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Romy RW

Loyola Marymount University, Romy.RW@lmu.edu

Nick Joyce

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Effects of Intergroup Communication on Intergroup Anxiety and Prejudice through Single Sessions of Peer Counseling in Online Settings

ROMY RW*¹

Loyola Marymount University, USA

NICK JOYCE

University of Maryland, College Park, USA

Counseling represents a form of intergroup communication that could theoretically lead to less intergroup anxiety and prejudice but represents a form of intergroup contact that has not previously been studied. Two hundred and ninety-two undergraduate college students were recruited to participate in a single 30-minute peer counseling session with either a White, an Asian, or an African American counselor. Participants were randomly assigned to either in-group or out-group counselors. Results indicated that intergroup communication in counseling significantly reduced participants' racial intergroup anxiety although the findings for prejudice were less uniform. This study not only extends research on intergroup contact theory but also provides a practical tool to improve intergroup outcomes by developing a peer counseling mental health intervention.

Keywords: intergroup communication, prejudice, intergroup anxiety, counseling

People often avoid communicating with people of different racial/ethnic groups (Dixon, Weeks, & Smith, 2019). One predictor of this avoidance is anxiety (Bettencourt, Dixon, & Castro, 2019; Butz & Plant, 2011). This avoidance occurs in numerous contexts including mental health, where individuals are often distrustful of out-group counselors (Nickerson, Helms, & Terrell, 1994) and in general feel more positively toward counselors of their own race (Cabral & Smith, 2011). However, intergroup contact theory suggests that in many contexts, interactions among people from different groups can lead to less anxiety and more positive attitudes (Pettigrew & Tropp, 2008). Intergroup contact has been observed in many contexts, but not yet within mental health counseling despite its theoretically interesting nature.

Romy RW: Romy.RW@lmu.edu

Nick Joyce: drnick@umd.edu

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Intergroup Counseling

Counseling can be defined as communication between clients and counselors in which counselors help and guide clients to solve their problems. Peer counseling is a specific form of counseling in which individuals receive one-on-one educational or counseling support from their peers who are supervised by professional counselors (Bernecker, Williams, Caporale-Berkowitz, Wasil, & Constantino, 2020). Peer counselors typically receive training to prepare them for their role as helpers (Harris & Larsen, 2007). The primary objective of peer counseling is to offer a safe and supportive environment where individuals can share their experiences, receive emotional support, and develop effective coping strategies to address their challenges. This approach can be particularly advantageous for individuals who may be reluctant to seek professional counseling or who may feel more comfortable speaking with someone who has shared similar experiences. Peer counseling can be an effective means of providing mental health support, and can complement traditional counseling approaches (Salsabila, Wiryantara, Salsabila, & Alhad, 2020).

Despite the potential benefits of peer counseling, it is important to acknowledge that some individuals may face additional challenges when seeking counseling services. The existence of subtle yet complex forms of bias and prejudice among different racial groups has been assumed to be a significant factor affecting counseling. Research has shown that when clients and counselors come from different racial groups, they tend to face more challenges than when they share the same racial background (Baruth & Manning, 2016). Intergroup counseling is a professional intervention in which the counselor and the client belong to different social groups. Previous research has emphasized the role of race as a key decision-making and procedural factor in counseling (Cabral & Smith, 2011). Thus, in the current study, intergroup counseling was defined as sessions where participants and their peer counselors belonged to different racial groups, whereas intragroup counseling referred to sessions where participants and their peer counselors shared the same racial group.

Studies have consistently found that individuals from diverse racial backgrounds are more likely to seek counseling services from professionals who share their racial backgrounds (Cabral & Smith, 2011). However, despite the growing awareness of the importance of racial background in counseling (Baruth & Manning, 2016), data from the U.S. Bureau of Labor Statistics (2022) indicates that the counseling profession in the United States is still predominantly White (82.4% of counselors identifying as White). Many clients from racial minorities who seek counseling services are likely to have intergroup counseling with White counselors. Efforts to investigate the importance and effects of intergroup counseling services have considerable theoretical and practical significance, which warrants further research attention.

Numerous studies have documented the positive outcomes of counseling, including reductions in stress, anxiety, and depression, as well as improvements in overall quality of life (Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). Intergroup counseling can offer additional benefits that are particularly important in today's increasingly diverse world. For example, it provides a unique opportunity to address negative racial dynamics that can impact individuals from different racial groups. Intergroup counseling can help combat racial prejudice and reduce intergroup anxiety, which refers to the discomfort or fear that individuals may experience when interacting with people from different racial backgrounds.

Effects of Intergroup Counseling on Prejudice and Intergroup Anxiety

Allport's (1954) intergroup contact theory explains that intergroup contact, the interactions amongst members of different and salient social groups, will result in positive attitudes toward members of those groups. These prejudice reduction effects are often conceptualized in terms of positive affect. Research has shown that increased positivity of affect from intergroup contact is driven by increased empathy, disconfirmation of stereotypes, and the reduction of intergroup anxiety (Pettigrew & Tropp, 2008). In essence, exposing ourselves to people from other groups allows us to see things from their perspective, see them as less threatening, and as a result like them more. Intergroup contact has been studied in a huge variety of social contexts (Pettigrew & Tropp, 2006), and yet examinations of intergroup contact between doctors and patients have been extremely limited (Frenkel, Greden, Robinson, Guyden, & Miller, 1980; Weiss, 2021). Frenkel and colleagues (1980) asked 114 nurses to report their attitudes toward different racial groups (e.g., White and African American). Eleven months later, they reported the frequency of contact with patients of other races and their attitudes toward different racial groups. The results showed that direct nurse-patient contact during the clinical training program resulted in positive racial perceptions. Weiss (2021) also conducted a natural experiment to assign 2,164 Jewish patients from 21 Israeli medical clinics to interact with either an Arab or Jewish doctor. They found that after contacting Arab doctors, Jewish patients reported less prejudice toward Arabs as a whole. These studies both demonstrate the potential efficacy of intergroup contact in health-care settings to reduce prejudice but are limited in terms of their ability to assess causality. Furthermore, no studies to our knowledge assess intergroup counselor-client interactions as a form of intergroup contact.

