

**Adapting Expressive Writing for Minoritized Students at Predominantly White
Institutions Who Experience Microaggressions**

by

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A thesis submitted to the Graduate Faculty of

Auburn University

In partial fulfillment of the
requirements for the Degree of

Master of Science

Auburn, Alabama

May 6th, 2023

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Abstract

Racial and ethnic based stressors, such as microaggressions, are pervasive, distressing, and result in long lasting negative repercussions for minoritized students at predominantly white institutions (PWI's). These stressors related to racial and ethnic identity are experienced in addition to the universally experienced stressors of higher education. Expressive writing (Pennebaker & Beall, 1986) may be a widely disseminable and scalable intervention fit for addressing the negative repercussions resulting from microaggressions experienced by minoritized students at PWI's. However, this intervention has not been designed to specifically address microaggressions in the minoritized college student population. As such, we utilized the ADAPT-ITT Model by Wingood and DiClemenete (2008) to develop a culturally sensitive adaptation of expressive writing. In the current study, we conducted a theater test of expressive writing in a sample of 18 minoritized college students enrolled at a PWI. Utilizing a mixed methods design, we found full retention following the first pre-intervention session, adequate variability for most quantitative measures, and that participants broadly perceived the adapted intervention to be helpful, appropriate, enjoyable, and necessary. Participants provided additional recommendations for future modifications of the adapted prompt and the intervention broadly. With the completion of the Administration phase of the ADAPT-ITT model, the results of the current study can be used to complete the next phases of the ADAPT-ITT model with the intent of creating a finalized adaptation of an evidence-based, widely scalable intervention aimed at addressing microaggressions experienced by minoritized students at PWIs.

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Introduction

As of 2018, 44.8% of the university student population within the United States identifies with a minoritized racial or ethnic group (*Digest of Education Statistics*, 2019). Not only do minoritized students experience academic stressors universal to all college students (Grayson, 1998), but they also experience stressors unique to their minoritized status, such as microaggressions (Cokley et al., 2013; Goodman & West-Olatunji, 2010). Microaggressions are daily experiences of indirect, subtle, or unintentional acts or sentiments expressing degradation, invalidation, or discrimination (Pierce, 1995; Sue et al., 2007). Microaggressions contribute to negative mental and physical health outcomes further impacting the university experience of minoritized students (Ogunyemi et al., 2019; Steele, 1997; Sue et al., 2007; Wong et al., 2014). Experiences of microaggressions and their associated negative repercussions are exacerbated at predominantly white institutions (PWIs; Harwood et al., 2018; Lewis et al., 2021). In addition to exacerbated negative mental and physical health outcomes, minoritized students who attend PWIs have a higher dropout rate and increased levels of fatigue associated with stress responses as they navigate racialized experiences (Cox, 2020; McClain & Perry, 2017). Moreover, mental health and treatment-seeking disparities present among minoritized students result in fewer acceptable resources for coping with such compounding stressors (Busby et al., 2019; Miranda et al., 2015). The goal of the proposed study is to promote well-being in minoritized students attending PWIs by developing a widely disseminable and scalable intervention designed to facilitate coping with microaggressions. Specifically, we will use Wingood and DiClemente's (2008) ADAPT-IT model to tailor an existing intervention (i.e., expressive writing; Pennebaker & Beall, 1986) to meet the needs of minoritized students attending PWIs.

Microaggressions & Minoritized Students at PWIs

Stressors unique to the minoritized student experience include racism, discrimination, institutional racism, racial and discriminatory traumas, and microaggressions (Cokley et al., 2013; Goodman & West-Olatunji, 2010). Of particular interest to this project, microaggressions are “subtle, innocuous, preconscious, or unconscious degradations, and putdowns,” (Pierce, 1995, p. 218) that occur in daily verbal, nonverbal, or environmental interactions (Sue et al., 2007). From the aggressor’s perspective, microaggressions may be perceived as harmless or jokes, if perceived at all. From the minoritized individual’s perspective, the experience is anything but harmless. Researchers point to three major types of microaggressions: microassaults, microinsults, and microinvalidations (Sue et al., 2007; Torres-Harding et al., 2012; Wong et al., 2014). A microassault refers to a verbal or nonverbal attack that was intended to harm the minoritized individual (Sue et al., 2007; Wong et al., 2014). A microinsult refers to verbal or non-verbal actions that convey rudeness, insensitivity, or are meant to demean an individual based on their minoritized identity (Sue et al., 2007; Wong et al., 2014). Finally, a microinvalidation refers to statements made that exclude, negate, or ignore an individual’s thoughts, feelings, or experiences as a minoritized individual (Sue et al., 2007; Wong et al., 2014). Beyond these three types, a key factor of microaggressions is the potential ambiguity and invisibility of the slight. Not only can the slight usually be explained away in a dismissive manner, but it can also be difficult to identify (Sue et al., 2007).

Qualitative research focusing on microaggressions experienced by students at PWIs highlight the effects of microaggressions which range from racial jokes to racial slurs that occur on campus (Cox, 2020; Harwood et al., 2018; Lewis et al., 2021; Von Robertson et al., 2016). For Black students, the effects of microaggressions result in constant self-monitoring,

justification of their racial or ethnic identity, and worry about others' perceptions of their Black authenticity (Cox, 2020; McCabe, 2009). For such individuals, the experience of assimilating into a PWI couples with defending their "Black authenticity" to their Black peers (Cox, 2020). The dual racial battle for validation and belonging only furthers the negative outcomes resulting from microaggressions (Cox, 2020; Hernández & Villodas, 2020; Smith, 2008). For Latine¹ students, the effects of microaggressions similarly result in self-monitoring with a focus on competence and belonging (Lewis et al., 2021; McCabe, 2009; Von Robertson et al., 2016). Latine students in the United States experience increased pressures to prove that they belong in the country, let alone the PWI (Von Robertson et al., 2016). For Asian American and Pacific Islander students, the effects of microaggressions similarly result in self-monitoring and isolation (Harwood et al., 2018; Lewis et al., 2021; Yeo et al., 2019). Particularly salient microaggressions for Asian American and Pacific Islander students involve themes of linguistic capability, invalidation, and being a "model minority" (Yeo et al., 2019, p. 57). More generally, a repercussion of microaggressions includes a decreased sense of belonging stemming from a sense of intellectual inferiority and othering (Cox, 2020; Harwood et al., 2018; Lewis et al., 2021; Von Robertson et al., 2016). The dismissal and ambiguity of microaggressions generate an experience of social inequality that is often hidden or dismissed by university staff and administration (Cox, 2020; Lewis et al., 2021; McCabe, 2009). Coupled with the stressful experiences of coping with and preparing for microaggressions, such dismissal only furthers to weaken minoritized students' sense of belonging at PWIs (Harwood et al., 2018). This is further supported by the higher drop out and transfer rates of minoritized students at PWIs compared to white students (Cox, 2020; McClain & Perry, 2017).

¹ In this paper, we will use the term "Latine" to refer to both Hispanic and Latine populations; however, when describing results from specific research studies, we will use the term applied by the researchers for that study.

Quantitative research supports the above findings in that the experience of compounding daily microaggressions results in increased rates of depression (Lilly et al., 2018), decreased mental health generally (Hernández & Villodas, 2020), a decreased sense of belonging (Hernández & Villodas, 2020; Regis, 2016), and increased fatigue (Ogunyemi et al., 2019; Smith, 2008; Sue et al., 2007). Research also demonstrates the link between experiencing microaggressions and the development and worsening of posttraumatic stress symptoms, depression symptoms, and negative affect (Kim et al., 2017; Nadal et al., 2014). Furthermore, research shows that the experience of a single microaggression proximally results in energy depletion further demonstrated by a decrease in academic and task performance (Steele, 1997; Sue et al., 2007; Wong et al., 2014). Neurobiologically, structures such as the hypothalamic-pituitary- adrenal (HPA) axis, anterior cingulate cortex (ACC), and the prefrontal cortex (PFC) are altered as a result of discriminatory experiences (Berger & Sarnyai, 2015; Paradies et al., 2015; Williams et al., 2019). In sum, microaggressions experienced by minoritized students result in unique compounding negative health repercussions not experienced by their white counterparts.

Microaggressions, per their definition, are experienced daily, if not more frequently (Pierce, 1995; Sue et al., 2007). At PWIs, most students of minoritized backgrounds report experiencing racial microaggressions on campus frequently (Lewis et al., 2021). Though not as severe as racially based traumatic experiences, the frequent, compounding, and universally experienced nature of microaggressions result in negative outcomes worthy of intervention. Furthermore, addressing the negative repercussions of microaggressions may be proactive by assisting minoritized students in developing coping mechanisms that uniquely target racially based stressors. Such coping mechanisms may then be generalized to more severe and traumatic

experiences. In short, interventions that target microaggressions for minoritized students at PWIs are necessary as a result of the frequent and compounding occurrences, the severe negative outcomes, and the potential for generalizable coping mechanisms. It is important to note that addressing coping with microaggressions among minoritized students should not be viewed as the ultimate solution to this problem plaguing college campuses. Indeed, interventions and institution-level changes are also needed to prevent non-minoritized individuals from perpetrating microaggressions. However, as these efforts unfold, and until microaggressions and other acts of racism are rooted out, an intervention that promotes coping among minoritized students is a worthy endeavor.

Potential Interventions

To our knowledge, there are no evidence-based, widely scalable interventions aimed at addressing microaggressions experienced by minoritized students in PWIs. Most interventions designed or adapted for minoritized students are either focused on more severe distress like general or racially based traumas and/or require a trained clinician for administration. Some such interventions include but are not limited to prolonged exposure (Williams et al., 2014), cognitive behavioral therapy (Metzger et al., 2020), and cognitive processing therapy (Marques et al., 2016). In addition to these interventions lacking focus on microaggressions, such interventions do not alleviate reduced mental health treatment utilization demonstrated in minoritized student populations at PWIs because they require administration from a trained clinician.

Research points to significantly lower rates of treatment seeking and mental health resource utilization in minoritized students compared to their white peers (Busby et al., 2019; Miranda et al., 2015). The reason for such low rates may stem from issues with pragmatic barriers, and traditional treatment. Pragmatic barriers to treatment include money, time,

availability, and transportation (Busby et al., 2019; Ebert et al., 2019; Miranda et al., 2015). Though the financial barriers are often addressed through the availability of free mental health resources on university campuses, students receive a limited number of sessions per school year, clinics typically have long waitlists, and these services are not always available on all campuses within the same university (Busby et al., 2019; Ebert et al., 2019). Beyond pragmatic barriers, issues with traditional treatment include historically based mistrust of the clinical environment (Diala et al., 2000; Kugelmass, 2016; Rathod et al., 2018) worsened by a lack of representation and cultural competence and humility among clinicians (Flynn et al., 2020; Gozho, 2020; Ramos et al., 2020).

A potential solution to the barriers associated with low rates of treatment seeking and mental health utilization in minoritized student populations at PWIs is the use of scalable interventions. The World Health Organization has encouraged the development of scalable interventions that are categorized as brief, non-specialist-delivered, self-help based, accessible, and/or easily distributed (Heim & Kohrt, 2019; Milat et al., 2013; Schleider & Weisz, 2017; WHO, 2017). In addition to being highly disseminable and accessible, scalable interventions are more easily adapted for minoritized students as they are primarily self-help based and can be a stop-gap measure when campuses lack local mental health providers who share overlapping identities with the student and/or have adequate training in culturally responsive treatment. However, there are no evidence-based scalable interventions, to our knowledge, that focus on microaggressions experienced by minoritized students in PWIs. Similar to traditional treatment, current scalable interventions target general stressors, general traumas, or traumas unique to minoritized groups (Hirai et al., 2020; Pachankis & Goldfried, 2010; Watson-Singleton et al., 2021). Some such interventions may take the form of mobile apps or a writing technique (Hirai

et al., 2020; Pachankis & Goldfried, 2010; Watson-Singleton et al., 2021). More specifically, a mindfulness mobile app utilized a culturally responsive mindfulness intervention and demonstrated efficacy in reducing stress in African American students (Watson-Singleton et al., 2021). This intervention, though culturally informed, does not specifically address the negative repercussions of microaggressions experienced by African American students. An alternative scalable intervention with much research promise is a writing technique called expressive writing (Hirai et al., 2020; Pachankis & Goldfried, 2010; Pennebaker & Beall, 1986). This intervention can be both scalable and adapted for microaggressions experienced by minoritized students at PWIs.

Expressive Writing

Expressive writing is a brief intervention coined and developed by Pennebaker and Beall (1986). The intervention has been operationalized as a type of repeated exposure practice that asks individuals to expressively write about their thoughts and feelings regarding a stressful life event (Resick et al., 2008). General benefits of expressive writing established by previous research include, but are not limited to, the development of improved coping strategies, reduction of rumination symptoms, improved emotion regulation, and reduction of activity restriction (Andersson & Conley, 2013; Baikie & Wilhelm, 2005; Pennebaker & Beall, 1986; Sloan et al., 2008; Smyth et al., 2008). Expressive writing arguably disrupts ruminative tendencies by asking individuals to confront negative feelings and restructure their cognitions surrounding the topic (Baikie & Wilhelm, 2005; Sloan et al., 2008). The emotional problem-solving skills developed through disrupting ruminative tendencies while utilizing expressive writing further assists in increasing general activity levels and reducing symptom severity (Andersson & Conley, 2013; Baikie & Wilhelm, 2005; Smyth et al., 2008). In minoritized students, specifically, expressive

writing demonstrates similar benefits when writing about general stress and trauma (Hirai et al., 2020; Knowles et al., 2011; Lu & Stanton, 2010). Researchers have hypothesized that individuals reap such benefits from expressive writing due to repeated exposure to the stressor, confrontation of potentially inhibited emotions, and a cognitive restructuring of how stressors are processed (Baikie & Wilhelm, 2005; Pennebaker, 1997). Broadly, the use of expressive writing as an intervention demonstrates general physical and mental health benefits that could generalize to reductions in symptomology presenting from the experience of microaggressions in the minoritized student population (Andersson & Conley, 2013; Pavlacic et al., 2019; Resick et al., 2008; Sloan et al., 2008).

Expressive writing is commonly used and assessed as a means of reducing posttraumatic stress symptomatology (Baikie & Wilhelm, 2005; Pavlacic et al., 2019; Pennebaker, 1997; Pennebaker & Beall, 1986). Some literature calls into question the salience of expressive writing in the absence of psychoeducation or traditional therapy to reduce posttraumatic stress symptoms in response to a Criterion A trauma (Sloan & Marx, 2017; Smyth et al., 2008). Despite such findings, expressive writing in the absence of psychoeducation or traditional therapy is still seen to significantly reduce symptoms, such as rumination and posttraumatic stress symptoms, in response to stressful life events or events of less severity (Cummings et al., 2014; Smyth et al., 2008). Considering the stress induced by microaggressions and the potential symptomology that may arise as a result, expressive writing on its own may have just the right amount of salience to assist in the reduction of symptoms such as general distress, rumination, and posttraumatic stress symptoms.

