURE DIRECTIONS**

Largely as a result of the COVID-19 pandemic, a portion of investigative interviews have moved to virtual settings and there is a potential for this practice to be maintained moving forward. This has raised questions regarding interviewers' ability to build rapport in this novel context. Our results provide empirical evidence that (1) rapport can be established effectively within virtual interviews and (2) increased rapport can lead to increased disclosure from interviewees about difficult-to-discuss events. Although a single study, we believe that this supports the idea that virtual interviews can be conducted effectively despite their limitations and that interviewers should continue to strive to build rapport within this context. This is particularly true where the topic discussed may be challenging to speak about (e.g., due to the event's personal, taboo, or traumatic nature or subject). Not only do interviewees perceive the efforts to build rapport and feel more comfortable discussing difficult topics, but they also tend to provide more information about a target event, which in turn, has the potential to aid investigations.

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## Appendix A

### Qualtrics Questionnaire Outline

- How old are you (please only enter numbers)?
- What gender do you identify as?
  - Male
  - Female
  - Others
- What is/are the ethnicity/ies you most closely identify with?
  - Aboriginal
  - Arab
  - White
  - Black
  - Chinese
  - Filipino
  - Japanese
  - Korean
  - Latin American
  - West Asian (Iranian, Afghan)
  - South Asian/East Indian (e.g., Bangladeshi, East African, East Indian from Guyana or Trinidad, Pakistani, Sri Lankan)
  - Southeast Asian (Burmese, Cambodian/ Kampuchean, Indonesian, Laotian, Malaysian, Thai, Vietnamese)
  - Person of Mixed Origin (with one parent in one of the visible minority groups listed above)
  - Other, Please specify: \_\_\_\_\_
- You are about to watch a video. This video may contain content of a sexual nature. If you wish to stop the video and withdraw from participation, you may do so at any time by closing your internet browser.
- Please make sure you have your computer sound on and that you have your headphones on. We ask that you pay attention while you watch the video and that you watch the video in its entirety once.

After the video, click on the arrow to continue the survey. You will see instructions to keep this tab open in your browser and click on the link to join the Zoom meeting with the interviewer. You will be interviewed about your perceptions of this video.

- **EMBEDDED VIDEO**

- What anatomy figure does the woman point to on the flipboard?
  - Uterus
  - Mammary glands
  - Penis
- What funny name does the woman say some people call the penis?
  - Weiner
  - John Willy
  - Pecker
- Now that you have watched the video, we are ready to proceed with the interview portion. Please make sure to keep this tab open in your browser as you will be asked to return to it after.
- The following is a link to join the Zoom call with the interviewer. Please open this link on a new tab or copy and paste it into your browser. If the Qualtrics browser is replaced by the Zoom page, simply go back to the previous page to return to this page or click the Questionnaire link in the email. You will be brought back to this page.
- [ZOOM MEETING LINK]

- **INTERVIEW CONDUCTED THROUGH ZOOM**

- Thank you for completing the interview portion of the study. Now, you will be asked to answer a few questions about your experience. Note that the RA who interviewed you will not see your answers.
- What is the participant number that you have been assigned by the interviewer?
- What group number have you been assigned by the interviewer?
  - 1

- 2
- Please indicate to which extent you agree or disagree with the following statements. (Strongly disagree to Strongly agree)
  - The content of the video was awkward to talk about.
  - I was comfortable talking about the video with the interviewer.
  - I reported everything that I could remember about the video.
- Merriam Webster defines rapport as: “ a relationship characterized by agreement, mutual understanding, or empathy that makes communication possible or easy.”
- In the context of this interview, rapport also involves how comfortable you felt with the interviewer, whether you trusted the interviewer, and whether you liked/disliked the interviewer.
- Keeping the definition of rapport in mind, how much rapport did you experience today during the interview? (Slider from No Rapport to A lot of Rapport)
- Please explain why you felt that level of rapport with the interviewer.
- What device you joined the virtual interview on (cellphone, desktop computer, laptop, etc.)?
- Please describe the setting where you experienced the virtual interview (your bedroom, home office, a local coffee shop, etc.).
- Please list anything you can think of that we might be able to do to improve the virtual process.