The context of counselor-client is interesting not simply because of its novelty but because of the facilitating theoretical factors it encompasses. There are a number of important variables present in intergroup counseling that should result in it being a more powerful intergroup experience. Past research has found that contact that involves equal status between participants, institutional support for the interaction, and common goals and cooperation between the interactants (Pettigrew & Tropp, 2006) increases the prejudice-reducing effects of intergroup contact. While equal status is not present in counselor-client interactions, and we will address this pitfall later, these other three conditions are all present within this context. Furthermore, intergroup contact effects are maximized when relationships are ongoing (Pettigrew, 1998). While doctor-patient interactions are often brief, interactions with counselors are generally designed to be part of an ongoing relationship, suggesting that the effects of contact in this particular form of intergroup health might be most powerful. Additionally, counseling is important for facilitating personal self-disclosure (Malchodi et al., 2003; Stricker & Fisher, 1990). Both self-disclosure (Ensari & Miller, 2002; Turner, Hewstone, & Voci, 2007) and the perception that the interaction was important (Van Dick et al., 2004) have been found to be key in contact's effects. Finally, intergroup counseling represents an incredibly intimate form of contact. Recent research has suggested that intimate contact is more powerful than casual experiences (Fuochi, Voci, Boin, & Hewstone, 2020; Graf, Paolini, & Rubin, 2018; Marinucci et al., 2020).

However, as mentioned earlier, there are some potential pitfalls in the counselor-client intergroup context. The first is the unequal roles of the interactants. Research has suggested that people in lower power positions within contact may have lessened effects (Tropp & Pettigrew, 2005). Role inequity could also lead

to ineffective or even negative contact. Individuals in intergroup communication are often hyper focused on whether the other person is judging them (Vorauer & Kumhry, 2001; Vorauer & Sakamoto, 2008), especially when they are in emotionally vulnerable positions as is often the case in counseling. In fact, anxiety and stress are more likely to be evoked in intergroup interactions in general (Trawalter, Richeson, & Shelton, 2009). These feelings of anxiety can also evoke negative stereotypes (Stephan & Stephan, 2000). In one doctor-patient study, priming of stereotypes before interactions with doctors reduced contact and relational quality (He, Kang, Tse, & Toh, 2019). Intergroup contact has also been shown to reduce perceptions of intergroup threat and anxiety (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001). Swart, Hewstone, Christ, and Voci (2010) found that cross-group friendships were effective in reducing intergroup anxiety. Given this, a focus on intergroup anxiety, in addition to prejudice, as an outcome of intergroup counseling is especially important. Indeed, research finds that generalized intergroup anxiety is often related to specific group prejudice (e.g., Hopkins & Shook, 2017). Contact research does suggest specifically that the actions of talking and sharing that occur during well-managed counseling should reduce intergroup anxiety (Turner et al., 2007), and our focus on peer counseling should reduce the inherent power imbalances in this context. Furthermore, intimate contexts tend to reduce the negative effects of contact and enhance the positive ones (Fuochi et al., 2020). Thus, we hypothesize the following:

H1: Intergroup, as opposed to intragroup, counseling will result in less intergroup anxiety.

H2a: Intergroup, as opposed to intragroup, counseling will result in less prejudice toward the race of the counselor.

Intergroup Counselor Race

Racial prejudice is a complex construct that encompasses various stereotypes and beliefs about different racial groups, thus, it should not be measured monolithically. The stereotype content model (Fiske, Cuddy, Glick, & Xu, 2002) suggests that people may stereotype racial groups based on their warmth (whether a group is viewed as friendly) and competence (how capable that group is perceived to be). This research found that African Americans were stereotyped as warm but not competent, whereas Asian people were perceived as competent but not warm. As a result, the nature and action tendencies of prejudice toward different groups are different (Cuddy, Fiske, & Glick, 2007). This demonstrates the need to address whether reductions in prejudice toward different groups are uniform.

While intergroup contact is an effective tool in reducing prejudice toward various social groups, much of the research has focused on interracial communication with a particular emphasis on changing White individuals' attitudes toward African American people (Pettigrew & Tropp, 2006) or reducing majority groups' intergroup prejudice toward minority groups (Dovidio, Love, Schellhaas, & Hewstone, 2017). To expand on potential inequities in contact effects for different racial groups and guided by the stereotypical content model (Fiske et al., 2002), our experiment examined people's racial prejudice toward three racial out-groups (White, Asian, African American) after communicating with individuals from each racial group. For example, after participants interacted with an Asian peer counselor, we measured participants' racial prejudice toward Asian people only. Based on this, we hypothesize the following:

H2b: Counselor race will moderate the relationship between intra/intergroup counseling and racial prejudice, such that (1) intergroup counseling will result in less racial prejudice toward Asian people than intragroup counseling after the participants interact with an Asian counselor (vs. non-Asian counselors), (2) intergroup counseling will result in less racial prejudice toward African American people than intragroup counseling after the participants interact with an African American counselor (vs. non-African American counselors), (3) intergroup counseling will result in less racial prejudice toward White people than intragroup counseling after the participants interact with a White counselor (vs. non-White counselors).

Communication Channel in Intergroup Counseling

Just as intergroup contact has been applied to numerous group contexts, it has also been applied to numerous communication mediums. One that is particularly relevant to the context of counseling is computer-mediated contact (Amichai-Hamburger & McKenna, 2006). The COVID-19 pandemic has radically altered how counselors are using computer-mediated formats to provide counseling services to their clients. To follow guidelines on social distancing, many counselors have had to switch from traditional face-to-face counseling to full-time telehealth (American Psychological Association, 2020). However, neither computer-mediated communication nor counseling is monolithic in general. Computer-mediated counseling includes e-mails, synchronous chats, phone calls, and videoconferencing (Mallen & Vogel, 2005).

