Impact of online racism on psychological distress and alcohol use severity: Testing ethnic-racial socialization and silence about race as moderators

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ABSTRACT

Given the psychological deficits associated with online racism, we examined whether ethnic-racial socialization (cultural socialization, promotion of mistrust, and preparation for racial bias) and silence about race would moderate the impact of online racism on psychological distress and alcohol use severity by conducting latent moderated structural equation modeling with data collected from 380 racial/ethnic minority young adults (Mage = 32.25, SD = 11.28). Online racism was significantly and positively related to distress and alcohol use severity. Promotion of mistrust and preparation for bias moderated the link between online-mediated exposure to racist reality and psychological distress such that this relationship was significant at low to mean levels of these messages but not at high levels; however, individuals reporting a high frequency of messages sustained higher psychological distress. Promotion of mistrust and silence about race exacerbated alcohol use associated with racism in personal online interactions. Silence about race moderated alcohol use associated with vicarious exposure to online racism such that the link was significant at high levels of silence messages but not at low to mean levels. Findings seem unconvincing of ethnic-racial socialization as a protective function and supportive of silence about race as a detrimental socialization practice in dealing with online racism.

Impact of Online Racism on Psychological Distress and Alcohol Use Severity: Test of Ethnic-Racial Socialization and Silence about Race as Moderators.

Racism is an everyday reality resulting in maltreatment, unjust burden, and discrimination for people of color in the United States (U.S.). Racism is deeply rooted in a system of dominance and power that creates White societal privileges and discriminates against racial/ethnic minority populations who are viewed as inferior, deviant, and undesirable. Racism affects people of color at the individual, group, and institutional/systemic levels (Harrell, 2000). The individual (e.g., calling someone a racial slur) and group (e.g., negatively stereotyping an entire racial group) experiences are oftentimes confined to interpersonal contexts in blatant and subtle forms. However, institutional/systemic forms of racism, such as policies that provide people of color less access to societal goods, services, and opportunities, are more overarching, insidious, and debilitating across multiple life domains among people of color. Whether direct or indirect, individual or systemic, the psychological, physical, and social costs of racism for people of color have been well documented (Pascoe & Smart Richman, 2009).

In today’s digital era, racism persists more visibly, commonly, and explicitly on the internet (Keum, 2017; Keum & Miller, 2017, 2018a,b). In fact, the internet has been dubbed as a “safe haven” (Van Blarcum, 2005) for perpetrators to express racist views as they take advantage of online anonymity and “digital freedom of speech” to freely disclose their racist ideologies for the public to witness without fear of consequence and direct responsibility. Keum and Miller (2017) provided empirical evidence that online racism can be encountered in three ways: (a) via personal encounters of racial cyber-aggression from others on the internet, (b) vicariously witnessing racial cyber-aggression among others on the Internet, and (c) via consumption of online content that elucidates the racist reality in society (e.g., racist incidents happening in another geographic location or online information illuminating various systemic racial inequalities). Growing research has demonstrated that online racism is significantly linked to poorer mental health among adolescents and adults (Keum & Miller, 2017; Tynes, Giang, Williams, & Thompson, 2008; Umana-Taylor, Tynes, Toomey, Williams, & Mitchell, 2015; Pieterse, Nicolas, & Monachino, 2017). Even after accounting for offline experiences of racism, Keum and Miller (2017) found that online racism contributed unique significant variances to psychological distress among people who reported experiencing online racism.
In response to the emerging psychological deficits associated with online racism, it is imperative to examine protective factors that can buffer the harmful consequences. Moreover, given the unique distress stemming from online racism compared to offline accounts of racism (Keum & Miller, 2017), and the way that racism is now conveniently encountered on the Internet (Keum, 2017; Keum & Miller, 2018a,b), it is important to examine whether existing buffers against costs of racism also apply to online racism. Notably, ethnic-racial socialization, a process through which individuals learn about race during their developmental period, has been shown to have some protective roles against the harmful consequences of racism (Wang, Henry, Smith, Huguley, & Guo, 2020). Thus, we tested the protective role of ethnic-racial socialization (including silence about race) in mitigating the psychological distress and alcohol use severity associated with online racism (Keum & Cano, in press).