The traditional administration of expressive writing takes place over three 20-minute writing sessions across consecutive days within a clinical setting (Pennebaker, 1997, 2010; Sloan

et al., 2008). This administration also includes a broad writing prompt which asks participants to write about a stressful life event and feelings associated with the event (Pennebaker, 1997; Sloan et al., 2008). Although this administration method demonstrates efficacy, expressive writing has also been administered by researchers and clinicians alike using a variety of formats. These have included administrations in-person in a laboratory setting, in-person in a clinical setting, completely online, half in-person and half-online, on paper, or on computer-based applications (Hirai et al., 2012, 2020; Pennebaker, 2010). For minoritized student populations who are more likely to experience higher levels of mental health stigma and discrimination, as previously mentioned, a scalable online administration, which bypasses traditional clinical settings, may be the most appealing, practical, and acceptable form. Online administration of expressive writing as a scalable intervention for traumatic experiences has demonstrated efficacy across populations with traditional prompts and methodologies (Barak et al., 2008; Hirai et al., 2020; Kaufka, 2009). More specifically, online administration of expressive writing research considering LGBTQ+ (Pachankis et al., 2020; Pachankis & Goldfried, 2010), Asian (Knowles et al., 2011), and Hispanic (Hirai et al., 2012, 2020) populations established the intervention as acceptable and effective in improving psychosocial functioning, reducing posttraumatic stress symptoms, and reducing negative physical health symptoms, respectively, resulting from a traumatic experience with the traditional prompts. However, to our knowledge, research has not assessed the efficacy of expressive writing within other minoritized student populations, including African American students. Furthermore, despite the plethora of research on expressive writing, no research has considered expressive writing that specifically targets the experience of microaggressions.

In sum, expressive writing demonstrates efficacy across administration methods and within some minoritized student populations for symptoms arising from traumatic experiences.

Extrapolating from such findings, expressive writing, in its online scalable format, can be hypothesized to assist in reducing negative symptoms resulting from microaggressions experienced by minoritized students at PWIs.

ADAPT-ITT Model

Although researchers have found traditional expressive writing to be effective and efficacious in some minoritized student populations for non-racially based stressful or traumatic experiences, the acceptability and adaptation of expressive writing for a new population and potentially new stressors has not been considered. Further, the use of tailored expressive writing for minoritized students at PWIs and their unique experience with microaggressions has also not been considered. To establish and consider expressive writing in a minoritized population, it is imperative that the intervention be adapted beyond simply exporting it into a new population or translating the intervention to a new language to account for the cultural and socioeconomic differences that influence treatment seeking and engagement (Chen et al., 2017; Rathod et al., 2018; Williams et al., 2014; Wingood & DiClemente, 2008). Individuals from minoritized cultural or socioeconomic backgrounds may have different perceptions of mental health, mental health treatment, and distress that should be accounted for during the adaptation (Chen et al., 2017; Rathod et al., 2018; Wingood & DiClemente, 2008). Rathod et al.'s (2018) recent meta-analysis of culturally adapted treatments revealed a wide variety of approaches to cultural adaptation, ranging from direct translation to full reconstruction of interventions, and these tended to be applied in an idiosyncratic manner across studies. This lack of standardization runs the risk of being subject to individual researchers' biases, which can lead to overlooking important components of adaptation. One standardized adaptation procedure with the potential to avoid these problems is the ADAPT-ITT model (Wingood & DiClemente, 2008). It is a

standardized adaptation procedure that has demonstrated efficacy in adapting interventions to new groups and topics (Davidson et al., 2014; Druss et al., 2010; Rushing & Gardner, 2016; Wingood & DiClemente, 2008). For example, the method has been used to adapt evidence-based HIV interventions (Wingood & DiClemente, 2008), HIV-prevention programs for Latine girls (Davidson et al., 2014), sexual health interventions for American Indian and Alaskan Native youth (Rushing & Gardner, 2016), and chronic disease self-management for individuals with serious mental illness (Druss et al., 2010).

Utilizing the ADAPT-ITT model, expressive writing can be modified and expanded to meet the needs of minoritized college students and their unique stressors (Wingood & DiClemente, 2008). The ADAPT-ITT model consists of eight phases that inform researchers and practitioners of best practices for adopting or adapting an intervention into new, and typically minoritized, populations (Wingood & DiClemente, 2008). The first phase of the model, Assessment is used to identify needs and potential solutions. The second phase, Decision, identifies an intervention that may be an appropriate solution while also considering either to adopt or adapt the intervention. The third phase, Administration, administers the adapted or adopted intervention using a theater test methodology. This methodology involves administering the (un-adapted) intervention to members of the target population while consulting with experts and analyzing pre- and post-test results. The primary goal of this phase is to establish what needs to be adapted and how it should be done. The fourth phase, Production, further adapts and develops the intervention based on the feedback from the previous three phases. The fifth phase, Topical experts, requires researchers seek out topical experts to critique the intervention. The sixth phase, Integration, integrates the critiques from tropical experts while also developing or finding reliable scales for measuring the effectiveness of the intervention. The seventh phase,

Training, considers who must be trained on the intervention to properly disseminate the intervention to the target population. The eighth and final phase, Testing, analyzes the results of a pilot study and the previous phase two study to determine the efficacy of the intervention.

Our research team has already completed the first two phases: Assessment and Decision. Existing research suggests that microaggressions take a significant mental and physical health toll on the minoritized student population in PWIs, who are also less likely to access mental health treatment than their non-minoritized peers. This demonstrates a need for symptom reduction by way of scalable intervention. Leading into the Decision phase, research demonstrates expressive writing's efficacy as a scalable intervention in minoritized populations and for stressful life experiences that may be applicable to microaggressions experienced by minoritized students at PWIs. Despite such evidence, it is still unknown how expressive writing would need to be adapted or adopted to be acceptable for microaggressions experienced by this population. As a result, the unknown aspects of expressive writing's ability to assist in symptoms resulting from microaggressions experienced by minoritized students at PWIs leads us to the third phase, Administration.

Current Study

Informed by the ADAPT-ITT model, the current study addresses the Administration phase as we conducted a theater test of expressive writing as a potential intervention for symptoms resulting from microaggressions experienced by minoritized students attending PWIs. Research aims for the proposed study include: (a) piloting several questionnaires (i.e., measures of the effects and frequency of microaggressions experienced, mental health symptoms before and after expressive writing, and acculturation status of our sample) to establish their psychometric properties (e.g., variability) and investigation of attrition rates across study

timepoints, (b) eliciting impressions about the desirability of expressive writing as an intervention for microaggressions experienced by minoritized students at PWIs, (c) eliciting feedback regarding the original and adapted expressive writing prompts, and (d) identifying potential changes to any aspects of the intervention recommended by participants.

Methods

Participants

Eligibility criteria for the current study required participants to be current full-time students at Auburn University, at least 18 years of age, and identify with a racial or ethnic minoritized group, including individuals of multi-racial/multi-ethnic backgrounds. Thirty-two students from Auburn University, a PWI, responded to the study's advertisements and met eligibility criteria. Of those 32 students, 21 scheduled a zoom consent session, and 18 participated in the writing intervention. Demographics can be found in Table 1. The final sample was predominantly female ($n = 12$), ranged in age from 18 to 29 ($M = 22.28$, $SD = 3.83$), and consisted of undergraduate and graduate students who identified with a variety of racial and ethnic minoritized groups

Procedure

We recruited participants via flyers posted around campus, social media posts, and via Auburn University's student research participation pool, SONA. Study flow can be found in Figure 1. After accessing the QR code featured on the study's advertisements, potential participants filled out a brief screener to ensure eligibility and offer availability to schedule an informed consent session via Zoom with a Research Assistant. During the zoom session, the Research Assistant provided the participant with information about the study procedures and answered preliminary questions. The participant then provided informed consent, contact

information, and their preferred start date for the study. On the identified start date, the researcher sent the participants a pre-intervention Qualtrics survey. See Table 2 for a list of measures administered at this time point. Participants who identified as African American or Black received an additional measure of acculturation, the African American Acculturation Scale (AAAS-R; Klonoff & Landrine, 2000), as their experience with acculturation was expected to differ from other ethnic and racial groups due to the history of enslavement in the United States.

The rest of the study consisted of multiple sessions following the pre-intervention survey, including three 20-minute writing sessions over consecutive days, the post-assessment session, and an exit interview. Participants indicated their preference between monetary and SONA credit compensation upon signing up for the study, and they received up to \$40 or 4 SONA credits for completing all the study sessions. Compensation was allocated across sessions at \$5 or 0.5 SONA credits for the pre-intervention assessment, writing session 1, and writing session 2 (\$15 or 1.5 SONA credits total). As writing session 3 includes additional measures, participants were compensated \$10 or 1 SONA credit for this session. Participants who opted into the exit interview received an additional \$10 or 1 SONA credit with a \$5 or 0.5 SONA credits completion bonus for engaging in all four sessions along with the exit interview (\$15 or 1.5 SONA credits total).

Participants received a text or email the morning after completing the pre-intervention assessment with instructions and a link to their first writing session. Prior to beginning the writing session, each participant completed the Positive and Negative Affect Scale (PANAS; Watson et al., 1988). The first writing session included the standard writing prompt, which states (Pennebaker & Beall, 1986):

Please read the following instructions carefully. You will have 20 minutes to write about a stressful life event. This event should be something you experienced and not something witnessed. Please include information on the event and how this event made you feel. Please also discuss how the event impacted you emotionally both during the event and afterwards.

As dictated in the prompt, we expected the participants to write for 20 minutes. The Qualtrics system allowed participants to write for an unlimited amount of time. If the participants attempted to progress after less than 5 minutes of being on the writing page, they received a message that stated: *Are you sure you are finished? Ideally, you'd spend about 20 minutes writing about your experiences.* After receiving this prompt, the participants could continue writing or move forward to the next questionnaire. Upon completion, the participants progressed to the second PANAS and Adaptation Evaluation Form for this session. Participants then received an assessment of anxiety and depression (Forkmann et al., 2018), along with the Short Post-Traumatic Stress Disorder Rating Interview (SPRINT; Connor & Davidson, 2001). The SPRINT asked participants to rate their symptoms as they related to the event they wrote about. See Table 3 for timing information across all writing sessions.

The next morning, participants received a text or email with the link to the second writing session. Prior to beginning the second writing session, participants again completed a PANAS. This session included a modified prompt that stated:

Please read the following instructions carefully as they have changed from your last session. You will have 20 minutes to write about a time that you experienced a microaggression. Microaggressions are like papercuts. They are subtle everyday spoken, unspoken, or environmental interactions where someone expresses an insulting,

degrading, or minimizing sentiment about you or a group with which you identify (e.g., race, ethnicity, gender, sexuality, etc.). Microaggressions can also be intentional or unintentional. This experience should be something you experienced and not something witnessed. Please include both information on the microaggression and how it made you feel. Please also discuss how the microaggression impacted you emotionally both during and afterwards.

Again, Qualtrics monitored the time participants spent writing, before proceeding to a second PANAS, an Adaptation Evaluation Form for this session, an assessment of anxiety and depression, and the SPRINT.

The next day participants received a text or email in the morning with the link to the third writing session. The third and final writing session included the pre-writing PANAS, the same prompt as the first writing session, the post-writing PANAS, a final Adaptation Evaluation Form, an assessment of anxiety and depression, and the SPRINT, along with a post-intervention assessment. The post-intervention assessment asked participants if they would like to participate in an exit interview over Zoom to provide their opinions of the intervention, and 16 participants (89%) agreed to complete this portion of the study.

Measures

See Table 2 for a schedule of the measures for each session.

Demographics Information Questionnaire.

Demographic information obtained included participants' age, gender identity, race, ethnicity, sexual orientation, nationality, ancestral descent, level of education, and primary, secondary, and tertiary language (see Table 1). Prior to scheduling the informed consent session

to verify eligibility, participants responded to questions about race, ethnicity, age, and student status.

Measures of Acculturation, Microaggressions, and Discrimination

See Table 4 and 5 for descriptive statistics associated with the following measures.

Vancouver Index of Acculturation (VIA; Ryder et al., 2000). This scale utilizes 20 items to assess the degree to which participants identify with and participate in the dominant and nondominant cultures. These items are rated on a 1 (*disagree*) to 9 (*agree*) scale. The first item assesses the participants' heritage culture or the nondominant culture. The scale separates into two subscale scores with 10 items each. The first score yields the heritage or nondominant culture subscale score. The second subscale score yields the mainstream or dominant culture score. Both subscales had adequate internal consistency (alphas = .86).

African American Acculturation Scale (AAAS-R; Klonoff & Landrine, 2000). This measure was presented to the six participants who identified as Black or African American. Due to systemic and institutional racism, Black or African American students may not have a connection to their heritage culture or culture of origin. As such this measure was presented to assess how well Black or African American students identify with African American culture. The measure includes 47 items rate on a 7-point Likert scale ranging from 1 (*totally disagree*) to 7 (*strongly agree*). The measure is divided into eight subscales including religious beliefs and practices, preferences for things African American, interracial attitudes, family practices, health beliefs and practices, cultural superstitions, racial segregation, and family values. In the present study, the measure demonstrated good internal consistency for the total score (alpha = .86) and select subscales including preferences for things African American (.92), interracial attitudes (.85), family practices (.85), health beliefs and practices (.80), and cultural superstitions (.86).

The study generated poor levels of internal consistency for racial segregation (.56), and family values (.43). In addition, the subscale for religious beliefs and practices (-1.05) received a negative alpha greater than one. Notably for the racial segregation, family values, and religious beliefs subscales, the poor internal consistency may reflect our small sample size (N=6), the lack of inter-item correlation identified across the items in each of these subscales, as well as the potential need reassess the appropriateness of this measure for this sample.