Because individuals have more control over self-presentation during computer-mediated communication, it may be less anxiety provoking and, as a result, more effective in reducing prejudice (Amichai-Hamburger & McKenna, 2006). People tend to feel more control over self-presentation when there is lower social presence, as might be experienced in less-rich communication like textual exchanges (Fox & McEwan, 2017). However, only one study to our knowledge measured the relationship between social presence and prejudice reduction and in contrast to the argument above found a positive relationship (Schumann, Klein, Douglas, & Hewstone, 2017). Other researchers have also argued that comparatively less-rich mediums can be critical in improving intergroup relations, so long as there is synchronicity (White, Harvey, & Abu-Rayya, 2015). Thus, we ask the following question:

RQ1: Will the social presence of the intergroup counseling medium moderate the effects of intergroup contact on either intergroup anxiety or prejudice?

Method

Participants

Undergraduates from a large Mid-Atlantic university were recruited for peer counseling. Eleven participants were excluded from data analysis for not completing the survey, not reporting their race, or failing the manipulation check. The final analyses included 292 undergraduate students (175 females, 117 males). Participants averaged 19.32 years of age, ranging from 18 to 40 years (see Figure 1). Participants identified themselves as White (52.1%), Asian/Pacific Islander (21.6%), Black/African American (13.4%), Hispanic/Latino/Latina (2.7%), Middle Eastern (1.4%), and biracial (8.9%). Participants who self-reported as

biracial were consistently approached as intergroup communication with peer counselors, contrasting with intragroup communication for two reasons. First, the U.S. Census lists biracial as an independent race from other races. Second, according to Poston's Biracial Identity Development Model, biracial individuals often integrate both ethnic identities into a third form (Garbarini-Philippe, 2010). In total, the participants represented more than 40 of the 60 majors offered at the university.

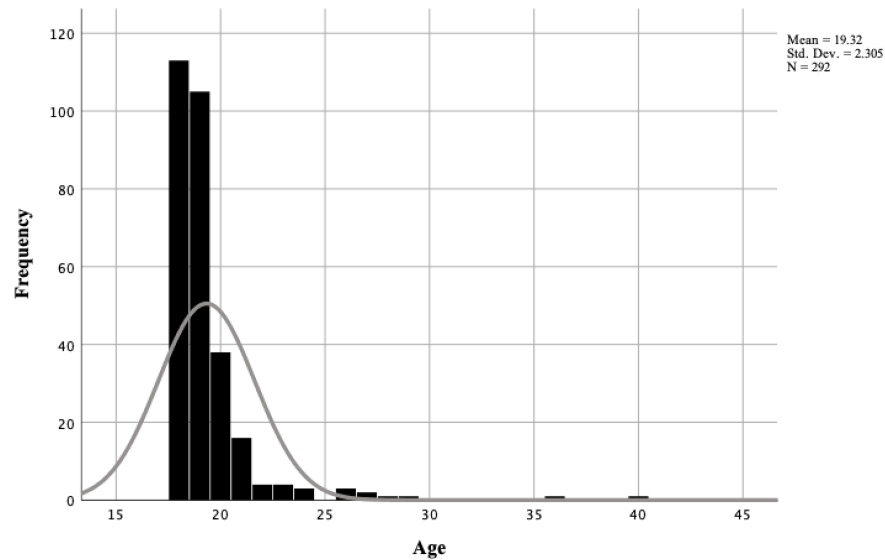


Figure 1. Distribution of participants' age.

Note. There were 256 participants (87.67%) whose ages ranged from 18 to 20 years, 34 participants (11.64%) whose ages ranged from 21 to 29 years, one participant (0.34%) who was 36 years old, and one (0.34%) who was 40 years old.

Procedure and Study Design

This study received Institutional Review Board approval before the onset of data collection. The study consisted of three parts: A pretest questionnaire, an experimentally manipulated 30-minute peer counseling session, and a posttest questionnaire. In the pretest questionnaire, participants were asked to provide informed consent and respond to a survey that included several questions about their state anxiety² and demographic information. Participants were informed in the consent form that they would be assigned to one of two counseling channels, either videoconferencing or online synchronous chat, so they were not blinded to the manipulation of the counseling channel. To protect participants' personal identity information, they were asked to come up with

² Twenty items from State-Trait Anxiety Inventory (Spielberger et al., 1983) were used to measure participants' levels of anxiety. All items were rated on a 4-point scale (e.g., from "almost never" to "almost always"). Higher scores indicate greater anxiety. The Cronbach's alpha of this scale in the present study was .92 ($M = 2.18$, $SD = .86$) for anxiety in the pretest questionnaire and .89 ($M = 1.81$, $SD = .74$) in the posttest questionnaire. The results of the therapeutic benefits of this peer counseling are covered in another article (RW & Joyce, 2023).

code names. The pretest questionnaire took about five minutes. After these questions, they began their peer counseling sessions. These counseling sessions occurred with peer counselors specially trained for this study over six weeks. The counseling protocol (Appendix A) was designed to address anxiety and was based on an existing communication intervention protocol (Lewis, Pantell, & Sharp, 1991). The protocol and training sessions underwent a thorough review and revision process by a professional counselor to ensure clarity and ethical integrity. Each counseling session was a 30-minute one-on-one session focused on reducing anxiety. In each session, peer counselors followed a standardized protocol of questions in a semi-structured interview format. All questions were designed to encourage participants to disclose more information about themselves as self-disclosure is an important mechanism in both counseling (Stricker & Fisher, 1990) and intergroup contact (Ensari & Miller, 2002; Tam, Hewstone, Harwood, Voci, & Kenworthy, 2006; Turner et al., 2007).