## **Debrief**

- Thank you, once again, for your participation in this study.
- This study made use of deception. You were told we were interested in your opinions and reactions to the video. In reality, this study seeks to examine the effects of building rapport on memory recall in virtual interviews. You were placed either in a condition of rapport or in a condition of no-rapport. This determined how the interviewer behaved with you. We are interested in how the presence or absence of rapport influences the number of accurate details participants are able to provide about topics that can be uncomfortable to speak about with a stranger. This is why we asked you to watch an old video about sexual intercourse. This study will help inform the field of investigative interviewing and as well as the people working with witnesses or victims.
- Now that you have been informed of the true purpose of this study, please indicate whether you provide continued consent to participate in this study:

- I freely consent to have my data used in this study
  - I agree
  - I do NOT agree
- You may withdraw your data from this study up to two months after your participation. If you wish to withdraw, please contact the PI (Dr. Joseph Eastwood) ([Joseph.eastwood@ontariotechu.ca](mailto:Joseph.eastwood@ontariotechu.ca)).
- Ontario Tech University provides a number of resources for students in need of support. If you have been affected by the content of this study, the University can assist you. To make an appointment or view options regarding the University's mental health services, please visit on the following link:
- <https://studentlife.ontariotechu.ca/services/health-and-wellness/mental-health-services/counselling/index.php>
- For additional mental health service information for post-secondary students in Ontario, please visit Good2Talk: <https://good2talk.ca/ontario/> or 1-866-925-5454 (phone)

## Appendix B

Figure 1. Storyboard of the stimulus video used in this study.



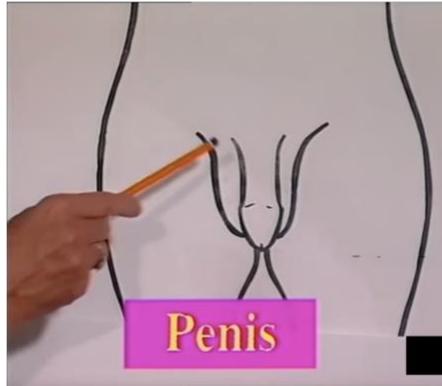
Title page



She begins by describing female genital anatomy.



Then, she moves on to discussing male genital anatomy.



Lastly, she described sexual intercourse between a man and a woman.

The video used in this study depicts a woman in the 1980s teaching children and adolescents about male and female reproductive anatomy as well as about sexual intercourse. She is wearing floral patterned clothing and standing in a room with plants and framed photos. She uses very basic drawings of genitalia to discuss anatomy as well as language that is developmentally appropriate for children.

## Appendix C

**Bold:** Consistent Script

*Italicized:* Reactionary, personalized

### **RAPPORT CONDITION**

- Non-verbal elements:
  - Smiling, looking at the screen (eye contact), nodding, open and relaxed body posture (posture), position in the middle of the screen (proximity)

**[Introduction]** *Hi there, how are you doing?*

**Great. So, my name is [interviewer full name], but you can call me [interviewer name]. I'm a student in Dr. Eastwood's lab and will be running the study today.**

**Your name is [participant's name from SONA], correct? [...] What name do you normally go by? [...] *I want to make sure I am pronouncing it correctly; could you repeat it for me?* Thank you!**

**Nice to meet you [participant first name]! Thank you for participating in our study, I really appreciate it.**

*[Addressing position and lighting for video] It would be helpful if you could try and stay facing the screen straight on during this interview [...] Great, thank you. [If applicable] One more thing, do you think there is a way you can turn on another light so I can see you better? [...]*

**Were you able to access the link easily [participant first name]? [...] And, just to be clear, did you watch the video? [...] Great. I know that with running everything online, sometimes the technology can fail, so I just wanted to verify that everything went smoothly for you.**

**As you have seen in the consent form, this interview will be screen and audio recorded, because as you know, I'm only human. I cannot remember everything we will talk about together today, so we just want to make sure everything is captured.**

**All right. Let me know if you need to take a quick break at any point, okay?**

**I wasn't able to see anything other than your name from SONA, so what year are you in right now?**

*Oh great, what do you study? How are you finding the online learning approach?*

[Rapport interaction sequence #1] [active listening and personalized response] E.g., *Yeah, it has been hard always working from home, I agree. It is my first time running a study online. It is really interesting that we are able to do this online now! I guess it can be useful, I live in Oshawa, but I am glad to be able to just stay home!*

**[Self-disclosure regarding activities/hobbies during the pandemic and personal struggles with the changes/restrictions]** *It's not always fun to be at home, but I guess it gives us time for more personal hobbies; I've always wanted to learn piano. I haven't really taken the time yet, though. I guess I took an online class on the science of well-being for fun, but I have mostly been playing animal crossing and, I guess, school stuff. How have you found it in general? /What have you been up to?* [...] [confirming and empathetic approach].

