ABSTRACT

Title of Dissertation:	INVESTIGATING THE EFFECTS OF COMMUNICATION CHANNELS AND INTERGROUP CONTACT ON COLLEGE STUDENTS' MENTAL HEALTH
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The prevalence and severity of mental health issues among students have increased on college campuses in recent years. Online counseling can provide a good way to improve college students' mental health, but the amount of social presence of online counseling types may impact its effectiveness. Moreover, communication challenges may arise when the counselors and clients are from different racial groups, and these challenges may in turn be impacted by the characteristics of the communication channel. Using an experiment with 292 participants, this study investigated how counseling channels and inter/intragroup contact, as well as their interaction, affect counseling effectiveness (state anxiety, self-disclosure, satisfaction, and working alliance) and intergroup outcomes (intergroup prejudice and intergroup anxiety) as well as the moderation effects of communication competence and stigma. The results indicated that videoconferencing counseling had a higher satisfaction than online synchronous chat counseling. Intergroup counseling significantly reduced intergroup prejudice and intergroup anxiety. Participants' self-disclosure, satisfaction, working alliance, reduced intercultural prejudice, and reduced intercultural anxiety significantly decreased their state anxiety. Implications of these findings for intergroup communication in online counseling are discussed.

INVESTIGATING THE EFFECTS OF COMMUNICATION CHANNELS AND INTERGROUP CONTACT ON COLLEGE STUDENTS' MENTAL HEALTH

by

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Chapter 1: Introduction

Technological advances are changing the way people communicate. Online counseling has become an important mental health service that is being used by many counselors and clients (American Psychological Association, 2017). Due to the COVID-19 pandemic, traditional face-to-face counseling has temporarily transitioned to online counseling format (American Psychiatric Association, 2020). However, despite the increasing popularity of online counseling, there is little empirical evidence regarding how the communication channel of counseling affects either its counseling effectiveness or impact intergroup communication challenges that can sometimes lead to counseling challenges.

Online counseling is defined as "a mental health intervention between a patient (or a group of patients) and a therapist, using technology as the modality of communication" (Barak & Grohol, 2011, p. 157). Online counseling includes email, synchronous chat, phone, and videoconferencing (Mallen et al., 2005). Despite these channels varying along a number of variables related to social presence, only one study has used social presence theory to explore the differences between online and face-to-face counseling in working alliance and social presence (Holmes & Foster, 2012). Even though they did not find significant effects, they suggested that future study should increase the sample size. Moreover, their methodology was cross-sectional and thus lacks the ability to address causality. The paucity of research linking social presence theory to counseling effectiveness needs attention. In order to fill this gap, this experiment will examine the different effects between videoconferencing (a high presence channel) and online synchronous chat counseling (a low presence channel) on counseling effectiveness.

Intergroup counseling describes "professional intervention and counseling relationships in which the counselor and the client belong to different cultural group" (Baruth & Manning,

2016, p. 15). When clients and counselors are from different social groups, they tend to face more challenges than when they are members of the same group (Baruth & Manning, 2016), and yet some intergroup theories (e.g., social identity model of deindividuation effects, Reicher et al., 1995) suggest these challenges are likely to be altered according to the social presence the counseling provides. Even though the issues of intergroup communication between clients and counselors affect intergroup counseling, few studies have applied intergroup communication theories to intergroup counseling. Therefore, this area has considerable theoretical and practical significance which needs further research attention. In order to fill this gap, this experiment also manipulated whether individuals are exposed to either ingroup or outgroup counselors in order to test hypotheses derived from both social identity theory and intergroup contact theory. Moreover, social presence lies at the crux of understanding the effects of both manipulations, and my study aims to show that two areas of research previously unconnected may actually be deeply theoretically entrenched with one another. Ultimately, this study seeks to begin to address these knowledge gaps and broaden the theoretical contexts of both the counseling and intergroup communication literature.

The History of Alternative Communication Channels in Counseling

Online counseling has the potential to support the increasing need for mental health services (Tirel et al., 2019). Thus, it is important to review the current landscape of online counseling. As far back as 1986, the earliest known mental healthcare program through the Internet was “Ask Uncle Ezra,” which provided advice to the students at Cornell University (Ainsworth, 2002). Uncle Ezra was an anonymous Cornell staffer with a mental health background who posted answers to between 10 to 20 questions a week. Uncle Ezra either answered the questions themselves or relied on the expertise of a Cornell professor or staff

member for answers. This program inspired other similar online services such as “Go Ask Alice!” at Columbia University in 1993 and “Ask Ralphie” at University of Colorado Boulder in 2001. Later in 1995, Ivan Goldberg created PsychCentral (psychcentral.com/chats.htm). His online chat room was open at advertised times and focused on answering questions about the medical treatment of depression (Skinner & Zack, 2004).

Phone is often considered a type of online counseling within the online counseling literature (Dowling & Rickwood, 2013), because Internet phone is the precursor, and functionally identical, to voice chat format of online counseling. Since 1994, a group of counselors, the “Samaritans,” began providing suicide prevention services via email in UK. Later, “Samaritans” developed into a telephone helpline, operating 24/7/365 for clients. In 2001, responded to 64,000 queries. Today it has 68 branches across the world. They still operate 24/7/365 to reduce suicide rate, providing online counseling services and provide suicide prevention education to the public.

Fee-based online mental health services were established by Sommers in 1995, rather than just answering single questions, he developed longer term online therapeutic relationships where communication was through the Internet (Skinner & Zack, 2004). Within three years, Sommers had worked with hundreds of people through several Internet technologies including e-mail, synchronous chat, and videoconferencing counseling.

In 1997, the International Society for Mental Health Online (ISMHO, www.ismho.org), was formed as a nonprofit organization to promote the understanding, use, and development of online communication technology for the international mental health community. It became a landmark in the development of online counseling because it provides a professional platform for

counselors to receive peer support, participates in information exchange and provides mental health help to online clients.

The American Psychological Associate (APA) published a declaration on online counseling services in 1995 and 1997. A statement by the APA's Ethics Committee indicated that when psychologists are delivering online counseling, they need to follow certain standards including counselor's competence, assessment, therapy relationship, confidentiality, professional and scientific relationship, basis of scientific and professional judgments, describing the nature and results of psychological services, avoiding harm, fees, financial arrangements, and advertising. The declaration is important, because American Psychological Associate started to revise the Ethics Code in order to formalize the standards for online counseling format due to "a rapidly evolving area" of online counseling (APA, 1997).

The increase of online mental health services was accompanied with the development of Internet in the late 1990s. A number of mental health providers were available online to service clients. However, online counseling companies could not acquire enough clients to maintain a large-scale business. Thus, online counseling services faced a challenge to continue to grow (Skinner & Zack, 2004).

It is challenging to estimate the current prevalence of online counselling (Shiller, 2009). According to a survey conducted by the American Psychiatric Association, among 1,241 psychology health service providers who are "trained in or currently working in a clinical, counseling, or school setting or performing a direct human service work activity" (p. 4), phone counseling was the most frequently used form of counseling by 58% of the providers surveyed, followed by e-mail (45%), then videoconferencing (7%), and the least used was online group (1%) among online counseling services (APA, 2010).

Now, the COVID-19 pandemic has radically altered how counselors are using technology to provide safe spaces, intimate connections, and relational continuity. In order to follow guidelines for social distance practicing, many counselors have had to switch traditional face-to-face counseling to full-time telehealth (APA, 2020). Additionally, Centers for Medicare & Medicaid Services (2021) announced COVID-19 Emergency Declaration Blanket Waivers for Health Care Providers in order to increase flexibility for online counseling services. Therefore, there is an increased need to conduct online counseling. The current study used a peer counseling session to improve participants' mental health by reducing their mental stress. Thus, I ask the following research question:

RQ1: Whether or not online counseling will be effective in improving participants' mental health?

Chapter 2 Social Presence and Counseling Effectiveness

This section reviews and discusses how scholars have defined social presence in terms of technological affordances, subjective experiences, and an interaction of media and users. Then, I provide my definition of social presence and use it to categorize online counseling channels with respect to their levels of social presence. In the second section of this chapter, I will argue why social presence should be related to some of the most commonly studied outcomes in counseling studies, such as self-disclosure, satisfaction, and working alliance, and why stigma may moderate some of these relationships.

Social Presence and Online Counseling

Social presence was first conceptualized by Short et al.'s (1976) social presence theory to explain the different apparent physical proximities produced by various communications channels. Physical closeness or proximity is normally associated with the involvement in face-to-

face communication, but Walther and Parks (2002) argue that interactions through online communication channels could also experience a sense of closeness. Short et al. (1976) defined social presence as the "degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (p. 65). They argued that media with high social presence are perceived as sociable, warm, and personal, whereas media with a low social presence are perceived as less personal. Thus, social presence is determined by the perceived "realness" of interpersonal interactions through online communication compared to in person communication.

The extent to which people feel socially present in different communication channels has been used as the theoretical focus for a great deal of research on computer mediated communication (CMC). Research on the effects of communication channels on social presence often compares computer-mediated with face-to-face communication. Scholars found that communicators experience higher levels of social presence during face-to-face communication compared with CMC in online learning contexts (Zhan & Mei, 2013), decision-making scenarios (Alge et al., 2003; Biocca et al., 2001), and online discussion (Cortese & Seo, 2012). Another common way in which social presence is studied in comparisons between text-based CMC with other types of audiovisual communication channels. Studies found that when given the same amount of time, communicating through text-based CMC resulted in lower levels of social presence compared to audio, audio with video, avatar-mediated communication channels (Bente et al., 2008) or videoconferencing (Kim et al., 2014; Sallnäs, 2005). Finally, research has found that immersive virtual environments (e.g., virtual reality) generally result in greater social presence compared to non-immersive virtual communication (e.g., Desktop) (Heldal et al., 2005; Schroeder et al., 2001). However, despite the prevalence of this social presence research, almost

none has been applied to online counseling. This represents an especially problematic gap in the literature given the way in which social presence should be related to counseling outcomes, as I will discuss in the later part.

There have been various attempts to explicate what drives this sense of closeness or presence. Some researchers define social presence in terms of a communication channels technological affordances. Walther and Parks (2002) use the cues-filtered-out perspective to explain how social presence is determined technologically. They believe that media differ in the ability to convey social presence, due to the different ability of media to transmit verbal and nonverbal cues. Short et al. (1976) indicated that social presence is determined by verbal and nonverbal cues, and some media are more capable of delivering these cues than others. Thus, inherent communication richness should impact the social presence of a communication channel.

Other researchers have focused on user-driven subjective evaluations of social presence across different communication channels. To these researchers, the degree of social presence is highly contingent on users' psychological feelings. Lee (2004) defined social presence as "the feeling that you are actually transported to a virtual world ('You are there'), or the feeling that the virtual world comes to you while you are remaining where you are initially ('It is here'), or the feeling that you and your interaction partners are sharing a space in a virtual world ('We are together [shared space]')" (p. 31). Social presence is also defined in terms of psychological immersion, or the degree to which users feel involved with stimuli from the virtual environment (Palmer, 1995).

Other scholars put forward that the experience of social presence is highly contingent on interactions between the technological features of communication channel and user psychological feelings (Oh et al., 2018). On the one hand, when a communication channel only

provides individuals limited communication options (e.g., lack of communication cues), it will be likely to influence the level of social presence a user feels. On the other hand, according to social information processing theory, "individuals adopt different strategies to convey socioemotional cues on platforms with relatively limited verbal and nonverbal cues" (Oh et al., 2018, p. 3). For example, people who communicate via text-based communication channels are probable to achieve a same level of social presence to face-to-face communication, but over a longer period of time (Walther, 1996). Thus, the degree of social presence is measured by the users' involvement while considering the constraints of the communication channels used.

I would argue that this last definition, that includes the interaction between the medium quality and user psychological feelings, allows for a better understanding of social presence within mediated communication channels. As for what matters to the user, Short et al. (1976) explained that social presence is composed of two main concepts: intimacy and immediacy. Intimacy is "the feeling of connectedness that communicators feel during an interaction" and immediacy "the psychological distance between the communicators" (Oh et al., 2018, p. 2). Intimacy and immediacy provide an understanding of how individuals come to subjective psychological perspectives on richness. Thus, in this study, social presence is defined as a result of quality of the communication channel itself (e.g., communication richness) and the degree to which an individual experience a sense of richness, intimacy and immediacy of the other (Short et al., 1976).

Next, by combining research that looks how technological affordances affects perceived richness, immediacy, and intimacy. I will explain the differences among various online counseling channels with respect to their level of social presence as described in the above definition (See *Figure 1*).

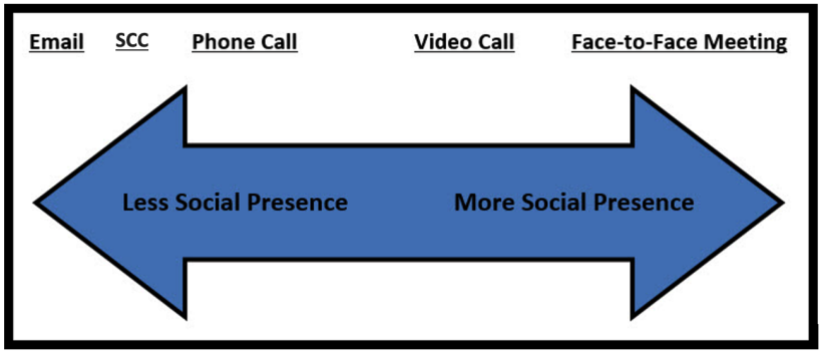


Figure 1 Degrees of Social Presence in Communication Channels

Counseling Presence and Richness. Short et al. (1976) indicated that social presence is determined by verbal and nonverbal cues, some media are more capable of delivering these cues than others. Different online counseling channels may also vary in the degree of social presence. For example, videoconferencing or telephone should for most individuals have greater social presence than synchronous chat and e-mail, as textual-based communications offer little social presence due to the lack of nonverbal cues to the interactants (Hiltz et al., 1978).

As discussed before, communication richness represents a component of social presence. media richness theory (Daft & Lengel, 1984, 1986) is used to rank and evaluate the richness of certain communication channels on a continuum from lean to rich channels. Rich media can transmit multiple cues. Videoconferencing provides a live audio and visual environment for participants to talk to one another with verbal and nonverbal cues (Holmes & Foster, 2012). Phone counseling represents an audio-based communicative service format between counselors and clients. It cannot reproduce visual social cues, which significantly reduces both counselor and client access to gestural non-verbal information. Synchronous chat counseling (SCC) delivers a text-based chat between a counselor and a client, allowing engagement in real time through the computer-generated space (Holmes & Foster, 2012), but SCC and email are incapable of transmitting non-textual cues. Thus, among online counseling services,

videoconferencing should be perceived as having the greatest amount of social presence because of the simultaneity of cues it projects. It is followed by telephone, then SCC and e-mail counseling which should be perceived as lower in social presence. However, it is also important to consider subjective experience of using communication channels when we define social presence.

Counseling Presence and Immediacy. The characteristic of immediacy is also influential in deciding the level of social presence for online counseling. Counseling channels such as face-to-face, synchronous chat, phone, and videoconferencing counseling allow immediate feedback in communication. On the other hand, when communicating through asynchronous email, clients and counselors have to wait for the other person's response for a while. Synchronicity is an important indicator of immediacy, because it means no time delay between counselors and clients' communication. Synchronous counseling refers to the communication which happens in real time between counselors and clients, while asynchronous counseling means the communication between them has a time delay (Perle, et al., 2011). E-mail counseling is the use of email exchanges for the delivery of counseling services between counselors and clients. The clients simply send emails, and the counselors answer when they are available. When using email, the feedback of both parties is intermittent and lacks immediacy. On the other hand, synchronous chat, phone, and videoconferencing are synchronous formats. They offer both clients and counselors direct and continuous communication (Teh, et al., 2014). Communication channels high in immediacy increase the quality of feeling direct and instant involvement with each other and giving rise to a sense of urgency in a communication process (Hackman & Walker, 1990). Hrastinski (2008) indicated that compared with asynchronous channels, synchronous formats provide better quality communication, this is more social and

engaging (feeling like being with others rather than isolating individuals facing the computer). Baker (2010) studied students' online learning experience and found that online synchronous courses resulted a significantly higher immediacy and presence than asynchronous courses. They explained that may be because instructors' use of nonverbally and verbally immediate behaviors in synchronous communication. Thus, synchronous counseling should be perceived by most as having a higher social presence than asynchronous counseling. Specifically, videoconferencing, telephone, and synchronous chat have higher social presence than e-mail.

Counseling Presence and Intimacy. The last feature of social presence is the capacity of communication channel to foster a sense of intimacy with others. Short et al. (1976) argued that communication channels with a high degree of social presence are perceived as sociable, warm, and personal, whereas media with a low degree of social presence are perceived as less personal. Compared to a communication channel with a low social presence, channels higher in social presence are more efficient for relational communication, such as building and maintaining interpersonal relationships (Calefato & Lanubile, 2010). Chou's (2002) content analysis analyzed the transcripts of students' interactions in both online synchronous and asynchronous seminars and indicated that in a synchronous online learning environment, students have more private and social talk and exchange more socioemotional interactions than in asynchronous formats. Face-to-face communication is considered as more highly involving in interaction with others than other types of online communication media which offer less involvement (Joyce & Wang, in process). When applying the concept of social presence (Short et al.,1976) to a counseling context, when the counseling channel has a wider capacity of conveying social presence, it should provide more effective relational communication than a counseling channel with low social presence (Calefato & Lanubile, 2010). In videoconferencing, the counselor and the clients

are able to express emotions and feelings verbally and nonverbally. In phone counseling, clients and counselors can hear the tonal cues (Rhoads, 2010), but the emotions and feelings that require visual cues (e.g., nodding, frowning) to express are absent. On the other hand, in SCC and email counseling, it might be harder to express emotion with only text. Kruger et al. (2005) asked participants to email 10 statements to a recipient and found that it was harder for the recipient to correctly figured out the emotions behind text messages compared with voice messages. Thus, videoconferencing should be perceived by most as having the highest level of social presence because of its wide capacity of to transmit emotions and feelings. It is followed in social presence by telephone, then SCC and e-mail counseling are low in social presence.

Each of the three dimensions (richness, immediacy, and intimacy) consistently suggest that videoconferencing is the highest level of social presence, then followed in social presence by telephone, SCC and e-mail counseling are low in social presence. Generally, communication channels with higher social presence often predict positive communication outcomes (e.g., persuasion and attraction) compared with those are low in social presence (Fogg & Tseng, 1999; Lee et al., 2006a). However, for a number of theoretical reasons discussed below, this may not always be the case in online counseling. While there is no comprehensive research on how social presence affects counseling outcomes, there are a number of studies that compare the channels I have just ranked in terms of social presence. In the next section, I will use these rankings to understand what past research can infer about the impact of social presence on the effectiveness of counseling.

The Effectiveness of Online Counseling

In chapter one, I have explained how various counseling channels differ in social presence. Very little research has explicitly demonstrated how social presence affects counseling

effectiveness. In this section, I will discuss the effectiveness of different online counseling channels in terms self-disclosure, satisfaction, and working alliance. These variables have been chosen because they are common therapeutic outcomes in past studies investigating counseling effectiveness (e.g., Cook & Doyle, 2002; Day & Schneider, 2002; King et al., 2006;Mallen et al., 2003; Mitchell et al., 2008; Murphy et al., 2009; Sangha, et al., 2003; Schopp et al., 2000; Stevens et al., 1999).

Self-disclosure

Self-disclosure has been defined as "a process whereby a person verbally reveals private feelings, thoughts, beliefs, or attitudes to another person" (Vogel & Wester, 2003, p. 351). Counseling can be effective only if clients are willing to disclose information about their problems to counselors (Stricker & Fisher, 1990). Social presence plays a role in affecting how people self-disclose in counseling. When communication cues are absent, individuals are disinhibited and tend to disclose more freely (Nguyen et al., 2012). Studies show that for individuals who are not willing to self-disclose in face-to-face counseling, online counseling may bypass their defenses and aid them in disclosing sensitive information and reducing their defenses enough to benefit from counseling (Cohen & Kerr, 1999). Absence of nonverbal information necessitates greater self-disclosure (Nguyen, et al., 2012). Due to the *online disinhibition effect* (Suler, 2004), an online environment makes the clients feel more psychologically safe, which changes the nature of their self-disclosure (Richards & Viganó, 2013). For individuals who are suffering, unable, or unwilling to present themselves in visual counseling, text-based counseling's characteristic of anonymity can "aid clients in disclosing sensitive information and lowering their defenses enough to benefit from therapy" (Cohen & Kerr, 1999, p. 24). As a result, according to these theoretical perspectives increases in social

presence may actually make it more difficult for individuals to self-disclose in videoconferencing counseling compared with SCC.

However, past studies have had inconsistent findings regarding the relationships between different channels of counseling and self-disclosure. Mallen et al. (2003) conducted an experiment in which 64 undergraduate counseling major students were randomly assigned to either a face-to-face setting or an online synchronous chat counseling setting. The results showed that the participants had higher levels of self-disclosure with their interaction with partner in a face-to-face, as compared to an online setting. However, other studies found higher levels of self-disclosure in an online environment than in face-to-face communication. Bruss and Hill (2010) examined the effect of online text-based chat versus face-to-face communication on self-disclosure and reported that the online format had a significantly higher amount of personal self-disclosure than face-to-face communication. Another study also found that there was a higher level of self-disclosure in synchronous chat counseling than face-to-face counseling (Joinson, 2001). Thus, synchronous chat may be a more appropriate format for self-expression and more appealing to the individuals who are uncomfortable expressing themselves (Richards & Viganó, 2013). Based on this, I hypothesize:

H1: Participants in the SCC condition will report higher self-disclosure than those in the videoconferencing counseling.

Satisfaction

Clients' satisfaction plays an important role in gauging counseling effectiveness (Pruitt et al., 2019). Social presence has been viewed as an important predictor of computer-mediated communication user satisfaction. Specifically, the higher the sense of social presence conveyed by a channel, the higher the satisfaction perceived by participants when communicating

(Gunawardena & Zittle, 1997). Research on online learning environments provide a useful analogue to understanding the effects of online counseling as both are happening in an interactive computer-mediated communication channel, and the instructors or the counselors provide information to the students or the clients. Gunawardena and Zittle (1997) found that social presence accounted for about 60% of the variance of the satisfaction variable in online learning environments. They explained that physical media capabilities may affect people's perceptions of social presence and subsequent user experience in computer-mediated communication.

Research, comparing different channels of counseling supports this. In the Mallen et al. (2003) study, 64 undergraduate students were randomly assigned to either a face-to-face or SCC in pairs. They found participants in a face-to-face setting were more satisfied with the experience than those in a SCC. Liebert et al. (2006) found that the clients were satisfied with online counseling they received, but they reported a significantly higher level of satisfaction with face-to-face counseling. Sangha et al. (2003) compared face-to-face and phone counseling among participants, the results did not show a significant effect on clients' satisfaction between the two channels of counseling. Past studies consistently demonstrate significantly higher satisfaction with face-to-face counseling than online counseling and based on my arguments above it seems likely this has to do at least in part with social presence. However, past studies did not provide evidence to compare videoconferencing and SCC on these outcomes. Because videoconferencing counseling has a higher level of social presence than SCC, I hypothesize:

H2: Participants in the videoconferencing condition will report higher satisfaction than those in the SCC condition.