The peer counselors were blind to the hypotheses, which was further confirmed by the debriefing at the end of the intervention. The intergroup nature of the session was experimentally manipulated, and participants were randomly assigned to either an in-group counselor or an out-group counselor. To increase the generalizability of the manipulation peer counselors from three races were selected (White, African American, and Asian). These three racial groups were chosen in accordance with the stereotype content model (Fiske et al., 2002). Professional headshots of the peer counselors were obtained for the online synchronous chat sessions, and all photos featured a smiling face (Appendix B). Each peer counselor opened six sessions including three videoconferencing and three online synchronous chat counseling sessions every week on a participant recruitment platform. The channel on which the sessions took place varied from week to week and was not announced in advance to the participants. The Zoom ID numbers, rather than the peer counselors' actual names, were used to display their sessions to prevent the inadvertent disclosure of their racial identities to participants. To randomly assign participants with respect to intragroup versus intergroup pairings, we 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, we 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, thus 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.

When the counseling session was over, the peer counselors sent participants a posttest questionnaire. The order of the instruments was the following: Participants' levels of anxiety, the ratings of their peer counselors (warmth and competence), and participants' levels of intergroup anxiety and racial prejudice toward out-group members. The order of the items within each instrument was randomized. The participants were asked to write down their code names again in the post survey to match their presurvey. The entire study took approximately one hour to complete.

To decrease confounds only female counselors were selected, conforming to the reflective trends for school counselors to be overwhelmingly female (National Association for College Admission Counseling, 2012) and were of the same age group as the vast majority of our participants. More importantly, the peer counselors not only shared a similar age with the majority of traditionally college-aged participants but were also undergraduate students at the same institution who could relate to the experiences of the participants. In the protocol, these peer counselors were able to share their own experiences, such as the stress they faced from

schoolwork, with the participants. In total, there were 167 participants (57%) in intragroup communication and 124 participants (43%) in intergroup communication. Participants were also randomly assigned to either videoconferencing or online synchronous chat (including a still picture of the counselors to prime group identity). In total, there were 124 participants (42%) in videoconferencing and 168 participants (58%) in synchronous text-based chat. Table 1 shows the numbers of counseling sessions that counselors from different racial groups conducted in experimental conditions. It can be noted in Table 1 that some of the intergroup experiences are small (e.g., the Asian counselor conducted 15 sessions in the intergroup condition).

Table 1. Numbers of Counselors' Sessions in Each Condition.

	African American	Asian	White
Intergroup	20	15	89
Intragroup	79	30	59
Total	99	45	148
Synchronous chat	47	22	73
Videoconferencing	52	23	75
Total	99	45	148

Manipulation Check

A manipulation check for intra/intergroup contact was completed by asking the participants to identify their peer counselors' race in the posttest questionnaire. Additionally, a manipulation check for the counseling channel was completed by asking participants to report in the postsurvey what type of session (videoconferencing or synchronous text-based chat) they participated in. The participants' answers were also checked by the first author using the peer counselors' records of counseling sessions they conducted.

Measures

Racial Prejudice

Racial prejudice was assessed using the feeling thermometer (Converse, Dotson, Hoag, & McGee, 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 previous research (e.g., Turner & Feddes, 2011). The reported scores of racial prejudice were reverse coded so that a higher score indicated a higher level of racial prejudice. Racial prejudice toward White people was $M = 20.58$, $SD = 22.50$, African American people was $M = 14.91$, $SD = 18.84$, and Asian people was $M = 15.66$, $SD = 19.44$.

Intergroup Anxiety

Eleven items were taken from the research on intergroup anxiety (Stephan & Stephan, 1985) to measure participants' intergroup anxiety in this study. In line with the theoretical conceptualization underlying this measure, we looked at generalized intergroup anxiety. The participants read the following 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 with occasions when you are interacting with people from your own ethnic group?

They then used a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) to rate the 11 statements: "I would feel certain/awkward/self-conscious/happy/accepted/confident/irritated/impatient/defensive/suspicious/careful during the interaction". The Cronbach's alpha of this scale was .90 ($M = 2.75$, $SD = 1.45$).

Covariates

The ratings of peer counselors in the current study were not consistent with stereotypical views of the counselors' racial groups (e.g., Fiske et al., 2002), such as the African American peer counselors were rated the highest in all the traits (Table 2). As a result, it did not appear as if evaluations of the counselors were strongly driven by intergroup processes, so we continued to include them as covariates. Items from Cuddy and colleagues (2007) were adopted to measure participants' ratings of their peer counselors regarding their warmth ("warm-cold," "friendly-unfriendly," and "easy to talk with-difficult to talk with") and competence ("competent-incompetent," "skilled-unskilled," and "professional-unprofessional") using bipolar adjective scales ranging from 1 to 7. Cronbach's alpha of peer counselors' warmth was .70 ($M = 6.71$, $SD = .68$) and competence was .75 ($M = 6.60$, $SD = .77$). Table 2 indicates participants' perceived warmth and competence of each peer counselor.

Table 2. Differences in Counselor Evaluations by Race.

	White M (SD)	African American M (SD)	Asian M (SD)	f
Warmth	6.73 (.46)	6.77 (.55)	6.54 (.66)	3.11*
Competence	6.53 (.61)	6.72 (.61)	6.52 (.69)	3.16*

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

Table 3 shows the relationships between these covariates and outcomes.

Table 3. Pearson Correlation Analysis.

	1	2	3	4	5	6
1. Warmth	1	.578**	-.263**	-.141*	-.121*	-.160**
2. Competence	.578**	1	-.238**	-.125*	-.157**	-.137*
3. IA	-.263**	-.238**	1	.351**	.186**	.254**
4. RPW	-.141*	-.125*	.351**	1	.632**	.706**
5. RPAA	-.121*	-.157**	.186**	.632**	1	.753**
6. RPA	-.160**	-.137*	.254**	.706**	.753**	1

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

Note. IA: intergroup anxiety, RPW: racial prejudice toward White people, RPAA: racial prejudice toward African American people, and RPA: racial prejudice toward Asian people.