Racial Microaggression Scale (RMAS; Torres-Harding et al., 2012). This scale utilizes 46 items to measure how frequently individuals experience racial microaggressions and the distress they cause. The items are organized into six subscales according to the theoretical categories of microaggressions proposed by Sue et al. (2007). The subscales include microaggressions categorized as foreigner, criminality, sexualization, low achieving, invisibility, and environmental subscales. Each item is rated on both frequency (ranging from 0 [*never*] to 3 [*often/frequently*]) and distress (ranging from 0 [*not at all*] to 3 [*high level*]). Previous research supports the validity of the RMAS across multiple racial and ethnic minoritized populations (Torres-Harding & Turner, 2015). In our sample, the measure demonstrated adequate internal consistency across several frequency subscales with alphas of .89 for foreigner, .73 for criminality, .88 for sexualization, and .88 for low achieving. However, we found more modest internal consistency for the subscales measuring invisibility (.60), and for environmental (.62). When considering the distress subscales, participants only provided distress ratings for items they identified as occurring at least *a little/rarely* (1). As such, measures of internal consistency for distress ratings associated with the low achievement and invisibility subscales could not be attained. Additionally, zero variance was observed for the criminality and sexualization distress subscales and, as a result, internal consistency ratings are not reported. Beyond the

aforementioned subscales, the distress ratings demonstrated adequate internal consistency of .76 for foreigner and .80 for environmental.

Everyday Discrimination Scale (EDS; Williams et al., 1997). This scale includes 9 items rated on a frequency scale (1=*Never* to 7=*Always*). This measure assesses the frequency of discriminatory events along with the self-rated prediction of which identity this discrimination is aimed at if the frequency of the discrimination was rated as happening at least a 3 or *A few times a year*. The measure demonstrated good internal consistency in our sample with an alpha of .81.

Clinical Outcome Measures

See Table 6 for descriptive statistics associated with the clinical outcome measures.

Positive and Negative Affect Scale (PANAS; Watson et al., 1988). The measure uses 20 specific emotions and feelings to assess participants' experience of positive and negative affect. For the purposes of this study, the measure asked participants for ratings in the current moment (e.g., *right now*). Participants rated the emotions listed based on how they are feeling at the present moment using a Likert scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). Scores are totaled and separated into positive (10 to 50) and negative (10 to 50) affect scales. The measure demonstrated good internal consistency for in-the-moment ratings in our sample with alphas ranging from .82 - .90 for positive and .84 for negative affect across all writing sessions. The measure also demonstrates sensitivity to change for in the moment reporting and has a test-retest reliability of .54 for the positive affect scale and .45 for the negative affect scale (Watson et al., 1988). This measure assisted in our aim of understanding the immediate impact the intervention has on affect, as it was administered before and after every writing session.

Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995). The scale utilizes 21 items to assess symptoms of anxiety and depression as experienced by the participant in the last week. The items are further divided into depression, anxiety, and stress subscales with seven items each. Each item is rated on a 4-point Likert scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*). The measure is totaled (0 to 63) and divided amongst depression (0 to 21), anxiety (0 to 21), and stress (0 to 21) with higher scores being indicative of increased severity. To attain severity, scores on the subscales are multiplied by two. For depression, the scale is normal (0 to 9), mild (10 to 13), moderate (14 to 20), severe (21 to 27) and extremely severe (28+; Lovibond & Lovibond, 1995). For anxiety, the scale is normal (0 to 7), mild (8 to 9), moderate (10 to 14), severe (15 to 19) and extremely severe (20+; Lovibond & Lovibond, 1995). For stress, the scale is normal (0 to 14), mild (15 to 18), moderate (19 to 25), severe (26 to 33) and extremely severe (34+; Lovibond & Lovibond, 1995). In our sample, the measure demonstrated good internal consistency across the subscales with alphas ranging from .84 - .88 for depression, .78 - .88 for anxiety, .85 - .88 for stress, and .92 - .95 for the total scale. This measure allowed us to characterize the depression, anxiety, and stress symptoms of our sample before and after the intervention.

Life Events Checklist (LEC-5; Weathers et al., 2013). The checklist is a measure of trauma history based on 17 potential traumatic events, such as natural disaster or serious injury. Each event is rated as *happened to you*, *witnessed it*, *learned about it*, *not sure*, or *doesn't apply*. Participants also answer questions concerning their age when the event occurred, whether the event happened more than once, whether anyone was seriously injured, threatened, or killed, whether someone's life was in danger, and their emotional reactions during the event. This measure allowed us to characterize the trauma exposure in our sample and was used to establish

Criterion A for Posttraumatic Stress Disorder (PTSD) per the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5).

Posttraumatic Stress Disorder Checklist – DSM 5 (PCL-5; Blevins et al., 2015). This scale includes 20 items corresponding to the 20 *DSM-5* symptoms for PTSD. Participants received the PCL-5 following the LEC-4. The first item of the PCL-5 asked participants to identify the worst event from the LEC-5 and to respond to the PCL-5 based on this event. Participants answered on a 5-point Likert scale about how much each symptom has bothered them in the past month (0=*Not at all*, 1= *A little bit*, 2= *Moderately*, 3= *Quite a bit*, 4= *Extremely*). The measure demonstrated good internal consistency in our sample with an alpha of .94. This measure allowed us to characterize posttraumatic stress symptoms of our sample before and after the intervention. In addition, the measure allowed us to determine if participants had experienced a Criterion A event per the *DSM-5*.

To assess *DSM-5* PTSD Criterion A, the first author reviewed the participants responses to the worst event from the LEC-5. We considered events Criterion A if the participant reported the event happening directly to them or witnessing it and that the event included their or someone else's life being in danger or threatened with physical harm or experienced serious injury/death or there was sexual violence. Further, participants' worst event was considered Criterion A if they reported learning about an event happening to a close friend or family member and that it included an accident or violence. The sample included 7 participants (38.9%) whose worst event was consistent with a PTSD Criterion A event. The PCL-5 descriptive statistics were only reported for participants whose worst identified event was determined to meet Criterion A per the *DSM-5*. Among the participants identified to have experienced a

Criterion A event, the PCL-5 showed an adequate internal consistency with alphas ranging from .92 - .96.

Assessment of Anxiety and Depression (Forkmann et al., 2018). This measure includes four total items with two items for ratings of anxiety and depression respectively. Participants answer on a 5-point Likert scale about how much participants have felt anxious, nervous, downhearted, and sad over the last 24 hours (0=*Not at all*, 1= *Slightly*, 2= *Moderately*, 3= *Very*, 4= *Very Much*). The measure demonstrated good internal consistency in our sample for anxiety with alphas ranging from .85 - .94 and depression with alphas ranging from .72 - .91. This measure allowed us to characterize anxiety and depression symptoms of our sample after each writing session.

Short Post-Traumatic Stress Disorder Rating Interview (SPRINT; Connor & Davidson, 2001). This measure includes 8-items to assess posttraumatic stress symptoms that relate to a specific event. The measure was adapted to relate to the event the participant wrote about. Participants answered on a 5-point Likert scale about how much each symptom has bothered them in the past week (0=*Not at all*, 1= *A little bit*, 2= *Moderately*, 3= *Quite a bit*, 4= *Extremely*). The measure demonstrated good internal consistency in our sample with alphas ranging from .81 - .85. This measure allowed us to characterize posttraumatic stress symptoms of our sample after each writing session.

Intervention Feedback Measures

Adaptation Evaluation Form. This measure was adapted from Wingood and DiClemente's (2008) guide for the ADAPT-ITT Model. The Adaptation Evaluation Form was modified for each writing session. All Adaptation Evaluation Forms included quantitative and qualitative questions relating to participants' opinions on the helpfulness of the writing prompt,

how much they liked the writing prompt, and if they wrote about a racially/ethnically based stressor. The final Adaptation Evaluation Form following writing session three included additional questions regarding the participants' opinions about the activity overall, the administration method used (i.e., online format, device used), and what changes they would make to the activity and prompts. See Table 7 for descriptive statistics and frequencies for quantitative questions and Tables 8 – 10 for qualitative themes and their frequencies. This measure assisted in our aim of understanding the acceptability, perceptions, and desired changes of the intervention.

Exit Interview Questionnaire. This interview included 20 questions and was administered by the researcher via Zoom. The questions include topics such as general feelings about the intervention, what was or was not helpful, what was difficult, what they would change the intervention, opinions on the necessity of the intervention, if they would recommend the intervention to a friend, and if they would engage in the intervention in the future. Additional follow-up questions were depending on the participants' responses during each individual interview. This measure further assisted our aim to understand the acceptability, perceptions, and utility of the intervention. See Tables 10 – 14 for qualitative themes and their frequencies.

Data Analysis

To conduct our quantitative analyses, we first derived descriptive statistics of our sample, previously discussed. Quantitatively, we assessed frequencies of the themes collected above, averages of acceptance, approval, pre- and post-writing PANAS scores, pre- and post-intervention DASS and PCL-5 scores, and pre-intervention RMAS and EDS scores of frequencies and distress. We also examined internal consistency and range for the measures as indicated above, to determine their suitability for subsequent research studies. Finally, we have

reported on attrition rates across study sessions, further depicted in Figure 1. We did not use inferential statistics to assess this dataset as our sample size is too small to be properly powered.

We used Pennebaker's Linguistic Inquiry and Word Count-22 (LIWC-22) program to quantitatively analyze the content of the participants' writing sessions (Boyd et al., 2022; Pennebaker et al., 2015; Tausczik & Pennebaker, 2010). LIWC-22 is an online software used for analyzing word use in text entries. The software utilizes over 100 dictionaries with words, word stems, emoticons, and other verbal constructions to capture an individual's social and psychological state when writing (Boyd et al., 2022). For each text entry, the LIWC-22 calculates the total percentage of words used which fit into each dictionary (Boyd et al., 2022). Dictionaries, or variables, of interest derived from the LIWC-22 include positive and negative tone, positive, negative, and anxiety related emotional tone, and ethnicity, as discussed below and in Table 15 (Boyd et al., 2022; Pennebaker et al., 2015; Tausczik & Pennebaker, 2010).

To conduct our qualitative analysis, we used thematic analysis to identify and analyze themes that arose in the writing sessions as well as in the feedback assessments and exit interviews. Thematic analysis is a qualitative technique for identifying and assessing themes in a given dataset (Braun & Clarke, 2006). The first phase of our qualitative analysis involved examining the themes that were generated during the writing sessions themselves (i.e., answering the question *What experiences did participants describe during the writing sessions?*). Two graduate students in clinical psychology independently reviewed the writing sessions and developed initial codes for the dataset. These codes denoted patterns in each writing session regarding types of stressors or microaggressions discussed. The graduate students developed one codebook for all three writing sessions regardless of writing prompt. However, the themes

identified are analyzed and reported separately according to the associated prompt (i.e., general or microaggression).

The second phase of our qualitative analysis involved examining themes that arose from the feedback assessment (i.e., answering the question *What did participants think about the intervention?*). The same graduate students independently reviewed the written feedback provided by the participants in the online survey measures (i.e., the Adaptation Evaluation Form). Four codebooks were created for each of the following questions (i.e., *How or why do you feel this activity did or did not help you? What made you decide to write about an ethnically or racially based stressor? What made you decide not to write about an ethnically or racially based stressor? How would you change the prompt?*). The codes from these codebooks identified reoccurring themes relating to what was and was not helpful, recommended changes, and reasons participants did and did not write about ethnically or racially based stressors, respectively.

In addition to the written feedback, the optional exit interviews were recorded and transcribed by two undergraduate research assistants assigned to the project. One research assistant transcribed the audio recording of the session while the second research assistant edited the transcription using the video recording of the session. The order of the research assistants was counterbalanced, and all transcriptions were proofread by the primary investigator. After the transcriptions were completed, the same graduate students who coded the written feedback coded the exit interviews. The codes in this codebook aimed to identify themes relating to general feedback, activity format preferences, device preferences, feedback relating to the prompts, perceptions on the necessity of a microaggression intervention, and whether the participants would recommend or re-engage with the activity. The codebook generated from the exit

interviews identified reoccurring themes previously identified in the written feedback codebook as well as unique themes not previously identified.

The codes across the dataset were theory driven (Braun & Clarke, 2006). Therefore, they focused solely on comments relating to the primary study topics of interest (Braun & Clarke, 2006). During this process, the graduate student raters reviewed the qualitative data independently and identified broad themes aligned with the study topics of interest (e.g., stressor topics, general feedback on the activity, specific feedback on the writing prompts). Once this was completed, the graduate students came together and generated a final list of themes to be used in the codebooks. The themes generated at this collaborative session were used to assess what themes existed within the writing sessions, the feedback assessments, or the exit interview.

The two graduate students met regularly to discuss coding and to resolve disagreements. Because the graduate students collaborated to ensure consensus on the final codebook is agreed upon, we did not compute Cohen's κ statistic (Landis & Koch, 1977). After the two graduate students completed coding, the primary investigator consulted with her faculty mentor in an effort to refine the individual codes, resolve disagreements between raters, and refine the overall codebook. Codes that were utilized infrequently were removed due to lack of thematic significance or merged with other codes. When codes were merged, the title and description were expanded to insure they included both historic codes. We used Dedoose™, an online software application used for qualitative data analysis, for coding the data (Dedoose, 2021).

Results

Completion Time of Writing Sessions and Survey Assessments

Participant engagement across the different parts of the study varied. It is valuable to note that the timing measures used to ascertain these values did not distinguish between time

participants actively engaged with the study as compared to time the participants may have spent with the internet window open and inactive. As such, the median values associated with these data are likely more meaningful than averages which include extreme outliers. When considering the median values for the online study sessions, participants spent anywhere between 24.4 minutes and 43.2 minutes. This timing included time spent writing for Sessions 1-3 as well as completing the clinical outcome and feedback measures. With regard to the optional exit interview, interview times ranged from 13.2 minutes to 52.0 minutes, with interviews lasting for a median of 19.9 minutes.

When looking at the time spent writing (Table 3), participants wrote for a median of 14.8 minutes, 16.0 minutes, and 12.9 minutes, respectively. According to this metric, participants spend the more time writing in response to the microaggression prompt (Session 2), as compared to the general prompt (Sessions 1 and 3). Notably, several participants took fewer than 10 minutes on each writing activity (Writing Session 1: 27.8%, $n = 5$; Writing Session 2: 17.7%, $n = 3$; Writing Session 3: 33.3%, $n = 6$). Upon review of the expressive writing text, however, only one participant demonstrated a significant lack of engagement in the writing activity on one writing session (Writing Session 3) by leaving the text box blank. All other participants were deemed to have engaged in the writing activity appropriately, per qualitative analysis.

Quantitative Measures of Acculturation and Discrimination

Measures of acculturation and discrimination were administered at the pre-session to all participants. See Table 4 and 5 for descriptive statistics across the measures and their respective subscales. Participants appeared to be equally identified with the dominant (North American) culture as they did with the non-dominant (heritage) cultures. The observed scores on the AAAS-R, completed by African American/Black participants, reflected similar findings to the VIA.