[Rapport interaction sequence #2] **Okay, so I'm going to ask you to recall the details of the video content in a moment as part of the study, but I just wanted to ask first about what you thought about it in general?** [...] [active listening and personalized/empathetic response] *I have to admit that was quite a weird video to watch. [...] Yea, I totally had the same reaction the first time I watched it. I know it's odd, but Dr. Eastwood has used this video in previous studies, which is why we are using it again for this one. We want to be consistent. I appreciate you taking the time to do this for me.*

[Interview Question #1] **Now, as I mentioned, I recognize that some of the video content might be uncomfortable and awkward to discuss, but it is important that you provide as much detail as you can remember. So just take your time, and in your own words and pace, please tell me everything you remember about the video you have watched:**

[Rapport interaction sequence #3] [Addressing difficulties if they arise] *Take your time. I know it's a bit odd as a topic.*

[Pause for 5 seconds after they stop talking] **Thank you for this information.** [Comment about details provided or clarification that they should give more details] *I really appreciate you working hard to recall all those details as it is very helpful in making sure this study runs well.*

[Interview Question #2] **So please just take a minute and tell me what else you can remember?**

[Pause for 5 seconds after the stop talking] **Thank you so much for answering my questions. That is all from me on this zoom call, [participants name].**

**Now, I will ask you to reopen the Qualtrics questionnaire browser and complete the rest of the questionnaire. There will be questions about your experience participating in this study and a textbox for any feedback on this interview process. If you have any further questions, please do not hesitate to contact the student lead or the principal investigator.**

**I'll give you a minute to note the following information down so you can enter it into Qualtrics. In the questionnaire, you will be asked for your participant number, yours is [participant #]. You will also be asked to select what group you are a part of, you are group #X. If you forget, you can email me, and I'll remind you.**

**Thank you again for participating, [participant first name]. It was great to meet you! I'll make sure you get that credit for your participation. I'll leave you to the rest of the questionnaire, now. Bye!**

### **NO-RAPPORT CONDITION**

- Non-verbal elements:
  - No smiling, minimal nodding, looking away from the screen to take notes

**Hello. Thank you for your participation in this study.**

**Were you able to access the link? [...] Okay. And, did you watch the video? [...] Okay.**

[Addressing position and lighting for video] **Please make sure that you are facing the screen straight on during this interview. [...] Are you able to turn on another light in the room? [...] Thank you.**

**As you have read in the consent form, this study is going to be screen and audio recorded for the purposes of coding and analyses.**

**This is case number OTU [participant # + group #]**

**Please state your full name. [...] I am [full name], and I am a research assistant in Dr. Eastwood's lab, and today's date is [date]. It is now [time].**

**Do you have any questions about this process? [...]**

**Now that you've filled out the first part of the Qualtrics questionnaire [...], I will proceed with some preliminary questions.**

**Are you joining this meeting from a computer or a phone? [...] Is it a laptop computer? [...] Is the webcam integrated into this computer? [...] *Okay.***

**What course will your credits for your participation go to? [...] *Okay.***

**The substantive portion of this interview will follow briefly.**

**[Interview Question #1] Please tell me everything you remember about the video you have watched before this interview. You must provide as much information as you can about the video you watched. This is important.**

**[Pause for 5 seconds after the stop talking] *Okay.***

**[Interview Question #2] What else do you remember?**

**[Pause for 5 seconds after the stop talking] Thank you for answering my questions. This portion of the study is officially completed. It is now [time].**

**Now, please reopen the Qualtrics questionnaire browser and complete the rest of the questionnaire. There will be questions about your experience participating in this study.**

**Please take note of the following information to enter it into Qualtrics. If you do not remember this information, you may contact the lab via email, and the information will be provided for you again.**

**In the questionnaire, you will be asked for your participant number, yours is [participant #]. You will also be asked to select what group you are a part of, you are group #X.**

**You will receive credit for your participation. If you have any further questions, you can contact the student lead or the principal investigator. Goodbye.**

**Appendix D**  
**Consent Form to Participate in a Research Study**

**Title of Research Study:** Virtual Interviewing

**Name of Principal Investigator (PI):** Dr. Joseph Eastwood

**PI's contact number(s)/email(s):** 905.721.8668 ext.

5971; [Joseph.eastwood@ontariotechu.ca](mailto:Joseph.eastwood@ontariotechu.ca)

**Student Lead and contact mail:** Cassandre Dion Larivière

([Cassandre.dionlarivire@ontariotechu.net](mailto:Cassandre.dionlarivire@ontariotechu.net) )

**Departmental and institutional affiliation(s):** Faculty of Social Science and Humanities,  
Ontario Tech University

**Introduction**

You are invited to participate in a research study entitled Virtual Interviewing. You are being asked to take part in a research study. Please read the information about the study presented in this form. The form includes details on the study's procedures, risks and benefits that you should know before you decide if you would like to take part. You should take as much time as you need to make your decision. You should ask the Principal Investigator (PI) or study team to explain anything that you do not understand and make sure that all of your questions have been answered before signing this consent form. Before you make your decision, feel free to talk about this study with anyone you wish including your friends and family. Participation in this study is voluntary.