Results

Given that we analyzed this data across three possible out-group races (White, African American, and Asian), it is important to control for other variables that might relate to intergroup anxiety and racial prejudice but are independent of our manipulation. The stereotype content model (Cuddy et al., 2007; Fiske et al., 2002) finds that perceptions of warmth and competence are often derived from racial stereotypes. Importantly, warmth and competence perceptions are strongly tied to perceptions of counseling (Neukrug & Williams, 1993), thus they were controlled in this study to look at the effects of an in-group or out-group counselor more generally.

A moderation analysis using Hayes' (2018) process macro (Model 1) was run to address RQ1, which asked whether the social presence of the intergroup counseling medium will moderate the effects of intergroup contact on either intergroup anxiety or prejudice. However, communication channel did not interact with intra/intergroup contact in intergroup anxiety (main effect: $p = .16$, 95% confidence interval [CI; $-.57, .09$], moderation effect: $p = .96$, 95% CI [$-.48, .45$]), or predicting prejudice (African American: main effect $p = .74$, 95% CI [$-5.21, 7.34$], moderation effect $p = .96$, 95% CI [$-9.02, 8.61$]; Asian: main effect $p = .54$, 95% CI [$-4.44, 8.50$], moderation effect $p = .63$, 95% CI [$-11.29, 6.88$]; White: main effect $p = .59$, 95% CI [$-9.59, 5.43$], moderation effect $p = .62$, 95% CI [$-7.92, 13.18$]). In further analyses, we have collapsed the data across these conditions as they do not impact the results of the hypothesis testing below.

A one-way analysis of covariance was used to test H1 (participants in the intragroup communication will have higher intergroup anxiety than those in the intergroup communication), in which intra/intergroup communication was entered as the independent variable, warmth and competence were entered as covariates, and intergroup anxiety as the dependent variable. Perceived warmth of the counselor was a significant covariate of the relationship between intra/intergroup contact and intergroup anxiety, $F(1, 287) = 8.22$, $p < .01$, partial eta squared = .028. Moreover, intra/intergroup communication significantly affected intergroup anxiety, $F(1, 287) = 4.44$, $p = .04$, partial eta squared = .015. The analysis indicated that participants in the intergroup communication reported less intergroup anxiety than those in the intragroup communication.

Hypothesis 2a and H2b propose that participants in the intergroup communication condition will have a lower racial prejudice than those in the intragroup communication condition. Hypothesis 2b was 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 communication conditions, and the scale of racial prejudice was measured for Asian, African American, and White independently.

Model 1 from the PROCESS macro (Hayes, 2018) was used to test H2b(1). First, the intra/intergroup communication was entered as the independent variable, whether the peer counselor was Asian or not was entered as a moderator using a dummy code (0 = non-Asian, 1 = Asian), and intergroup prejudice toward Asian people was entered as the dependent variable. The covariates were not significant. The results show that intra/intergroup communication did not significantly predict intergroup prejudice toward Asian people ($b = -.62$, $SE = 2.47$, $p = .80$, 95% CI [$-5.47, 4.24$]). However, this effect was significantly moderated by whether the peer counselor was Asian ($b = 12.54$, $SE = 6.54$, $p = .05$, 95% CI [$.33, 25.42$]), but approached significance in

the opposite direction from predictions. The findings demonstrate that participants in the intergroup communication who had an Asian counselor reported significantly higher racial prejudice toward Asians than in either the intragroup communication or in the intergroup communication when they were assigned a non-Asian counselor. For an illustration of these effects and specific unstandardized regression coefficients see Figure 2.

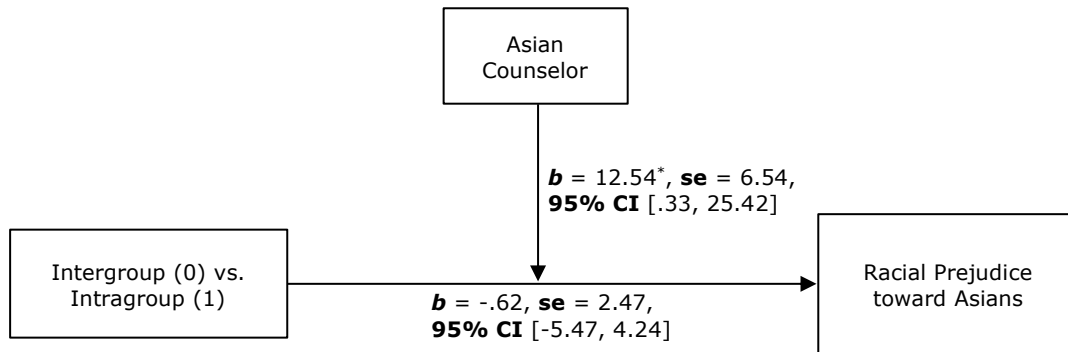


Figure 2. The moderation effect of counselor race on the relationship between intra/intergroup communication and racial prejudice toward Asian people.

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

In Figure 3, the mean of intergroup prejudice toward Asian people has been used to indicate the moderation effect of counselor race on the relationship between intra/intergroup contact and intergroup prejudice toward Asian people.