More specifically, the observed averages on the AAAS-R fell within the mid-range indicating an equal identification with African American/Black culture and dominant North American culture. Furthermore, African American/Black participants' average scores on the VIA for non-dominant (heritage) cultures ($M = 6.7, SD = 1.4$) were consistent with non-African American/Black participant's average scores ($M = 6.6, SD = 1.2$). In comparison, African American/Black participant's average scores ($M = 5.8, SD = 1.3$) were slightly lower than non-African American/Black participant's average scores on the VIA for the dominant (North American) culture ($M = 6.4, SD = 1.3$), though with the small sample size, we cannot demonstrate this difference definitively. Overall, despite the potential difference in acculturation on the VIA dominant culture subscale, both the averages observed for African American/Black participants and non-African American/Black participants reflect a relatively equal level of identification with dominant and non-dominant cultures.

When considering the experience of discrimination using the RMAS, participants rated environmentally based discrimination, not belonging/being treated as a foreigner, and low achieving as more frequently experienced forms of discrimination compared to the other subscales in the RMAS (i.e., criminality, sexualization, invisibility). That is, the average score of the most frequently experienced scale (i.e., environmentally based discrimination) was 2.1, corresponding to *sometimes/a moderate amount* frequency, whereas the average score of the less experienced scale (i.e., low achieving) was 1.1, corresponding to *a little/rarely* frequency. When considering distress, participants indicated the most distress associated with discrimination relating to low achieving, invisibility, and criminality as compared to the other subscales in the RMAS (i.e., sexualization, environmental discrimination, not belonging/being treated as a foreigner). That is, the average score of the most distressing scale (i.e., low achieving) was 1.9,

corresponding to a *moderate level* of distress, whereas the average score of the less distressing scale (i.e., criminality) was 1.5, corresponding to a *moderate level* of distress.

The EDS was similarly used to assess the frequency at which participants experienced discrimination. Notably, participants indicated experiencing discrimination relating to others being less courteous, less respectful, underestimating intelligence, and assuming superiority more frequently than the other items on the scale. The most frequently endorsed identities targeted by the discriminatory experience were race ($n = 11$; 61.1%), shade of skin color ($n = 12$; 66.7%), ancestry or national origins ($n = 8$; 44.4%), and gender ($n = 6$; 33.3%).

Clinical Outcome Measures Pre- and Post-Writing Sessions

See Table 6 for descriptive statistics for each measure at each timepoint. Regarding the PANAS, on average, we observed an increase in positive affect and no change in negative affect after the participants engaged in the second writing session, the microaggression prompt. Conversely, we observed a decrease in positive affect and an increase in negative affect after the first and third writing sessions, the general prompt.

With regards to anxiety and depression, observable trends indicate lowest rated anxiety and depression scores in the moment after the second writing session, the microaggression prompt, as compared to scores after first and third writing session, the general prompts. Utilizing the SPRINT, observable trends indicate lowest average trauma related distress following the second writing session, the microaggression prompt, as compared to scores after first and third writing session, the general prompts. Overall, descriptive trends observed from clinical outcome measures after each writing session indicate lowest scores following the second writing session, the microaggression prompt.

Clinical Outcome Measures Pre- and Post-Intervention

Although we did not run inferential statistics, observable trends on the DASS indicate that depression, anxiety, stress, total distress, and PTSD symptoms were lower after engaging in the full intervention (i.e., the average score at the post-writing session was lower than the average scores at the pre-session).

Analyses of the Content Contained within the Expressive Writing Text

The LIWC-22 analyzed the content of the writing sessions for each participant and provided variables indicating the tone, emotion, and use of ethnicity related words (See Table 15). Findings in our sample are consistent with comparable stream-of-consciousness writings described by Boyd et al. (2022). Of note, average negative tone, negative emotion, and anxiety were observed to be lower in texts from Writing Session 2, as compared to the other writing sessions. This trend is consistent with the PANAS, and momentary measure of anxiety findings discussed above. No differences of note were observed for variables relating to positive tone and positive emotions across writing sessions. This implies reduced negativity and anxiety in response to the microaggression prompt, as compared to the general prompt. Additionally, the LIWC-22 variable for ethnicity demonstrated more frequent use of the ethnicity related words in response to the microaggression prompt, as compared to the general prompt. This provides evidence for the efficacy of the microaggression prompt to induce writing about racial/ethnic stressors.

Qualitative analysis considering the expressive writing text of each participant generated three primary themes: Racial/Ethnic stressor/trauma, Other identity stressor, and Non-Identity related stressor (See Table 16). Such themes were identified across writing sessions and prompts. With regards to Racial/Ethnic stressor/trauma, subthemes that arose most frequently included

those related to the experience of microaggressions along with the subtypes of microaggressions (i.e., microassaults, microinsults, microinvalidations) identified by Sue et al. (2007). Discussion of microinsults arose most frequently with participants citing it being “frustrating when the first thing someone wants to know about you is your ethnicity,” or that “one of [their] lab members asked if the people in [their] country and neighboring country were not hygienic.” Participants who discussed microinsults further identified that their racial/ethnic background was the target identity of such discrimination. Microinvalidations and microassaults were also identified, but with less frequency as compared to microinsults. One participant detailed a microinvalidation:

A lot of people were quick to note that I don’t act Asian, and instead act ‘white.’

Although this is in itself isn’t offensive, the sentiment in which it was expressed was always a tone of complimentary. As if I should be happy that I don’t act like I look.

Another participant described a microassault in which they were called a racial slur by a customer. Consistent with the EDS findings, across all subtypes of microaggressions racial/ethnic background were noted as the most frequent source of discrimination. In addition to microaggressions, participants discussed Structural discrimination which included cultural or societal normalized discriminatory treatment of minoritized individuals that were either explicitly experienced or internalized sentiments (e.g., “With time, I started to accept it was simply how some older people around here still think,” “the place was not at all diverse, and the staff did not really know how to be culturally competent”). Furthermore, some participants discussed immigration in response to the general prompts of Writing Session 1 and 3. Discussion of immigration included stressors relating to the process of immigrating as well as the experience of acculturation (i.e., moving back and forth between participant native country and the United

States). Finally, participants reported institutionalized discriminatory experiences discussing stressors related to policies or behaviors of unspecified organizations or institutions.

In addition to racial/ethnic related stressors and traumas, a subsection of participants discussed stressors related to a minoritized identity outside of their racial/ethnic identity. Other such identities included identifying as a female (e.g., “sometimes the guy(s) in the group would tend to either not reply... or simply dismiss [me]”), identifying with a minority religious group (e.g., “Only after passing the screen of the religion, you would be able to tell ... the intention of the friendship.”), and/or identifying with a minoritized socioeconomic group (e.g., “we will always be the inner city kids with nothing to offer”). Discussion of Other identity stressors was present across all writing sessions.

Among the Non-identity related stressors, interpersonal stressors arose most frequently including discussions about family members, friendships, romantic partners, and roommates. Another Non-identity related stressor included distress related to academics. This stressor included mentions of program or medical school acceptance concerns, concerns with grades and academic performance, as well as course completion. Further concerns relating to mental health arose frequently and included discussion of anxiety, depression, as well as general mental health concerns. Similarly, participants discussed sudden or unexpected deaths of others in addition to mentions of suicide and suicidal ideation. Discussion relating to suicide and suicidal ideation included comments of learning about others’ experiences with suicide or suicidal ideation as well as the participant’s lived experience with suicidal ideation. Participants further discussed stress relating to illness or injury experienced by the participant or by an individual close to the participant. Additionally, participants discussed experiencing or learning about significant

accidents including transportation accidents as well as accidents at work or home. Finally, participants mentioned financial stressors or constraints in their expressive writing.

As would be expected, identity-related stressors and associated themes (i.e., Racial/Ethnic stressor/trauma, Other identity stressor) were more frequently elicited in response to the prompt from Writing Session 2. Such findings are further supported by the LIWC-22 variable for words relating to ethnicity as discussed above. This suggests that the modified prompt had its intended effect of encouraging participants to reflect on their experiences with microaggressions. Also, as would be expected, in Writing Session 2, non-identity related stressors were not discussed. In response to the general prompt in Writing Session 1 and 3, a majority of participants' Expressive Writing text reflected stressors unrelated to identity (i.e., Non-identity related stressor).

When asked if the participants considered writing about an ethnically or racially based stressor at the end of each writing session, a majority of participants said they considered writing about such a stressor for Writing Session 2, whereas only a minority of participants responded affirmatively for Writing Sessions 1 and 3 (see Table 7). After being asked whether they wrote about an ethnically or racially based stressor after Writing Session 1, participants provided qualitative feedback as to why they did or did not write about an ethnically or racially based stressor (see Table 8). Regarding those who did write about an ethnically or racially based stressor, participants most frequently indicated that there was no reason, it "...just happened..." or that writing about identity was unintentional. Furthermore, a participant indicated that their worldview was influenced by their identity so discussing their ethnic or racial background within the context of the stressor felt natural. Finally, a participant indicated that they wrote about an

ethnically or racial stressor because they suspected the study was related to ethnic or racial backgrounds and assumed they were meant to write about these topics.

Regarding those who did not write about an ethnically or racially based stressor, their feedback reflected having a more stressful experience to discuss. Participants most frequently indicated that they felt a sense of normalized discrimination. These participants indicated that they'd "...grown used to..." discriminatory stressors, never experienced stressors that were "...harmful enough..." or that ethnically or racially based stressors "...get pushed aside..." in favor of other non-identity related stressors. Some participants further reported being unaware that writing about a racially or ethnically based stressor was an option due to the phrasing of the general prompt. Finally, one participant indicated that they did not talk about an ethnically or racially based stressor because they had not faced any recently.

Acceptance and Approval Measures across Quantitative Measures, Written Feedback, and Exit Interviews

Participants provided feedback on the intervention across multiple time points. When asked to consider the intervention as a whole, 94.5% ($n = 16$) of participants indicated they liked the intervention at least *somewhat*. Participants further indicated that they found the intervention relevant to their experience with 83.3% ($n = 15$) of participants indicating that they found the intervention at least *somewhat* relevant to their experience. Additionally, 66.7% ($n = 12$) of participants indicated that they found this intervention at least *somewhat* helpful. Most participants also stated that the intervention was helpful in the exit interviews (See Table 15). Consistent across both the exit interviews and the written feedback (See Table 9), participants reflected that emotional processing, empowerment and validation, the opportunity to express experiences or put experiences into words, and the ability to recall the event or stressor were

helpful aspects of the writing activity. Beyond this, some participants found it helpful to share the experience knowing that someone would read their reflections. A minority of participants indicated that they found the intervention to be distressing but helpful. In addition, a small number of participants stated that the intervention did not help them or was unpleasant as a result of thinking about the stressor.

When asked how helpful they found the individual writing prompts, more participants found the writing prompt at least *somewhat* helpful after Writing Session 2, the microaggression prompt ($n = 15$), as compared to after Writing Sessions 1 and 3, the general prompt ($n = 12$; See Table 7). Similar trends of positive feedback were observed on a measure where participants rated the sessions using a series of negative and positive word pairs (see Figure 2). Notably, participants indicated that Writing Session 2, the microaggression prompt, was more helpful appropriate, comprehensive, novel, quick, and easy as compared to responses after Writing Session 1, the general prompt. Such a finding indicates that the microaggression specific prompt was well received and expanded upon the benefits observed by the general prompt alone.

As seen in Tables 9 and 11, participants found it helpful to gauge their progress in processing or managing their distress as a result of the general writing prompt. With regard to the microaggression prompt, participants indicated that learning about, learning how to identify, or providing a label for microaggressions was a helpful aspect of the intervention. It is valuable to note that although all sessions were found to be helpful in some way, the microaggression prompt provided help in a way that the general prompt did not.

With regards to the prompts, 94.5% ($n = 16$) of participants indicated that they liked the general prompt's wording at least *somewhat* after Writing Session 1, prior to their exposure to the microaggression prompt. After Writing Session 2 where participants had experience with

both prompts, 77.8% ($n = 14$) of participants indicated that they liked the microaggression prompt's wording at least *somewhat*. Across two timepoints (e.g., Writing Session 2 and Writing Session 3), 77.8% ($n = 14$) and 66.7% ($n = 12$) of participants, respectively, indicated a preference for the microaggression-specific prompt. Similar trends were observed in the exit interviews where a majority of participants' feedback reflected a preference for prompt 2, the microaggression prompt, over prompt 1, the general prompt (See Table 11). When asked which prompt participants would choose to do if they could only do one prompt, 61.1% ($n = 11$) of participants chose the microaggression specific prompt over the general prompt. In the exit interviews, a subset of participants requested new prompts for each session, though they did not provide specific recommendations.

Seven total participants requested changes be made to the writing prompts with three (16.7%) participants recommending changes to the microaggression prompt and four (22.2%) participants recommending changes to the general prompt (See Table 7). Participants recommended changes to the microaggression prompt indicating they would prefer the prompt be more specific or that the use of "papercuts" as a comparison be modified (See Table 10 and 15). With regard to the general prompt, a number of participants requested more information, direction, or a richer prompt across feedback outlets. A subset of participants requested adding specificity to both prompts (i.e., general and microaggression prompts) including asking about stressors or microaggressions that were witnessed, experienced, from their parents, or generational.

Participants were also asked their opinions on the administration method (i.e., session number, measures used, device used, online format, compensation rate) of this intervention. Participants broadly indicated that they liked the format of the study (See Table 11). More

specifically, most participants liked the 24-hour timeframe between each session. About half of the participants requested more sessions, and the other half requested no change to the session number. When it came to measures (i.e., PANAS, clinical outcome measures, feedback measures), half of the participants found the measures to be confusing or unhelpful while others found the measures to positively impact their ability to reflect on the writing session. With regards to compensation, 14 (77.8%) participants received Amazon gift cards and 4 (22.2%) participants received SONA credits with 72.2% ($n = 13$) participants indicating that they felt the compensation was at least *quite a bit* fair.

When asked how much they liked the online format, 61.1% ($n = 11$) participants indicated they liked the online format *very much* with 88.9% ($n = 16$) of participants indicating a preference for online over in-person administration. This finding is consistent with participant feedback provided during the exit interviews (See Table 11). Participants accessed the intervention from their laptop ($n = 11$; 61.1%), smartphone ($n = 7$; 38.9%), and/or desktop ($n = 2$; 11.1%) with 61.1% ($n = 11$) of participants indicating that they liked the device they used. In the exit interviews, participants preferred a laptop ($n = 12$, 75.0%) because of the improved ability to type, correct mistakes, and view the text box while others preferred a cell phone ($n = 10$, 62.5%) because of portability, typing fluency, and a preference for text messages with study links over emails. However, some participants noted that moving the texted link from a phone to a non-cellular device was difficult and inconvenient.