This study has been reviewed by the University of Ontario Institute of Technology (Ontario Tech University) Research Ethics Board [#16150] on January 4<sup>th</sup>, 2021.

**Purpose and Procedure:**

*Purpose:*

- The purpose of this study is to examine psychological responses that occur in response to various audio/visual stimuli and situations
- You have been invited to participate in this study because you are in the student participant pool at Ontario Tech University and are eligible to receive credit in your psychology course for research participation.

*Procedures:*

- This study consists of an online survey (hosted at Qualtrics.com). Qualtrics surveys are commonly used in psychological research. You will be asked to watch a short video. **PLEASE NOTE:** The video may contain content of a sexual nature. Following the video, you will be asked to participate in a one-on-one interview via Zoom. For this interview, you will be required to have your webcam turned on. The interview will be screen recorded.

- This study is expected to take 60 minutes to complete in its entirety.
- Participants are asked to pay close attention to the video.
- The data collected will consist of your responses within the online Qualtrics survey as well as the interview. The interview will be recorded and will be coded by research assistants. This data will be analyzed by the research team.
- Aggregate data may be published (e.g., dissertation, conference presentations, academic journal articles) in the future.
- This study can be completed at a time agreed upon with the researchers and at any place of your convenience.
- Approximately 120 participants will be recruited for this study.

### **Potential Benefits:**

- You will not directly benefit from participating in this study.
- There may be indirect benefits associated with your participation (e.g., by contributing to advancing knowledge in areas that are relevant to the legal system and society more broadly).

### **Potential Risk or Discomforts:**

- The video you will be asked to watch may contain content of a sexual nature and may make you feel uncomfortable during some parts of the video. You are free to withdraw from participation at any point during the study (by closing your web browser, informing the interviewer and closing your Zoom window).
- Ontario Tech University provides a number of resources for students in need of support. If you have been affected by the content of this study, the University can assist you. To make an appointment or view options regarding the University's mental health services, please visit on the following link:
  - <https://studentlife.ontariotechu.ca/services/health-and-wellness/mental-health-services/counselling/index.php>
- For additional mental health service information for post-secondary students in Ontario, please visit Good2Talk: <https://good2talk.ca/ontario/> or 1-866-925-5454 (phone)

### **Use and Storage of Data:**

- The data collected will be stored on the PI's password-protected cloud drive indefinitely and will be accessible only to members of the research team. The cloud storage used for this study is a personal cloud storage but one that is used solely for research purposes for Dr. Eastwood's research laboratory (ALERT Lab).
- Data collected via the online Qualtrics survey will also be temporarily stored within the Qualtrics system (for more information: <https://www.qualtrics.com/platform/security/>)

- Basic demographic information will be requested (e.g., age, gender). However, you are not obligated to provide this information.
- **The interview portion of this study will be screen-recorded.** This information will allow us to code and analyze the data. The video-recording will be transcribed, and all identifying information will be removed. Once all the analyses are completed, the video will be electronically deleted.
- **You will be required to provide your email address.** This information will allow us to schedule your participation in this study. Once your responses have been linked, your email address will be removed from our dataset.
- Raw data will be accessible only to those researchers listed on this form, while aggregate data (without personal identifiers) may be shared with other researchers.
- Please be aware that academic publications and presentations may result from this project and that the data you provide may be published at the discretion of the researcher.
- If you choose to withdraw from the study up to two months after your participation, your raw data will be discarded and will not be included in our final analysis.
- All information collected during this study, including your personal information, will be kept confidential and will not be shared with anyone outside the study unless required by law. You will not be named in any reports, publications, or presentations that may come from this study.

### **Confidentiality:**

- Identifying information will be collected during the study, including basic demographic data, your email address and the recording of the interview. All data will be used solely for research purposes, and only aggregate data will be published in any publicly available formats (journal articles, presentations, etc.)
- Your privacy shall be respected. No information about your identity will be shared or published without your permission, unless required by law. Confidentiality will be provided to the fullest extent possible by law, professional practice, and ethical codes of conduct. Please note that confidentiality cannot be guaranteed while data is in transit over the Internet.
- This research study includes the collection of demographic data, which will be aggregated (not individually presented) in an effort to protect your anonymity. Despite best efforts it is possible that your identity can be determined even when data is aggregated.
- Please note that communication via e-mail is not absolutely secure. Thus, please do not communicate personal or sensitive information via e-mail.

### **Voluntary Participation:**

- Your participation in this study is voluntary and you may partake in only those aspects of the study in which you feel comfortable. You may also decide not to be in this study, or

to be in the study now, and then change your mind later. You may leave the study at any time without affecting your academic standing.