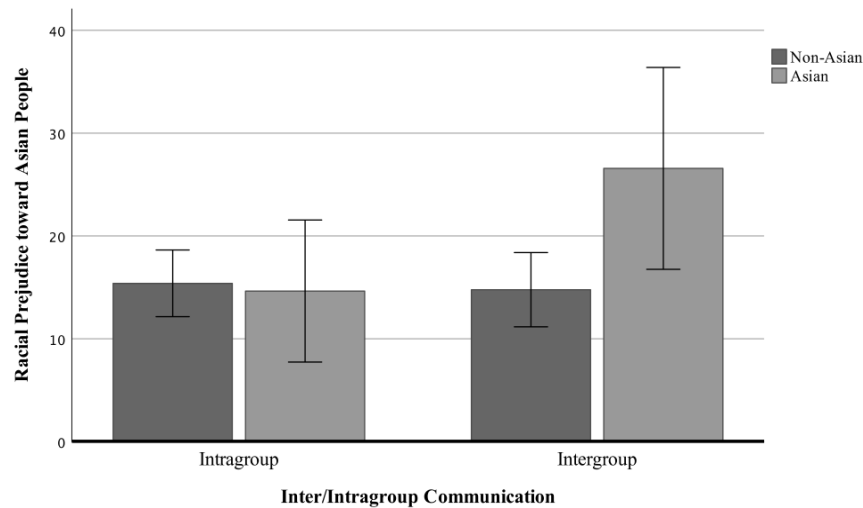


Figure 3. The moderation effect of counselor race on the relationship between intra/intergroup communication and racial prejudice toward Asian people.

Note. Error bars: 95% CI.

Second, the intra/intergroup communication condition was entered as the independent variable, whether the peer counselor was African American or not was entered as a moderator using a dummy code

(0 = non-African American, 1= African American), and racial prejudice toward African Americans was entered as the dependent variable. The covariates were not significant. The results show that intra/intergroup contact did not significantly predict racial prejudice toward African American people ($b = 4.07, SE = 2.70, p = .13, 95\% CI [-1.23, 9.38]$). However, this effect was significantly moderated by whether the peer counselor was African American or not ($b = -10.81, SE = 5.44, p = .05, 95\% CI [-21.52, -0.11]$). For an illustration of these effects and specific unstandardized regression coefficients see Figure 4.

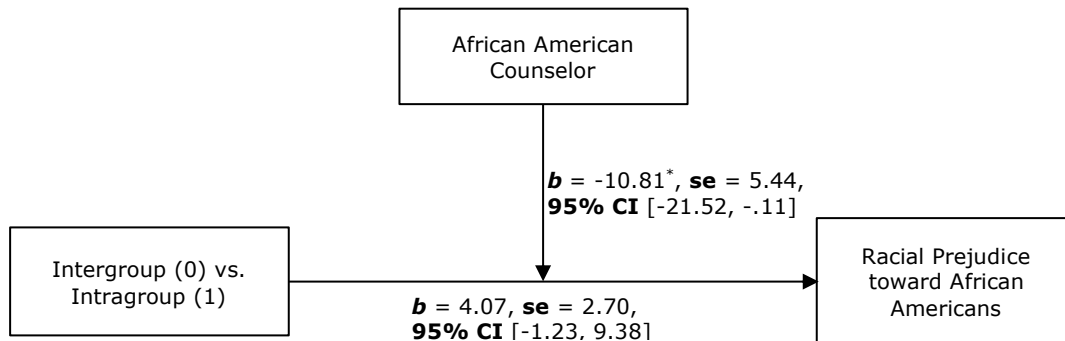


Figure 4. The moderation effect of counselor race on the relationship between intra/intergroup communication and racial prejudice toward African American people.

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

In Figure 5, the mean of intergroup prejudice toward African American people has been used to indicate the moderation effect of counselor race on the relationship between intra/intergroup communication and intergroup prejudice toward African American people.

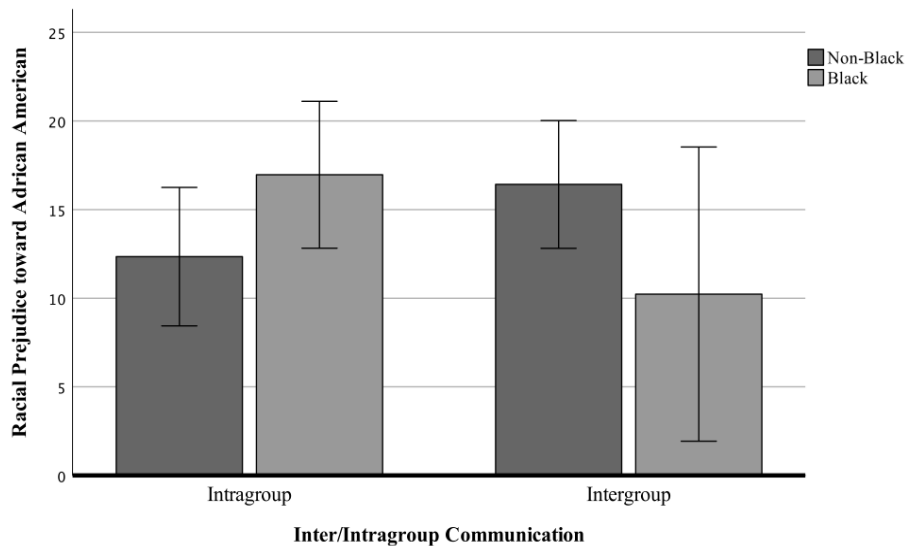


Figure 5. The moderation effect of counselor race on the relationship between intra/intergroup communication and racial prejudice toward African American people.

Note. Error bars: 95% CI.

Third, the intra/intergroup contact condition was entered as the independent variable, whether the peer counselor was White or not was entered as a moderator using a dummy code (0 = non-White, 1 = White), and racial prejudice toward White people was entered as the dependent variable. The covariates were not significant. The results show that intra/intergroup contact significantly predicted racial prejudice toward White people ($b = 17.57$, $SE = 4.20$, $p < .001$, 95% CI [9.30, 25.84]). Moreover, this effect was significantly moderated by whether the peer counselor was White or not ($b = -27.08$, $SE = 5.53$, $p < .001$, 95% CI [-37.97, -16.18]). For an illustration of these effects and specific unstandardized regression coefficients see Figure 6.