When considering potential expansion of the intervention, some participants requested additional resources or an option to request feedback on their writing (See Table 11). In contrast, some participants preferred the anonymity of the intervention. In all, the administration of the intervention was well received with recommendations provided for increasing the specificity of

the prompts, a general preference for the microaggression prompt, potentially expanding the intervention to include resources or feedback, and an openness to additional sessions with new or consistent prompts.

During the exit interview, all participants found the intervention to be necessary or warranted due to the helpfulness of the intervention (See Table 12). Some participants indicated that the intervention was also necessary for other minoritized identities (i.e., gender, sexual minorities). Despite all of the participants finding intervention necessary for others, two participants indicated that the intervention was unnecessary for them individually because they were not distressed by the experience of microaggressions.

During the exit interview, all participants said they would recommend this intervention to a friend by advertising the positive impact of the intervention (See Table 13). Some participants further indicated that they would advertise the accessibility and minimal time and resource commitment associated with the intervention.

When asked how likely it was that the participant would re-engage with the intervention, 61.1% ($n = 11$) of participants indicated that they at least *somewhat* wanted to re-engage in the intervention. In the exit interviews, all participants indicated that they would re-engage in the intervention in the future (See Table 14). If the intervention were to remain the same, some participants said they would engage in the intervention when they experienced a stressor of any kind, while others indicated that they would re-engage less frequently (i.e., less than three days in a row). Some participants indicated that they would re-engage in the intervention if it was presented in a different format (i.e., on paper, with feedback, with more specific prompts).

Discussion

In the current study, we used the ADAPT-ITT model (Wingood & DiClemente, 2008) to conduct a theater test of expressive writing to address symptoms resulting from microaggressions experienced by minoritized students at PWIs. We utilized a mixed-methods analysis of data collected through a series of questionnaires and exit interviews with minoritized students currently enrolled at a PWI. In accordance with the study's aims, we found (a1) that all participants who engaged in the first pre-intervention session completed all three writing sessions, (a2) adequate variability for most measures and found that additional measures of acculturation for African American/Black students were unnecessary, (b) that, across quantitative and qualitative measures, participants perceived the adapted intervention to be helpful, appropriate, enjoyable, and necessary to address the symptoms resulting from the experience of microaggressions, (c) that participants preferred the adapted expressive writing prompt and recommended making the prompt more specific and removing the comparison to "papercuts," and (d) that some participants requested additional resources or opportunities to receive feedback on their expressive writing entries.

With regard to attrition, we found that all participants who engaged in the first pre-intervention session completed all three subsequent writing sessions. This finding is notable as it is substantially less than previous studies of online administration methods of expressive writing (Hirai et al., 2020; Pachankis et al., 2020) as well as studies assessing the use of online scalable interventions broadly (Watson-Singleton et al., 2021). Although comparable studies have a larger sample size, the lack of attrition demonstrated in the current study is a promising indication of the intervention's acceptability and ability to retain participants.

Beyond attrition, we further estimated engagement through the measurement of time spent writing. The current study found participants to write for less than the instructed 20 minutes across all writing sessions. Previous literature established the efficacy of such a timeframe (Pennebaker, 1997, 2010; Sloan et al., 2008); however, qualitative findings for the current study established appropriate engagement for most participants. Given the difference in prompts, it is notable that participants were observed to write for longer periods of time in response to the microaggression-specific writing prompt. The longer writing period during this session implies increased engagement across all participants when compared to the general writing prompt. It may be that the microaggression prompt expanded on the engagement potential of the activity beyond that of the general prompt.

Observed variability and internal consistency across measures were mostly sufficient, except for the AAAS-R. This measure of acculturation was administered to African American/Black participants as a result of differences in systemic and institutionalized racism that may distance participants from their heritage culture or culture of origin. Although the measure demonstrated appropriate psychometric properties throughout development (Klonoff & Landrine, 2000), the poor internal consistency demonstrated in the current study may be a result of the small subsample size (N=6) or the lack of inter-item correlation across subscales in this sample. In addition to the poor internal consistency of this measure, the observed scoring trends of the AAAS-R and the VIA, a general measure of acculturation, did not appear to differ in a way that the AAAS-R provided additional information about the acculturation rates reported by African American/Black participants. Furthermore, the AAAS-R added an additional 47 items to the surveys for African American/Black participants. As the measure demonstrated poor internal consistency, did not expand upon findings from other measures in the study, and added

additional survey load to African American/Black participants, the findings from the current study indicate that the use of one measure of acculturation is sufficient. Unlike the AAAS-R, all other measures of acculturation, experience of microaggression, discrimination, and clinical outcome measures demonstrated appropriate internal consistency and variability. The findings from the current study support the future use of such measures in samples similar to the current one.

When considering participants' response to the intervention, clinical outcome measures from pre- and post-writing and -intervention demonstrated trends indicative of increases in positive affect and decreases in negative affect, symptoms of depression, anxiety, stress, total distress, and PTSD symptoms. Such findings are consistent with previous literature investigating the efficacy of expressive writing (Andersson & Conley, 2013; Pavlacic et al., 2019; Pennebaker, 1997; Resick et al., 2008; Sloan et al., 2008). More specifically, measures of affect (i.e., the PANAS, the LIWC) reflected higher scores for positive affect and lower scores for negative affect associated with the microaggression prompt as compared to the general prompt. Such findings not only reflect a lack of iatrogenic effects of the microaggression prompt, but also the possibility that the adapted prompt had a more positive impact than the original expressive writing prompt.

When looking at the content of participants' expressive writing texts, it is notable that stressors relating to race, ethnicity, or other minoritized identities were present across writing prompts (i.e., general and microaggression prompt). As intended, participants most often wrote about racial/ethnic identity related microaggressions in response to the microaggression specific prompt. Participants further included stressors relating to structural racism, immigration related stressors, and institutional racism. Though stressors related to minoritized identities were

discussed in response to the general prompt, it's important to acknowledge that the frequencies of such disclosures were fewer in comparison to the microaggression prompt. When asked why participants did not write about a race or ethnicity related stressor in response to the general prompt, participants most often reported that they did not write about such a stressor as a result of normalized discrimination (i.e., they'd "...grown used to..." it, never experienced stressors that were "...harmful enough...", or that such stressors "...get pushed aside..") or not knowing that it was an option due to the prompts wording. It is valuable to acknowledge that the inclusion of a microaggression specific prompt provided the opportunity for minoritized students to reflect on such experiences purposefully and may aid in the development of coping skills targeted towards the experience of microaggressions.

Across all measurements, participants provided primarily positive feedback indicating that they found the entirety of the intervention (i.e., Writing Sessions 1-3) to be helpful, appropriate, and enjoyable. One participant reflected:

I liked it, um it like gave me time, cause sometimes life moves fast, so you're trying to like bottle things up or just like push it to the side so it really gave me time to like think. Especially about how it made me feel like in certain moments and how I feel about it now. So, I liked it.

This participant, among others, found the overall intervention generally helpful, appropriate, relevant to their lived experience, and accessible. This finding is further bolstered by all participants indicating that they would recommend the intervention to a friend and likely re-engage in the intervention in the future.

Participants further reflected that they liked the online format and timeframe of the sessions as well as the compensation rate. Consistent with the theorized benefits of scalable

interventions (Heim & Kohrt, 2019; Milat et al, 2013; Schleider & Weisz, 2017; WHO, 2017), participants indicated that they liked that the intervention was accessible, portable, and required minimal time and resources. One participant indicated they liked the online administration and time frame as it allowed them the:

... option of where you want to take it, where you feel most comfortable. Where you feel like you can just, you know, write this, feel, and then just compose yourself all in one place.

Participants further indicated that the online modality allowed them to utilize their preferred device and access links in places and times that were feasible to them. Participants also noted that the scalable benefits (i.e., accessibility, limited time and resource commitment) of the intervention would be something they would advertise about the intervention when recommending it to others. The scalable nature of the intervention appears to be beneficial and positively impact the acceptability and feasibility of the intervention's implementation.

Per the ADAPT-ITT model (Wingood & DiClemente, 2008), it was valuable to learn about the perceived necessity of an adapted intervention from the target population. When asked about the necessity of an intervention for the experience of microaggression all participants indicated that an intervention was necessary. Consistent with previous literature which cites the prevalence and negative repercussions of the experience of microaggressions at PWIs (Harwood et al., 2018; Lewis et al., 2021), we found that participants reported the necessity of the intervention as a way to cope with these experiences at a PWI. One participant reflected:

I think there is value to it, um, a lot can happen especially like being here at a predominantly white institution you go through a lot of stuff and sometimes you may not

feel like talking to another person about it...So, being able to write about it you were just able to like kind of get those feelings out and express yourself.

Another participant reflected that they thought the intervention was a “good start of like exploring it for yourself first before you bring it up into, you know, other spaces.” This participant illustrates the necessity of an intervention to aid in coping with the experience of microaggressions in addition to continued efforts to prevent non-minoritized individuals from perpetrating microaggressions at an individual and institutional level.

When considering the prompts, participants indicated a preference for the microaggression specific prompt over the original expressive writing prompt. It is notable that participants indicated that the microaggression prompt was more helpful, appropriate, novel, quick, and easy as compared to the general writing prompt. They reflected that the microaggression prompt provided an opportunity for them to learn more about microaggressions and provided a space to utilize the label as well as reflect and express the experience. Although the feedback was generally quite positive for the microaggression prompt, several participants suggested that we add more specificity and remove the comparison to “papercuts.” More specifically, participants reflected that the comparison “didn’t particularly help” them understand the concept and has been used “as an example of something that doesn’t hurt and you’re exaggerating” in the past. These reflections indicate that the comparison of microaggressions to “papercuts” may have contributed to a feeling of invalidation. Furthermore, participants broadly requested a more specific prompt such that confusion may be reduced and additional text might “lighten the mood or get gears turning.” In future iterations, it is recommended that the adapted microaggression prompt be utilized across all three writing sessions, per expressive writing administration protocol (Pennebaker, 2020), and be modified to remove the comparison to

“papercuts” and include more specific (i.e., specify timeframe, location, situation, source of microaggression) and empathetic language (i.e., words of encouragement, anecdotes).

When considering the intervention as a whole, participants provided recommendations regarding the expansion of the project to include opportunities for feedback, additional resources, and the expansion of the project to other minoritized identities (i.e., gender, sexual identity, religious identity). First, a subset of participants requested an opportunity to receive feedback or engage in conversation about their writing session. More specifically, a participant indicated that it “...would be really nice to have a community immediately afterward or at least a space...to have those...regular discussions or a check in...having that option to like talk to someone.” A participant further reflected that it would be beneficial to “see how someone felt about what I wrote” via an email correspondence. Though these recommendations would complicate efforts to maintain anonymity, future iterations should consider opportunities for community check-ins, forums, or feedback provided to those who engage in the intervention. In addition, participants requested additional resources be provided throughout the intervention. Though we provided resources at the consent session, participants reflected that it would be beneficial to receive “an email detailing you went through this, and this is how this can help you based on your experiences.” Finally, participants noted that the intervention could be expanded to other identities. More specifically, when asked about the necessity of the intervention for the experience of microaggressions, some participants indicated that intervention could also be necessary and beneficial to other minoritized identities beyond racial and ethnic groups (i.e., gender, sexual, religious minoritized identities). Though previous literature has demonstrated the effectiveness of traditional expressive writing methods to other minoritized identities (Pachankis et al., 2020; Pachankis & Goldfried, 2010), future researchers should consider utilizing the

ADAPT-ITT model or the adapted prompt from this study to expand the intervention to other minoritized identities.

In the current study we completed the Administration phase of Wingood and DiClemente's (2008) ADAPT-ITT model through the completion of a theater test, establishment of acceptability, and the collection of recommendations for future modifications.

The findings of the current study provide a firm foundation for future progression through the ADAPT-ITT model into the Production phase where recommended changes may be implemented and the Topical Experts phase where experts assess the intervention and provide feedback. The continual use of the ADAPT-ITT model will allow for a standardized adaptation of expressive writing for the experience of microaggressions in minoritized students at PWIs. Ultimately, with the completion of a clinical trial to investigate efficacy, this would result in the first, to our knowledge, adapted, scalable, evidence-based intervention specifically targeting the symptoms resulting from the experience of microaggressions in minoritized students at PWIs. This is especially important for a number of reasons. First, microaggressions experienced by minoritized students at PWIs are pervasive (Cokley et al., 2013; Cox, 2020; Goodman & West-Olatunji, 2010; Lewis et al., 2021). Beyond the literature, the current sample reported experiencing environmentally based, not belonging/being treated as a foreigner, and low achievement microaggressions on the RMAS most frequently. In addition, the current sample reported instances of discrimination on the EDS most frequently relating to being treated with less courtesy and respect, underestimations of their intelligence, and assumptions of superiority. Furthermore, expressive writing texts discussing microaggressions occurred across all participants. This included discussion of microinvalidations, microinsults, and microassaults relating to participants racial or ethnic identity as well as their country of origin. Second, the

experience of microaggressions is associated with significant negative impacts on both physical (Berger & Sarnyai, 2015; Ogunyemi et al., 2019; Sue et al., 2007) and mental (Hernández & Villodas, 2020; Lilly et al., 2018; Regis, 2016) health as well as academic success (Cox, 2020; McClain & Perry, 2017). This is further exemplified in this study by ratings of distress on the RMAS where participants reported the most distress associated with low achievement, invisibility, and criminality related microaggressions. Finally, minoritized students represented across the literature report significant treatment barriers when seeking traditional mental health treatment (Busby et al., 2019; Flynn et al., 2020; Kugelmass, 2016; Miranda et al., 2015) in addition to a lack of interventions specifically focused on the experience of microaggressions. To target treatment barriers, scalable interventions are recommended (WHO, 2017); however, few scalable interventions target experiences unique to minoritized individuals (i.e., Watson-Singleton et al., 2017). Furthermore, there are no evidence-based interventions, to our knowledge, that focus on the experience of microaggressions specifically; let alone scalable interventions which maintain this focus.

Although this study had many strengths, it also had notable limitations. First, our sample, though purposefully small, included 18 self-selected participants who predominantly identified as female, all of whom were enrolled at the same university in the southeastern United States. As a result, the current sample may not be a comprehensive representation of minoritized students at PWIs. Second, Pennebaker (1997, 2010; Sloan et al., 2008) included instructions for expressive writing expecting participants to write for at least 20 minutes. Due to our measures of time engaged in writing and the online administration method, we could not accurately establish and enforce the 20-minute writing period. It is notable that expressive writing texts were deemed qualitatively substantial and clinical outcome measures demonstrated a reduction of distress

despite the less than 20-minute engagement. Finally, as a result of the small sample size and the nature of the theater test, efficacy of expressive writing to reduce the distress associated with microaggressions experienced by minoritized students at PWIs was not established.