- You may refuse to answer any question you do not want to answer, or not answer an interview question by saying, ‘pass’.”

### **Right to Withdraw:**

- If you withdraw from the research project at any time (by closing your internet browser and informing the researcher), any data that you have contributed will be removed from the study, and you do not need to offer any reason for making this request.
- You will be able to withdraw from participation anytime during the study and up to two months after your participation. After two months, you will no longer be able to withdraw as it is not feasible to identify/remove your data once it has been anonymized.
- It will also be impracticable to withdraw results once they have been published or otherwise disseminated.

### **Conflict of Interest:**

- Researchers have an interest in completing this study. Their interests should not influence your decision to participate in this study.

### **Compensation, Reimbursement, Incentives:**

- You will receive 1.0 credit in your psychology course as compensation for taking part in this study
- You will not incur any expenses as a result of your participation in this study.

### **Debriefing and Dissemination of Results:**

- You may contact the PI (Dr. Joseph Eastwood) with any questions or concerns you have about the study ([Joseph.eastwood@ontariotechu.ca](mailto:Joseph.eastwood@ontariotechu.ca)).
- To inquire about the results of the study, please contact Dr. Eastwood after June 2022.
- Results may be published in the future (e.g., conference presentations, scholarly publications). If you wish to receive a copy of any publications, please contact us.

### **Participant Rights and Concerns:**

- Please read this consent form carefully and feel free to contact the researchers with any questions that you might have about the study. If you have any questions about your rights as a participant in this study, complaints, or adverse events, please contact the Research Ethics Office at (905) 721-8668 ext. 3693 or at [researchethics@ontariotechu.ca](mailto:researchethics@ontariotechu.ca).
- If you have any questions concerning the research study or experience any discomfort related to the study, please contact the researcher, Joseph Eastwood, at 905.721.8668 ext. 5971 or [Joseph.eastwood@ontariotechu.ca](mailto:Joseph.eastwood@ontariotechu.ca).

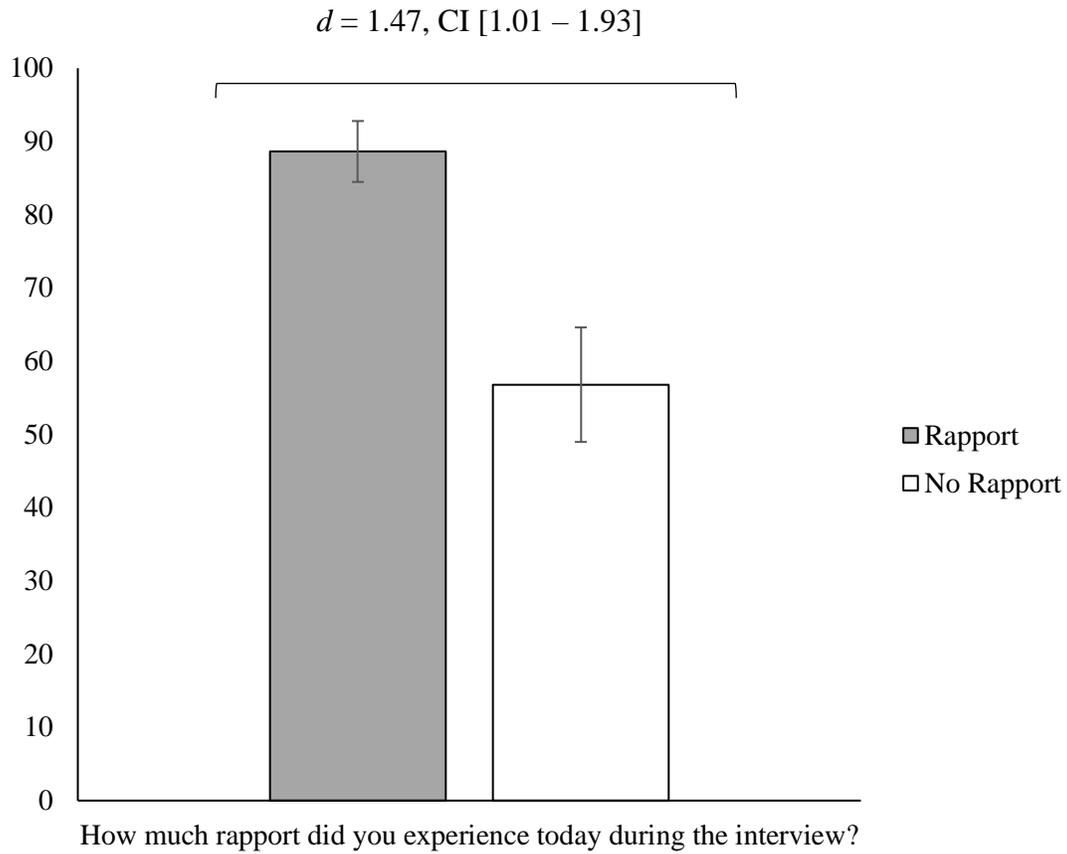
- By clicking “I agree” below, you do not give up any of your legal rights against the investigators, sponsor or involved institutions for compensation, nor does this form relieve the investigators, sponsor or involved institutions of their legal and professional responsibilities.