Working Alliance

Working alliance refers to the degree to which the client and counselor incorporate "a mutual understanding and agreement about change goals and the necessary tasks to move toward these goals along with the establishment of bonds to maintain the partners' work". Working alliance has been considered as a central component of defining a successful therapy (Cook & Doyle, 2002).

Generally, communication channels with greater social presence (e.g., videoconferencing or telephone) are more efficient for building and maintaining interpersonal relationships and intimacy than other media (e.g., e-mail) (Calefato & Lanubile, 2010). Thus, people tend to favor more presence in counseling. However, it is not necessarily a predictor of their ability to form a productive relationship with their counselor. According to social information processing theory, while communication channels low in social presence can still foster a stronger relationship, they may take a longer time than high social presence channels, because lack of nonverbal cues leads to less social information transmitted per message (Walther, 1996). For example, Holmes and Foster (2012) found participants in the online counseling condition received significantly stronger working alliance ratings than the face-to-face counseling condition. Similarly, Cook and Doyle (2002) found that participants reported higher working alliance in asynchronous and synchronous text-based counseling than face-to-face counseling. While asynchronous and synchronous text-based counseling resulted in a weaker working alliance than face-to-face counseling in Leibert et al.' study (2006), their study lacked randomization of participants to treatment conditions which affected their study's validity. To explain the result, they said that the disadvantage of missing nonverbal cues was offset by the advantage of anonymity when sharing

shameful personal messages. My study randomly assigned the participants to either a videoconferencing or a SCC condition. Based on the previous evidence, I hypothesize:

H3: Participants in the SCC condition will report higher working alliance than those in the videoconferencing condition.

Chapter 3 Group Identity and Intergroup Counseling

Communicators in intergroup interactions (meaning that the communicators are from different salient groups) experience more cognitive, emotional, and social challenges than when communicators are members of the same group (Dovidio, et al., 2017). This study takes a social identity approach to studying counseling and intergroup counseling. In the following sections, I will explain the basic concepts of social identity theory (Tajfel & Turner, 1986) and how identity affects counseling.

Group Identity in Counseling

Social identity theory (SIT) was first developed by Henri Tajfel in 1970s. Hogg (2018) explained SIT as "a social psychological analysis of the role of self-conception in group membership, group processes, and intergroup relations" (p. 112). "Groups, defined as collections of people sharing the same social identity, compete with one another to be distinctive in evaluatively positive ways—they compete over consensual status and prestige" (Hogg, 2018, p. 114). The SIT is an influential theoretical framework in the study of intergroup communication. Intergroup communication occurs when individuals in a social interaction define themselves and others based on the groups to which they belong (Harwood et al., 2005). An individual's social identity can become salient through social comparison which maximizes distinctions between self (as in-group member) and other (as out-group member) and similarities between self and ingroup members (Hogg, 2018). The salience of differences may trigger the mechanism of

group-based rather than person-based impression formation (Brewer, 1988). Groups to which people belong are termed *ingroups*; groups of which these same people are not members are *outgroups*.

Individuals are often more positively biased toward the members in the same group (in-group favoritism) than members of a different group (out-group derogation). This is called intergroup bias (Hewstone et al., 2002). There are numerous mechanisms which reinforce these biases. Two especially relevant to counseling have to do with cooperation and stereotyping. Individuals are more likely to remember negative acts by out-group members than by in-group members (Howard & Rothbart, 1980) and are more likely to cooperate with those with whom they share a group identity (Orbell et al., 1988). This might affect how clients perceive and interpret the counselors who are members of outgroups. "The extension of trust, positive regard, cooperation, and empathy to in-group, but not out-group, members is an initial form of discrimination based solely on in-group favoritism, which must be distinguished from bias that entails an active component of aggression and out-group derogation" (Hewstone et al., 2002, p. 578-579). An early study found that in a Jewish residential district in New York City, people tended to help strangers who held pro-Israel (in-group) perspectives than a stranger who held pro-Arab (out-group) perspectives (Hornstein et al., 1971). Group salience refers to "an individual's awareness of group memberships and respective group differences in an intergroup encounter (e.g., the salience of race in an inter-racial conversation)" (Harwood et al., 2006, p. 182). The existence of subtle yet complex forms of bias and prejudice between different cultural groups was significant factor to affect intergroup counseling (Casas, 1984). Thus, the intergroup bias can potentially affect counseling when counselors and clients are from different cultural groups. Few studies have focused on applying social identity theory to intergroup counseling

contexts. However, given that race/ethnicity influences how people think and behave, it suggests that race/ethnicity also affects how different groups define a counseling relationship (Baruth & Manning, 2016).

Intragroup counseling occurs when counselors and clients share the same social identity (e.g., racial/ethnic identity), while intergroup counseling is considered as professional counseling relationships in which the counselor and the client share different social identities. A meta-analysis conducted by Cabral and Smith (2011) indicated that individuals had strong preference (52 studies, Cohen's d = 0.63) for a therapist of their own race/ethnicity and they tended to perceive the therapists of one's own race/ethnicity more positively than other therapists (81 studies, Cohen's d = 0.32). Cabral and Smith (2011) explained that when the clients and counselors are from the same racial/ethnic group, they are more likely to have similar social networks and live in similar communities, increasing counselors' mindfulness to provide clients available and familiar resources.

More challenges may be produced in intergroup counseling. For example, intergroup bias may be detected by clients and counselors when they view each other as out-group members during intergroup counseling interactions. SIT argues that "depersonalized perception of out-group members is more commonly called stereotyping, you view 'them' as being similar to one another and all having out-group attributes" (Hogg, 2018, p. 120). However, when people lack knowledge about their interlocutors, their expectancies directly connect to the interlocutors' cultural norms and stereotypes (Burgoon, 1995). Thus, the expectancies that are related to out-group stereotypes are often negative (Gudykunst & Nishida, 2001). People often make sense of other people by categorizing them based on stereotypes and prejudices about familiar and salient social groups. Physical appearance is immediately apparent upon communicating with someone

visually which frequently triggers stereotypes, prejudices, or biases (Fiske & Neuberg, 1990). Additionally, the consequences of negatively stereotyping out-group members frequently lead to racism (the belief that one race is superior to another) (Baruth & Manning, 2016). For example, one study found that African American clients tended to mistrust white American counselors (Nickerson et al., 1994). It may be because African Americans as a group have a long history of race-related mistreatment by White people, African Americans tend to have a generalized suspicion or mistrust of White people (Terrell & Terrell, 1981). Thus, when the counselor's outgroup status is made more salient this may result in counseling deficits, as I will discuss below.

Intergroup Communication and Counseling Effectiveness

Social identities create bias and change behaviors when people from different racial groups communicate. In this section, I will discuss how the changes that result from intergroup contexts affect our previously discussed counseling outcomes.

Self-disclosure

Self-disclosure is not only a counseling outcome, but also an important part in intergroup contact (Ensari & Miller, 2002). Zane and Ku (2014) stated that clients perceiving similarity with their counselor may facilitate greater disclosure. Thus, ingroup affiliation is seen as a stand in for similarity (Hogg, 2018) ethnic match may foster clients' self-disclosure. Concordantly, clients may be reluctant to disclose information if they distrust their culturally different counselors (Horsman et al., 2009). For example, African American clients were less likely to self-disclose to White American counselors compared with African American counselors (Ridley, 1984). Ridley (1984) explained that these problems in self-disclosure among African American clients can account for the disparities in mental health treatment for this population. Thus, intergroup

counseling may decrease clients' self-disclosure because their counselors are from different racial groups.

H4: Intragroup counseling will result in higher reported self-disclosure than intergroup counseling.

Satisfaction

People' group identities may affect counseling satisfaction. A study of doctor-patient relationships revealed that minority patients were more likely to choose minority doctors and tend to be more satisfied and feel more connected and involved in decision making with racially congruent doctors (Ferguson & Candib, 2002). In a group counseling study, Perrone and Sedlacek (2000) surveyed 32 group counseling clients and found that homogenous counseling group members (race, ethnicity, and gender) reported higher satisfaction than heterogenous counseling group members. Satisfaction is also related to a high intention/willingness to continue counseling sessions (Zeren, 2015). Research suggests that the preference for ingroup counselor/client pairings goes both directions. Casas (1984) indicated that counselors prefer to work with clients who share similar characteristics (race or ethnicity) to them, and the similarity is highly associated with successful outcomes. Studies indicated that racial or ethnic match between clients and counselors is associated with increased counseling utilization. For example, Gamst (2004) examined the relationship between counselor-client racial matching among Asian Americans and the amount of counseling visits and found that racially matched Asian American clients had significantly more visits than nonmatched mood disorder clients. O'Sullivan and Lasso (1992) found the same effects among Hispanic clients. Sue et al. (1991) examined the relationship between client-counselor racial matching and the rate of failure to return for treatment among 7,136 Asian Americans, 47, 220 African Americans, 58,844 Latinos, and

99,036 White people using outpatient services in the Los Angeles County mental health system. They found that racially matched clients had lower odds of dropping out from mental health treatment among Asian American, Latino, White clients, but not among African American clients. Based on this, I hypothesize:

H5: Intragroup counseling will result in higher satisfaction than intergroup counseling.

Working Alliance

According to SIT, individuals tend to be positively biased toward ingroup members because of presumed shared similarities. Specifically, "people assume greater similarity of opinion between themselves and in-group members than between themselves and out-group members" (Marks & Miller, 1987, p. 80). As discussed, working alliance is an important outcome in counseling studies. While there is little research looking at the effects of group dynamics on working alliance, it is possible to draw some conclusions by looking at research on intergroup teamwork and cooperation more generally. A meta-analysis of 8,757 teams in 39 field studies found that cultural diversity (e.g., race) in project teams had a negative effect on team cohesion and team performance (Joshi & Roh, 2009). When working in teams, people of different racial/ethnicity backgrounds perceived themselves to be dissimilar to their fellow team members (Harrison et al., 2002; Zellmer-Bruhn et al., 2008). Also, eople who had different racial or ethnic background from their work units were evaluated negatively (Tsui et al., 1992).

Research on intergroup doctor-patient communication echoes these findings. For example, one study found that race/ethnicity have large effects on the quality of the doctor-patient relationship, such that minority and nonnative English patients were less likely to build rapport with physicians (Ferguson & Candib, 2002). Therefore, working with people from different racial/ethnic groups may result in a lower working alliance. Applying this to

inter/intragroup counseling contexts, clients might tend to prefer counselors who share more similarities to themselves. The similarity between clients and counselors can help with increasing mutual understanding (Kohatsu et al., 2000). With this preliminary evidence, I hypothesize:

H6: Intragroup counseling will result in higher working alliance than intergroup counseling.

Intergroup Counseling and Intergroup Outcomes

As discussed, social identity theory explains that the phenomenon of intergroup bias often happens in intergroup communication which might lead to members of the ingroup holding prejudice against people who belong to out-groups. However, the experience of interacting with people from outgroups could lead to certain positive outcomes. Allport's (1954) intergroup contact theory explains that why, how, and when intergroup communication serves as a prolific prejudice reduction technique. According to Allport (1954), intergroup contact would result in positive outcomes if the contact happens under certain ideal conditions, such as when the contact involves equal status, institutional support, common goals and cooperation. Past studies indicated that regardless of these ideal conditions, intergroup contact significantly reduced prejudice (Pettigrew & Tropp, 2006).

Intergroup Prejudice

Intergroup contact is important to explain the role of prejudice in intergroup counseling. The intergroup contact framework argues that contact with outgroup members facilitates information exchange and improvements in knowledge about outgroups, leading to more accurate and favorable impressions of specific outgroup members. Dissipation of stereotypes could reduce prejudice toward the outgroup as a whole (Walther et al., 2015). Intergroup prejudice plays a role in intergroup counseling in which people need to work with an out-group

counselor. However, positive contact experiences with outgroup members could potentially reduce prejudices. An experiment conducted by Mustafa et al. (2012) found that participants had lower levels of intergroup prejudice after interacting with their culturally different partners than those interacted with people from the same culture. While there are no studies specifically addressing whether intergroup contact in the context of intergroup counseling is effective in reducing prejudice, some research has studied intergroup contact in the context of health care more generally. Frenkel et al. (1980) asked 114 nurses reported their attitudes toward different racial groups (e.g., White and African American). Then 11 months later, they were asked to report how frequency they contacted with patients who are members of other races and the same measurement of their attitudes toward different racial groups. The results show that direct nurse-patient contact during clinical training program resulted in positive racial perception. Thus, compared with intragroup counseling, intergroup counseling may be beneficial for reducing individuals' intergroup prejudice in their future intergroup contact. Based on this, I hypothesize:

H7: Intergroup counseling will result in less intergroup prejudice than intragroup counseling.

Intergroup Anxiety

Intergroup anxiety serves as a barrier to intergroup communication as individuals must navigate numerous fears, stress, and discomfort during interactions with outgroup members (Stephan & Stephan, 1985). In fact, intergroup contact can trigger anxiety (Spencer-Rodgers & McGovern, 2002). However, research has repeatedly found that positive contact typically reduces perceptions of intergroup threat and anxiety (e.g., Blascovich et al, 2001). For example, studies found that cross-group friendships significantly predicted reduced intergroup anxiety (Swart et al., 2010; Swart et al., 2011). People who experience positive intergroup contact are

less likely to feel anxious about similar interactions with outgroup members in the future, because this experience helps reduce their fear and discomfort after interaction. A study found that White people who reported having regular contact with members of racial/ethnic minority groups showed lower levels of physiological stress during intergroup contact scenarios than those who lacked these real-world interactions (Blascovich et al., 2001). Thus, contact with outgroup members should be useful in reducing people's intergroup anxiety. Thus, I hypothesize:

H8: Intergroup counseling will result in less intergroup anxiety than intragroup counseling.

Communication Competence

Communication competence (CC) is "the degree to which meaningful behavior is perceived as appropriate and effective in a given context" (Spitzberg, 2013, p. 130). When people have high CC, they tend to have high motivation to understand and communicate with others. They also possess communicative knowledge that makes them more aware of the appropriate behaviors to perform in a given social situation. Additionally, people with high CC are more likely to have communicative skills to achieve the effective communication goals.

Applying it to a counseling context. When clients have low CC, they are more likely to have less motivation, knowledge, and skill to interact with the counselors who are from different social groups. Having knowledge about how to interact with outgroup members will reduce situational ambiguity and uncertainty generated in intergroup interactions (Gudykunst, 2002). Additionally, having the skills and knowledge about how to interact with outgroups brings people the feeling that they will be able to handle the intergroup communication and stay calm and relaxed (Portalla & Chen, 2010). Conversely, not knowing how to interact with outgroup members can be a major source of anxiety in intergroup interactions. For example, Florack et al.

(2014) found that Spanish-speaking immigrants' competence in intergroup communication was negatively correlated to their intergroup anxiety of contacting with local Germans. Theoretically, Harwood (2010) argued that individuals with less communication skills might have a weakness in managing the flow of intergroup communication. Thus, intergroup counseling and its outcomes should be moderated by CC. Clients with high CC should feel less intergroup anxiety after they meet with an outgroup counselor, compared with those have a low CC, because they are most likely to be motivated, knowledgeable, and skilled enough to comfortably interact with their ingroup and outgroup counselors. Based on this, I hypothesize:

H9: CC moderates the relationship between inter/intragroup contact and intergroup anxiety, such that for participants having a high CC, intergroup counseling will result in lower intergroup anxiety than intragroup counseling. While for participants having a low CC, there is no significant difference between intergroup and intragroup counseling in evoking intergroup anxiety.

Chapter 4 The Interaction of Group Dynamic and Communication Channel

I have argued that many of the same core counseling outcomes can be predicted independently by both counseling channel and group dynamics (whether the counseling is intra/intergroup), but there is a reason to believe that these two predictive factors are not in fact isolated, but rather interactive. In this chapter, I will explain the effects of the interactions between group dynamics and communication channels on counseling effectiveness and intergroup outcomes.

The social identity model of deindividuation effects (SIDE, Reicher et al., 1995) serves as a tool to explain how group salience affects people's perceptions and behaviors through various communication channels. The SIDE model was grounded in SIT and explains that anonymity

enhances group salience and deindividuation (individuals perceive a loss of self-awareness in groups) because individual differences and identities are hidden. Thus, "perceptions of others shift from being primarily interpersonal to being group-based perceptions (stereotyping) under anonymity, rather than there being a loss of attention to others" (Lea et al., 2001, p. 527). Specifically, the characteristic of anonymity hides personal features and differences and thereby reduces the importance of individuality resulting in more focus on group memberships (Harwood, 2010; Postmes & Baym, 2005). When group identity is salient, people view themselves and others as representatives of social groups rather than idiosyncratic individuals (deindividualization) and thus view others' group identities based on group norms and stereotypes (Spears, 2017). Additionally, the characteristic of anonymity may lead people to view self and others based on stereotypic group features (Postmes et al., 1998). Lee (2004) indicated that people tend to develop a strong identity and see others as deindividuated group members through CMC channel more than face-to-face group meetings. The SIDE effects of anonymity not only affect how we perceive others, but also influence how we perceive ourselves and guide how we behave (Spears et al., 2002). The SIDE demonstrates that the characteristic of anonymity can increase social influence if a common group identity is salient (Lea et al., 2001). Thus, SIDE explains how group salience changes people's group identities in an online environment and provides a useful framework for understanding the interactive effects of counseling channel and group dynamics on both counseling and intergroup outcomes.

The SIDE Model and Online Counseling Effectiveness

The SIDE model is a useful framework to study online counseling, but to the best of my knowledge has not been used in this context. Visual anonymity is a common feature of text-based counseling and phone counseling, wherein an individual's physical characteristics are

hidden. Thus, compared with videoconferencing counseling (identifiable with visual cues), phone and text-based counseling should produce more deindividuation effects for clients and counselors in counseling contexts. Compared with text-based counseling, phone counseling may be perceived as less anonymous because of tonal and dialectic cues, as languages, dialects or communication styles can "drive attention to specific social groups, guide social categorization, maintain or change stereotypes, express and protect social identities, transmit broad cultural worldviews, and justify existing societal systems" (Holtgraves et al., 2014, p. 1). Thus, among the three counseling channels, text-based counseling has the highest anonymity and videoconferencing has the lowest level of anonymity. It may suggest that when clients and counselors share the same social identity in intragroup counseling, text-based counseling may trigger a salient ingroup identity and people tend to confirm more ingroup norms than videoconferencing. As noted on page 23 to 24, intragroup counseling should be associated with a higher satisfaction, working alliance, and self-disclosure than intergroup counseling. Based on SIT, these effects should be stronger when counselors and clients' shared group identities are more salient. SIDE suggests more anonymous channels will lead to more salient identities and thus enlarged differences between the intragroup and intergroup conditions. Thus, I hypothesize:

H10: Counseling channel will moderate the relationship between intra/intergroup contact and self-disclosure, such that intragroup counseling will be associated with higher self-disclosure compared with intergroup counseling in the SCC condition, while in videoconferencing this effect will be reduced.

H11: Counseling channel will moderate the relationship between intra/intergroup contact and counseling satisfaction, such that intragroup counseling will be associated

with higher satisfaction in SCC compared with intergroup counseling, while in videoconferencing this effect will be reduced.

H12: Counseling channels will moderate the relationship between intra/intergroup contact and working alliance, such that intragroup counseling will be associated with higher working alliance in SCC compared with intergroup counseling, while in videoconferencing this effect will be reduced.

The SIDE Model and Intergroup Outcomes

The interaction between group dynamics and communication channels also affects intergroup outcomes. Harwood's (2010) contact space framework argues that different channels of intergroup contact are likely to have different outcomes regarding the reduction of intergroup prejudice and intergroup anxiety. He argues that communication channels with high richness provide a more productive way to reduce intergroup prejudice through intergroup contact compared with communication channels low in richness because of mere exposure effects. Applying this to a counseling setting, when the clients continuously see the image of an outgroup counselor through a communication channel (e.g., videoconferencing), this should be more effective in reducing intergroup prejudice and anxiety compared with the clients who can't see the counselors' images. Conversely, Harwood (2010) indicated that segregation/psychological distance creates barriers (e.g., inaccurate beliefs and myths, a sense of mystery or exoticism, and a serious lack of knowledge about outgroups) in intergroup contact. According to social presence theory, communication channels high in social presence foster less psychological distance (high immediacy and intimacy) between communicators than those low in social presence (Short et al., 1976). According to Harwood (2010), communication channels with psychological distance provide relatively fewer options for intergroup contact and might be less likely to reduce anxiety

compared with communication channels with low segregated communication channels. Thus, communication channels high in social presence may work better to reduce intergroup anxiety, because low social presence communication channels may create more barriers and psychological distance.

In a visual communication environment, it is easy to make assumptions about others based on certain observable features (e.g., race, gender, and language accent) (Cohen & Kerr, 1999). Text-based synchronous chat is less rich because the observable features in intergroup videoconferencing may not exist in text-based synchronous chat counseling. This lack of richness might reduce the obviousness of group communication differences (e.g., accent) which might serve as a temporary advantage to intelligibility and comprehension. However, in the long term, avoiding visual cues in text-based counseling can create bias (e.g., not knowing outgroup dialects) in future intergroup contact as people may miss opportunities to confront their prejudices in nonthreatening and supportive environments. Therefore, this is a reason to believe that the less rich and less socially present outgroup contact in synchronous chat counseling may lead to less reduction of intergroup anxiety and intergroup prejudice compared with videoconferencing with high richness. Thus, I hypothesize:

H13: Counseling channel will moderate the relationship between inter/intragroup contact and intergroup prejudice, such that intergroup counseling will be associated with lower intergroup prejudice compared with intragroup counseling in videoconferencing, while in SCC this effect will be reduced.

H14: Counseling channel will moderate the relationship between intergroup contact and intergroup anxiety, such that intergroup counseling will be associated with lower

intergroup anxiety compared with intragroup counseling in videoconferencing, while in SCC this effect will be reduced.

Anxiety in College Students

The outcome variables discussed above are of more practical and theoretical interest if they also serve to improve the mental health of the participants. As a result, the ultimate dependent variable in this study is state anxiety. Anxiety refers to "an ambiguous feeling that is worsened when a person experience extended, unresolved stress or multiple stressors" (Bamber & Schneider, 2016, p. 2). State anxiety is a form of anxiety tends to show up temporarily. According to the Substance Abuse and Mental Health Services Administration (SAMHSA, 2019), over 47 million American adults suffer from mental health issues, 11.4 million of which are classified as serious. Of those diagnosed with having serious mental illness, two million are young adults, aged 18 to 25 (SAMHSA, 2019). The prevalence and severity of mental health issues have risen on college campuses in recent years (The Center for Collegiate Mental Health, 2019). The age of traditional college students marks a stage of critical personal growth and development for most individuals. During this period, most young people leave their parents' homes for the first time, pursue advanced educations or careers, and some begin to form their own families. These changes may make college students feel overwhelmed, stressed, or anxious (Pedrelli et al., 2015). According to the American College of Health Association (2019), anxiety is the highest diagnosed mental health disorder in the college population, 65.7% of students experienced overwhelming anxiety, 27.82% of which reported that anxiety negatively impacted their academics. Early diagnosis and intervention are instrumental in preventing or mitigating the symptoms of serious mental illness, and delays or failures to seek early treatment could lead to suicide (Leverich & Post, 2006).