It is important to note that, despite the predicted benefits of the adapted version of expressive writing for alleviating the symptoms associated with the experience of microaggressions, the current adapted intervention cannot be viewed as the ultimate solution to microaggressions experience by minoritized students at PWIs. Though there is immense value in supporting the development of coping mechanisms for the experience of microaggressions, interventions and institution-level changes are needed to prevent the perpetuation of microaggression by non-minoritized individuals. It is important that efforts to eradicate microaggressions and other acts of racism from occurring in the first place are enacted and support. In the meantime, an intervention which promotes the development of coping among minoritized students is a worthy endeavor.

To our knowledge, this is the first study to utilize the ADAPT-ITT model to adapt expressive writing for the experience of microaggressions for minoritized students at PWIs. Continuing along the ADAPT-ITT model, the results of the current study can be used to enter the Production and Topics Expert phases of the of the ADAP-ITT model where the intervention is further modified and reviewed with the intent of creating a finalized adapted expressive writing intervention for the symptoms resulting from microaggressions experienced by a minoritized students at PWIs. The findings of this study provide evidence for the perceived necessity of an intervention targeting the experience of microaggressions, the acceptance of our proposed adaptations of expressive writing for the experience of microaggressions, as well as valuable next steps in the continued development of this intervention. Our findings set up the path to the

continued standardized adaptation of an evidence-based, widely scalable intervention aimed at addressing microaggressions experienced by minoritized students at PWIs.

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Appendix A

Figure 1

Study Flow

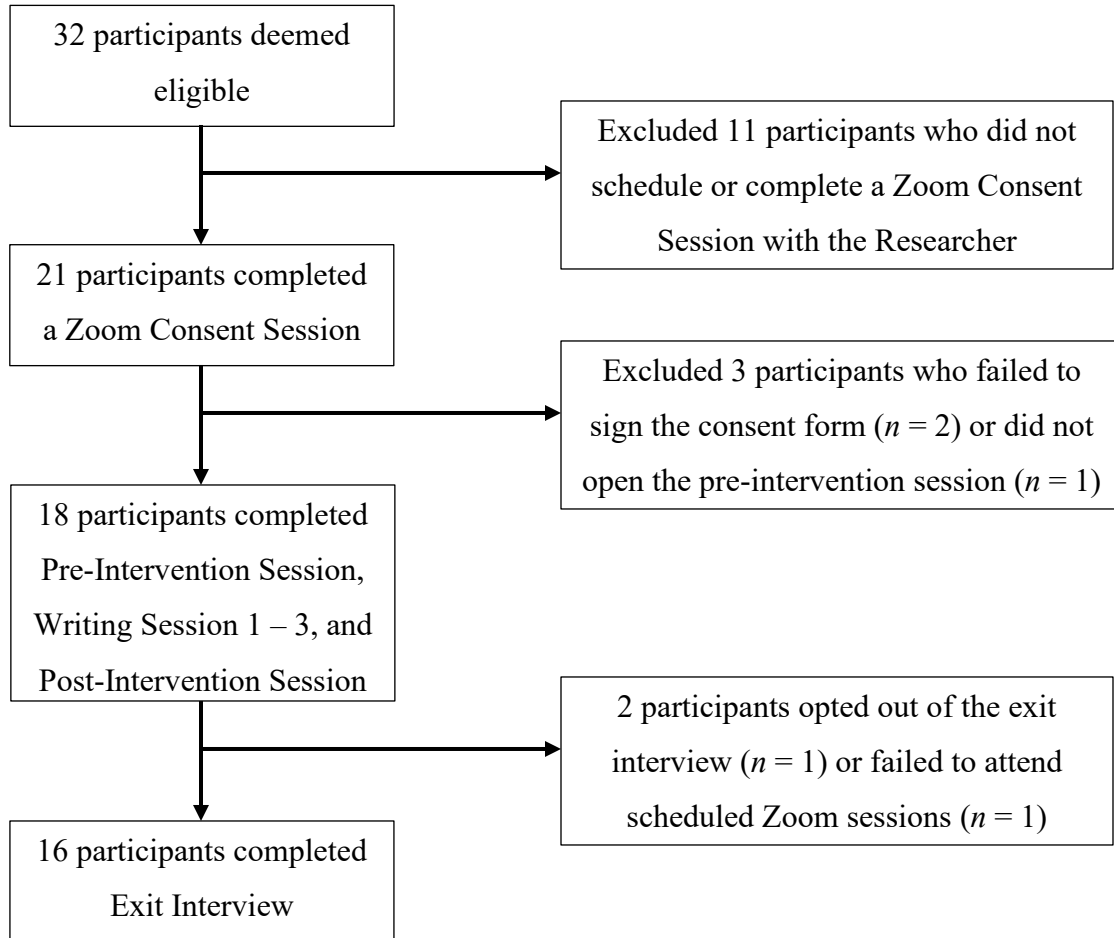
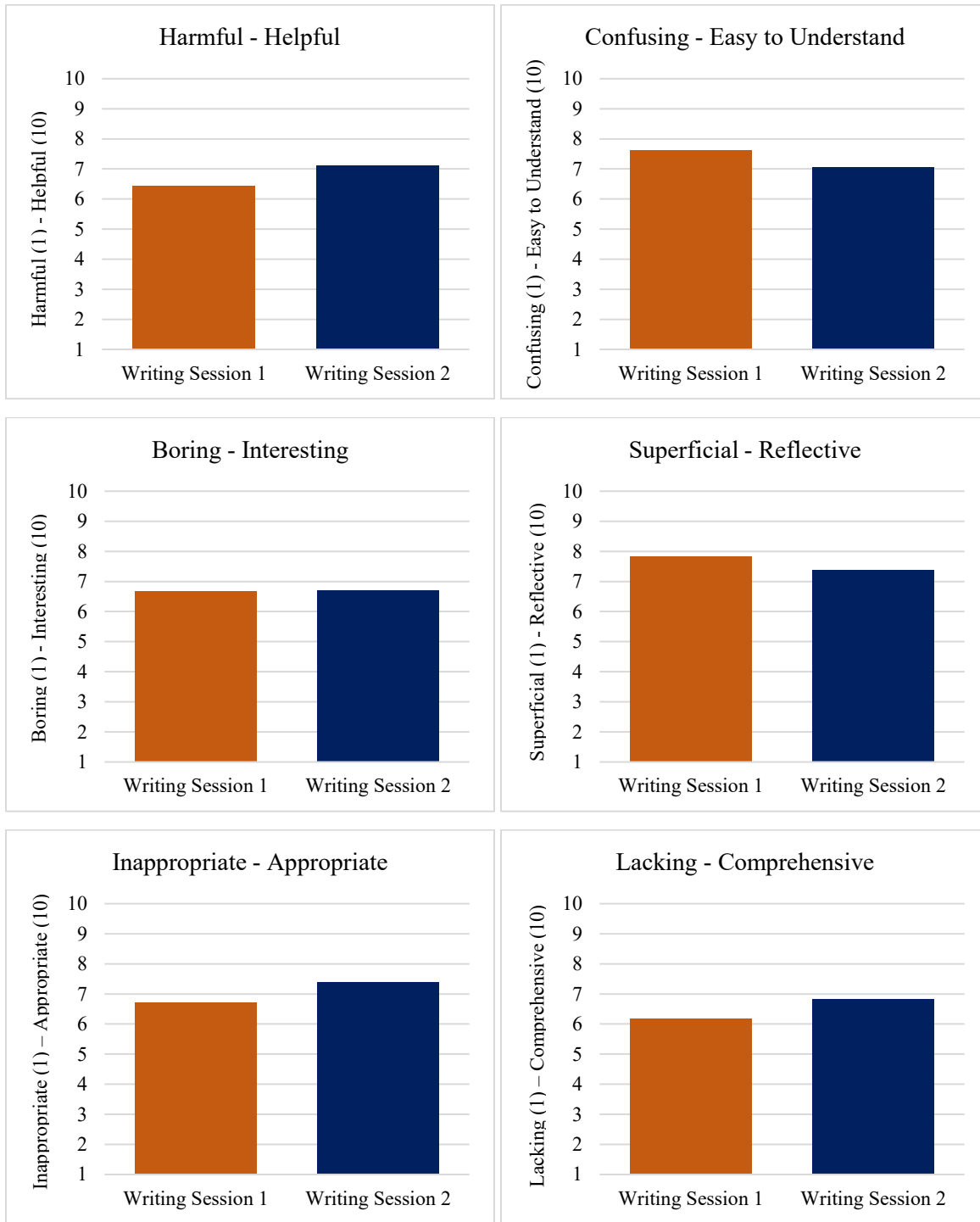
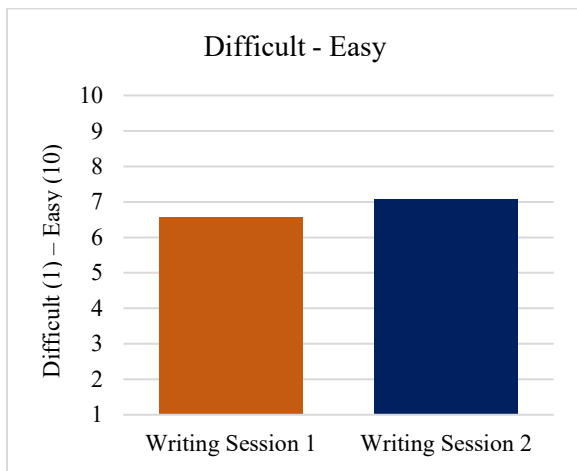
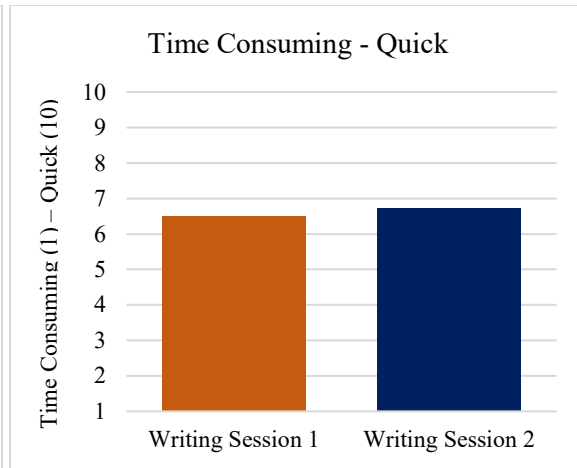
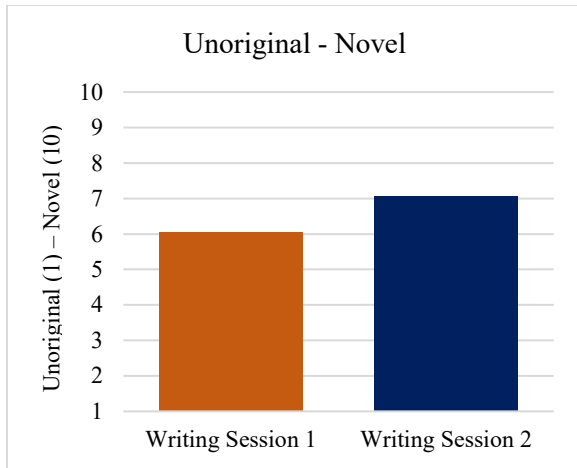


Figure 2

Average Scores for Quantitative Descriptor Measure Comparing the General Prompt (Writing Session 1) and the Microaggression Prompt (Writing Session 2; N = 18)



(Cont.)



Note. Statistics represented are the average scores across descriptors with higher averages indicating endorsements of positive descriptor words (i.e., helpful, easy to understand, interesting, reflective, appropriate, comprehensive, novel, quick, easy).

Appendix B

Table 1

Sample Characteristics (N = 18)

Demographics	Mean (SD)
Age	22.28 (3.83)
Demographic	<i>n</i> (%)
Gender	
Female	12 (66.7%)
Male	5 (27.8%)
None reported	1 (5.6%)
Race/Ethnicity	
Black/African American	6 (33.3%)
Asian	5 (27.8%)
Hispanic/Latine	4 (22.2%)
Multiple Racial/Ethnic Groups Identified	3 (16.7%)
None Reported	2 (11.1%)
Not Listed – Persian	1 (5.6%)
Sexual Orientation	
Straight/Heterosexual	13 (72.2%)
Bisexual	3 (16.7%)
Pansexual	1 (5.6%)
Asexual	1 (5.6%)
Nationality	
US Citizen	14 (77.8%)
Non-US Citizen	4 (22.2%)
Student Status	
Undergraduate	13 (72.2%)
First Year	5 (27.8%)
Second Year	3 (16.7%)
Fourth Year	4 (22.2%)
Fifth Year and Beyond	1 (5.6%)
Graduate	5 (27.8%)

Table 2*Measure Administration Schedule*

Session	Measures
Eligibility Screener	Demographics (age, gender identity, race, ethnicity, student status)
Pre-Intervention Assessment	Demographics Information Questionnaire Vancouver Index of Acculturation African American Acculturation Scale Racial Microaggression Scale Depression, Anxiety, and Stress Scale Life Events Checklist Posttraumatic Stress Disorder Checklist – DSM-5
Writing Session 1	Pre-Writing PANAS Writing Prompt 1 Post-Writing PANAS Assessment of Anxiety and Depression SPRINT Adaptation Evaluation Form 1
Writing Session 2	Pre-Writing PANAS Writing Prompt 2 Post-Writing PANAS Assessment of Anxiety and Depression SPRINT Adaptation Evaluation Form 2
Writing Session 3 & Post-Intervention Assessment	Pre-Writing PANAS Writing Prompt 3 Post-Writing PANAS Adaptation Evaluation Form 3 Depression, Anxiety, and Stress Scale Posttraumatic Stress Disorder Checklist – DSM-5
Exit Interview	Exit Interview Questionnaire

Note. Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), Positive and Negative Affect Scale (PANAS), Short Post-Traumatic Stress Disorder Rating Interview (SPRINT).

Table 3*Time Spent Writing within each session*

	<i>N</i>	Mean	SD	Min	Median	Max
Time Spent Writing						
Writing Session 1	18	15.0	6.3	6.5	14.8	25.4
Writing Session 2	18	22.6	21.6	4.3	16.0	83.0
Writing Session 3	18	13.5	8.4	0.1	12.9	29.8

Note. All statistics described are in minutes. Time spent writing describes time between first and

last click on the expressive writing prompt page.