**Consent to Participate:**

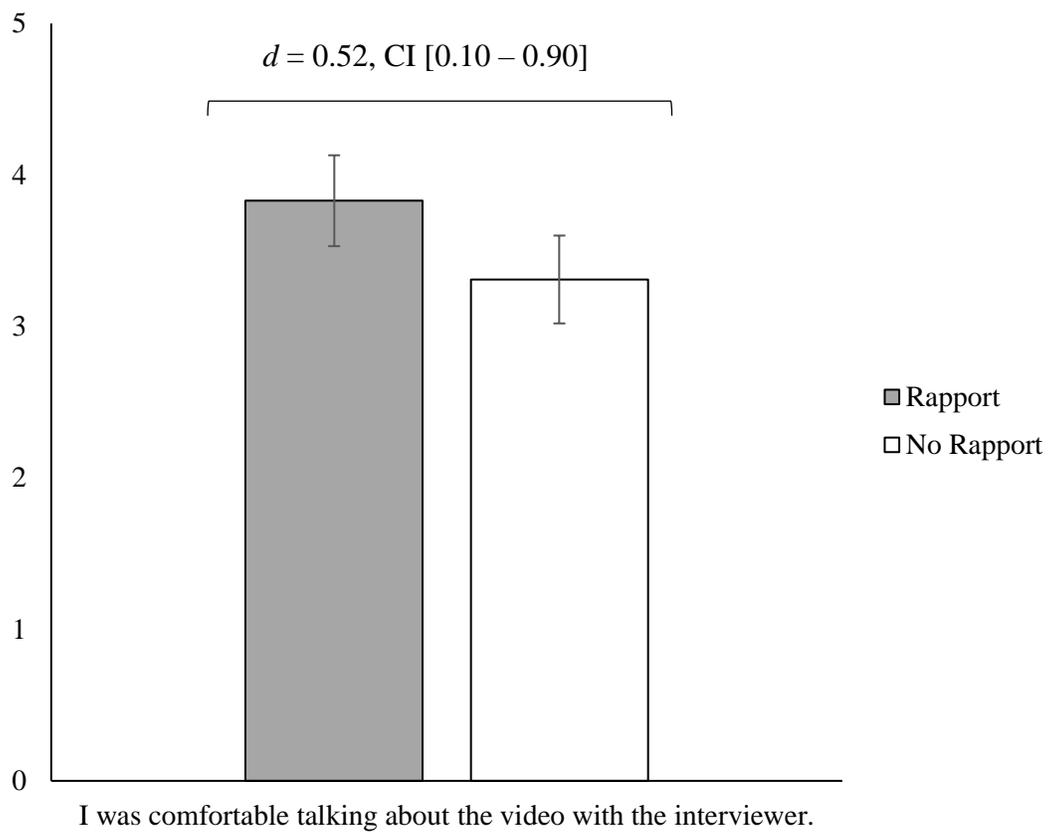
1. I have read the consent form and understand the study being described.
  2. I have had an opportunity to ask questions, and my questions have been answered. I am free to ask questions about the study in the future.
  3. I freely consent to the screen recording of the interview and to the collection and analysis of this video.
  4. I freely consent to participate in the research study, understanding that I may discontinue participation at any time without penalty. A copy of this Consent Form has been made available to me.
- I agree
  - I do NOT agree (this will end the survey)