The Center for Collegiate Mental Health (2020) reported that across 163 counseling centers in colleges and universities, 207,818 college students sought mental health treatment and scheduled 1,580,951 appointments during the 2018-2019 academic year. However, only 4,059 clinicians were available to provide services for these college students. There is a gap between the demand for mental health treatment from college students and the limited resources at universities. This results in long waitlists, so many students must wait weeks or longer to attend a counseling session (Thielking, 2017). Moreover, the outbreak of COVID-19 "is leading to additional health problems such as stress, anxiety, depressive symptoms, insomnia, denial, anger and fear globally" (Torales et al., 2020, p. 1). Lee (2020) indicated that students with mental health needs may face a lack of access to the mental health resources they usually have through schools during COVID-19 pandemic. In a survey of 2,111 patients with a history of mental illness, with a mean age of 25 located in the UK, 83% of them reported that the pandemic and the social distancing restriction had made their mental health conditions worse; 26% said that because of the cancellation of face-to-face individual and group counseling services they were unable to access mental health support they normally received before, resulting in an even greater gap in mental health coverage. Counseling has the potential to reduce college student' anxiety issues. A past study found that young adults (19-24 years old) reported better online-intervention effectiveness because of the "pervasiveness, acceptance, and usage skills associated with the Internet" (Barak et al, 2008, p. 145). As a result, it is especially important to consider in the context of college campuses given college students' needs, their technological savvy, and the shortages in mental health care facing many of their institutions.

There are many byproducts of counseling that may affect counseling's effectiveness. Patients who are unwilling to disclose their thoughts and feelings tend to experience decreased

effects of counseling (Farber & Hall, 2002). Regan and Hill (1992) found that the patients who failed to disclose their negative thoughts in counseling were more likely to have a lower satisfaction toward the counseling sessions they received. Thus, it is possible that when clients disclose their personal matters (e.g., specifics about their anxiety) it might be helpful to reduce that anxiety. Thus, I hypothesize:

H15: College students' self-disclosure will be negatively related to their state anxiety.

Previous studies also suggest that clients' satisfaction toward counseling sessions has a positive effect on their health outcomes. For example, Bitar et al. (2021) conducted a survey among 118 participants with schizophrenia regarding their fear and anxiety related to the COVID-19 pandemic. They found a significant negative relationship between their counseling satisfaction and their anxiety. Based on the study, I believe that satisfaction with counseling will lead to a reduced state anxiety.

H16: College students' satisfaction will be negatively related to their state anxiety.

Working alliance between clients and counselors plays an important role in affecting counseling effectiveness. A meta-analysis indicated that the quality of alliance has strong effects on yielding intervention success (Antoniou & Cooper, 2013). Anderson et al. (2012) found that the quality of the working alliance in online and face-to-face cognitive behavior therapy predicted a significant anxiety decrease after the three sessions among 73 adolescents with anxiety disorder. This suggests that clients who have better working alliance with their counselors have a better chance to reduce their anxiety. Thus, I hypothesize:

H17: College students' working alliance will be negatively related to their state anxiety.

People' levels of intergroup prejudice could also potentially affect their state anxiety. Previous studies indicated that people experience strong anxiety about showing prejudice in front

of other people due to the social norms against the expressions of racial bias (Stephan & Stephan, 1985). So, it is reasonable to assume that the more intergroup prejudice people hold, the more likely they may experience more anxiety. Based on this, I hypothesize:

H18: College students' intergroup prejudice will be positively related to their state anxiety.

Intergroup anxiety is different from state anxiety as the former can be seen as more reflective of a trait. However, these two types of anxiety can be related to each other. State anxiety can be caused by the fear of social interactions (Thompson et al., 2019). Intergroup anxiety occurs in intergroup interactions when people anticipate or participate in intergroup interactions. Thus, it is possible there might be a positive relationship between people's intergroup anxiety and their state anxiety.

H19: College students' intergroup anxiety will be positively related to their state anxiety.

Stigma

Additionally, past exclusion of some important moderators may also be responsible for the lack of a consistent direct effect. One prime example is the effect stigma may have on the counseling channel's relationship with counseling effectiveness. Cohen and Kerr (1999) mentioned that stigma management is an advantage of synchronous chat counseling compared with face-to-face counseling. Stigma toward seeking counseling has been defined as "an individual's perception of the devaluation, rejection, and discrimination that may occur if the individual receives counseling" (Choi & Miller, 2014). Corrigan (2004) advised that stigma is the most important reason why people avoid or hold negative attitudes toward counseling. However, some types of online counseling have been found to reduce stigma because of the characteristic of anonymity (Dowling & Rickwood, 2013). In text-based counseling, the clients

can communicate freely without having to see counselors. Hollenbaugh and Everett (2013) demonstrated that the features of anonymity and invisibility are considered to reduce the clients' fear of stigmatization to seek mental professional help. Because individuals will be less on display, SCC should be effective in minimizing the effects of counseling stigma. Not seeing the counselor might conceal stigma in the text-based counseling, while videoconferencing counseling is considered as more highly stigma triggering (Wang et al., 2020). Stigma has been shown to be a trigger of a person's psychological experiences of anxiety (Levy et al., 2015). Thus, stigma could moderate the relationship between state anxiety and counseling channel in the following way.

H20: Stigma moderates the relationship between counseling channel and state anxiety. Such that for participants with high stigma, videoconferencing will be associated with higher state anxiety than SCC. While for participants with low stigma, the effect will be reduced.

Additionally, given that I have predicted that the experimental conditions will effect each of these predictors of state anxiety, it is also worth asking if the difference between SCC and videoconferencing will have both direct and indirect effects on state anxiety though self-disclosure (RQ2a), satisfaction (RQ2b), and working alliance (RQ2c), and if the effect of having an intra vs intergroup counselor has a direct and indirect effect on state anxiety through self-disclosure (RQ2d), satisfaction (RQ2e), working alliance (RQ2f), intergroup prejudice (RQ2g) and intergroup anxiety (RQ2h).

Chapter 5 Methodology

Procedure and Study Design

The study consists of three parts: A pre-test questionnaire, a manipulated 30-minute

counseling session, and a post-test questionnaire. The counseling sessions were manipulated in two dimensions. The participants were randomly assigned to one of two counseling channels, either videoconferencing counseling or SCC. Within each condition, they were randomly assigned to either match their counselors' races (an intragroup contact setting) or mismatch their counselors' races (an intergroup contact setting).

Pre-test Questionnaire

The participants were asked to provide informed consent (see Appendix A) to be recorded and to respond to a survey that includes several questions about their state anxiety, demographic information, CC, and stigma toward seeking counseling. In order to protect participants' personal identity information, they were asked to come up with their own codenames. After these questions were completed, the participants started their counseling sessions using Zoom meeting program.

Experiment

Six peer counselors representing three races (two are Asian, one is African American, and three are White) provided a one-on-one anxiety intervention peer-counseling session in the experiment. The experiment was conducted as a 2 (videoconferencing vs. SCC) x 2 (intergroup vs. intragroup contact) factorial design. Each peer counselor opened 6 sessions including three videoconferencing and three SCC sessions every week on SONA, which channel the session took place varied from week to week and was not announced in advance to the participants. In order to randomly assign participants with respect to intragroup vs. intergroup pairings, I had pairs of counselors from two different racial groups providing sessions during the same time blocks. Due to the racial composition of the peer counselors, I ensured that each peer counseling pair provided two different racial grouping possibilities (pair one: one White counselor and one

Asian counselor; pair two: one White counselor and one African American counselor). Then, participants were randomly assigned to one of the two available counselors and they were unable to self-select their peer counselors. As a result, participants were not able to self-select either the race of their counselor or the channel through which the counseling took place.

The peer-counselors conducted a 30-min session with the participant. A 30-min time limit allowed the peer counselors to complete the questions in the protocol (see Appendix B) and have time to explore participants' anxiety experience. In each session, peer-counselors followed a standardized protocol of questions in a semi-structured interview format which was the same for both videoconferencing and SCC conditions. All questions were designed to encourage participants to disclose more information about themselves. However, the protocol also allowed the participants to answer the questions with minimal direction from the peer counselors for both groups. This protocol was developed in consultation with a professional counselor. At the conclusion of the interview, participants were given information about local counseling services available to them.

Peer Counselor Training. To ensure smooth functioning the online SCC sessions, the peer counselors needed to demonstrate their typing skill by typing a paragraph of eighty words in two and a half minutes to three minutes. Then, the six peer counselors received six weeks of training on the study protocol. The purpose of training was to hone their ability to converse fluently during the experiment.

In the first week, the six peer counselors discussed the protocol and brainstormed potential questions for each section in the protocol. After the meeting, the peer counselors were asked to complete assignment 1, in which they wrote about three hypothetical counseling sessions for three different types of anxiety respectively (Appendix C). In the second week, the

peer counselors were asked to practice two mock videoconferencing counseling sessions. The two peer counselors who played counselor roles played hypothetical client roles for the second session. After the practice, peer counselors were asked to complete their assignment 2 about watching all the video recordings, then write the reflections of their own sessions and the other peer counselors' roles (Appendix C). In the third week, the peer counselors were asked to practice two mock SCC sessions. The procedure was the same as the mock videoconferencing session. After the practice, peer counselors were asked to complete their assignment 3 which involved reading the transcripts of four SCC and writing reflections of their own sessions and the other peer counselors' roles (Appendix C). In the fourth week, the peer counselors were asked to practice two mock videoconferencing counseling sessions second time. The procedure was the same as week 2 and completed assignment 4 (same to assignment 2) to reflect their own sessions and the other peer counselors' roles. In the fifth week, the peer counselors were asked to practice two mock SCC sessions second time. The procedure was the same as week 3 and completed assignment 5 to reflect their own sessions and the other peer counselors' roles (same to assignment 3). In week 6, the peer counselors discussed the challenges they had during the practices, the feedback from the professional counselor, and the peer counselors' schedules for the experiment. The peer counselors were required to read their peers' reflections about themselves and for others in order to improve their skills for the next practice.

Post-test Questionnaire

When the counseling session was finished, the peer counselors sent participants a post-test questionnaire. In order, participants answered questions about their levels of state anxiety, the warmth, competence, attractiveness, and trustworthiness ratings of their peer counselors, participants' levels of self-disclosure, working alliance, and satisfaction with this counseling as

well as their levels of intergroup anxiety and prejudice toward outgroup members. The order of the questions attempted to avoid triggering participants' awareness of taking the peer counselors' races in account. The order of the items within each instrument were randomized. The entire study took approximately one hour to complete.

Manipulation Check

A manipulation check for counseling channel was completed by asking participants to report what type of session (videoconferencing or online synchronous chat) they participated in the post-survey. The participants' answers were also checked by the researcher using the peer counselors' records of counseling sessions they conducted. Four participants did not pass the manipulation check, and their data were excluded from the data analysis (See Table 1). In addition, given that the manipulation of channel was intended to correspond to differences in social presence, participants were asked about the perceived social presence of their counseling experience (for details on the scale see the instrument section). Supporting the validity of the manipulation, videoconferencing was perceived by participants as higher in social presence than synchronous chat (M_{video} = 5.93, SD_{video} = .84; M_{chat} = 5.06, SD_{chat} = 1.26, $p < .001$).

Table 1

Numbers of the Excluded Participants in the Counseling Channel Manipulation Check

	Intergroup	**Intragroup**
SCC	1	2
Videoconferencing	0	1

A manipulation check for intra/intergroup contact was completed by asking the participants to identify their peer counselors' race in the post survey. The peer counselors' pictures were presented in the SCC counseling. The participants' answers were checked by the researcher using the peer counselors' records of counseling sessions they conducted. Nine

participants did not pass the manipulation check, and their data were excluded from the data analysis (See Table 2). Based on past research (e.g., Turner et al., 1987), I also had the expectation that this manipulation should increase group salience. However, the manipulation did not affect group salience (M_{inter} = 2.33, SD_{inter} = 1.11; M_{intra} = 2.32, SD_{intra} = 1.00, p = .93). It could be because that the items measuring group membership salience triggered participants' uncomfortable feelings. In qualitative feedback on the group salience items, a participant stated: *"I am not sure I appreciated how the last question was phrased 'to what extent was this peer counselor TYPICAL of her racial group.' I believe that it promotes the idea that African American people have stereotypes they should and shouldn't abide by which should not at all be the case.' I just wanted to state that. Overall, the peer counseling was very helpful, and I am glad to have been part of this*." The Cronbach's Alpha of this scale in the current study is also low (α = .62). Thus, this scale did not support the validity of the intra/intergroup contact manipulation.

Table 2

Numbers of the Excluded Participants in the Intra/intergroup Contact Manipulation Check

	SCC	**Videoconferencing**
Intergroup	3	2
Intragroup	3	1

Participants

Participants were undergraduate students recruited from communication classes at the University of Maryland in exchange for extra credit. Each student was received extra credit in a communication course of their choice for participating. Fifteen participants were excluded as a result of failing attention and manipulation checks[1]. A total of twenty-three sessions were

[1] The participants who did not complete the survey, prefer not to disclose their races, or misjudged the peer counselor's race were excluded from the current study.

conducted by the researcher were also excluded[2]. The final analyses included 292 undergraduate college students (175 females, 117 males). Participants averaged the 19.32 years of age, ranging from 18 years to 40 years old. Participants identified themselves as Caucasian (52.1%), Asian/ Pacific Islander (21.6%), African American or African American (13.4%), bi-racial (8.9 %), Hispanic/Latinx (2.7%), and Middle Eastern (1.4%). There were 260 native speakers and 32 non-native speakers. In total, there were 124 participants (42%) in videoconferencing and 168 participants (58%) in SCC. Additionally, there were 150 participants (51%) in intragroup contact condition and 142 participants (49%) in intergroup contact condition.

Undergraduate students are not just a sample of convenience for this study but are the target demographic for the following reasons: first, an undergraduate student sample matches the interested population of this study; second, college students are also the age group that uses online counseling the most frequently (Barak et al., 2008). So the development and understanding of online counseling is particularly important to young people (Perle et al., 2011).

Instruments

State anxiety

The State-Trait Anxiety Inventory (STAI, Spielberger et al., 1983, see Appendix D) is a self-report questionnaire that evaluates feelings of apprehension, tension, nervousness, and worry. STAI was developed largely with the sample of undergraduate and high school students and largely used for conducting studies across different races/ethnicities, ages, and gender (Beck et al.,1988). Twenty items measuring temporary condition of *state anxiety* (see Appendix D) were used to measure participants' levels of anxiety. All items are rated on a 4-point scale (e.g., from "Almost Never" to "Almost Always"). Higher scores indicate greater anxiety. Internal

[2] Because the researcher was not blinded to the hypotheses, the sessions conducted by the researcher were excluded. However, other peer counselors were all completely blinded to the study's hypotheses.

reliability coefficients for the scale have ranged from 0.86 to 0.95; test-retest reliability coefficients have ranged from 0.65 to 0.75 over a 2-month period (Spielberger et al., 1983). The Cronbach's Alpha of this scale in the present study was .92 (M = 2.18, SD = .86) for state anxiety in the pre-test questionnaire and .89 (M = 1.81, SD = .74) in the post-test questionnaire.

Satisfaction with Counseling

Ten items from Satisfaction with Therapy and Therapist Scale-Revised (STTS-R, Oei & Green, 2008) were used to measure participants' satisfaction with the counseling session by a 7-point scale ranging from 1 strongly disagree and 7 strongly agree (see Appendix D). The higher the average score, the greater the level of participants satisfaction. An example of this scale is that "I am satisfied with the quality of the counseling session I received". Oei and Green (2008) revised STTS (Oei & Shuttlewood, 1999) by using confirmatory factor analysis with 344 patients with anxiety disorders. The results of factor analysis indicated that items are accounted for 66.9% of the variance. Internal reliability coefficient for the scale was .93 in their study. The Cronbach's Alpha of this scale in the present study was .87 (M = 5.89, SD = 1.10).

Working Alliance

Working Alliance Inventory-Short Form (WAI-S; Tracey & Kokotovic, 1989) was used to measure clients' and counselors' perception of the quality of the therapeutic alliance (see Appendix D). The WAI-S is 12-items using 7 Likert scales ranging from 1 strongly disagree and 7 strongly agree (see Appendix D). The scale contains three subscales named Bonds, Goals, and Tasks, with four items per subscale. WAI has been well-documented by over 100 published research reports. The internal consistency of the total scale composite score at the fourth session and final session, respectively, ranged from .91 and .93 (Holmes, & Foster, 2012). The Cronbach's Alpha of this scale in the present study was .93 (M = 5.67, SD = 1.16).

Self-disclosure

Sixteen items from Laurenceau et al.'s (1998) self-disclosure measurement (see Appendix D) were used in this study to measure participants' self-disclosure to the counselor. The items were measured on a scale from 1 (strongly disagree) to 7 (strongly agree). An example of the items was "I do not often talk about myself during the session.". The Cronbach's Alpha of this scale in the present study was .78 (M = 4.91, SD = 1.46).

Intergroup Prejudice

Intergroup prejudice was assessed using the feeling thermometers (Converse et al., 1980). The feelings thermometer asks participants to rate their feelings toward Asian, African American, and White racial groups using a "temperature" gauge, on which 0 degrees indicates cold and 100 degrees indicates warm. This scale has been used in the previous research (Turner & Feddes, 2011). Intergroup prejudice toward White people was M = 20.58, SD = 22.50, African Americans was M = 14.91, SD = 18.84, and Asian people was M = 15.66, SD = 19.44.

Intergroup Anxiety

Eleven items taken from the research on intergroup anxiety (Stephan & Stephan, 1985) to measure participants' intergroup anxiety in this study. The participants read a statement, "If you were the only member of your ethnic group and you were interacting with people from a different racial or ethnic group (e.g., talking with them, working on a project with them), how would you feel compared to occasions when you are interacting with people from your own ethnic group?" Then they used a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (Strongly agree) to rate the seven statements: "I would feel certain/awkward/self-conscious/happy/accepted/confident/irritated/impatient/defensive/suspicious/careful during the interaction". The Cronbach's alpha coefficient was .81 in Stephan and Stephan's (1985) study.

The Cronbach's Alpha of this scale in the present study was .90 (*M* = 2.75, *SD* = 1.45).

Stigma

Five items from the Stigma Scale for Receiving Psychological Help (SSRPH, Komiya et al., 2000) were used to measure individuals perceived stigma toward seeking counseling. Participants used a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (Strongly agree) to rate the following statement, "Seeing a counselor for emotional or interpersonal problems carries social stigma", "It is a sign of personal weakness or inadequacy to see a counselor for emotional or interpersonal problems", "People will see a person in a less favorable way if they come to know that he/she has seen a counselor", "It is advisable for a person to hide from people that he/she has seen a counselor", "People tend to like less those who are receiving professional counselor help". The Cronbach's alpha coefficient was .91 in my previous study (Wang et al., 2020). The Cronbach's Alpha of this scale in the present study was .73 (*M* = 3.49, *SD* = 1.53).

Communication Competence

Communicative Adaptability Scale (CAS, Duran,1983, see Appendix D) was used to measure participants' CC. The thirteen items were measured using 7-point Likert scales ranging from strongly disagree (1) to strongly agree (7). An example item was "In most social situations, I feel tense and constrained." The Cronbach's Alpha of this scale was .79 (*M* = 5.19, *SD* = 1.36).

Social Presence

A total of six items (see Appendix D) were used to measure social presence. The items were measured using 7-point Likert scales ranging from strongly disagree (1) to strongly agree (7). An example item was "The medium for the peer counseling session felt real to me." The Cronbach's Alpha of this scale in the present study was .84 (*M* = 5.42, *SD* = 1.35).

Group Salience

Group Membership Salience during Contact (Harwood et al., 2005, see Appendix D) was used to measure participants perceived their peer counselors' group salience. All items are rated on a 7-point scale (e.g., from "Not at all" to "Very"). An example item was "How aware were you of the racial differences or similarities between you and your peer counselor?" The Cronbach's Alpha of this scale in the present study was .62 (M = 2.32, SD = 1.58).

Covariates

Several covariates were included in this study (see Appendix D). First, participants' sex. The five counselors are females, but the participants include both females and males. Also, gender identity might also be salient identity as racial identity. In order to control the potential bias, the participants' sex is treated as a covariate in the analyses.

Next, peer counselors' warmth and competence. The stereotype content model (SCM; Fiske et al., 2002) suggests that different races are judged to be stereotypically different in traits such as warmth (e.g., feeling of kindness) and competence (e.g., high in status). According to SCM, African Americans are regarded as warm, but not competent while Asian people are considered to be competent, but not warm) and these evaluations could also result in counselor preferences. Thus, participants' perceived peer counselor's warmth and competence were treated as covariates in this study. Participants rated their peer counselors' warmth and competence using bipolar adjective scales ranging from 1-7. The three-item measuring warmth include "warm-cold", "friendly-unfriendly", and "easy to talk with-difficult to talk with". Three items were used to measure peer counselors' competence including "competent-incompetent", "skilled-unskilled", and "professional-unprofessional". Cronbach's Alpha of peer counselors' warmth was .70 (M = 6.71, SD = .68) and competence was .75 (M = 6.60, SD = .77).

Last, peer counselors' attractiveness and trustworthiness. According to Strong's (1968) two stage model of social influence, how clients perceive counselors' trustworthiness (e.g., reputation for honesty) and attractiveness (e.g., physical appearance) affect counseling process. Thus, the more trustworthy and attractive the counselors are perceived by the clients, the more likely the counselors could influence the clients in the counseling process. Considering these variables might affect the study's outcomes, counselors' trustworthiness and attractiveness were treated as covariates in the current study. Participants rated their peer counselors' attractiveness and trustworthiness using bipolar adjective scales ranging from 1-7. The three-item measuring attractiveness include "attractive-unattractive", "pretty-ugly", and "likable-unlikable". Three items were used to measure peer counselors' trustworthiness including "trustworthy-untrustworthy", "sincere-insincere", and "honest-dishonest". Cronbach's Alpha of peer counselors' attractiveness was .90 (M = 6.23, SD = 1.15) and trustworthiness was .78 (M = 6.67, SD = .80). The relationships between these covariates and manipulations are shown in Table 3-5.

Table 3
The Relationships between Covariates and Counseling Channel

	Warmth		Competence		Trustworthiness		Attractiveness	
Counseling Channel	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
SCC	6.64	.63	6.51	.73	6.57	.76	6.00	1.28
Video	6.78	.41	6.67	.50	6.76	.55	6.45	.84

Note: SCC = Synchronous Chat Counseling. N_{SCC} = 142, N_{Video} = 150.