Table 4*Measures of Acculturation, Microaggressions, and Discrimination*

	<i>n</i>	Measure Range	Observed Range	Mean	SD
VIA					
Dominant	17	1.0 – 9.0	4.0 – 8.4	6.2	1.3
Non-Dominant	17	1.0 – 9.0	4.5 – 9.0	6.6	1.3
AAAS-R					
Preference for African American Things	6	1.0 – 7.0	2.2 – 6.6	4.9	1.6
Interracial Attitudes	6	1.0 – 7.0	3.4 – 6.3	4.7	1.3
Family Practices	6	1.0 – 7.0	1.0 – 7.0	3.8	2.3
Health Beliefs and Practices	6	1.0 – 7.0	2.6 – 6.0	4.8	1.3
Cultural Superstitions	6	1.0 – 7.0	1.3 – 7.0	4.3	2.5
Racial Segregation	6	1.0 – 7.0	1.0 – 5.5	3.7	1.9
Family Values	6	1.0 – 7.0	3.5 – 6.5	4.8	1.1
Religious Beliefs and Practices	6	1.0 – 7.0	4.3 – 6.0	4.9	0.6
Total	6	1.0 – 7.0	3.7 – 6.0	4.6	0.8
RMAS					
Not Belonging/ Being Treated as a Foreigner					
Frequency	18	0.0 – 3.0	0.0 – 3.0	1.2	1.0
Distress ^a	13	0.0 – 3.0	0.0 – 2.0	0.9	0.7
Criminality					
Frequency	18	0.0 – 3.0	0.0 – 1.8	0.5	0.6
Distress ^a	11	0.0 – 3.0	0.5 – 2.7	1.5	0.7
Sexualization					
Frequency	18	0.0 – 3.0	0.0 – 2.7	0.7	0.8
Distress ^a	11	0.0 – 3.0	0.0 – 2.3	1.4	0.7
Low Achieving					
Frequency	18	0.0 – 3.0	0.0 – 2.2	1.1	0.7
Distress ^a	16	0.0 – 3.0	0.5 – 2.9	1.9	0.7
Invisibility					
Frequency	18	0.0 – 3.0	0.0 – 1.3	0.6	0.4
Distress ^a	16	0.0 – 3.0	0.5 – 3.0	1.8	0.7
Environmental Discrimination					
Frequency	18	0.0 – 3.0	0.8 – 3.0	2.1	0.5
Distress ^a	18	0.0 – 3.0	0.0 – 2.8	1.1	0.8

Note. Vancouver Index of Acculturation (VIA) ranges from *Strongly disagree (1)* to *Strongly agree (9)*; African American Acculturation Scale – Revised (AAAS-R) from *I totally*

disagree/Not true at all (1) to I strongly agree/Absolutely true (7).; Racial Microaggression Scale (RMAS) frequency scale is *Never (0) A little/rarely (1), Sometimes/a moderate amount (2), and Often/frequently (3)*; RMAS distress scale includes *Not at all (0), A little (1), A moderate level (2), and A high level (3)*. Descriptives are based on subscale averages.

^a Participants only saw this question if they indicated a frequency of at least *A little/rarely (1)*.

Table 5*Frequency for Everyday Discrimination Scale Responses (N = 18)*

	Never <i>n</i> (%)	Less than once a year <i>n</i> (%)	A few times a year <i>n</i> (%)	A few times a month <i>n</i> (%)	At least once a week <i>n</i> (%)	Almost everyday <i>n</i> (%)	Always <i>n</i> (%)
“You are treated with less courtesy than other people are.”	3 (16.7)	1 (5.6)	10 (55.6)	4 (22.2)	0 (0.0)	0 (0.0)	0 (0.0)
“You are treated with less respect than other people are.”	4 (22.2)	4 (22.2)	8 (44.4)	1 (5.6)	1 (5.6)	0 (0.0)	0 (0.0)
“You receive poorer service than other people at restaurants or stores.”	7 (38.9)	7 (38.9)	3 (16.7)	1 (5.6)	0 (0.0)	0 (0.0)	0 (0.0)
“People act as if they think you are not smart.”	2 (11.1)	7 (38.9)	3 (16.7)	4 (22.2)	1 (5.6)	1 (5.6)	0 (0.0)
“People act as if they are afraid of you.”	12 (66.7)	1 (5.6)	4 (22.2)	1 (5.6)	0 (0.0)	0 (0.0)	0 (0.0)
“People act as if they think you are dishonest.”	14 (77.8)	3 (16.7)	0 (0.0)	1 (5.6)	0 (0.0)	0 (0.0)	0 (0.0)
“People act as if they’re better than you are.”	2 (11.1)	5 (27.8)	7 (38.9)	1 (5.6)	2 (11.1)	1 (5.6)	0 (0.0)
“You are called names or insulted.”	11 (61.1)	4 (22.2)	2 (11.1)	1 (5.6)	0 (0.0)	0 (0.0)	0 (0.0)
“You are threatened or harassed.”	13 (72.2)	3 (16.7)	2 (11.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Table 6*Clinical Outcome Measures (N =18)*

	Measure Range	Observed Range	Pre-Session		Writing Session 1		Writing Session 2				Writing Session 3						
			M	SD	M	SD	Pre-Writing		Post-Writing		Pre-Writing		Post-Writing				
							M	SD	M	SD	M	SD	M	SD			
PANAS																	
Positive Affect	10-50	12-48	-	-	29.3	8.6	24.3	9.6	20.4	7.8	25.2	10.2	23.0	9.6	22.4	10.3	
Negative Affect	10-50	10-34	-	-	15.7	16.1	18.8	6.4	14.3	5.7	14.2	5.5	14.1	5.5	16.1	6.4	
Anxiety	0-8	0-6	-	-	-	-	2.0	1.8	-	-	0.9	1.6	-	-	1.3	1.7	
Depression	0-8	0-8	-	-	-	-	3.1	2.4	-	-	1.6	1.6	-	-	2.3	2.4	
SPRINT	0-32	1-23	-	-	-	-	11.8	6.4	-	-	7.3	5.9	-	-	9.7	6.7	
DASS																	
Depression	0-21	0-16	6.5	4.7	-	-	-	-	-	-	-	-	-	-	4.6	4.3	
Anxiety	0-21	0-13	5.2	3.9	-	-	-	-	-	-	-	-	-	-	3.0	3.8	
Stress	0-21	0-16	7.9	4.8	-	-	-	-	-	-	-	-	-	-	6.2	5.0	
Total	0-63	0-42	19.6	11.7	-	-	-	-	-	-	-	-	-	-	13.8	12.2	
Distress																	
PCL-5 ^a	0-80	0-48	14.0	17.9	-	-	-	-	-	-	-	-	-	-	12.7	12.2	

Note. Positive and Negative Affect Scale (PANAS), Short Post-Traumatic Stress Disorder Rating Interview (SPRINT), Depression

Anxiety and Stress Scale (DASS), Posttraumatic Stress Disorder Checklist – Diagnostic and Statistics Manual of Mental Disorders,

Fifth Edition (PCL-5). Cells with a ‘-’ reflect data that were not collected.

^a 11 participant’s scores were removed as their traumatic event did not meet DSM-5 Criterion A. Reported statistics are based $n = 7$.

Table 7*Acceptance and Approval Quantitative Measures*

Acceptance Measures	Writing	Writing	Writing
	Session 1	Session 2	Session 3
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Did you consider writing about an ethnically/racially based stressor?			
Yes	4 (22.2)	16 (88.9)	6 (33.3)
No	14 (77.8)	2 (11.1)	12 (66.7)
How much do you like this activity as a whole?			
Not at all	-	-	1 (5.6)
Slightly	-	-	1 (5.6)
Somewhat	-	-	5 (27.8)
Quite a bit	-	-	7 (38.9)
Very much	-	-	4 (22.2)
How much did the activity feel relevant to your experience?			
Not at all	-	-	1 (5.6)
Slightly	-	-	2 (11.1)
Somewhat	-	-	3 (16.7)
Quite a bit	-	-	6 (33.3)
Very much	-	-	6 (33.3)
How much do you feel like this activity helped you?			
Not at all	-	-	2 (11.1)
Slightly	-	-	3 (16.7)
Somewhat	-	-	5 (27.8)
Quite a bit	-	-	3 (16.7)
Very much	-	-	4 (22.2)
How much do you feel like this writing activity helped you?			
Not at all	1 (5.6)	2 (11.1)	2 (11.1)
Slightly	5 (27.8)	1 (5.6)	3 (16.7)
Somewhat	7 (38.9)	6 (33.3)	6 (33.3)
Quite a bit	2 (11.1)	6 (33.3)	3 (16.7)
Very much	3 (16.7)	3 (16.7)	3 (16.7)

(Cont.)

Acceptance Measures	Writing	Writing	Writing
	Session 1	Session 2	Session 3
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
How much did you like how this session's writing prompt was worded?			
Not at all	1 (5.6)	1 (5.6)	-
Slightly	1 (5.6)	3 (16.7)	-
Somewhat	5 (27.8)	4 (22.2)	-
Quite a bit	4 (27.8)	3 (16.7)	-
Very much	7 (38.9)	7 (38.9)	-
Prompt Preference			
General	-	4 (22.2)	6 (33.3)
Microaggression Specific	-	14 (77.8)	12 (66.7)
If you had to choose one prompt for all three writing sessions, which would it be?			
General	-	-	7 (38.9)
Microaggression Specific	-	-	11 (61.1)
Would you recommend we keep the wording of this session's prompt the same, or do you think we should make changes?			
Keep it the same	-	15 (83.3)	14 (77.8)
Make changes	-	3 (16.7)	4 (22.2)
How fair do you feel the compensation was?			
Not at all	-	-	0 (0.0)
Slightly	-	-	1 (5.6)
Somewhat	-	-	4 (22.2)
Quite a bit	-	-	3 (16.7)
Very much	-	-	10 (55.6)
How much did you like the online format of this activity?			
Somewhat	-	-	2 (11.1)
Quite a bit	-	-	5 (27.8)
Very much	-	-	11 (61.1)
Format preference			
Online	-	-	16 (88.9)
In-person with another individual	-	-	2 (11.1)
How much did you like participating in the intervention with the device you used?			
Not at all	-	-	0 (0.0)
Slightly	-	-	2 (11.1)
Somewhat	-	-	2 (11.1)
Quite a bit	-	-	3 (16.7)
Very much	-	-	11 (61.1)

(Cont.)

Acceptance Measures	Writing	Writing	Writing
	Session 1	Session 2	Session 3
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
How much is this an activity you'd like to do/want?			
Not at all	-	-	1 (5.6)
Slightly	-	-	6 (33.3)
Somewhat	-	-	2 (11.1)
Quite a bit	-	-	5 (27.8)
Very much	-	-	4 (22.2)

Table 8

Qualitative Themes in response to “What made you decide to write about an ethnically or racially based stressor?” (N=4) or “What made you decide not to write about an ethnically or racially based stressor?” (n=14) at the end of session 1 (general prompt)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n (%)</i>
Wrote about an ethnically or racially based				Statements under this code described why participants did write about a racial/ethnic stressor.	4 (22)
	No reason/ Unintentional			Statements under this code imply that discussing racial/ethnic stressors "just happened" or was entwined into the stressor unintentionally. These statements may also indicate that the racial or ethnic stressor is the most stressful experience.	2 (11)
	Identity influenced world view			Statements indicate that the participant's world view/interaction with others consistently relates to or is colored by their ethnicity/race.	1 (6)
	Demand characteristics			Statements under this code implies that the participant wrote about a racial/ethnic stressor because of the study's title or description.	1 (6)
Did not write about an ethnically or racially based stressor				Statements under this code described why participants did not write about a racial/ethnic stressor.	14 (78)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n</i> (%)
	More stressful experience			Statements under this code indicate a stressor that was worse or had a bigger impact on the participant than a stressor related to their identity. Or that an ethnic/race-based stressor didn't come to mind.	14 (78)
		Normalized discrimination		Statements under this code reflect an experience with discrimination that feels normalized and no longer is associated with distress. For example, "I've just grown used to" "never experience personal racial or ethnic stressors that are harmful enough" "get pushed aside."	9 (50)
			Unaware of option	Statements under this code didn't write about racial/ethnic stressors because they didn't think it was an option or the lack of "better phrasing" in the general prompt.	2 (11)
		No microaggressions experienced		Statements under this code indicate not talking about a racial/ethnic stressor because they hadn't faced any.	1 (6)

Note. Participants were only administered separate questions based on whether they indicated that they did or did not write about a racial or ethnically based stressor following Writing Session 1 and the general prompt. Percentages are based on the whole sample ($N = 18$).

Table 9

Qualitative Themes in response to “How or why do you feel this activity did or did not help you?” administered at the end of each

Writing Session (N=18)

Theme	Subtheme	Description	Writing	Writing	Writing
			Session 1	Session 2	Session 3
			<i>n (%)</i>	<i>n (%)</i>	<i>n (%)</i>
Emotional processing		Statements under this code relay that the intervention is "therapeutic" or aids in processing or providing clarity on emotions.	12 (67)	6 (33)	9 (50)
	Empowering/ Validating	Statements under this code indicate empowerment or validation coming from their engagement with the intervention.	2 (11)	1 (6)	2 (11)
Express experiences		Statements under this code indicate an ability to "put into words" the participants experience with the stressors.	5 (28)	5 (28)	4 (22)
	Gauge progress	Statements under this code reflect using the intervention to estimate the stage of processing or progress in managing distress related to the stressful event discussed.	2 (11)	0 (0)	2 (11)
Recall		Statements under this code indicate the intervention helped because it helped them recall an event/stressor.	2 (11)	2 (11)	1 (6)
Sharing experience		Statements under this code indicate the aspect of others reading their writing or knowing that the writing may be shared provided some benefit.	3 (17)	1 (6)	0 (0)
Education on microaggressions		Statements under this code indicate that learning what microaggressions are, improving identification of microaggressions, or creating a label for the experience of microaggressions made the intervention helpful.	0 (0)	2 (11)	0 (0)
Didn't help		Statements under this code indicate that the intervention was not helpful.	1 (6)	3 (17)	2 (11)

(Cont.)

Theme	Subtheme	Description	Writing	Writing	Writing
			Session 1	Session 2	Session 3
			<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Distressing but helpful		Statements under this code indicate that the activity was helpful in that it was valuable to write about the situation, but the experience provided more stress or distress than relief at this time.	0 (0)	1 (6)	1 (6)

Note. All 18 participants were administered this question; however, not all presentations of the question resulted in a response.