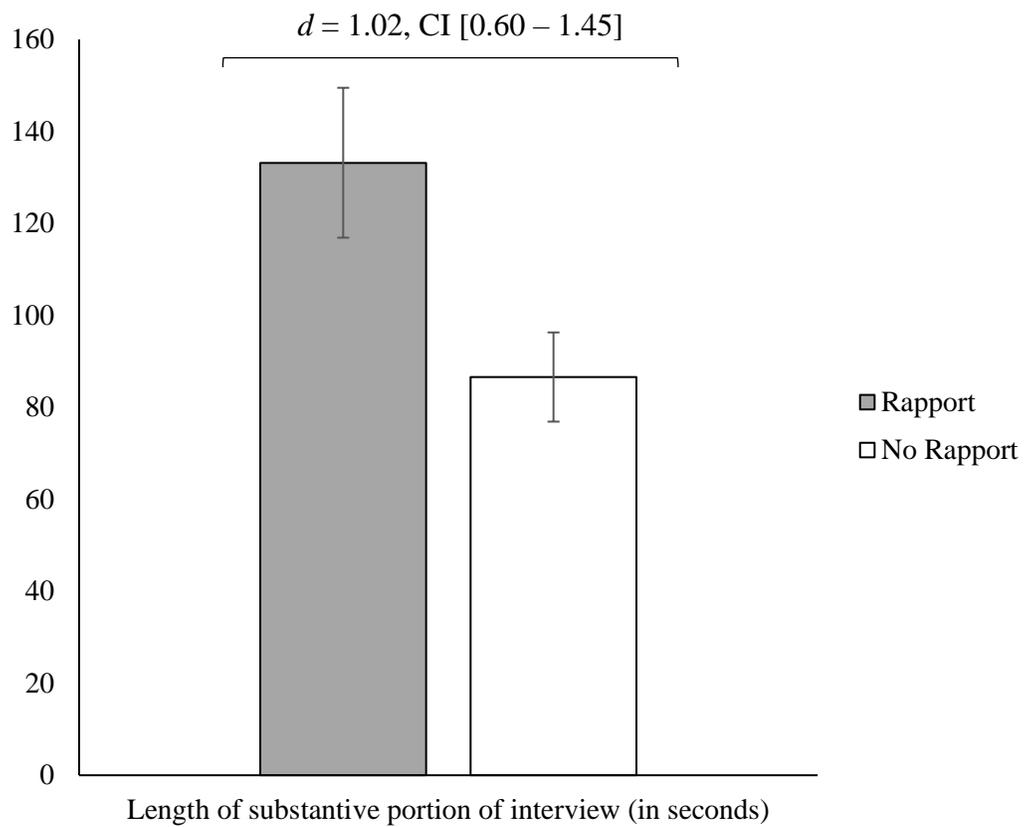
## Appendix D



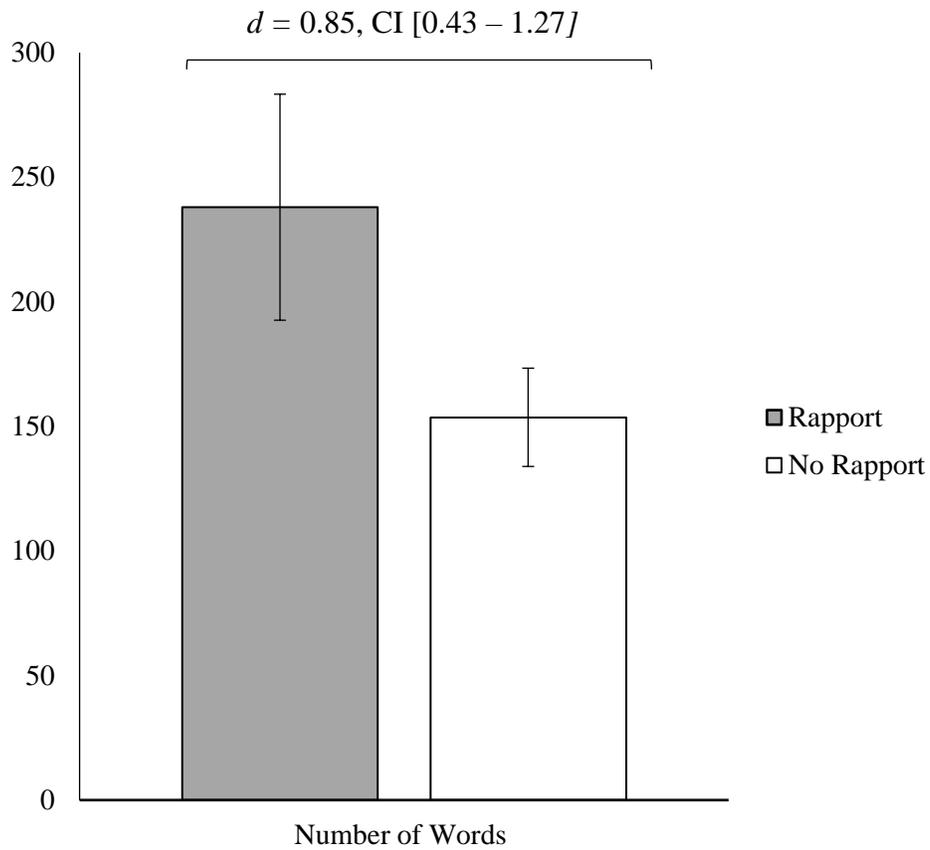
*Figure 3.* Mean participant reported level of perceived rapport with the interviewer on a 5-point Likert scale. Error bars are 95% confidence intervals. Cohen's  $d$  effect sizes for between-group comparisons are indicated.