Table 4
The Relationships between Covariates and Intra/Intergroup Contact

	Warmth		Competence		Trustworthiness		Attractiveness	
Group Condition	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Intragroup	6.75	.52	6.62	.65	6.67	.70	6.24	1.11
Intergroup	6.66	.55	6.56	.60	6.67	.63	6.22	1.08

Note: N_{Intra} = 168, N_{Inter} = 124.

Table 5

The Relationships between Covariates and Counselor Race

	Warmth		Competence		Trustworthiness		Attractiveness	
Counselor Race	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Asian	6.54	.66	6.52	.69	6.61	.73	5.87	1.29
African American	6.77	.55	6.72	.61	6.70	.69	6.25	1.11
White	6.72	.46	6.53	.61	6.66	.64	6.33	1.01

Note: N_{Asian} = 45, $N_{African\ American}$ = 99, N_{White} = 148.

Chapter 6 Results

Analysis Plan

To rule out pre-existing anxiety as a confounding variable, participants pre-test state anxiety scores were compared across conditions. The results of two ANOVA tests indicated that neither counseling condition, $F(1, 291) = .10$, $p = .74$, nor intra/intercultural condition, $F(1, 291) = .004$, $p = .95$, had a significant difference regardless of participants' pre-anxiety scores. While not part of the theoretical focus of hypotheses of this study, past research has found relationships between some of the dependent variables (Horvath & Greenberg, 1989; Turner et al., 2007). *Table 6* and *Table 7* shows the relationships between these covariates and outcomes.

Table 6

Bivariate and Partial Correlation Analyses

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Warmth	1												
2. Competence	.578**	1											
3. Trust	.642**	.625**	1										
4. Attractiveness	.375**	.361**	.396**	1									
5. WA	.375**	.423**	.450**	.236**	1	.299**	.665**	-.300**	-.217**	-.176**	-.137*	.008	-.219**
6. Self-disclosure	.252**	.278**	.225**	.141*	.388**	1	.223**	-.325**	-.164**	-.019	-.047	-.259**	-.302**
7. Satisfaction	.443**	.470**	.513**	.341**	.752**	.335**	1	-.199**	-.114	-.034	-.072	.071	-.166**
8. IA	-.263**	-.238**	-.231**	-.119*	-.383**	-.381**	-.310**	1	.326**	.153**	.216**	.171**	.160**
9. IPW	-.141*	-.125*	-.101	-.069	-.252**	-.199**	-.169**	.351**	1	.625**	.701**	.179**	.211**
10. IPAA	-.121*	-.157**	-.092	-.090	-.220**	-.066	-.107	.186**	.632**	1	.753**	.070	.107
11. IPA	-.160**	-.137*	-.172**	-.087	-.205**	-.095	-.160**	.254**	.706**	.753**	1	.080	.102
12. Pre Anxiety	-.152**	-.160**	-.183**	-.147*	-.090	-.297**	-.059	.213**	.199**	.095	.113	1	.708**
13. Post Anxiety	-.312**	-.259**	-.316**	-.260**	-.345**	-.367**	-.330**	.239**	.243**	.147*	.159**	.718**	1

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

WA: Working Alliance, IA: Intergroup Anxiety, IPW: Intergroup Prejudice toward White People, IPAA: Intergroup Prejudice toward African Americans, and IPA: Intergroup Prejudice toward Asian people

The values below the diagonal represent Pearson correlations.

The values above the diagonal represent the partial correlations. Warmth, competence, trustworthiness, and attractiveness are the control variables.

Table 7

Differences in Sex on the Covariates and Dependent Variables

	Fmale		Male		Other					
	M	*SD*	*M*	*SD*	*M*	*SD*	df_{Num}	df_{Den}	*F*	*p*
Warmth	6.77	.48	6.64	.60	6.33	.38	2	289	3.281	.039
Competence	6.69	.51	6.48	.76	5.75	.32	2	289	8.002	.000
Trust	6.73	.58	6.57	.79	6.67	.38	2	289	1.859	.158
Attractiveness	6.43	1.00	5.94	1.18	5.88	.85	2	289	7.491	.001
WA	5.80	.85	5.51	.84	4.44	1.54	2	288	8.202	.000
Self-disclosure	4.93	.69	4.87	.72	4.83	.60	2	288	.310	.734
Satisfaction	5.97	.74	5.82	.70	4.90	1.05	2	288	5.413	.005
IA	2.68	1.04	2.83	1.00	3.70	1.35	2	288	2.528	.082
IPW	20.71	22.31	19.46	22.02	46.75	33.94	2	288	2.887	.057
IPAA	13.92	18.36	15.96	19.32	28.50	24.15	2	288	1.460	.234
IPA	15.88	19.51	14.71	19.12	33.00	22.47	2	288	1.746	.176
Pre Anxiety	2.24	.54	2.08	.55	2.44	.55	2	289	3.586	.029
Post Anxiety	1.81	.40	1.81	.45	2.04	.51	2	289	.587	.556

Note: N_{Female} = 175 N_{Male} = 113 N_{Other} = 4

df_{Num} indicates degrees of freedom numerator. df_{Den} indicates degrees of freedom denominator.

Hayes' process macro (Hayes, 2018) and ANOVA were used in the current study to test the hypotheses and research questions. In the following analyses, participants' sex (0 = Female, 1 = Male) and their perceived warmth, attractiveness, competence, and trustworthiness of the peer counselors were included as the covariates.

Test of Hypotheses and Research Questions

RQ1

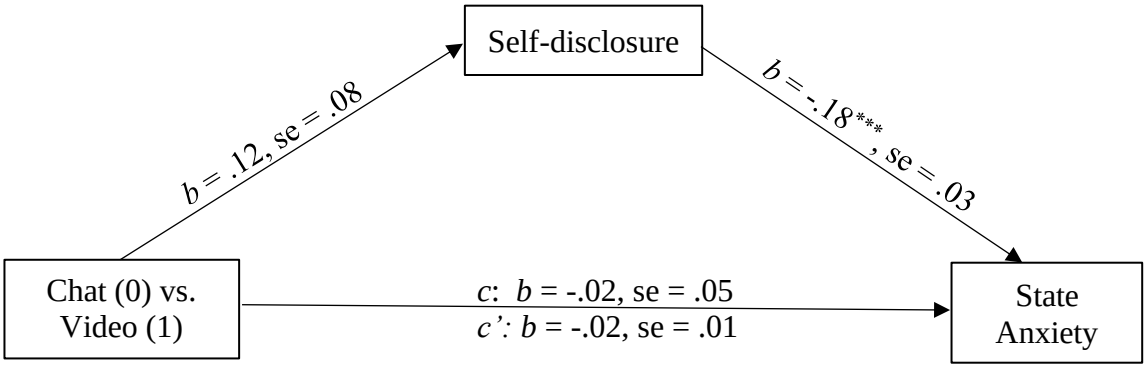
The RQ1 asked whether online counseling will be effective in improving participants' mental health. An ANOVA test was conducted to compare participants' state anxiety scores in pre-survey and post survey. The results indicated that scores for state anxiety significantly decreased between the pretest (M = 2.18, SD = .03) and the posttest (M = 1.81, SD = .03), t = 16.54, $p < .001$.

H1, H15, and RQ2a

The H1 predicted that participants in the SCC condition would have a higher self-disclosure than those in the videoconferencing counseling. Further, H15 predicted that self-disclosure would be negatively related to the state anxiety of participants. I also asked whether counseling channel condition would have either direct or indirect effects on participant's state anxiety through changes to self-disclosure (RQ2a). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which counseling channel condition was entered as the independent variable, self-disclosure as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.73, $p < .001$, $R^2 = .14$. The results of covariates indicate that competence was significant, $b = .21$, se = .09, $p < .01$, 95% CI [.04, .38]. Failing to support H1, the results indicated that the counseling channel was not associated with self-disclosure ($p = .13$, 95% CI [-.04, .28]). However, supporting H15, the results indicated that self-disclosure significantly decreased participants' state anxiety ($p < .001$, 95% CI [-.24, -.11]). Finally, regarding RQ2a, I found that the direct effect of counseling channel condition on state anxiety was not significant ($p = .98$, 95% CI [-.09, .09]). The indirect effect of counseling channel on state anxiety through self-disclosure was also not significant (95% CI [-.05, .01]). For an illustration of these effects and specific unstandardized regression coefficients see *Figure 2*.

Figure 2

The Direct and Indirect Effects of Self-disclosure on the Relationship between Counseling Channels and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

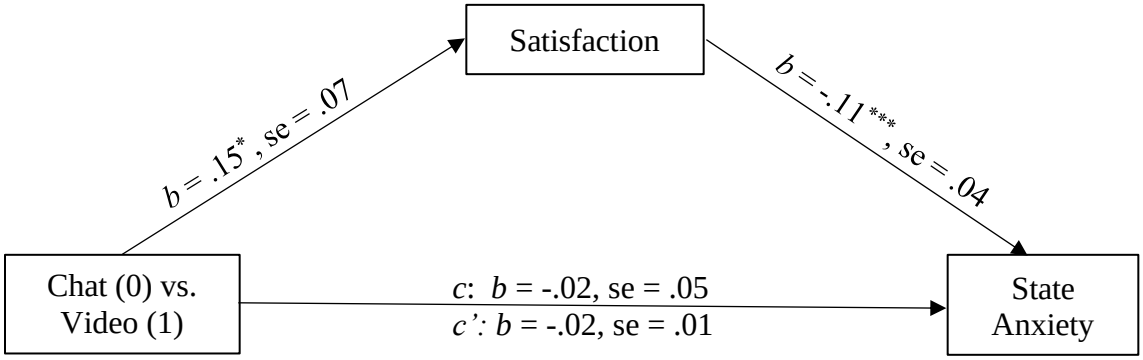
H2, H16, and RQ2b

H2 predicted that participants in the videoconferencing condition would have a higher satisfaction than those in the SCC condition. Further, H16 predicted that satisfaction would be negatively related to the state anxiety of participants. Additionally, I asked whether counseling channel condition would have either direct or indirect effects on participant's state anxiety through changes to satisfaction (RQ2b). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which counseling channel condition was entered as the independent variable, satisfaction as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.73, $p < .001$, $R^2 = .14$. The results of covariates indicate that competence ($b = .21$, se = .08, $p < .01$, 95% CI [.06, .37]) and trustworthiness ($b = .30$, se = .08, $p < .001$, 95% CI [.15, .46]) were significant. H2 was supported such that compared to SCC, videoconferencing led to greater satisfaction ($p = .04$, CI [.01, .30]), this significantly led to a decrease on state anxiety ($p < .001$, CI [-.18, -.03]) which supported H16. Finally, regarding RQ2b, I found that the direct ($p = .89$, 95% CI [-.10, .09]) and indirect effects 95% CI [-.04, .00] of counseling channel condition on

state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 3*.

Figure 3

The Direct and Indirect Effects of Satisfaction on the Relationship between Counseling Channels and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

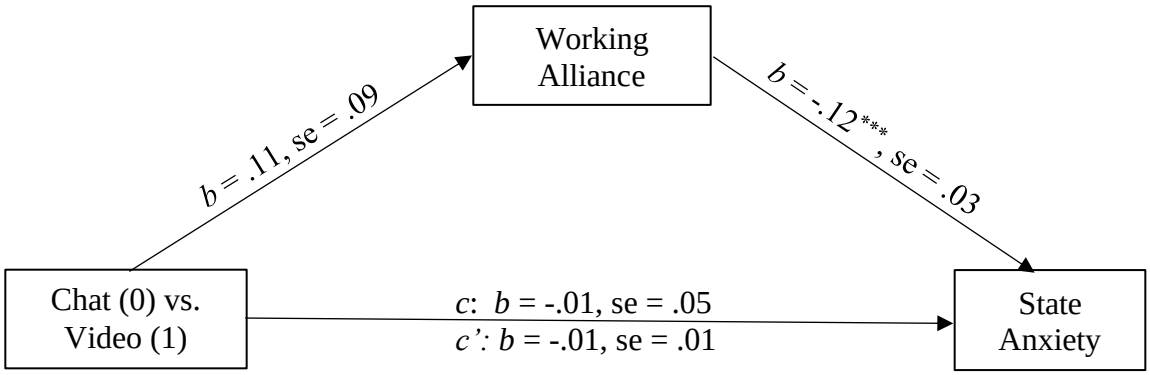
H3, H17, and RQ2c

H3 predicted that participants in the videoconferencing condition would have a higher working alliance than those in the SCC condition. Further, H17 predicted that working alliance would be negatively related to the state anxiety of participants. Additionally, I asked whether counseling channel condition would have either direct or indirect effects on participant's state anxiety through changes to working alliance (RQ2c). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which counseling channel condition was entered as the independent variable, working alliance as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.73, $p < .001$, $R^2 = .14$. The results of covariates indicate that sex (b = -.22, se = .09, p <.05, 95% CI[-.40, .-.04]), competence (b = .25, se = .10, p <.05, 95% CI[.05, .44]), and trustworthiness (b = .36, se = .10, p <.001, 95% CI[.16, .55]) were significant. Failing to support H3, counseling channel condition was not associated with working alliance (p

= .21, 95% CI[-.07, .29]). However, supporting H17, working alliance significantly decreased participants' state anxiety ($p < .001$, 95% CI[-.18, -.06]). Finally, regarding RQ2c, the direct ($p = .84$, 95% CI[-.10, .08]) and indirect effects 95% CI [-.04, .01] of counseling channel condition on state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 4*.

Figure 4

The Direct and Indirect Effects of Working Alliance on the Relationship between Counseling Channels and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

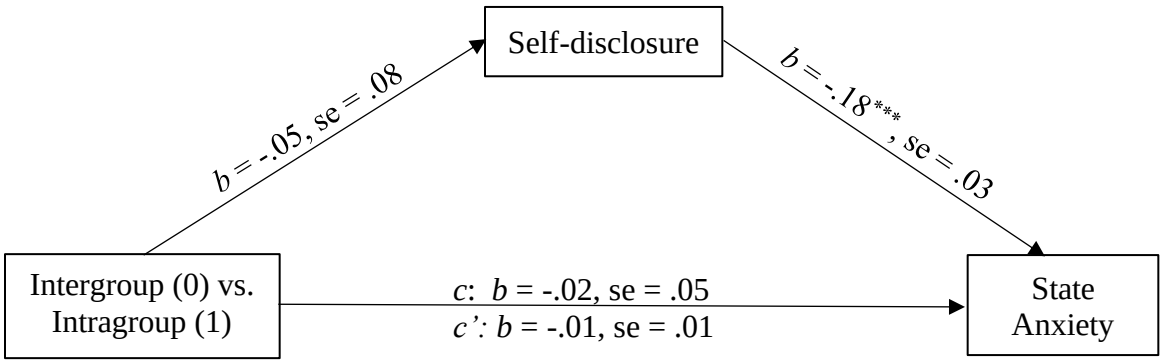
H4 and RQ2d

H4 predicted that participants in the intragroup contact condition will have a higher self-disclosure with their counselors than those in the intergroup contact condition. I also asked whether intergroup vs intragroup contact would have either direct or indirect effects on participant's state anxiety through changes to self-disclosure (RQ2d). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which inter/intragroup contact condition was entered as the independent variable, self-disclosure as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.70, $p < .001$, $R^2 = .14$. The results of covariates indicate that competence ($b = .21$, se = .09, $p < .05$, 95% CI[.04, .38]) was significant. Failing to support H4,

intra/intergroup contact did not significantly predict self-disclosure (p = .51, 95% CI[-.21,.11]). Additionally, the results of RQ2d indicated that the direct (p = .63, 95% CI[-.11, .07]) and indirect effects (95% CI = [-.02, .04]) of intra/intergroup contact on state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 5*.

Figure 5

The Direct and Indirect Effects of Self-disclosure on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

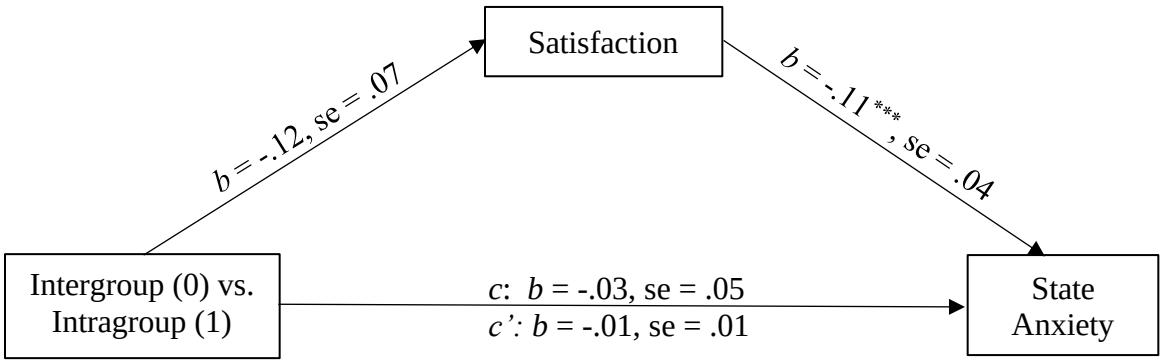
H5 and RQ2e

H5 predicted that participants in the intragroup contact condition will have a higher satisfaction with their counselors than those in the intergroup contact condition. I also asked whether intergroup vs intragroup contact would have either direct or indirect effects on participant's state anxiety through changes to satisfaction (RQ2e). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which inter/intragroup contact condition was entered as the independent variable, satisfaction as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.70, $p < .001$, R^2 = .14. The results of covariates indicate that competence (b = .21, se = .08, $p < .01$, 95% CI[.06, .36]) and trustworthiness (b = .32, se = .08, p

< .001, 95% CI[.16, .47]) were significant. Failing to support H5, intra/intergroup contact did not significantly predict satisfaction (p = .11, 95% CI[-.26, .03]). Additionally, the results of RQ2e indicated that the direct (p = .57, 95% CI[-.12, .07]) and indirect effects (95% CI = [.00, .03]) of intra/intergroup contact on state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 6*.

Figure 6

The Direct and Indirect Effects of Satisfaction on the Relationship between Intra/intergroup Contact and State Anxiety



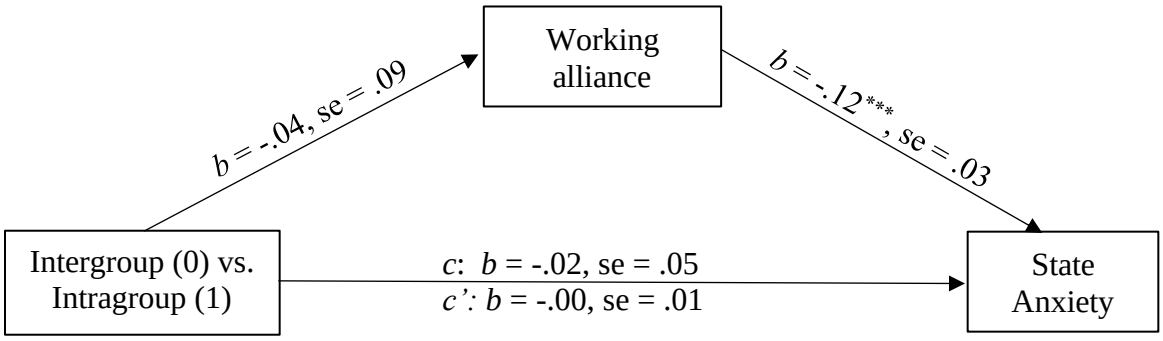
Note: * p < .05, ** p < .01, *** p < .001

H6 and RQ2f

H6 predicted that participants in the intragroup contact condition will have a higher working alliance with their counselors than those in the intergroup contact condition. I also asked whether intergroup vs intragroup contact would have either direct or indirect effects on participant's state anxiety through changes to working alliance (RQ2f). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which inter/intragroup contact condition was entered as the independent variable, working alliance as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.70, p < .001, R^2 = .14. The results of covariates indicate that sex (b = -.22, se = .09, p <.05, 95% CI[-.40, -.04]), competence (b = .25, se = .10, p <.05,

95% CI[.05, .44]), and trustworthiness (b = 0.36, se = .10, p <.001, 95% CI[.17, .55]) were significant. Failing to support H6, intra/intergroup contact did not significantly predict working alliance (p = .68, 95% CI[-.22, .14]). Additionally, the results of RQ2f indicated that the direct (p = .71, 95% CI[-.11, .07]) and indirect effects (95% CI = [-.02, .03]) of intra/intergroup contact on state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 7*.

Figure 7
The Direct and Indirect Effects of Working Alliance on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * p < .05, ** p < .01, *** p < .001

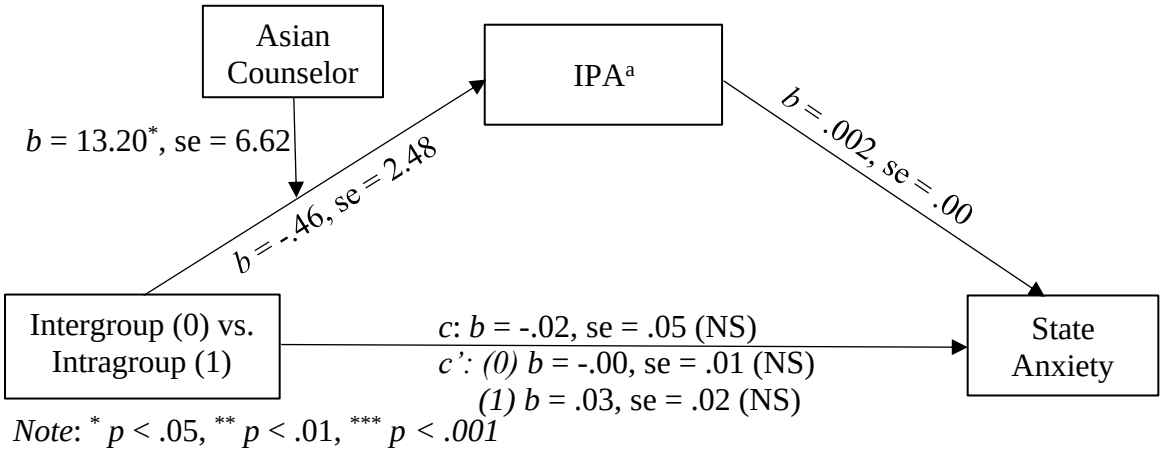
H7, H18, and RQ2g

H7 proposes that participants in the intergroup contact condition will have a lower intergroup prejudice than those in intragroup contact condition. Further, H18 predicted that intergroup prejudice would be positively related to the state anxiety of participants. I also asked whether intergroup vs intragroup contact would have either direct or indirect effects on participant's state anxiety through changes to intergroup prejudice (RQ2g). However, the measurement is targeted to one racial group at a time rather than testing non-specific prejudice in order to reach a more specific and precise result. Consequently, this hypothesis had to be split into three parts because there were three races of peer counselors (Asian, African American, and

White) all of whom could appear in intra versus intergroup conditions. To test these hypotheses and research questions I used Model 7 from the PROCESS macro (Hayes, 2018). The inter/intragroup contact condition was entered as the independent variable, whether the peer counselor is Asian or not was entered as a moderator using a dummy code (0 = non-Asian, 1= Asian), intergroup prejudice toward Asian people as the mediator, and state anxiety as the dependent variable. The covariates were not significant. The results show that intra/intergroup contact did not significantly predict intergroup prejudice toward Asian people (p = .85, 95% CI[-5.34, 4.42]). However, this effect was significantly moderated by whether the peer counselor is Asian, F (1, 282) = 3.98, p < .05. Fail to support H18, the result indicated that intergroup prejudice toward Asian people did not significantly increase participants' state anxiety (p = .09, 95% CI [.00, .00]). The findings demonstrated that participants in the intergroup contact condition who had an Asian counselor reported significantly higher prejudice toward Asian people than in either the intragroup conditions, or in the intergroup conditions when they were assigned a non-Asian counselor. This is the opposite relationship from what was hypothesized. The results of RQ2g indicated that the direct (p = .75, 95% CI[-.11, .08]) and indirect effects (non-Asian: 95% CI = [-.01, .01], Asian: 95% CI = [-.01, .08]) of intra/intergroup contact on state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 8.* In *Figure 9*, the mean of intergroup prejudice toward Asian people was used to indicate the moderation effect of counselor race on the relationship between intra/intergroup contact and intergroup prejudice toward Asian people.