Table 10

Qualitative Themes in response to “How would you change the prompt?” at the end of session 2 (microaggression prompt, N=3) and three (general prompt; n=4)

Theme	Description	Writing Session 2	Writing Session 3
		<i>n^a</i> (%)	<i>n^b</i> (%)
Microaggression definition	Statements under this code refer to the wording of the microaggressions prompt and requesting modification. For example, providing more detail or examples and removing the comparison to papercuts.	3 (17)	0 (0)
Richer, more empathetic prompts	Statements under this code indicate a preference for a more descriptive/directive prompt across both prompt types. This included recommendations to make the prompts "more empathetic" or providing more detailed, directed, or emotion focused prompts.	0 (0)	4 (22)

Note. Participants were only administered this prompt if they indicated that they would recommend changes to the prompt presented in this session. Percentages are based on the whole sample ($N = 18$).

^a Out of 3 administered this question.

^b Out of 4 administered this question.

Table 11*Qualitative Themes from spontaneously provided feedback during Exit Interviews (n=16)*

Theme	Subtheme	Child Subtheme	Description	n (%)
General Feedback	Did Help		Statements under this code provide general feedback on the intervention as a whole.	16 (100)
			Statements under this code indicate that the intervention was helpful.	15 (94)
		Emotional Processing	Statements under this code relay that the intervention is "therapeutic" or aids in processing or providing clarity on emotions.	12 (75)
		Express Experiences	Statements under this code indicate the intervention allowed participants an ability to "put into words" their experiences with the stressors through this intervention.	9 (56)
		Distressed but Helpful	Statements under this code indicate that the activity was helpful in that it was valuable to write about the situation, but the experience provided more stress or distress than relief at this time.	5 (31)
		Education on Microaggressions	Statements under this code indicate that learning what microaggressions are, improving identification of microaggressions, or creating a label for the experience of microaggressions made the intervention helpful.	2 (13)
		Didn't Help	Statements under this code indicate that the intervention was not helpful.	3 (19)
		Unpleasant	Statements under this code indicate aspects of the intervention that were unpleasant. Some participants identified unpleasant aspects of the intervention including thinking about the stressor during the writing activity.	6 (38)

(Cont.)

Theme	Subtheme	Child Subtheme	Description	<i>n</i> (%)
Prompts			Statements under this code discuss the prompts.	16 (100)
	Liked Both		Statements under this code indicated that they liked both prompts.	4 (25)
	Prompt 2		Statements under this code discuss prompt 2, the microaggression prompt.	13 (81)
		Prompt 2 Preference	Statements under this code indicate that the participant preferred prompt 2 or liked it more than prompt 1, the general prompt.	9 (56)
		Microaggression Definition	Statements under this code refer to the wording of the microaggressions prompt and requesting modification. For example, providing more detail or examples and removing the comparison to papercuts.	4 (25)
		Prompt 1	Statements under this code discuss prompt 1, the general prompt.	12 (75)
		More Detailed Prompt	Statements under this code requested more information, direction, or richer prompt descriptions. The statements may further indicate that prompt 1, the general prompt, is too broad.	9 (56)
		Prompt 1 Preference	Statements under this code indicate that the participant preferred prompt 1 or liked it more than prompt 2, the microaggression prompt.	3 (19)
		Generally More Specific	Statements under this code indicate a preference for more detailed prompts across both prompts (i.e., general prompt and microaggression specific prompt). For example, questions that ask more specifically about things such as stressors/microaggressions that are witnessed, experienced, parental, or generational.	8 (50)
		New Prompts Each Session	Statements under this code request new prompts each session.	6 (38)
Format			Statements under this code indicate that the participant discussed the format. This may include the online format, the personalized emails, or some other aspect.	16 (100)
	Liked		Statements under this code indicate what participants liked the format.	10 (63)

(Cont.)

Theme	Subtheme	Child Subtheme	Description	<i>n</i> (%)
	Sessions		Statements under this code discussed a preference for the number of sessions or time between sessions.	16 (100)
		Timeframe Liked	Statements under this code preferred the 24 hrs between sessions.	10 (63)
		Timeframe Disliked	Statements under this code indicate that the 'deadline' or timeframe of 24 hrs between sessions was disliked or unpleasant.	2 (13)
		More Sessions	Statements under this code request more sessions.	9 (56)
		No Change to Session Number	Statements under this code indicate a preference for the three sessions only; no more, no less.	8 (50)
	Disliked Measures		Statements under this code indicate that the participant disliked the measures associated with the writing sessions. This may include the feedback or the PANAS.	8 (50)
	Measures		Statements under this code indicated that the measures administered with the writing activity (i.e., the PANAS) was helpful.	4 (25)
	Online		Statements under this code indicate a preference for the online format.	12 (75)
	Text Messages		Statements under this code discuss receiving the link over text message.	4 (25)
		Text Messages Preferred	Statements under this code indicate a preference for the link to be sent via text message.	3 (19)
		Hard to Move to Computer	Statements under this code indicate that receiving the link via text message was hard to translate over to another non-cellular device.	2 (13)
	Additional Resources		Statements under this code indicate a request for additional resources throughout the writing sessions.	4 (25)
	Feedback		Statements under this code indicate a desire for feedback or the option for communicating with another individual about the writing.	4 (25)

(Cont.)

Theme	Subtheme	Child Subtheme	Description	<i>n</i> (%)
	Anonymity		Statements under this code indicate that the anonymity of the writing was beneficial or attractive.	1 (6)

Note. Percentages based on $n = 16$ completed interviews.

Table 12

Qualitative Themes in response to “What are your opinions on the necessity of an intervention for coping with microaggressions?” administered at each Exit Interview (n=16)

Theme	Subtheme	Description	<i>n (%)</i>
Necessary		Statements under this code found an intervention for microaggressions necessary or warranted.	16 (100)
	Helpful	Statements under this code indicated the microaggression intervention as necessary because the microaggression specific prompt was the most insightful or provided the most benefit.	16 (100)
	For Other Minoritized Identities	Statements under this code indicate that the intervention is necessary and may be expanded to include other minoritized identities (i.e., gender, sexual minorities)	2 (13)
Unnecessary		Statements under this code found an intervention for microaggressions unnecessary or unwarranted because the participants identified experiences with discrimination as feeling normalized and no longer associated with distress. For example, "I've just grown used to" "never experience personal racial or ethnic stressors that are harmful enough" "get pushed aside."	2 (13)

Note. Percentages based on *n* = 16 completed interviews.

Table 13

Qualitative Themes in response to “Would you recommend this activity to a friend?” and “What would you say to your friend if you were to recommend it?” administered at each Exit Interview (n=16)

Theme	Subtheme	Description	n (%)
Advertise		Statements under this code indicate ways of recommending the intervention.	16 (100)
	Highlight Positive Impact	Statements under this code recommend the intervention to friends through reflection on the positive impact the intervention can have.	16 (100)
	Accessible	Statements under this code indicate that the participant would recommend this intervention by discussing the accessibility, portability, or ease of access of the intervention.	4 (25)
	Little Commitment	Statements under this code reflect that when recommending the intervention to others participants would mention the low commitment of time/resources.	4 (25)

Note. Percentages based on $n = 16$ completed interviews.

Table 14*Qualitative Themes in response to “Would you use it again?” and “How often would you use it?” administered at each Exit Interview**(n=16)*

Theme	Subtheme	Description	n (%)
Yes		Statements under this code indicate they would re-engage with the intervention if that was an option in the future.	13 (81)
	When Experiences a Stressor	Statements under this code indicate they would re-engage in the intervention whenever they experienced a stressor of any kind.	10 (63)
	Less Frequently	Statements under this code indicate they would re-engage on a less frequent basis as compared to the three-days in a row.	4 (25)
Depends on Format Preference		Statements under this code indicate that they would reengage in the intervention but prefer to engage in a similar intervention on paper or a similar intervention that included feedback or more specific prompts.	6 (38)

Note. Percentages based on $n = 16$ completed interviews.

Table 15*LIWC-22 Findings based on expressive writing text across sessions (N=18).*

LIWC-22 Variable Names	Variable Exemplars	Range	Observed Range	Writing Session 1	Writing Session 2	Writing Session 3
				<i>M</i> (SD)	<i>M</i> (SD)	<i>M</i> (SD)
Positive Tone	good, well, new, love	0 – 100%	0.0 – 5.5%	1.7% (1.2%)	1.9% (1.8%)	1.7% (1.1%)
Negative Tone	bad, wrong, too much, hate	0 – 100%	0.0 – 16.9%	3.6% (2.5%)	1.9% (1.1%)	3.6% (3.6%)
Positive Emotion	good, love, happy, hope	0 – 100%	0.0 – 3.5%	0.7% (0.8%)	0.7% (0.8%)	0.4% (0.5%)
Negative Emotion	bad, hate, hurt, tired	0 – 100%	0.0 – 12.1%	2.8% (2.7%)	1.2% (1.1%)	2.4% (2.1%)
Anxiety	worry, fear, afraid, nervous	0 – 100%	0.0 – 4.6%	1.2% (1.3%)	0.2% (0.3%)	1.1% (0.8%)
Ethnicity	American, French, Chinese, Indian	0 – 100%	0.0 – 4.0%	0.1% (0.4%)	1.0% (1.2%)	0.3% (0.6%)

Note. Linguistic Inquiry and Writing Count (LIWC). Statistics reflect the percentage of total words in participants' expressive writing text related to a variable.

Table 16*Qualitative themes of expressive writing texts (N=18)*

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session	Writing Session	Writing Session
					1	2	3
					<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Racial/Ethnic stressor/trauma				The statements under this code include stressors or traumas that were discussed in the writing that were related to a participant's racial or ethnic identity. These include but are not limited to microaggressions and experiences of discrimination, prejudice, and racism.	7 (39)	16 (89)	4 (22)
	Microaggression			Statements under this category include "subtle, innocuous, preconscious, or unconscious degradations, and putdowns" (Pierce 1995, p.218) that occur in daily verbal, nonverbal, or environmental interactions.	1 (6)	15 (83)	2 (11)
		Micro-assaults		Statements in this code include verbal or nonverbal attacks that intend to harm a minoritized individual (Sue et al. 2007).	0 (0)	0 (0)	1 (6)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session	Writing Session	Writing Session
					1	2	3
					<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
		Micro-insults		Statements under this code include verbal or non-'verbal actions that convey rudeness, insensitivity, or are meant to demean based on an individuals minoritized identity (Sue et al., 2007).	0 (0)	13 (72)	1 (6)
			Country of origin	The source of such stressor relates to the participants country of origin.	0 (0)	4 (32)	0 (0)
			Race/ Ethnicity	The source of such stressor relates to the participants racial/ethnic background.	0 (0)	11 (61)	1 (6)
		Micro- invalidations		Statements under this code include statements made to exclude, negate, or ignore an individual's thoughts, feelings, or experiences as a minoritized individual (Sue et al., 2007).	1 (6)	7 (39)	1 (6)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n (%)</i>	Writing Session 2 <i>n (%)</i>	Writing Session 3 <i>n (%)</i>
			Country of origin	The source of such stressor relates to the participants country of origin.	1 (6)	2 (11)	0 (0)
			Race/ Ethnicity	The source of such stressor relates to the participants racial/ethnic background.	0 (0)	6 (33)	1 (6)
	Structural			Statements relate to stressors that discuss cultural values within a society that become normalized and considered "the way things are" that relate to the treatment of minorized individuals. This may be an explicitly experienced discrimination or internalized sentiments.	3 (17)	4 (22)	1 (6)
	Immigration			Statements under this code relate to stressors associated with immigration. This may include the process of immigration and acculturation.	3 (17)	0 (0)	1 (6)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n</i> (%)	Writing Session 2 <i>n</i> (%)	Writing Session 3 <i>n</i> (%)
	Institutionalized discriminatory experience			Statements relate to stressors that discuss policies or behaviors within nonspecific organizations or institutions that intend on discriminating against minoritized individuals. This may be an explicitly experienced discrimination or internalized sentiments.	1 (6)	1 (6)	0 (0)
Other identity stressor				Statements under this code involve stressors that relate or are attributed to an aspect of the participants identity that is not encompassed by race/ethnicity.	2 (11)	4 (22)	1 (6)
Non-identity related stressor				The statements under this code include stressors that were discussed in the writing that were not related to a participant's identity.	16 (89)	0 (0)	17 (94)
	Interpersonal stress			Statements under this code relate to stressors that stem from or associated with relationships or stressors related to individuals in the participant's social circle.	11 (61)	0 (0)	13 (72)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n</i> (%)	Writing Session 2 <i>n</i> (%)	Writing Session 3 <i>n</i> (%)
		Familial stress		Statements under this code relate to stressors related to family members or the family dynamic. This may include but is not limited to stressors in the family life that impact the participant or discord among family members.	6 (33)	0 (0)	9 (50)
		Friendship stress		Statements under this code relate to stressors related to friendships. This may include but is not limited to friendship discord, friendship dissolution, or stressors in the friend's life that impact the participant.	2 (11)	0 (0)	0 (0)
		Partner Stress		Statements under this code relate to stressors related to partnerships. This may include but is not limited to discord within the relationship, dissolution of relationships, or stressors in the partner's life that impact the participant.	2 (11)	0 (0)	2 (11)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session	Writing Session	Writing Session
					1	2	3
					<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
		Roommate stress		Statements under this code relate to stressors related to roommates. This may include but is not limited to discord with roommates, stressors within the participants living situation, or stressors in the roommate's life that impact the participant.	1 (6)	0 (0)	1 (6)
	Academic			Statements under this code relate to stressors associated with the academic setting. This may include but is not limited to concerns about acceptances, grades, course completion, and more.	4 (22)	0 (0)	6 (33)
	Mental health			Statements under this code relate to stressors associated with mental health difficulties (i.e., anxiety, depression, general mental health concerns).	4 (22)	0 (0)	2 (11)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n (%)</i>	Writing Session 2 <i>n (%)</i>	Writing Session 3 <i>n (%)</i>
	Illness or injury			Statements under this code relate to stressors associated with significant illness or injury (i.e., seizures, cancer).	2 (11)	0 (0)	2 (11)
	Sudden death			The statements under this code relate to discussion of a sudden or unexpected death. This code also includes mentions of suicide and suicidal ideation.	2 (11)	0 (0)	2 (11)
		Suicide		The statements under this code relate to suicide. This may include learning about the completed suicide or suicidal ideation of another individual or suicidal ideation experienced by the participant. Such experiences may be described as experiencing suicidal ideation, learning about the ideation of another individual, or being closely involved with an individual who is ideating.	2 (11)	0 (0)	1 (6)

(Cont.)

Theme	Subtheme	Child Subtheme	Grandchild Subtheme	Description	Writing Session 1 <i>n (%)</i>	Writing Session 2 <i>n (%)</i>	Writing Session 3 <i>n (%)</i>
	Accident			The statements under this code relate to transportation or serious accidents at work, home, or during recreational activity.	2 (11)	0 (0)	1 (6)
	Financial			Statements under this code relate to financial stressors.	2 (11)	0 (0)	1 (6)