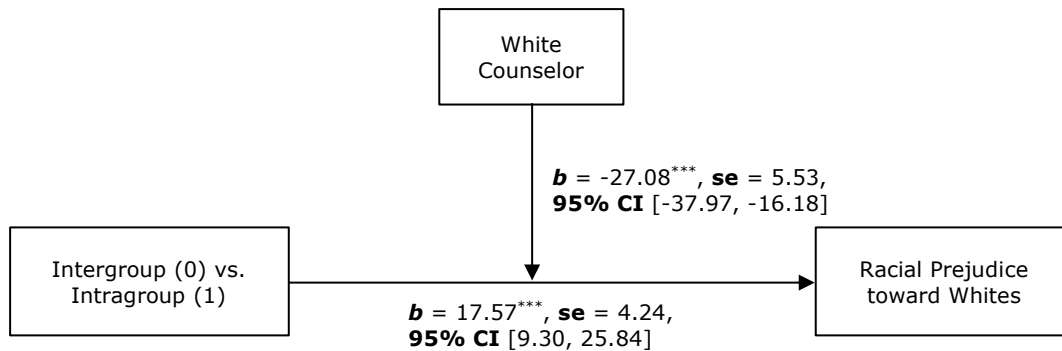


Figure 6. The moderation effect of counselor race on the relationship between intra/intergroup communication and racial prejudice toward White people.

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

In Figure 7, the mean of intergroup prejudice toward White people has been used to indicate the moderation effect of counselor race on the relationship between intra/intergroup communication and intergroup prejudice toward White people.

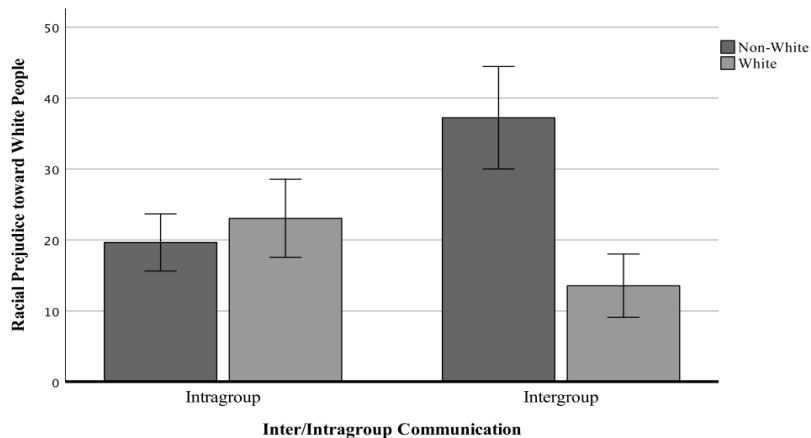


Figure 7. The moderation effect of counselor race on the relationship between intra/intergroup communication and racial prejudice toward White people.

Note. Error bars: 95% CI.

The results without control variables can be accessed through https://osf.io/3c5hn?view_only=2ea538b588804883a593e0f8bfc04d69

Discussion

This study investigated the role of the communication and group dynamics of an applied peer counseling intervention on intergroup anxiety and prejudice. This represents the first test of intergroup contact in the context of counseling. Despite being a special context in which some of the major mechanisms of contact such as increased knowledge and empathy about the out-group were structurally silenced, and the one-directional operation of self-disclosure in counseling sessions, our research suggests that intergroup peer counseling can still be useful in improving intergroup relations. Consistent with past research (Pettigrew & Tropp, 2008), intergroup, as contrasted with intragroup, peer counseling resulted in less intergroup anxiety, which in turn reduced prejudice toward the race of the peer counselor. This pattern was found regardless of whether the out-group counselor was White, African American, or Asian, suggesting a broadly generalizable effect even though these outcomes were measured after only one 30-minute peer counseling session. Research on contact has often argued about the importance and relative power of long-term intergroup relationships (Davies, Tropp, Aron, Pettigrew, & Wright, 2011; Pettigrew, 1998), and for more intimate contact (Fuochi et al., 2020; Graf et al., 2018; Marinucci et al., 2020). Extrapolating from that we suggest that the effects of intergroup counseling would only grow as the counseling relationship progressed.

While intergroup anxiety was negatively correlated with prejudice, as would be predicted by contact theory (Pettigrew & Tropp, 2008), intergroup contact did not always directly reduce prejudice. Past research has found that the effects of contact are often stronger for majority group members than minority group members (Dovidio et al., 2017; Tropp & Pettigrew, 2005). However, we found a significant direct prejudice reduction occurring for both African American and White counselors, perhaps even stronger for the White counselors. More inconsistent are the effects observed for the Asian peer counselors, where the direct effect actually trended in the opposite direction, suggesting a possibly mild increase in prejudice toward Asians after being exposed to an out-group Asian peer counselor. It is important to be cautious in interpreting this result as only this trended in the opposite direction. However, in brainstorming why results for this racial group were the only nonsignificant one, or perhaps significant in the counter-theoretical direction, it is worth considering the recent sociopolitical events surrounding the study. The Asian counselor was from China, and the experiment was conducted during the COVID-19 pandemic. Studies have indicated recent increases in prejudice against Chinese people and that because of COVID-19 Chinese people are perceived as a threat in the United States (Tabri, Hollingshead, & Wohl, 2023). During the peer counseling, the participants frequently talked about their anxiety levels having been increased by the COVID-19 pandemic (e.g., unable to see family and friends). Having a conversation with a Chinese national might have primed negative emotions regarding COVID-19. Research suggests that priming threats can increase prejudice and reduce the effectiveness of intergroup contact (Stephan & Stephan, 2000). While there is some evidence that contact with Asian nationals still results in lessened prejudice during the time of COVID-19 (Mandalaywala, Gonzalez, & Tropp, 2021), that study was nonexperimental, and the results also indicated that COVID-19 intensity was associated with a greater desire for social distance. What clearly did not explain these results was