Figure 8

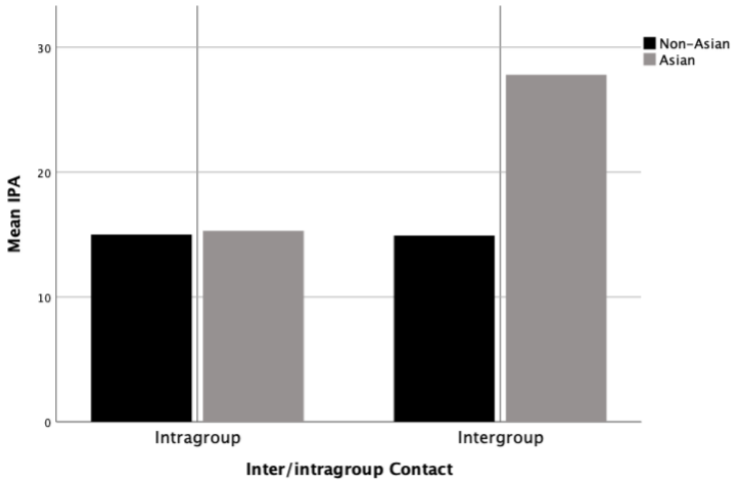
The Moderation Effect of Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward Asian people and the Direct and Indirect Effects of Intergroup Prejudice toward Asian people on the Relationship between Intra/intergroup Contact and State Anxiety



[a]: IPA refers to intergroup prejudice toward Asian people

Figure 9

The Moderation Effect of Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward Asian people

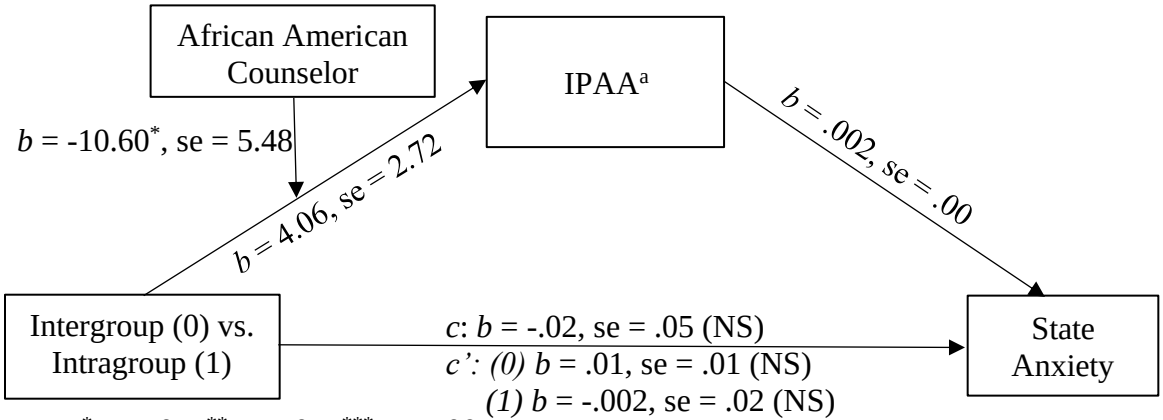


Second, the inter/intragroup contact condition was entered as the independent variable, whether the peer counselor is African American or not was entered as a moderator using a dummy code (0 = non-African American, 1= African American), intergroup prejudice toward African Americans as the mediator, and state anxiety as the dependent variable. The covariates

were not significant. The results show that intra/intergroup contact did not significantly predict intergroup prejudice toward African American people (p = .14, 95% CI[-1.29, .9.41]). However, this effect was significantly moderated by whether the peer counselor is African American or not, F (1, 282) = 3.74, p = .05. Fail to support H18, the results indicated that intergroup prejudice toward African American people did not significantly increase participants' state anxiety (p = .06, 95% CI [.00, .00]). The results of RQ2g indicated that the direct (p = .75, 95% CI[-.11, .08]) and indirect effects (non-African American: 95% CI = [-.01, .03], African American: 95% CI = [-.05, .01]) of intra/intergroup contact on state anxiety were not significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 10*. In *Figure 11*, the mean of intergroup prejudice toward African American people was used to indicate the moderation effect of counselor race on the relationship between intra/intergroup contact and intergroup prejudice toward African American people.

Figure 10

The Moderation Effect of Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward African American people and the Direct and Indirect Effects of Intergroup Prejudice toward African American people on the Relationship between Intra/intergroup Contact and State Anxiety

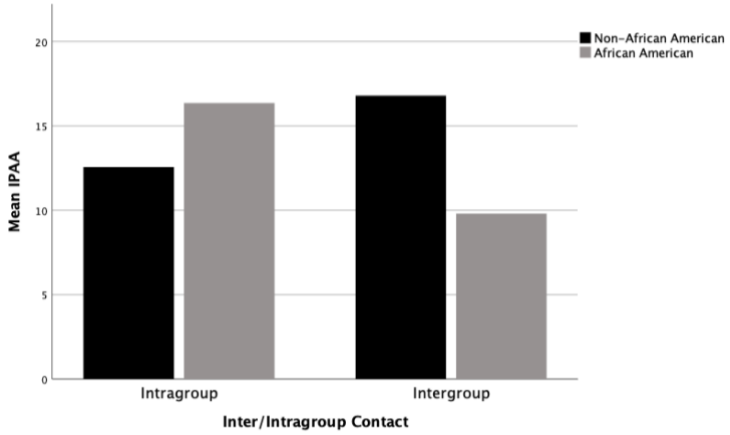


Note: * $p < .05$, ** $p < .01$, *** $p < .001$

[a]: IPAA refers to intergroup prejudice toward African American people

Figure 11

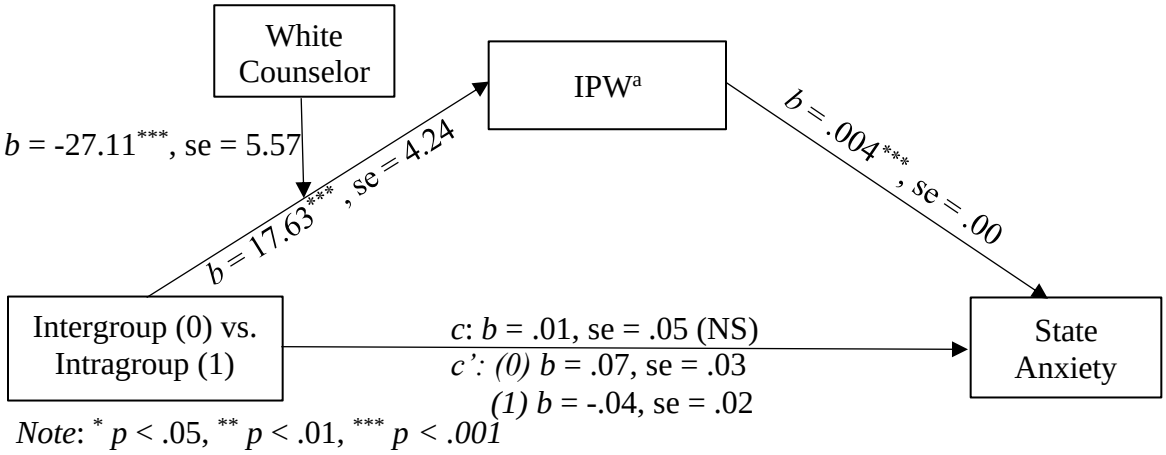
The Moderation Effect of Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward African American people



Third, the inter/intragroup contact condition was entered as the independent variable, whether the peer counselor is White or not was entered as a moderator using a dummy code (0 = non-White, 1= White), intergroup prejudice toward White people as the mediator, and state anxiety as the dependent variable. The covariates were not significant. The results show that intra/intergroup contact significantly predicted intergroup prejudice toward White people ($p < .001$, 95% CI[9.28, 25.98]). Moreover, this effect was significantly moderated by whether the peer counselor is White or not, F (1, 282) = 23.70, $p < .001$. Supporting H18, the results indicated that intergroup prejudice toward White people significantly increased participants' state anxiety ($p < .001$, 95% CI [.00, .01]). The results of RQ2g indicated that the direct effect ($p = .83$, 95% CI[-.10, .08]) of intra/intergroup contact on state anxiety was not significant. However, the indirect effects (non-White: 95% CI = [.02, .12], White: 95% CI = [-.07, -.01]) of intra/intergroup contact on state anxiety were significant. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 12*. In *Figure 13*, the mean of intergroup prejudice toward White people was used to indicate the moderation effect of counselor race on the relationship between intra/intergroup contact and intergroup prejudice toward White people.

Figure 12

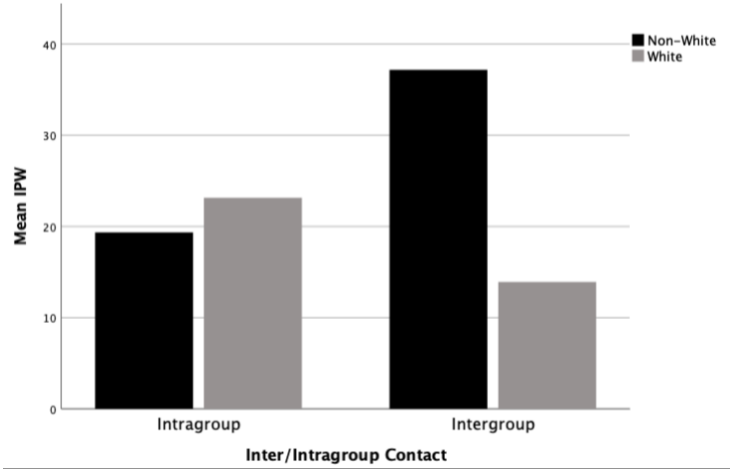
The Moderation Effect of Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward White people and the Direct and Indirect Effects of Intergroup Prejudice toward White people on the Relationship between Intra/intergroup Contact and State Anxiety



[a]: IPW refers to intergroup prejudice toward White people

Figure 13

The Moderation Effect of Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward White people



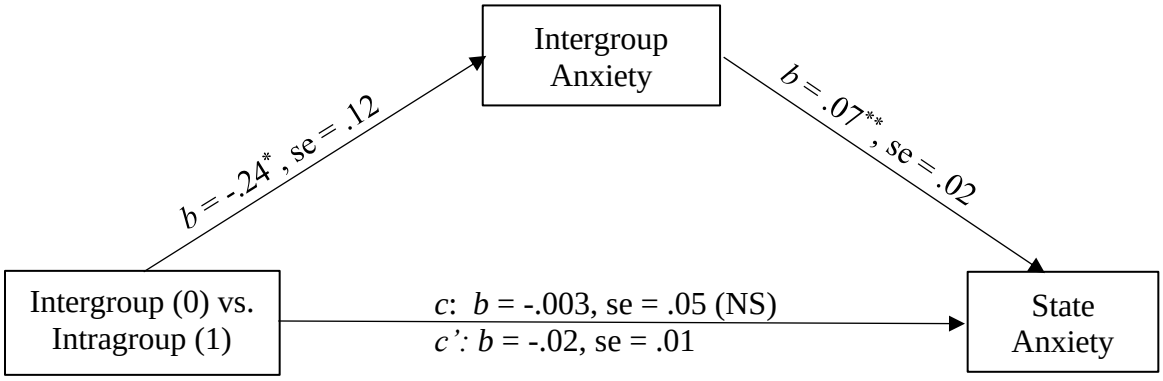
H8, H19, and RQ2h

H8 predicted that participants in the intragroup contact condition will have a higher intergroup anxiety than those in the intergroup contact condition. Further, H19 predicted that intergroup anxiety would be positively related to the state anxiety of participants. I also asked whether intergroup vs intragroup contact would have either direct or indirect effects on

participant's state anxiety through changes to intergroup anxiety (RQ2h). To test these hypotheses and research questions I used Model 4 from Hayes' process macro (Hayes, 2018), in which inter/intragroup contact condition was entered as the independent variable, intergroup anxiety as the mediator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (6, 284) = 7.70, $p < .001$, $R^2 = .14$. The results indicated that warmth (b = -.34, se = .15, p = .02, 95% CI[-.64, -.05]) was a significant covariate of the relationship between intra/intergroup contact and intergroup anxiety. H8 was supported such that participants in the intergroup contact reported less intergroup anxiety than those in the intragroup contact condition ($p < .05$, 95% CI[-.47, -.01]). Supporting H19, intergroup anxiety significantly increased participants' state anxiety (p = .01, 95% CI[.02, .11]). Additionally, the results of RQ2h indicated that the direct effect of intra/intergroup contact on state anxiety was not significant (p = .95, 95% CI[-.09, .10]), but indirect effect of intra/intergroup contact on state anxiety was significant (95% CI = [-.0400, -.0002]), such that intergroup contact reduced state anxiety through a reduction in intergroup anxiety. For an illustration of these effects and specific unstandardized regression coefficients see *Figure 14*.

Figure 14

The Direct and Indirect Effects of Intergroup Anxiety on the Relationship between Intra/intergroup Contact and State Anxiety



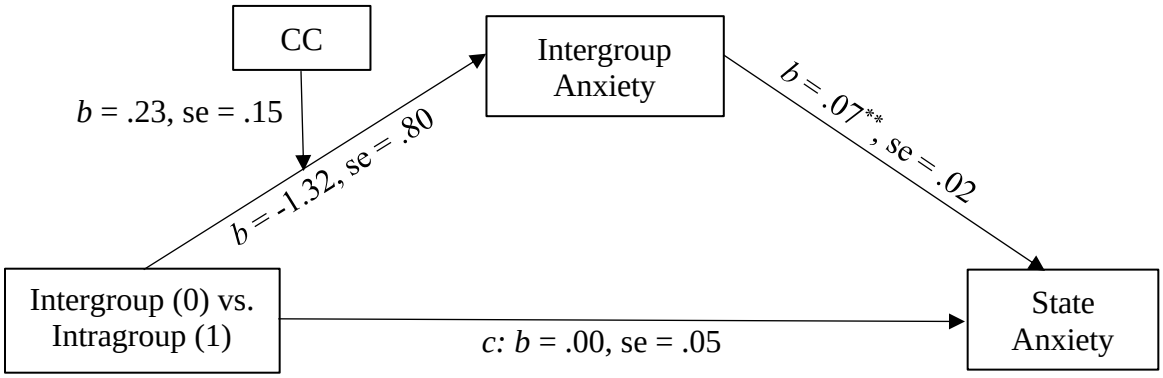
Note: * $p < .05$, ** $p < .01$, *** $p < .001$

H9

H9 proposes the moderation effect of CC on the relationship between inter/intragroup contact condition and intergroup anxiety. To test this hypothesis, I used Model 7 from the PROCESS macro (Hayes, 2018). The inter/intragroup contact condition was entered as the independent variable, communication competence entered as a moderator, intergroup anxiety as the mediator, and state anxiety as the dependent variable. The results of covariates indicate that warmth (*b* = -.33, se = .14, *p* = .02, 95% CI[-.61, -.06]) was significant. The results show that intra/intergroup contact did not significantly predict intergroup anxiety (*p* = .10, , 95% CI[-2.89, .26]) and this effect was not significantly moderated by CC (*p* = .14). For an illustration of these effects and specific unstandardized regression coefficients see *Figure 15*.

Figure 15

The Moderation Effect of Communication Competence on the Relationship between Intra/intergroup Contact and Intergroup Anxiety and the Mediation Effect of Intergroup Anxiety on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * *p* < .05, ** *p* < .01, *** *p* < .001

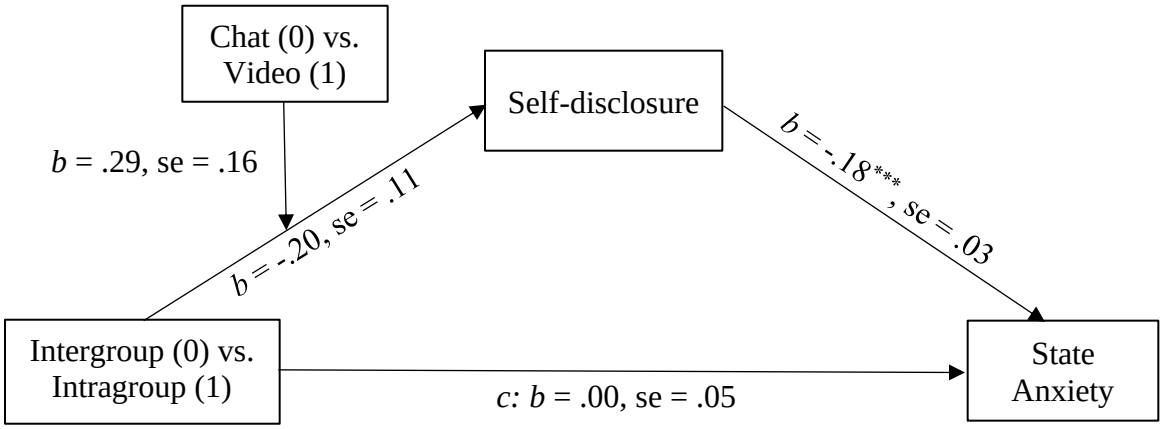
H10

H10 proposes the moderation effect of counseling channel condition on the relationship between inter/intragroup contact condition and self-disclosure. I used Model 7 from the PROCESS macro (Hayes, 2018) to test this hypothesis. The inter/intragroup contact condition

was entered as the independent variable, counseling channel condition entered as a moderator, self-disclosure as the mediator, and state anxiety as the dependent variable. The results of covariates indicate that competence (b = .22, se = .09, p <.01, 95% CI[.05, .39]) was significant. The results show that the main effect of inter/intragroup contact condition on self-disclosure was not significant (p = .09, 95% CI[-.42, .03]) and this effect was not significantly moderated by counseling channel condition (p = .08, , 95% CI[-.03, .06]). The *Figure 16* illustrates these effects and specific unstandardized regression coefficients.

Figure 16

The Moderation Effect of Counseling Channel Condition on the Relationship between Intra/intergroup Contact and Self-disclosure and the Mediation Effect of Self-disclosure on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * p < .05, ** p < .01, *** p < .001

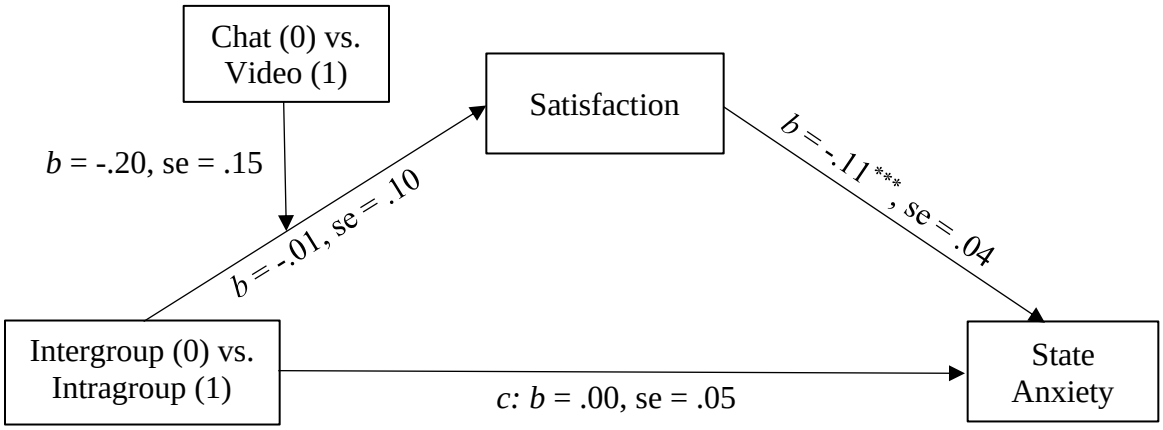
H11

H11 proposes the moderation effect of counseling channel condition on the relationship between inter/intragroup contact condition and satisfaction. I used Model 7 from the PROCESS macro (Hayes, 2018) to test this hypothesis. The inter/intragroup contact condition was entered as the independent variable, counseling channel entered as a moderator, satisfaction as the mediator, and state anxiety as the dependent variable. The results of covariates indicate that competence (b = .20, se = .08, p = .01, 95% CI[.04, .35]) and trustworthiness (b = .31, se = .08, p

<.001, , 95% CI[.16, .47]) were significant. The results show that the main effect of inter/intragroup contact condition on satisfaction was not significant (p = .94, 95% CI[-.21, .20]) and this effect was not significantly moderated by counseling channel (p = .16, 95% CI[-.49, .08]). For an illustration of these effects and specific unstandardized regression coefficients see *Figure 17*.