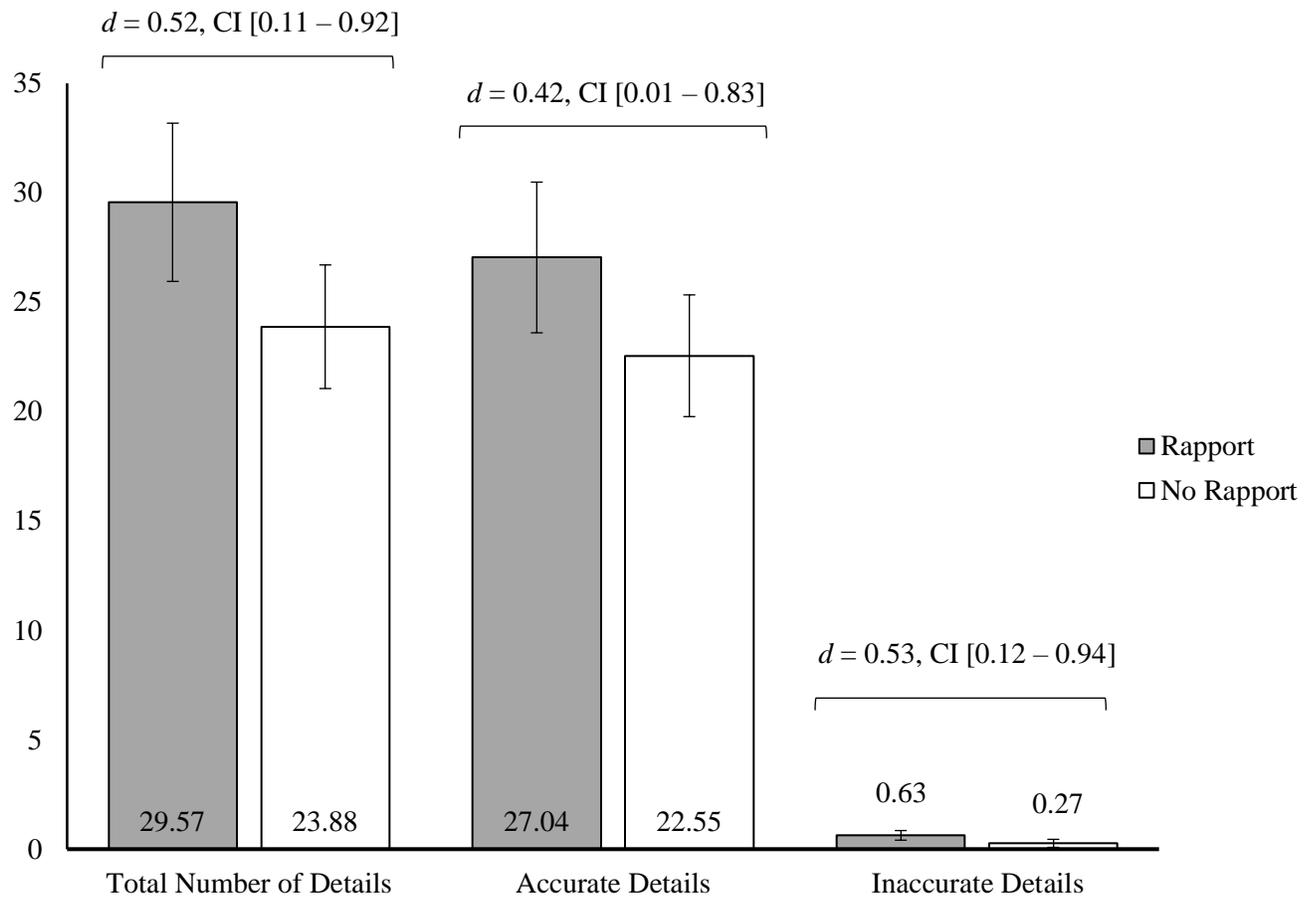
*Figure 4.* Mean participant reported level of comfort talking about the video with the interviewer on a 5-point Likert scale. Error bars are 95% confidence intervals. Cohen's  $d$  effect sizes for between-group comparisons are indicated.



*Figure 5.* Mean length of substantive phase of interviews (in seconds). Error bars are 95% confidence intervals. Cohen's  $d$  effect sizes for between-group comparisons are indicated.



*Figure 6.* Mean number of words spoken by the participant in the substantive phase of the interview. Error bars are 95% confidence intervals. Cohen’s *d* effect sizes for between-group comparisons are indicated.



*Figure 7.* Mean number of accurate, inaccurate, and total details. Error bars are 95% confidence intervals. Cohen's *d* effect sizes for between-group comparisons are indicated.