the quality of the counselors and counseling. Participants rated the peer counselors of all three races incredibly highly (e.g., > 5.5 on a 7-point scale). So, if there is a counter-theoretical effect here, it may be related to macro-variables like sociopolitical climate indirectly priming feelings of threat and reducing the efficacy of contact. We also asked whether the amount of social presence in the peer counseling session, as manipulated by the communication channel, would play a role in the reduction of prejudice. Ultimately, our results suggested that it would not. This stands in contrast to arguments that the lower social presence of computer-mediated communication might reduce intergroup anxiety and make contact more effective (e.g., Amichai-Hamburger & McKenna, 2006) or conversely, findings that increased social presence in contact led to greater prejudice reduction (Schumann et al., 2017). The observed results might be attributed to the presence of smiling faces in the pictures of the peer counselors, potentially conveying a sense of warmth and reducing the perception of social distance and/or prejudice during the intergroup interactions. While our findings show that social presence does not matter very much and therefore intergroup contact can be opened to whatever communication platform is most desirable or practical, that would be an overinterpretation of minimal and somewhat contradictory evidence, and more evidence is needed.

Limitations

There are several limitations. First, this study was conducted during the COVID-19 pandemic, and this could potentially have affected the findings. The evidence has demonstrated that COVID-19 exacerbates anti-Asian xenophobia (Misra, Le, Goldmann, & Yang, 2020), so this could affect how participants perceive the Asian peer counselor. While the socio-health context is theoretically interesting, it does beg the question of generalization, and it is possible that in other historical contexts, the inconsistent effects observed for the Asian counselors might have more closely matched the results we found for African American and White counselors.

A second limitation is that all the peer counselors were females. The reason we decided to have only female peer counselors was because female counselors are the majority in college settings (National Association for College Admission Counseling, 2012) and to avoid another possible confounding identity variable. For example, female counselors were perceived as warmer than male counselors in previous research (Cater, 1978). Future studies could consider recruiting counselors from different genders and investigate whether there would be different effects caused by counselors' gender.

A third limitation is that we focused on creating a peer counseling intervention for college students, which is not always a generalizable sample (Henrich, Heine, & Norenzayan, 2010). While future research and interventions should absolutely broaden to include a more diverse sample, it is also important to note that this population is one of particular interest because its members are of the age group that uses online counseling the most frequently (Barak, Hen, Boniel-Nissim, & Shapira, 2008) and because of large shortages in counseling availability at universities (American Psychological Association, 2022). While the generalizability of college students is an important consideration, meta-analytic research on online forms of contact showed no difference in effect size between college students and other populations (Imperato, Schneider, Caricati, Amichai-Hamburger, & Mancini, 2021).

Another limitation of this study is the imbalance in the number of counseling sessions conducted by each peer counselor and the numbers for some of the intergroup experiences being small. Table 1 indicates that White counselors conducted the highest number of sessions, followed by African American counselors in the second place, and Asian counselors conducted the fewest sessions. While this finding does present a limitation, it also reflects the current distribution of counselors by race within mental health services. Consequently, there is a higher likelihood for clients to be assigned a White counselor compared with an African American counselor, and a lower likelihood of being assigned an Asian counselor. Future studies could aim to increase the number of sessions conducted by counselors from different racial groups and continue to uncover the impact of counselor-client racial congruence on counseling outcomes.

Lastly, we controlled participants' perceived peer counselors' warmth and competence in the analyses. We acknowledge that intergroup contact effects are driven by the generalization of attitudes toward the individual interaction partner. While controlling for these variables might be problematic in some cases, we considered it important in our study to account for potential confounding effects on the results. Future research should investigate the intergroup contact effects without controlling for these variables to better understand the mechanisms underlying intergroup attitudes.

Conclusions

According to the Substance Abuse and Mental Health Services Administration (2019), more than 47 million American adults suffer from mental health issues, 11.4 million of which are classified as serious, however, there are health disparities for racial/ethnic minorities to seek and receive counseling. Specifically, racial or ethnic minority groups are less likely to receive mental health care, and even if they do receive mental health-care services, racial or ethnic minorities frequently endure poor outcomes (American Psychiatric Association, 2017). While therapy is clearly useful for mental health outcomes, this study additionally showed that, despite the atypical nature of this intergroup context, intergroup peer counseling interventions can also reduce intergroup anxiety and prejudice. Ultimately, as the relationships between clients and counselors grow, these effects seem likely to strengthen (Pettigrew, 1998, suggesting a strong impetus for mental health organizations to foster these types of relationships. However, it is worth noting that outside of experimental interventions like this study, individuals more often choose counselors of the same race because of issues of intergroup trust (Nickerson et al., 1994) or general perceptions that the therapy might be less effective (Cabral & Smith, 2011). These fears have not been borne out, however, and recent research has suggested that those assigned to intergroup versus intragroup counseling have equivalent therapeutic outcomes (RW & Joyce, 2023, further suggesting that intergroup counseling is important and multi-efficacious.

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 (Stephan & Stephan, 1985). The easing of anxious feelings by communicating in the intergroup peer counseling could be beneficial not only for increasing their trust toward out-group counselors but also for making them feel more prepared to face a multicultural world, thus leading to more effective anxiety reduction. With the limited research on intergroup communication in counseling, the results of this study

are particularly significant as intergroup counseling provides a chance to expose individuals to diverse perspectives and experiences that can help them develop the skills and knowledge needed to thrive in many multiethnic, multicultural countries like the United States.

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Appendix A**Table A1. Counseling 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	"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 discussions.
Problem-related expression (6 mins)	Conversations about the understandings and feelings regarding the scenario	Have you ever experienced a 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

Appendix B

Table B1. The Pictures of the Peer Counselors.

African American Counselor	Asian Counselor	White Counselors