Figure 17

The Moderation Effect of Counseling Channel Condition on the Relationship between Intra/intergroup Contact and Satisfaction and the Mediation Effect of Satisfaction on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * p < .05, ** p < .01, *** p < .001

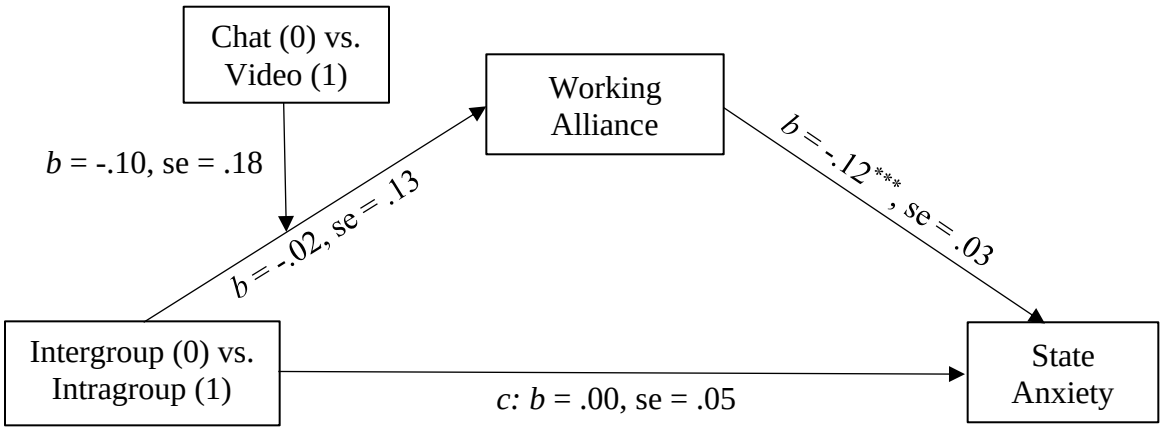
H12

H12 proposes the moderation effect of counseling channel condition on the relationship between inter/intragroup contact condition and working alliance. I used Model 7 from the PROCESS macro (Hayes, 2018) to test this hypothesis. The inter/intragroup contact condition was entered as the independent variable, counseling channel entered as a moderator, working alliance as the mediator, and state anxiety as the dependent variable. The results of covariates indicate that sex (b = -.22, se = .09, p = .02, 95% CI[-.40, -.04]), competence (b = .24, se = .10, p =.02, , 95% CI[.04, .43]), and trustworthiness (b = .36, se = .10, p <.001, 95% CI[.17, .55]) were significant. The results show that the main effect of inter/intragroup contact condition on

working alliance was not significant (p = .89, 95% CI[-.24, .28]) and this effect was not significantly moderated by counseling channel (p = .59, 95% CI[-.46, .26]). For an illustration of these effects and specific unstandardized regression coefficients see *Figure 18.*

Figure 18

The Moderation Effect of Counseling Channel Condition on the Relationship between Intra/intergroup Contact and Working Alliance and the Mediation Effect of Working Alliance on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

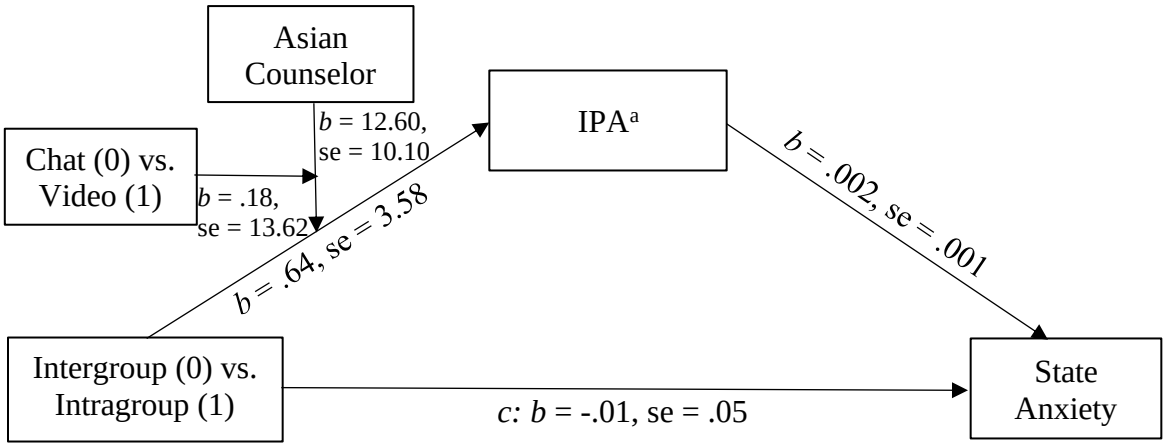
H13

H13 proposes the moderation effect of counseling channel condition on the relationship between inter/intragroup contact condition and intergroup prejudice. This hypothesis split into three parts because there were three races of peer counselors (Asian, African American, and White) all of whom could appear in intra versus intergroup conditions. Model 11 from the PROCESS macro (Hayes, 2018) in SPSS was used to test H13. First, the inter/intragroup contact condition was entered as the independent variable, intergroup prejudice toward Asian people as the mediator, state anxiety as the dependent variable, and whether the peer counselor is Asian or not using a dummy code (0 = non-Asian, 1= Asian) as the moderator for the relationship between inter/intragroup contact and intergroup prejudice. Moreover, a three-way interaction between inter/intragroup contact, whether the peer counselor is Asian or not, and counseling channel was

tested in this model as well. The covariates were not significant. The results show that intra/intergroup contact did not significantly predict intergroup prejudice toward Asian (p = .86, 95% CI[-6.40, 7.68]) and this effect was not significantly moderated by whether the counselor is Asian (p = .21, , 95% CI[-7.28, 32.48]). The three-way interaction between inter/intragroup contact, whether the counselor is Asian or not, and counseling channel was not significant (p = .99, , 95% CI[-26.63, 26.99]). For an illustration of these effects and specific unstandardized regression coefficients see *Figure 19*.

Figure 19

The Moderation Effects of Counseling Channel and Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward Asian people and the Mediation Effect of Intergroup Prejudice toward Asian people on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

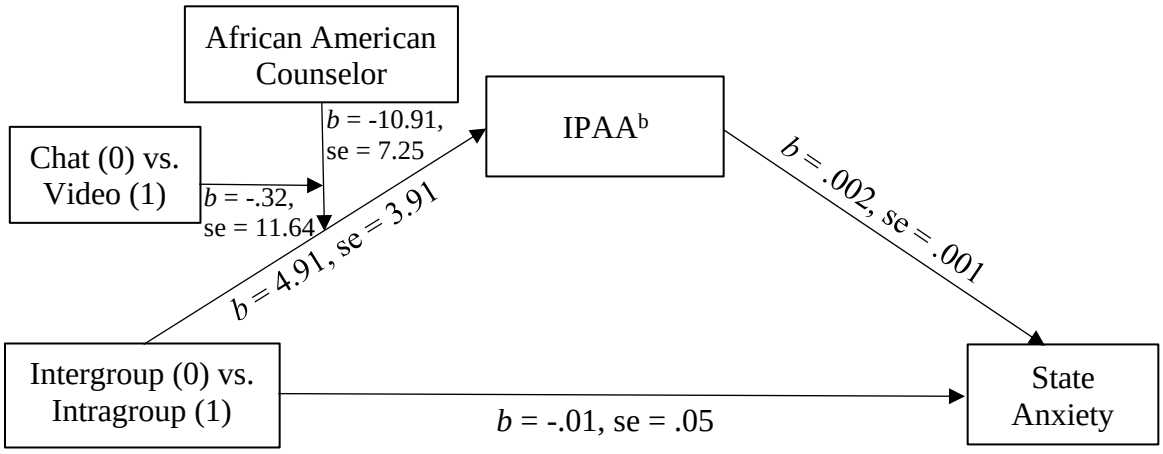
[a]: IPA refers to intergroup prejudice toward Asian people

Second, the inter/intragroup contact condition was entered as the independent variable, intergroup prejudice toward African American people as the mediator, state anxiety as the dependent variable, and whether the peer counselor is African American or not using a dummy code (0 = non-African American, 1= African American) as the moderator for the relationship between inter/intragroup contact and intergroup prejudice. Moreover, a three-way interaction

between inter/intragroup contact, whether the peer counselor is African American or not, and counseling channel was tested in this model as well. The covariates were not significant. The results show that intra/intergroup contact did not significantly predict intergroup prejudice toward African American (p = .21, 95% CI[-2.79, 12.62]) and this effect was not significantly moderated by whether the counselor is African American or not (p = .13, 95% CI[-25.17, 3.35]). The three-way interaction between inter/intragroup contact, whether the counselor is African American or not, and counseling channel was not significant (p = .98, 95% CI[-23.23, 22.59]). For an illustration of these effects and specific unstandardized regression coefficients see *Figure 20*.

Figure 20

The Moderation Effects of Counseling Channel and Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward African American people and the Mediation Effect of Intergroup Prejudice toward African American people on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * $p < .05$, ** $p < .01$, *** $p < .001$

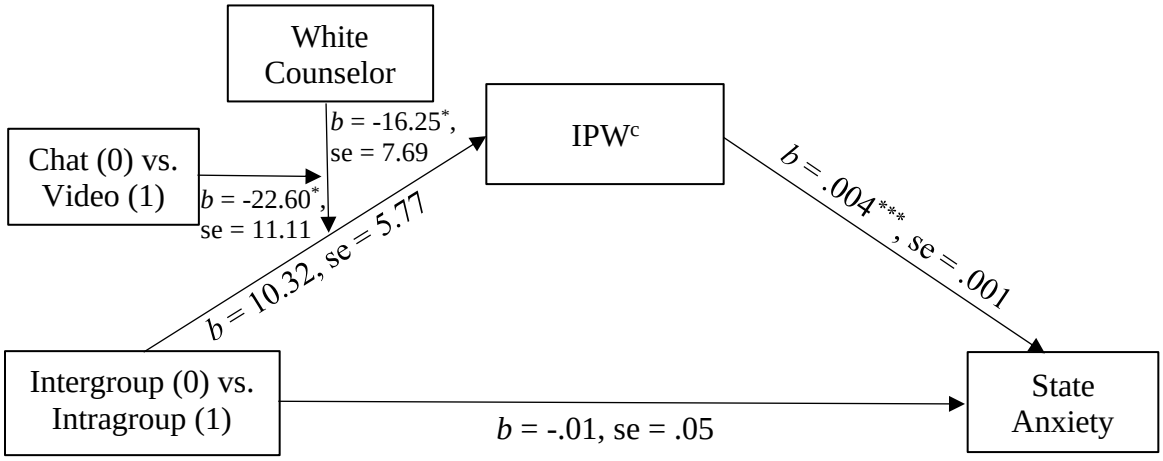
[b]: IPAA refers to intergroup prejudice toward African American people

Third, the inter/intragroup contact condition was entered as the independent variable, intergroup prejudice toward White people as the mediator, state anxiety as the dependent variable, and whether the peer counselor is White or not using a dummy code (0 = non-White, 1=

White) as the moderator for the relationship between inter/intragroup contact and intergroup prejudice. Moreover, a three-way interaction between inter/intragroup contact, whether the peer counselor is White or not, and counseling channel was tested in this model as well. The covariates were not significant. The results show that intra/intergroup contact did not significantly predict intergroup prejudice toward White people (p = .07, 95% CI[-1.03, 21.67]). However, whether the counselor is White or not significantly moderated the relationship between intra/intergroup contact and intergroup prejudice toward White people (p = .04, 95% CI[-31.39, -1.11]). Participants in intergroup contact who had a White counselor reported significantly lower prejudice toward White people than in either intragroup contact, or in intergroup contact when they were assigned a White counselor (see *Figure 21*). The three-way interaction between inter/intragroup contact, whether the counselor is White or not, and counseling channel was significant, $F(1, 278) = 4.14$, p = .04, 95% CI[-44.47, -.72]. In *Figure 22*, the mean of intergroup prejudice toward White people was used to indicate the three-way interaction between inter/intragroup contact, White counselor, and counseling channel. It indicates that in SCC, intergroup prejudice toward White people was lower in both intragroup and intergroup contact when the counselor is White than those participants who had a non-White counselor. On the other hand, in the videoconferencing condition, participants' intergroup prejudice toward White people was higher after they interacted with a White counselor than those participants who had a non-White counselor in intragroup contact. However, in the intergroup condition, participants' intergroup prejudice toward White people was lower after they interacted with a White counselor than those who had a non-White counselor.

Figure 21

The Moderation Effects of Counseling Channel and Counselor Race on the Relationship between Intra/intergroup Contact and Intergroup Prejudice toward White people and the Mediation Effect of Intergroup Prejudice toward White people on the Relationship between Intra/intergroup Contact and State Anxiety

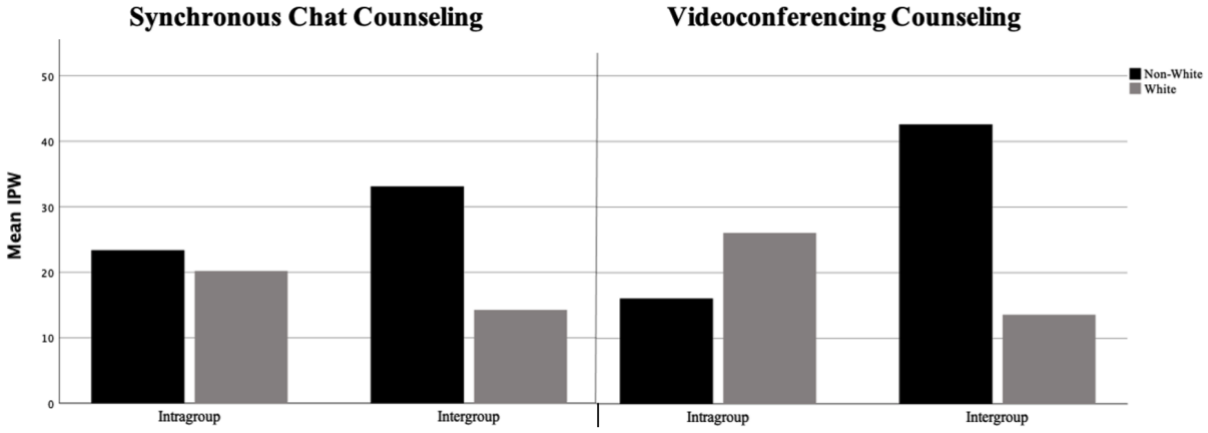


Note: * $p < .05$, ** $p < .01$, *** $p < .001$

c: IPW refers to intergroup prejudice toward White people

Figure 22

The Three-way Interaction between Inter/intragroup Contact Condition, White Counselor, and Counseling Channel



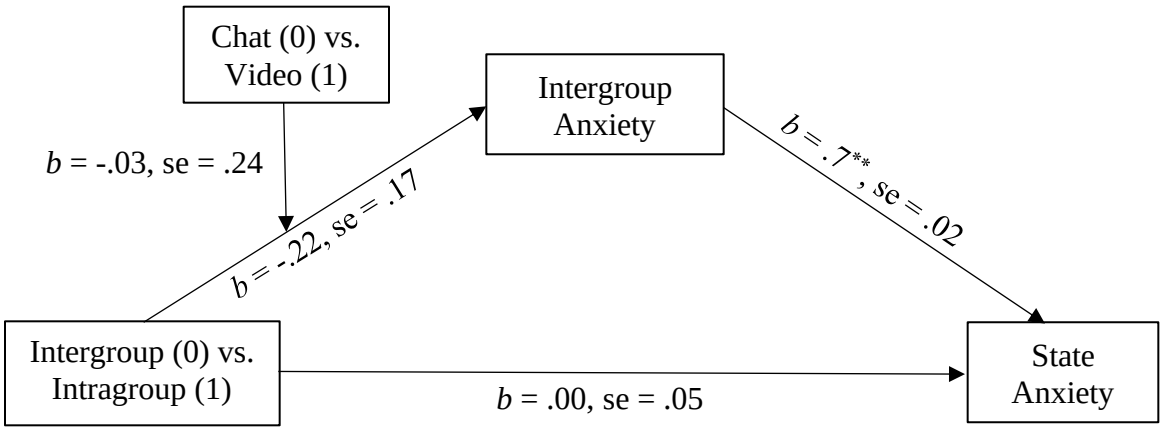
H14

H14 proposes that the moderation effect of counseling channel on the relationship between inter/intragroup contact and intergroup anxiety. I used Model 7 from the PROCESS

macro (Hayes, 2018) to test this hypothesis. Inter/intragroup contact was entered as the independent variable, counseling channel entered as a moderator, intergroup anxiety as the mediator, and state anxiety as the dependent variable. The results show that warmth (b = -.34 se = .15, p = .02, 95% CI[-.64, -.05]) was significant. The main effect of inter/intragroup contact on intergroup anxiety was not significant (p = .20, 95% CI[-.55, .12]) and this effect was not significantly moderated by counseling channel (p = .90, 95% CI[-.50, .44] (*Figure 23*).

Figure 23

The Moderation Effect of Counseling Channel on the Relationship between Intra/intergroup Contact and Intergroup Anxiety and the Mediation Effect of Intergroup Anxiety on the Relationship between Intra/intergroup Contact and State Anxiety



Note: * p < .05, ** p < .01, *** p < .001

H20

H20 proposes that the moderation effect of stigma on the relationship between counseling channel condition and state anxiety. I used Model 1 from the PROCESS macro (Hayes, 2018) to test this hypothesis. The counseling channel condition was entered as the independent variable, stigma was entered as a moderator, and state anxiety as the dependent variable. The results indicated that the whole model was significant, F (8, 283) = 5.76, p < .001, R^2 = .14. The results of covariates indicate that attractiveness (b = -.05, se = .02, p = .03, 95% CI[-.10, -.01]) was significant. The results show that the main effect of counseling channel on state anxiety was not

significant (b = .04, se = .16, p = .80, 95% CI[-.28, .36]) and this effect was not significantly moderated by stigma (b = -.02, se = .04, p = .68, 95% CI[-.11, .07]).

A summary of the results of the hypotheses and RQs is presented in *Table 8*.

Table 8

A Summary of the Results of the Hypotheses and RQs

No.	Research Hypothesis	P-Value	Result
R1	Whether or not online counseling will be effective in improving participants' mental health?	.00	Accept
H1	Participants in the SCC condition will report higher self-disclosure than those in the videoconferencing counseling.	.13	Reject
H2	Participants in the videoconferencing condition will report higher satisfaction than those in the SCC condition.	.04	Accept
H3	Participants in the SCC condition will report higher working alliance than those in the videoconferencing condition.	.21	Reject
H4	Intragroup counseling will result in higher reported self-disclosure than intergroup counseling.	.51	Reject
H5	Intragroup counseling will result in higher satisfaction than intergroup counseling.	.11	Reject
H6	Intragroup counseling will result in higher working alliance than intergroup counseling.	.68	Reject
H7	Intergroup counseling will result in less intergroup prejudice than intragroup counseling.	IPA: .85 IPAA: .14 IPW: .001	Partially Accept
H8	Intergroup counseling will result in less intergroup anxiety than intragroup counseling.	.05	Accept
H9	CC moderates the relationship between inter/intragroup contact and intergroup anxiety, such that for participants having a high CC, intergroup counseling will result in lower intergroup anxiety than intragroup counseling. While for participants having a low CC, there is no significant difference between intergroup and intragroup counseling in evoking intergroup anxiety.	Main: .10 Moderator: .14	Reject

H10	Counseling channel will moderate the relationship between intra/intergroup contact and self-disclosure, such that intragroup counseling will be associated with higher self-disclosure compared with intergroup counseling in the SCC condition, while in videoconferencing this effect will be reduced.	Main: .09 Moderator: .08	Reject
H11	Counseling channel will moderate the relationship between intra/intergroup contact and counseling satisfaction, such that intragroup counseling will be associated with higher satisfaction in SCC compared with intergroup counseling, while in videoconferencing this effect will be reduced.	Main: .94 Moderator: .16	Reject
H12	Counseling channels will moderate the relationship between intra/intergroup contact and working alliance, such that intragroup counseling will be associated with higher working alliance in SCC compared with intergroup counseling, while in videoconferencing this effect will be reduced.	Main: .89 Moderator: .59	Reject
H13	Counseling channel will moderate the relationship between inter/intragroup contact and intergroup prejudice, such that intergroup counseling will be associated with lower intergroup prejudice compared with intragroup counseling in videoconferencing, while in SCC this effect will be reduced.	Main IPA: .86 Moderator IPA: .21 Three-way IPA: .99 Main IPAA: .21 Moderator IPAA: .13 Three way IPAA: .98 Main IPW .807 Moderator IPW .204 Three way IPW .04	Partially Accept
H14	Counseling channel will moderate the relationship between intergroup contact and intergroup anxiety, such that intergroup counseling will be associated with lower intergroup anxiety compared with intragroup counseling in videoconferencing, while in SCC this effect will be reduced.	Main: .20 Moderator: .90	Reject
H15	College students' self-disclosure will be negatively related to their state anxiety.	.00	Accept
H16	College students' satisfaction will be negatively related to their state anxiety.	.00	Accept
H17	College students' working alliance will be negatively related to their state anxiety.	.00	Accept

H18	College students' intergroup prejudice will be positively related to their state anxiety.	IPA: .09 IPAA: .06 IPW: .001	Partially Accept
H19	College students' intergroup anxiety will be positively related to their state anxiety.	.01	Accept
H20	Stigma moderates the relationship between counseling channel and state anxiety. Such that for participants with high stigma, videoconferencing will be associated with higher state anxiety than SCC. While for participants with low stigma, the effect will be reduced.	Main: .80 Moderator: .68	Reject
RQ2a	If the difference between SCC and videoconferencing will have both direct and indirect effects on state anxiety though self-disclosure?	.98	Reject
RQ2b	If the difference between SCC and videoconferencing will have both direct and indirect effects on state anxiety though satisfaction?	.89	Reject
RQ2c	If the difference between SCC and videoconferencing will have both direct and indirect effects on state anxiety though working alliance?	.84	Reject
RQ2d	If the effect of having an intra vs intergroup counselor has a direct and indirect effect on state anxiety through self-disclosure?	.63	Reject
RQ2e	If the effect of having an intra vs intergroup counselor has a direct and indirect effect on state anxiety through satisfaction?	.57	Reject
RQ2f	If the effect of having an intra vs intergroup counselor has a direct and indirect effect on state anxiety through working alliance?	.71	Reject
RQ2g	If the effect of having an intra vs intergroup counselor has a direct and indirect effect on state anxiety through intergroup prejudice?	IPA: .75 IPAA: .75 IPW: .83	Reject
RQ2h	If the effect of having an intra vs intergroup counselor has a direct and indirect effect on state anxiety through intergroup anxiety?	.95	Reject

Chapter 7: Discussion

This study investigated how counseling channel (SCC vs. videoconferencing) and inter/intragroup contact, as well as their interaction, affected college students' state anxiety through counseling effectiveness (self-disclosure, satisfaction, and working alliance) and intergroup outcomes (intergroup prejudice and intergroup anxiety). The result of RQ1 indicated that this experiment significantly reduced college students' state anxiety. The manipulation of social presence was successful, videoconferencing is high in social presence which significantly improved participants' satisfaction. However, participants' self-disclosure and working alliance were not significantly different regarding counseling channel. This study was the first to show that in the context of online counseling, increased satisfaction, working alliance, and self-disclosure were related to decreased state anxiety. This research coincides nicely with research in more traditional settings showing that self-disclosure (Farber & Hall, 2002), satisfaction (Bitar et al., 2021), and working alliance (Haug et al., 2016), reduce anxiety. Intergroup prejudice didn't show the expected effects. There was one positive relationship for White people. In addition, I was able to provide some evidence that reducing intergroup anxiety was related to reductions in state anxiety.

In the following sections, I will first explain how state anxiety was associated with self-disclosure, satisfaction, working alliance, intergroup prejudice, intergroup anxiety.
Then I will discuss how self-disclosure, satisfaction, working alliance, intergroup prejudice, and intergroup anxiety were affected by counseling channel, inter/intragroup contact, stigma, and the interactions between counseling channel and inter/intragroup contact.

State Anxiety

The ability to elicit self-disclosure is especially important given the strong relationship between increased self-disclosure and reduced state anxiety. This coincides with the literature that patients who have trouble disclosing their thoughts and feelings create difficulties in counseling (Farber & Hall, 2002). However, to my knowledge no previous studies have directly tested the relationship between self-disclosure and state anxiety in the context of online counseling. Although this study did not compare mediated to non-mediated channels, self-disclosure was found to increase counseling's effectiveness across both high and low social presence channels. According to the uncertainty reduction theory (Berger & Calabrese, 1974), self-disclosure is one of the main communication strategies people use decrease uncertainty. Lin et al. (2016) discovered a significant negative relationship between self-disclosure and uncertainty reduction in people's online health information seeking behavior. Similarly, clients sharing their information with the counselor is a crucial part of the counseling process because it helps counselors collect information about the clients in order to evaluate their health conditions and provide suggestions. The evidence suggests that the more clients disclose information about themselves in online counseling contexts, the more likely their stress and anxious feeling could be reduced during the counseling process. This study does confirm the benefits online counseling can provide in reducing anxiety through successfully eliciting self-disclosure.

As with self-disclosure, satisfaction significantly reduced participants' state anxiety. This coincides with and provides additional generalizability to the literature that satisfaction with counseling is negatively related to anxiety (Bitar et al., 2021). However, their study mainly focused on participants with schizophrenia and explained the reduced anxiety is related to reduced schizophrenia concerns and symptoms. This study additionally contributes to theory by

highlighting the important role of satisfaction in reducing anxiety in counseling with a different, but perhaps somewhat more generalizable population. Finally, as I will discuss later, satisfaction was tied to the experimental variable, suggesting a causal relationship. This is important as it suggests that satisfaction is not merely idiosyncratic and intrinsic process, but rather extrinsic as well, and beholden to communication variables inherent in the counseling context.

Working alliance also significantly reduced participants' state anxiety. This coincides with the literature that the quality of the working alliance in online counseling predicted a significant decrease in anxiety after three counseling sessions taking part over six months (Anderson et al., 2012). This study demonstrated that anxiety could be reduced immediately after a single counseling session. According to hyperpersonalization theory, people can form relationships online, but that it takes longer (Walther, 1996). While this doesn't contradict that, it does suggest that the operative length of time, even in low social presence online settings to set up a working alliance can be relatively short and become immediately effective. The evidence provided support that a positive working alliance between counselors and clients can result in increased client motivation and greater perseverance with task completion which could lead to successful treatment outcomes (Anderson et al., 2012). Therefore, this study should reduce any extant concerns that online counseling might not immediately produce the types of counselor-client relationship that will keep clients coming back.

Intergroup prejudice toward Asian and African American people didn't significant predict participants' state anxiety. However, participants' prejudice toward White people were positively related to increased state anxiety. No study to our knowledge has yet tested this effect in the intergroup communication and counseling literatures. Thus, it is worth further investigating this

effect, as the findings may indicate that in some instances reducing people's intergroup prejudice not only helps improve intergroup relationships, but also benefits people's mental health.

In addition, I was able to provide some evidence that reducing intergroup anxiety was related to reductions in state anxiety. Intergroup anxiety is a special anxiety type occurring in intergroup interactions. As mentioned before, intergroup anxiety and anxiety can be related to each other. It is because anxiety can be caused by the fear of social interactions in general (Thompson et al., 2019). This study extends our understanding by demonstrating when people feel less anxious to interact with cultural outgroups and it leads to a reduced anxiety. We live in an increasingly intercultural society, in which young people are expected, but without significant support, to be comfortable with intergroup interactions that can be inherently anxiety provoking (Stephen & Stephen, 1985). The anxious feeling being eased by communicating with the intergroup peer counseling could be beneficial not only for increasing their trust toward outgroup counselors, but also make them feel more prepared to face a multicultural world, thus leading to more effective state anxiety reduction. This is theoretically important because the role of social identity lies at the crux of understanding both multicultural counseling and intergroup communication, this study provides evidence showing that two areas of research previously unconnected are deeply theoretically entrenched with one another.

While it was predicted that stigma might moderate a direct relationship between counseling channel and state anxiety, neither the direct nor moderated effect were significant. This could be explained by two reasons. First, according to one study I conducted (Wang et al., 2020), participants perceived significantly lower stigma for online counseling compared with face-to-face counseling. Thus, it might be because participants' levels of stigma have been reduced by an online communication environment, and that moderation might have been

significant if the channel comparison had included a face-to-face condition. Second, it could also be caused by participation bias. Specifically, participants who were willing to participant in a counseling study might have a low stigma toward counseling at the beginning. Indeed, participants scores on this variable indicated that most participants a least somewhat disagreed that there was a stigma against receiving counseling. Thus, the ability of a communication channel to reduce stigma was curtailed.

In summary, the study suggests that the more self-disclosure, satisfaction, and working alliance participants had across two different channels of counseling, the more their state anxiety were reduced. Moreover, reducing people's intergroup prejudice and intergroup anxiety helped reduce their state anxiety.

Self-disclosure

Counseling Channel Effects

The results showed no significant differences between the videoconferencing and SCC conditions on participants reported self-disclosure. It suggests that regardless of counseling channel, participants seem to feel that they disclose similar amounts of information. It is possible that since self-disclosure was measured as a subjective variable that individuals might have felt they shared as much as they could and had no direct comparison to how they would have disclosed in the other condition. Despite going against hypotheses, in retrospect this can be seen as consonant with social information processing theory. Individuals set different expectations and strategies when using communication channels with lower social presence (Oh et al., 2018). As a result, from a place of subjective judgements it would make sense that the difference might not have been appreciable in the absence of a comparison, and that they managed to self-disclose at subjectively similar levels regardless of channel. Ultimately, given that even this form of

subjective self-disclosure was predictive of positive counseling outcomes this finding. However, it also suggests that a future avenue of research might include looking at objective levels of self-disclosure.

While channel did not predict self-disclosure, perceptions of counselor competence did. The result indicates that the significant predictor of self-disclosure was the perceived competence of the counselor. A previous study found that counselors with a higher facilitative counseling style (defined in terms of both warmth and competence tended to receive more self-disclosures from their clients compared with those nonfacilitative counselors (Halpern, 1977). However, Halpern's (1977) study did not test the effects of counselors' warmth and competence separately. In the current study, competence and warmth were tested separately and competence is found to be much stronger predictor of self-disclosure than warmth. In a personal context, warmth and competence might be more separable, but in a counseling context, competence implies a certain amount of warmth. The strong correlation between warmth and competence ($r = .58$) in the current study supported this. The results interestingly indicate that counselor competence was not predicted by channel, further suggesting that channel may have little inherent direct or indirect effect on self-disclosure. Instead, it is important to note that a counselor who is trained to be competent through multiple channels can become equally effective in eliciting self-disclosure regardless of counseling channel.

Intra/intergroup Contact Effects

The results showed that there were no significant differences between intergroup and intragroup contact on participants reported self-disclosure. This contrasts with previous studies (e.g., Ridley, 1984) which found that African American clients were less likely to self-disclose to White American counselors compared with African American counselor. However, in the

context of this study, group dynamics had little effect on the amount that individuals perceived themselves to be sharing. Group salience happens as a result of social comparison (Hogg, 2018). However, there are other things which may be more salient comparisons in a professional/role driven relationship. It is possible that since both peer counselors and participants are college students at the University of Maryland, this shared identity between both parties might be more salient than their racial identity. This is supported by the content from the counseling sessions in which participants and peer counselors frequently discussed mental stress triggered by their academic work. It is also possible that participants perceived their relationships with their peer counselor in terms of counselor/client relational identity rather than interracial ones. This may maximize distinctions in a counseling relationship may in fact be the roles. This is consistent with the self-categorization theory (Turner et al., 1987) that people can have different identities, but that one identity will be more salient than others depending on the context. This suggests that future research should measure the salience of multiple relevant identities in order to understand which identity is the most salient and affect their communication behaviors (e.g., self-disclosure).

As with the above findings regarding counseling channel and self-disclosure, the strongest predictor remained counselor competence. The results indicate that counselor competence was not predicted by counselors' races, despite past research showing that groups are often stereotyped according to warmth and competence (Fiske et al., 2002). In some ways this is a testament to the standardization of the peer counseling protocol, and that when counselors are highly competent, it was less important for the participants to rely on the counselors' races regarding disclosing their personal matters to their counselors. On the other hand, if group dynamics were really in play, we would expect to find the ingroup positivity bias we encounter

across many studies (Tajfel & Turner, 1986). This further reinforces that despite the racial manipulation, and the successful manipulation check, racial identity was simply not the most salient social identity in this counseling context. This has implications which I will address in the conclusion.

The Interactions between Counseling Channel and Intra/intergroup Contact

Counseling channel did not significantly moderate the relationship between intra/intergroup contact and self-disclosure. According to SIDE, when clients and counselors share the same social identity in intragroup counseling, participants should have more salient ingroup identity in text-based counseling than those in videoconferencing. This is theorized to be a result of deindividuation in more anonymous contexts. However, counselors' group salience was not significantly perceived by the participants in the current study. It is possible that the depersonalization process that SIDE predicts was not significantly triggered in counseling sessions. In counseling sessions, the participants were supposed to focus on themselves and talk about their own stresses to the counselors. Thus, the nature of counseling might make deindividualization process harder to happen. This extends SIDE by indicating that the effect of channel on group salience is not guaranteed and needs to take communication context and content into account.

In summary, participants reported self-disclosure did not differ in either counseling channel or inter/intragroup contact. However, disclosing themselves in counseling session helped reduce participants' state anxiety and this effect was produced significantly regardless of counseling channel or inter/intragroup contact, but was instead related to perceived counselor competence.

Satisfaction

Counseling Channel Effects

Participants who were in the videoconferencing counseling condition reported higher satisfaction than those participants in the SCC condition. This finding coincides with the assumption that a higher level of social presence conveyed by a channel could lead to a higher satisfaction when communicating (Gunawardena & Zittle, 1997). The findings are in line with social presence theory, which suggests that videoconferencing (a high social presence channel) is able to deliver more cues than online synchronous chat (a low social presence) and could therefore increase communicators' intimacy with each other. In a videoconferencing counseling, peer counselors had a chance to conduct the session while showing their nonverbal cues which may increase participants understanding. Thus, participants were more satisfied with their peer counselors in videoconferencing than those participants in SCC with only text messages. Previous counseling studies only supported that face-to-face counseling had a higher satisfaction than online counseling (Liebert et al., 2006; Mallen et al., 2003; Sangha et al.,2003), but this study broadens past research by not treating online counseling as monolithic, and the differences showing in the results instead toward a theoretical mechanism (e.g., social presence) that allows for more fine-grained predictions of what counseling channels participants will find satisfying.

Intra/intergroup Contact Effects

The results showed that there were no significant differences between intergroup and intragroup contact regarding participants' satisfaction. This suggests that regardless of counselors' races, participants seem to feel similarly satisfied with the sessions they received in both intergroup and intragroup conditions. It is interesting because in my previous study (Wang & Joyce, in process), we found that participants had a higher intention to seek a counselor who

was ingroup. This finding is echoed in meta-analytic work as well (Cabral & Smith, 2011). A difference between the past and present research is in part the difference between anticipation and actual experience. People may avoid outgroup interactions on account of anxiety about what might happen. Goff et al. (2008) found that participants experienced anticipatory anxiety when faced with interracial contact, and that anxiety led to avoidance. However, the current results indicate that people can be equally satisfied with interactions with the peer counselors regardless of their race and/or the intergroup dynamic. This is echoed in the larger research on intergroup contact, that simultaneously shows that intergroup communication provokes a lot of anticipatory anxiety, but also that the experience of intergroup communication reduces that anxiety. Research on intergroup contact suggests that intergroup communication can reduce intergroup anxiety (Pettigrew & Tropp, 2006) and indeed this is a result I replicate and will discuss later. This is the first study that I am aware of that manipulates the race of counselor, and the finding shows that absent of confounds in self-selection, people's experiences do not in fact suffer in intergroup counseling contexts, at least online ones, which may be inherently less anxiety provoking (Amichai-Hamburger, 2008). This study further provides evidence to show that interacting with a racially different person could result in a similar level of satisfaction compared with communicating with an ingroup.

Participants' perceptions of their peer counselors' competence and trustworthiness positively affected their satisfaction with the peer counseling. The results also indicate that counselor competence and trustworthiness were not predicted by the counselors' races. This is inconsistent with previous finding that clients tend to mistrust a racially different counseling. For example, Nickerson et al. (1994) found that African American clients tended to mistrust white American counselors. As above, it is important to note that previous studies are based on clients'

perceptions rather than actual contact. The current study suggests that building perceptions of trust and competence is more important for effective counseling (e.g., satisfaction) and that this can happen regardless of the counseling group dynamics, as long as you can get people past their preconceptions and into sessions rather than considering their peer counselor's races.

The Interactions between Counseling Channel and Intra/intergroup Contact

Counseling channel did not significantly moderate the relationship between intra/intergroup contact and satisfaction. I predicted that there would be less of a difference between intergroup and intragroup in the counseling channel high in social presence. However, there wasn't a difference in satisfaction between intergroup and intragroup contact to lessen, so it makes sense that the moderation effect of counseling channel on inter/intragroup and satisfaction did not occur.

In summary, participants in videoconferencing reported a higher satisfaction than those in SCC. Even though there were no differences between intergroup and intragroup contact, satisfaction with the counseling helped all the participants to reduce their state anxiety. Thus, the study suggests that videoconferencing might lead to more satisfying and therefore effective counseling.

Working Alliance

Counseling Channel Effects

Counseling channel did not affect participants' perception of working alliance with their peer counselors. Despite going against the hypothesis that SCC should result in stronger working alliance than videoconferencing did, in retrospect this can be seen as consistent with social information processing theory (Walther, 1996). It is possible that people who communicate via text-based communication channels might be able to reach a stronger working alliance than

others did in videoconferencing over a longer period of time in counseling. Traditionally, a counseling session takes around 50 mins and is ideally followed by additional sessions. However, in this study, the participants were given 30 mins to talk with their peer counselors which was shorter than a traditional counseling setting. The shortness was brought up by the participants in qualitative feedback. For example, participants stated: " *I don't feel like the peer session was long enough for me to answer the questions accurately. The short time made me feel a little disconnected from my peer-counselor*.", "*I think that this is a pretty interesting study but I do think that the counseling time should be longer like 45 minutes to an hour*.". This is one of the limitations of the current study that participants in SCC might need longer time to yield a higher level of working alliance with their peer counselors than in videoconferencing. I will explain this in the limitation section.

Intra/intergroup Contact Effects

The results showed that there were no significant differences between intergroup and intragroup contact regarding participants' working alliance. It means that participants and their intergroup peer counselors still resulted in a sufficient working alliance that was not considerably weaker than in the intragroup condition. The reason I predicted intragroup counseling should result in higher working alliance because ingroup counselors are more likely to have similar social networks and live in similar communities, increasing counselors' mindfulness to provide clients available and familiar resources (Cabral & Smith, 2011). However, perceived group salience was not significant in the current study. It is possible that since both peer counselor and participants were undergraduate students at the same university, they tended to have similar social networks and live in similar communities, that might help them to create bonding rather than stressing their differences in status or racial group memberships. Additionally, a previous

study indicated that counselors discussing cultural related topics with their clients increases understanding of cultural differences and the relationships between counselors and clients (Day-Vines et al., 2007). However, in the current study, the peer counselors were trained to discuss the same topics (see Appendix B) across conditions which did not involve any cultural/identity related topics. For future research, it might be helpful to investigate whether taking about cultural or identity-related topics make participants' racial identity salient.

However, while neither the channel nor the intergroup manipulation effected working alliance, participants' sex did. In the current study, the five peer counselors were all females, and female participants reported a greater working alliance. It is interesting that one of my previous studies (Wang & Joyce, in process) indicated that matching gender significantly increased people's online counseling seeking behavior. The current finding further shows that gender matching is important because it not only affects individuals' online counseling decision making, but also improves counseling outcomes by facilitating a stronger alliance between counselors and clients. This may result in those female participants having a higher working alliance with the same-sex peer counselors compared to male participants who had a different sex peer counselor. It might be seen as providing limited support for the intergroup hypotheses, however, not in the intergender rather than interracial contexts. On the other hand, this may stem from gender norms as well, as so future research manipulating the gender of the peer counselors would be a useful next step in untangling this phenomenon.

The Interactions between Counseling Channel and Intra/intergroup Contact

Counseling channel did not significantly moderate the relationship between intra/intergroup contact and working alliance. I predicted that there a difference between intergroup and intragroup should be more in SCC than videoconferencing. It makes sense

because neither counseling channel nor inter/intragroup contact resulted in significant effects, so the moderation effect of counseling channel on inter/intragroup and satisfaction did not occur.

In summary, participants' working alliance did not differ according to either counseling channel or inter/intragroup contact. However, working alliance was instead related to counselor's gender and perceived counselor competence and trustworthiness.

Intergroup Prejudice

Intra/intergroup Contact Effects

Consistent with intergroup contact theory, participants had a lower intergroup prejudice level toward African American individuals when they had an African American peer counselor compared with those who had non-African American counselors in intergroup counseling condition. Moreover, in the intergroup condition, participants who interacted with a White peer counselor reduced their prejudice toward White individuals more than the participants who had non-White peer counselors. Again, this result coincides with intergroup contact theory.

Previous studies primarily focused on how to reduce majority groups' intergroup prejudice toward minority groups and the effects of intergroup contact was less effective for minority groups (Dovidio et al., 2017, Pettigrew & Tropp, 2006). For example, Mancini et al. (2018) found that after communicating with non-native healthcare providers, native patients reported a decreased prejudice toward the healthcare providers. This study shows that the effects of reducing prejudice in the context of healthcare also worked toward White individuals. The reduced intergroup prejudice toward White individuals might be helpful to improve White counselor-minority client relationship which could further improve minority groups' health outcomes.

In contrast to predictions, participants of other races/ethnicities assigned to the Asian counselors reported higher prejudice toward Asian people than those in the intragroup conditions, or intergroup conditions with either a White or African American counselor. This result doesn't coincide with intergroup contact theory (Allport, 1954) that predicts interacting with outgroup members should reduce people's prejudice toward a cultural outgroup, especially when the interaction is positive or productive. Given that the Asian counselor was rated equally highly by participants on perceptions of competence, it is unlikely that this was just the result of sub-standard peer counseling. One possible explanation is that the results of the current study were affected by the Asian peer counselor's nationality. The Asian counselor is an international student from China and the experiment was conducted during the COVID-19 pandemic. Studies have indicated an increased prejudice against Chinese people and Chinese people are perceived as a threat in the U.S. caused by the negative consequences of COVID-19 (Tabri et al., 2020). The participants frequently talked about their anxiety levels having been increased caused by the COVID-19 pandemic (e.g., unable to see family and friends) during the peer counseling sessions. Thus, having a conversation with a Chinese national might have introduced a confound in which negative emotions regarding COVID were primed. While there is some evidence that contact with Asian nationals still results in a lessoning of prejudice in the time of COVID (Mandalaywala et al., 2021), that study was non-experimental, and the results also indicated that COVID intensity was associated with a greater desire for social distance. As a result, putting participants into an intergroup situation that they were significantly uncomfortable with might have increased anxiety and reversed contacts effects. A finding that can be seen as in line with intergroup threat theory (Stephan & Stephan, 2000). Participants might have perceived the Asian counselor who is Chinese as a member of not just an out-group, but a threatening one. This

further highlights the important of understanding the contexts of intergroup contact, and that even when the Asian peer counselor was rated positively regarding her warmth, trustworthiness, competence, and attractiveness, it can have subtly negative impacts.

The Interactions between Counseling Channel and Intra/intergroup Contact

The findings showed that counseling channel did not significantly moderate the relationship between inter/intragroup contact condition and intergroup prejudice toward Asian and African American individuals. However, consistent with intergroup contact theory, counseling channels significantly moderated the relationship between inter/intragroup contact condition and intergroup prejudice toward White people. The interaction showed that while prejudice toward White people decreased in the synchronous chat condition, it increased in the videoconferencing condition. Indeed, even in the intragroup videoconferencing condition prejudice appeared to increase compared to the synchronous chat condition. This result is unexpected, and it is difficult to explain due to the lack of evidence in previous research. It is important to note that there were three White counselors conducting counseling sessions. Thus, there should not be the individual differences caused participants negative perceptions of the White counselors. My assumption is that this result might be affected the African American Matter Movement after George Floyd death during data collection in 2020-2021. It is possible that police brutality and racism social issues might have triggered both White and non-White participants' perceptions of white culpability in salient social issues. In videoconferencing, the race of the counselors may have become salient enough that race represented the "elephant in the room", something that was difficult not to think about. In some ways this parallels the findings about increasing prejudice toward the Asian counselor. The difference here is that it only occurred with additional social presence, where the group category was enough to drive the

effect for the Asian counselor. This may make sense in that additional stimulus would be needed to override the normativity of Whiteness in American culture.

In summary, intergroup prejudice was sometimes reduced by intergroup counseling. Especially when participants had a lower intergroup prejudice toward African American and White individuals after communicating with African American and White peer counselors than those who had non-African American and White counselors in intergroup counseling condition. However, participants of other races/ethnicities assigned to the Asian counselor had higher intergroup prejudice toward Asian people than those did with the non-Asian counselor, potentially representing a threat response (Stephen & Stephen, 2000).

Intergroup Anxiety

Intra/intergroup Contact Effects

Consistent with past research on intergroup contact (Pettigrew & Tropp, 2006), participants in intergroup contact came away with less intergroup anxiety than those in intragroup contact. Although this has been shown in many contexts, including medical school (Burke et al., 2017), this was the first time this result has been shown in a mental health care context. The mental health context is an interesting one not only for practical reasons, but because of its relationship with two important variables that otherwise suggest that contact should be less effective. Research has found that intergroup contact is more effective when the representatives of the group were treated as equal status (Pettigrew & Tropp, 2006), and when there was mutual self-disclosure (Ensari & Miller, 2002). However, traditional counseling (e.g., counselor-client relationship) lacks both conditions. It is worth noting that because the counselors were undergraduate students, perceptions of equal status might have been higher. Talking with a peer might increase participants' comfort level compared with a traditional health

provider-patient relationship because it empowered the participants in peer counseling sessions. Additionally, talking with a peer counselor from a different culture could increase people's knowledge about that racial group. For example, in qualitative feedback, one participant stated: " *I liked my peer counselor a lot and enjoyed our racial differences because she gave me a very interesting perspective about herself regarding that that helped me feel less alone about something :)*.". Communicating with an intergroup peer counselor may have increased the participants' knowledge and confidence with that racial group more than in a traditional counseling setting, and further helped to reduce their anxieties about interacting with people from different cultures. Alternatively, it may have been the reduction in state anxiety that reduced their intergroup anxiety. The significant correlation between state anxiety and intergroup anxiety (r = .239) supported this. State anxiety is more global phenomenon than intergroup anxiety, and so reducing a global sense of anxiety should logically influence specific anxieties as well.

While it was predicted that CC might moderate a direct relationship between inter/intragroup contact and state anxiety, neither the direct nor moderated effect were significant. Participants in both conditions reported a similar level of CC (M_{Intra} = 5.10 SD_{Intra} = .70; M_{Inter} = 5.30 SD_{Inter} = .74). It is important to note that participants were asked in the presurvey to report their CC before assigning them to an intergroup or intragroup condition. People might perceive their CC differently in various social settings. In the intergroup contact condition, participants might need more skills to manage communication with the peer counselor. However, the participants were not aware of interacting with an outgroup counselor when they reported their CC. In this future, it might be interesting to measure participants' CC of interacting with their counselors in the post survey.

The Interactions between Counseling Channel and Intra/intergroup Contact

The counseling channel did not significantly moderate the relationship between intra/intergroup contact and intergroup anxiety. It is interesting because one of my previous studies (Joyce & Wang, in process) indicated that communication channels low in richness (e.g., computer-mediated communication) should have triggered less anticipated intergroup anxiety than communication channels high in richness (e.g., face-to-face and media narrative communication). However, in the current study, participants reported a similar level of intergroup anxiety in both intergroup and intragroup contact regardless of counseling channels. This reinforces the differences between anticipated and actual intergroup communication. Participants might have felt more anxious in their imagination than the actual interactions in a communication channel high in social presence.

In summary, participants in intergroup contact reported less intergroup anxiety than those in the intragroup condition. However, counseling channel did not significantly moderate the relationship between intra/intergroup contact and intergroup anxiety. It is beneficial to know that reducing intergroup anxiety helped all the participants to reduce their state anxiety.

Chapter 8: Limitations

The limitations of this study should be acknowledged. First, due to the difficulty of recruiting and training peer counselors for the current study, there was only one African American peer counselor and one Asian peer counselor. Future studies should consider recruiting more than one counselor from each racial group in order to examine a cross-counselor effect on the counseling process and outcomes. However, it should be noted that the peer counselors had very similar ratings. This does suggest that because they all received the same training and structured format for the sessions that there was some homogeneity across the counselors. This

might be a secondary issue that some of the intergroup effects might have been reduced on account of this uniformity. While the decision for uniformity in this study was made for the sake of experimental control, this might have reduced some the genuine diversity that could drive both positive and negative intergroup effects.

Second, the current study was conducted during the COVID-19 pandemic, and this could potentially affect the findings. The evidence has demonstrated that COVID-19 exacerbate anti-Asian xenophobia (Misra et al., 2020), so this could affect how participants perceive the Asian peer counselor. While this context is theoretically interesting, it does generate problems with generalizing across the intergroup conditions. Moreover, the Asian peer counselor's native language is Chinese, she claimed that she spoke with participants with an accent in peer counseling sessions. The use of language (e.g., accent) for outgroup members could cause prejudices in intergroup communication. Thus, this factor could affect how participants think and evaluate the Asian peer counselor in the current study. However, if this were a huge issue, we might have expected to see an interaction in which anti-Asian prejudice was reduced in the synchronous chat condition where the accent would neither create communication challenges or further prime identity. Instead, in the current study, prejudice toward the Asian counselor was increased across counseling channel condition. Still, future study should measure specific language and contextual biases toward outgroup members.

Third, according to social information processing theory, communication channels low in social presence might need longer time to reach a similar level with a communication channel in high social presence (Walther, 1996). A 30-min session is shorter than a traditional 50-min counseling session. Additionally, due to a long process of typing messages in SCC, it might result in that less information was exchanged between peer counselors and participants compared

to videoconferencing counseling. This means that given a more ecologically valid time frame the SCC condition has the potential to become relatively more effective. A more effective SCC condition might result in some of the hypotheses being supported while others might find the opposite of the initial predictions. As a result, tracking efficacy over time is an important task for future research.

Chapter 9: Conclusions

This study investigated the effects of counseling channel and intra/intergroup counseling and their interactions on reducing college students' state anxiety through the effects of self-disclosure, satisfaction, working alliance, intergroup prejudice, and intergroup anxiety. The results of counseling channel efficacy exhibited a significant effect of video counseling on increasing participants' levels of satisfaction with the counseling. Moreover, better self-disclosure, satisfaction, and working alliance significantly improved college students' mental health across communication channels.

This study has implications about the theoretical role of social presence in counseling. Few studies focus on applying social presence theory to counseling contexts, which is a problematic gap in the literature given the way in which social presence could have been related to counseling outcomes. Interestingly, while these findings do provide the first causal evidence that some variables were impacted by the use of more or less socially present communication channels, there were a number of places in which this was not the case. It is always dangerous to overinterpret a null hypothesis, so some caution should be taken when interpreting these results in the discussion section. However, in this case, this study was conducted by using a tightly controlled and internally validated manipulation along with validated measures. This may suggest that in some cases, the effects were simply not there to be found. My hypotheses were

derived from past research in which people compared face-to-face with online channels (e.g., Bruss & Hill, 2010; Joinson, 2001; Mallen, 2003; Sangha et al., 2003). However, it is possible that the observed differences are related to social context. For example, an in-person context is perhaps quantitively different in terms of other unmeasured variables. This presents an interesting theoretical challenge, but regardless, if social presence turns out to not be problematic for counseling contexts, this opens up a great deal of logistical solutions to face the deficit in counseling services without fears of significantly reducing efficacy.

This research has theoretical implications for intergroup theories as well. While the limitations suggest that some caution should be taken in the interpretation of some of the intergroup findings, the results indicated a significant effect of intergroup counseling on decreasing participants' levels of intergroup anxiety and in some cases prejudice as well. Indeed, this tightly controlled experiment may have ultimately resulted in smaller than realistic intergroup effects, and that bias effects especially might be larger in reality, as is shown in other studies (e.g., Cabral & Smith, 2011). Social identity theory states that ingroup positivity bias often occurs in social interactions (Tajfel & Turner, 1986). However, this study indicates that racial identity may not have been the most salient social identity in this counseling context, despite all included participant passed the manipulation check. The results indicate that as long as counselors are highly competent, it was less important for the participants to rely on the counselors' races to form person and context perceptions, and more important that they were regarded as effective in their role identity as counselors. There are many lines of research that focus on individuals forming cross-cutting, or superordinate identities, and it may be that counseling is one context in which superordinate role identities become salient naturally.

Practically, mental health is a huge issue that needs to be addressed on college campuses. College students are the age group that uses online counseling the most frequently (Barak et al., 2008). With the limited research on online counseling efficacy, the current findings are particularly significant because they could potentially have far-reaching societal impacts. Namely, the research suggests that even brief online counseling, regardless of channel, can have impacts on both state anxiety and intergroup anxiety. This also gives counselors a deeper understanding of how to take advantage of different types of counseling services to improve counseling efficacy, such that videoconfereing could produce more satisfaction for the young clients than SCC. With the limited research on intergroup communication in counseling, the results of this study are particularly significant especially in many multi-ethnic, multi-cultural countries like the United States. Living in an increasingly intercultural society, it would be beneficial to prepare ourselves to feel comfortable with intergroup interactions that can be inherently anxiety provoking (Stephen & Stephen, 1985). These results suggest that regardless of people's anticipated challenges and preferences, counseling works well across equally trained counselors regardless of intergroup dynamics. This study indicates that communicating with the intergroup peer counseling could be beneficial not only for increasing their trust toward outgroup counselors, but also make people feel more prepared to face a multicultural world.

Appendix A

Project Title	A study on improving college students' mental health using an anxiety reduction intervention
Purpose of the Study	This research is being conducted by **Xiaojing Wang** at the University of Maryland, College Park. I am inviting you to participate in this research project because you are least 18 years old and an undergraduate student at the University of Maryland. The purpose of this study is to examine how college students perceive and evaluate an anxiety reduction intervention.
Procedures	The study will take place in one sitting and includes three parts: A pre-questionnaire (about 10 mins), an anxiety intervention (30 mins), and a post-questionnaire (about 20 mins). You will be randomly assigned to one of two communication channels, either videoconferencing or online synchronous chat. You will be asked to provide informed consent to being recorded and to respond to a survey that includes several questions, such as the level of your anxiety at the current moment, demographic information, communication competence, stigma toward seeking counseling, and past counseling experience. In order to protect your personal identity information, you will be asked to come up with your own **codename** in the pre-survey. After the pre-questionnaire is completed, you will start your session with your randomly assigned peer counselor using the Zoom meeting program. Zoom will be used for videoconferencing and synchronous chat. Please use your **codename** once you start your meeting with your peer counselor. · If you are assigned to videoconferencing, you will have a video meeting with a peer counselor. · If you are assigned to a synchronous chat meeting, we will disable the use of your video during the session in Zoom, you will only be able to use the chat feature to communicate during the session. The intervention will be a 30-min session. The peer counselor will ask some questions about your anxiety experience and anxiety coping strategies (e.g., "have you experienced anxiety?"; "Have you ever tried to reduce your anxiety?"). At the end, the peer counselor will provide you a list of mental health resources. Note: The peer counselor whom you will speak to is not a licensed therapist and will not provide you any therapeutic advice or medical diagnoses during the study. Please follow up with a mental health care provider or a medical professional if you wish to receive more information about anything that is discussed or brought up during the study. When the session is finished, you will be asked to fill out a post-test questionnaire including questions about the level of your anxiety at the current moment (e.g., "I feel calm."), self-disclosure (e.g., "How much did you express yourself freely during the peer counseling?"), and

	satisfaction with the session (e.g., "I am satisfied with the quality of the peer counseling I received."). You will also be asked to provide your **codename** again in the survey. The whole study will last 60 minutes. You will be offered extra credit in exchange for your participation in this study. Specifically, you, the participant, will receive 2 SONA credit for your participation in the study. You will be informed of the researcher's wish to record the session for research purposes; however, you will have the right to decline being recorded anytime. You can also decline the use of your recording by answering "yes" for the question "Please do not use my data for the study" in the post-survey. Your participation is completely voluntary, and you may withdraw from participating at any time.
Potential Risks and Discomforts	Since the session will be recorded, there is a potential risk for identification. To ensure this risk is addressed, you will be informed that your participation is voluntary and that you can decline to answer specific questions or to end your participation at any time. In order to keep anonymity, your name will neither be asked to be provided at anytime during the session nor be shown in any place in the study. If you are assigned to videoconferencing condition, only your face and voice will be recorded. Your participation is completely voluntary, you can skip questions, stop answering the questions, or discontinue the study at any time. You may feel upset, uncomfortable, and/or distressed when answering certain questions. We will provide resources to you, or we will call the following lines to seek assistance for your needs. University of Maryland Police: 301-405-3333 (emergency) / 301-405-3555 (non-emergency); Counseling Center: 301-314-7651 (24-hour crisis support); Maryland Youth Crisis Hotline:1-800-422-0009; National Suicide Hotline (1-800-273-8255).
Potential Benefits	There are no direct benefits to participants. This research, however, may be useful in increasing understanding about how to improve college students' mental health and how to reduce anxiety.
Confidentiality	In order to protect your personal identification information, you will be asked to come up with your own **codename** in the pre-survey. The SONA system will award credits to arbitrary SONA IDs so that your identity will be protected. Only Xiaojing Wang (the researcher) will use the data for research purposes. Any potential loss of confidentiality will be minimized by storing electronic data in a password protected computer. Only the principal investigator, Xiaojing Wang, will have access to the records of all of the sessions. All data (the video recordings and chat transcripts) will be destroyed when their use is no longer needed for the research or when five years have passed, whichever is later.

	The study information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.
Right to Withdraw and Questions	Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify. If you are an employee or student, your employment status or academic standing at UMD will not be positively or negatively affected by your participation or non-participation in this study. If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator: **Xiaojing Wang** **Department of Communication** **University of Maryland** **0107 Skinner Building** **College Park, MD 20742** **romyxiao@umd.edu**
Participant Rights	If you have questions about your rights as a research participant or wish to report a research-related injury, please contact: **University of Maryland College Park** **Institutional Review Board Office** **1204 Marie Mount Hall** **College Park, Maryland, 20742** **E-mail: irb@umd.edu** **Telephone: 301-405-0678** This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.
Statement of Consent	By clicking below you are indicating that you are at least 18 years of age; you have read this consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may save or print a copy of this consent form. If you agree to participate, please click "I agree" below.

Appendix B

Protocol Procedures

Category	Description	Example
Social exchange (2 mins)	Light conversation not related to clients' anxiety to establish rapport	"Good morning. How's it going?" "How do you feel about online classes?"
Presentation of symptoms (6 mins)	Statements describing or eliciting information about client's anxiety	Frequency-Duration-Impairment "How often did you have anxiety?" "How long did the anxious feeling stay?" "Did it affect any of your relationships/work performance?"
Scenario (1 min)	Using self-example to connect to the client	I find myself getting stressed out with schoolwork. I feel nervous when talking to people in group discussion. My heart is racing when I know I will have a public speaking.
Problem-related expression (6 mins)	Conversations about the understandings and feelings regarding the scenario	Have you ever experienced the similar feeling? If so, can you explain it? Do you think it is different from your experience?
Coping experience check (7 mins)	Conversations about their coping strategies	Have you ever tried to reduce your anxiety? What kind of coping strategies have you used before? Do you think your coping strategies work for a short term or long term?
Solution (6-7 mins)	Providing suggestions	Set short or long-term goals Breathing exercise You are not alone
Encouragements & Recommendations (1-2 min)	Encouraging and provide them some counseling resources	I have a Mental Healthcare Resources list. We have a counseling center on campus.

Appendix C

Assignment 1 for the Counseling Training Session 1

Instruction: There are three different anxiety types: **generalized anxiety disorder, panic disorder, and social anxiety**. Please watch the video and read NIH definitions for explaining the differences between the three types of anxiety.
The video: https://www.youtube.com/watch?v=LCg3OidD-3I
The NIH definition: https://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml

In this assignment, you will need to provide your questions and answers for three hypothetical counseling sessions (including patients and counselors). Imagine that you have three counseling sessions for a client with generalized anxiety disorder (Part 1), a client with a panic disorder (Part 2), and a client with social anxiety (Part 3). Write down what questions you would ask for the three clients and how they would answer your questions in the conversation.

Note: Pay attention to the assigned time for each section in the protocol. It means that your questions and answers for social exchange should not exceed 1 min AND your presentation of symptoms should not be shorter than 5 mins. Specifically, it seems that most of you type 50-100 words per minute, so I have put an estimated word limit for each question, please follow the instructions when you write your questions and answers.

For **generalized anxiety disorder, panic disorder, and social anxiety respectively.**
1. Social exchange (1 min, 50-100 words) Instruction: Light conversation not related to participants' problems and/or intended to establish rapport
2. Presentation of symptoms (5 mins, 250-500 words) Statements describing or eliciting information about patient's problem
3. Problem-related expression (8 mins, 400-800 words) Conversations about the similarities and differences between the participants and the patients in the video
4. Coping experience check (5 mins, 250-500 words) Conversations about their coping strategies
5. Solution (7 mins, 350-700 words) Providing suggestions
6. Encouragements & recommendations (1 min, provide 1 source)

Assignment 2 for the Counseling Training Session 2

Instruction: This assignment is to reflect on your mock peer video counseling session. In this session, you should have practiced playing a counselor role AND a client role. Please write your self-reflection and the reflections on your peer's videoconferencing counseling sessions.

1. For the counselor role:
This part is to reflect on your role of being a **counselor** during mock videoconferencing by watching the recording. Write a three-paragraph reflection:
Paragraph I: Reflect on **your** strengths and weaknesses after watching the recording (300-500 words).
Paragraph II: Reflect on what challenges **you** had in the session (300-500 words).
Paragraph III: Craft an action plan for **your** improvement (300-500 words).

2. For a client role:
This part is to reflect on your role of being a **client** during mock videoconferencing by watching the recording. Write a three-paragraph reflection:
Paragraph I: Reflect on **your counselor**'s strengths and weaknesses after watching the recording (300-500 words).
Paragraph II: Reflect on what challenges you and your counselor had in the session (300-500 words).
Paragraph III: Craft an action plan for your **counselor** to improve (300-500 words).

3. For one of your peer's videoconferencing session
The part is to watch one of your peers' session. You will write a three-paragraph reflection for her **counselor** role:
Paragraph I: What parts of your peer's **counselor** role do you think work well (300-500 words)?
Paragraph II: What parts of your peer's **counselor** role do you feel need improvement (300-500 words)?
Paragraph III: What suggestions do you want to give to your peer as **a counselor** to improve in next sessions (300-500 words)?

4. For the second peer's videoconferencing session
The part is to watch your second peer's session. You will write a three-paragraph reflection for her **counselor** role:
Paragraph I: What parts of your peer's **counselor** do you think work well (300-500 words)?
Paragraph II: What parts of your peer's **counselor** do you feel need improvement (300-500 words)?
Paragraph III: What suggestions do you want to give to your peer as **a counselor** to improve in next sessions (300-500 words)?

Assignment 3 for the Counseling Training Session 3

Instruction: This assignment is to reflect on your mock synchronous chat counseling session 1. In this session, you should have practiced playing a counselor role AND a client role. Please write your self-reflection and the reflection on your peer's synchronous chat counseling sessions.

Instruction: This assignment is to reflect on your mock synchronous chat counseling session. In this session, you should have practiced playing a counselor role AND a client role. Please write your self-reflection and the reflections on your peer's synchronous chat counseling sessions.

1. For the counselor role:
This part is to reflect on your role of being a **counselor** during synchronous chat counseling by reading the text transcript. Write a three-paragraph reflection:
Paragraph I: Reflect on **your** strengths and weaknesses after reading the text transcript. (300-500 words).
Paragraph II: Reflect on what challenges **you** had in the session (300-500 words).
Paragraph III: Craft an action plan for **your** improvement (300-500 words).

2. For a client role:
This part is to reflect on your role of being a **client** during synchronous chat counseling by reading the text transcript. Write a three-paragraph reflection:
Paragraph I: Reflect on **your counselor**'s strengths and weaknesses after reading the text transcript. (300-500 words).
Paragraph II: Reflect on what challenges you and your counselor had in the session (300-500 words).
Paragraph III: Craft an action plan for your **counselor** to improve (300-500 words).

3. For one of your peer's synchronous chat counseling session
The part is to read one of your peers' session transcript. You will write a three-paragraph reflection for her **counselor** role:
Paragraph I: What parts of your peer's **counselor** role do you think work well (300-500 words)?
Paragraph II: What parts of your peer's **counselor** role do you feel need improvement (300-500 words)?
Paragraph III: What suggestions do you want to give to your peer as **a counselor** to improve in the future (300-500 words)?

4. For your second peer's synchronous chat counseling
The part is to read your second peer's session. You will write a three-paragraph reflection for her **counselor** role:
Paragraph I: What parts of your peer's **counselor** do you think work well (300-500 words)?
Paragraph II: What parts of your peer's **counselor** do you feel need improvement (300-500 words)?
Paragraph III: What suggestions do you want to give to your peer as **a counselor** to improve in the future (300-500 words)?

Appendix D

The State-Trait Anxiety Inventory (Spielberger et al., 1983)

1. I feel calm
2. I feel secure
3. I am tense
4. I feel strained
5. I feel at ease
6. I feel upset
7. I am presently worrying over possible misfortunes
8. I feel satisfied
9. I feel frightened Item
10. I feel comfortable Item
11. I feel self-confident Item
12. I feel nervous
13. I am jittery
14. I feel indecisive Item
15. I am relaxed
16. I feel content
17. I am worried
18. I feel confused
19. I feel steady
20. I feel pleasant

The Satisfaction with Therapy and Therapist Scale-Revised (Oei & Shuttlewood, 1999)

1. I am satisfied with the quality of the counseling I received
2. The counselor listened to what I was trying to get across
3. My needs were met by the program
4. The counselor provided an adequate explanation regarding my therapy
5. I would recommend the program to a friend
6. The counselor was not critical towards me
7. I believe the counseling will help me with my anxiety problem
8. I felt free to express myself during counseling
9. I was able to focus on what was of real concern to me
10. The counselor seemed to understand what I was thinking and feeling
11. I would like to seek counseling in the future.

Working Alliance Inventory-Short Form (WAI-S; Tracey & Kokotovic, 1989)

1. As a result of this session I am clearer as to how I might be able to change.
2. What I did in the peer counseling session gives me new ways of looking at my concern.
3. I believe my peer counselor likes me.
4. The peer counselor and I collaborate on setting goals during the session.
5. The peer counselor and I respect each other.
6. The peer counselor and I are working towards mutually agreed upon goals.
7. I feel that the peer counselor appreciates me.
8. The peer counselor and I agree on what is important for me to work on.

9. I feel the peer counselor cares about me.
10. I feel that the things I do in the session will help me to accomplish the changes that I want.
11. The peer counselor and I have established a good understanding of the kind of changes that would be good for me.
12. I believe the way we are working with my concern is correct.

Self-disclosure (Laurenceau et al.,1998)
1. When I wish, my self-disclosure are always accurate reflections of who I really am during the session.
2. When I express my personal feelings, I am always aware of what I am doing and saying during the session.
3. When I reveal my feelings about myself, I consciously intend to do so during the session.
4. I do not often talk about myself during the session.
5. My statements of my feelings are usually brief during the session.
6. My conversation lasts the least time when I am discussing myself during the session.
7. Only infrequently do I express my personal beliefs and opinions during the session.
8. I cannot reveal myself when I want to because I do not know myself thoroughly enough.
9. I am often not confident that my expression of my own feelings, emotions, and experiences are true reflections of myself.
10. I am not always honest in my self-disclosures.
11. I do not always feel completely sincere when I reveal my own feelings, emotions, behaviors, or experiences.
12. I intimately disclose who I really am, openly and fully during the session.
13. Once I get started, my self-disclosures last a long time during the session.
14. I typically reveal information about myself without intending to.
15. My messages reveal mostly what I like during the session.
16. My disclosures of personal beliefs and opinions are always directly related to the conversation during the session.

Communicative Adaptability Scale (CAS, Duran,1983)
1. In most social situations, I feel tense and constrained.
2. I am relaxed when talking with others.
3. I try to be warm when communicating with another.
4. While I am talking, I think about how the other person feels.
5. I am verbally and nonverbally supportive of other people.
6. I like to be active in different social groups.
7. I enjoy socializing with various groups of people.
8. I find it easy to get along with new people.
9. I am aware of how intimate my disclosures are.
10. I am aware of how intimate the disclosures of others are.
11. When speaking I have problems with grammar.
12. I sometimes use words incorrectly.
13. I have difficulty pronouncing some words.

Social Presence
1. The medium for the peer counseling session provided me a multi-sensory (many senses) experience.
2. The medium for the peer counseling session felt real to me.
3. The medium for the peer counseling session provided me a rich experience.
4. I felt that my point of view was acknowledged by the peer counselor in the session.
5. I had a warm and comfortable relationship with the peer counselor in the session.
6. I received considerable emotional support from the peer counselor in the session.

Group Salience
When communicating with your peer counselor…
1. How aware were you of the racial differences or similarities between you and your peer counselor?
2. How much did you think about the peer counselor's race?
3. How much did the differences or similarities in race between you and your peer counselor matter?
4. To what extent was this peer counselor typical of her racial group?

Ratings of Peer Counselors
Warmth
Friendly-Unfriendly
Warm-Cold
Likeable-Unlikeable

Competence
Competence- Incompetent
Skilled-Unskilled
Intelligent-Unintelligent

Trustworthiness
Trustworthy-Untrustworthy
Sincere- Insincere
Honest- Dishonest

Attractiveness
Attractive-Unattractive
Pretty- Ugly

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