1. Ethnic-racial socialization

In the past few decades, there is increasing scholarship on not only the effects of racial discrimination on psychological outcomes but also what factors may protect ethnic minorities from the deleterious consequences of racism. From an ecological theoretical framework (Bronfenbrenner, 1979), the microsystem may be one system that may interact and push back against larger, macrosystem messages in the media. For example, in the microsystem, parental messages may be especially critical given that attachment to parents has a lasting influence on an internal working model of viewing the self as lovable and worthy (Kenny & Sirin, 2006). Emerging research in the past few decades has focused on how parents actively promote and send messages about race, also known as ‘ethnic-racial socialization’ (E-RS). Although E-RS scholarship primarily developed to elucidate the way in which African American parents help their children cope in a racist society (e.g., Bowman & Howard, 1985), studies within the last decade have noted that parents from other racial/ethnic minority groups (e.g., Asian, Latinx) also transmit messages about race (e.g., Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009; Juang et al., 2018; Villegas-Gold & Tran, 2018). Although there are group differences (e.g., Juang, Shen, Kim, & Wang, 2016), given the shared experience of racial discrimination, racial/ethnic minority parents generally send measurable patterns of messages about race and racism to their children (Hughes et al., 2006). Depending on the nature of the messages received from their parents, particularly throughout childhood and adolescence, racial minority individuals may adhere to adaptive or maladaptive approaches to dealing with racism (Hughes et al., 2006).

E-RS has been operationalized as a multidimensional construct (Hughes et al., 2006), as parents send varying messages about race that may impact their children differently. Most commonly, Hughes et al. (2006) found that parents send direct and indirect information to their children including: (a) cultural socialization, or transmitting messages to be proud of their culture, (b) preparation for bias or messages that describe being aware that racial discrimination exists and how to cope with it, and (c) promotion of mistrust or helping children become more alert with trusting others. In addition, parents use strategies to orient their children to the White mainstream culture such as (d) egalitarianism/silence about race, or emphasis on the individual rather than racial/ethnic groups, and avoidance of racial conversations. Although it has not been commonplace for scholars to study silence about race as an explicit dimension of E-RS, we posit that messages deflecting conversations about race also impact people’s psychological functioning.

2. Ethnic-racial socialization as a buffer against racism

E-RS dimensions have been examined as potential buffers between racial discrimination and psychological functioning, but the findings have yielded mixed trends. Cultural socialization messages have been found to provide psychological benefits. For example, African American college students who reported receiving greater cultural socialization messages reported decreased psychological distress (Bynum, Burton, & Best, 2007). However, other scholars have found that cultural socialization is not protective against racism and its impact on psychological well-being and resilience with young adults (Brown and Tylka, 2011; Thai, Lyons, Lee, & Iwasaki, 2017). Yet, other studies have found evidence that cultural socialization may be protective against racism-related psychological distress with adolescent populations (e.g., Atkin, Yoo, & Yeh, 2019). In addition to distress, scholars have suggested that E-RS may be a useful protective tool against substance use (Neblett et al., 2010). In fact, an empirical study found that cultural socialization indirectly decreases substance use through stronger social bonds (Grindal, 2017). On the other hand, a more recent study showed that cultural socialization messages from parents were not protective against racial microaggressions and alcohol problems (Su et al., 2020). The mixed findings call for increased clarity on whether cultural socialization may act as a protective factor against racism and associated mental health costs and risky coping behaviors (e.g., alcohol use).

Similarly, scholarship on preparation for bias as a buffer seems to be mixed. Racial discrimination is associated with preparation for bias and in turn, engagement in coping strategies among Latina college students (Sanchez, Smith, & Adams, 2018). There is a dearth of research on whether preparation for bias is a protective factor with young adults; rather, most studies have examined it as a direct pathway to outcomes or as a protective function with youth. One study that used an emerging sample found that preparation for bias was not a significant moderator in the link between racism and self-esteem for Asian Americans (Thai et al., 2017). An additional study with Latina college students also found that messages to promote racial awareness also did not buffer against racism and mental health (Chavez & French, 2007). However, with African American youth, a moderate amount of preparation for bias buffered the relationship between perceived discrimination and self-esteem (Harris-Britt, Valrie, Kurtz-Costes, & Rowl, 2007).

Regarding promotion of mistrust, although parents may discuss such a strategy to socialize and protect their children against racism, the literature has generally demonstrated that it may rather exacerbate psychological costs. For example, parental messages about avoiding other racial/ethnic groups among African American college students were linked with lower social bonds, and in turn increased substance use (Grindal, 2017). On the other hand, Thai et al. (2017) found that with Asian American emerging adults, promotion of mistrust buffered the relationship between racial microaggressions and self-esteem. Other research demonstrated that messages promoting mistrust may only be detrimental when received from friends and not parental figures (Su et al., 2020). Hence, emerging studies have noted some nuanced discrepancies suggesting potential benefits.

In addition, scholars have suggested silence about race as another socialization strategy that parents use (Hughes et al., 2006), in which individuals are silenced or discouraged from race talk. Given that this approach may reflect racial evasiveness and notions that talking about race is impolite or troublesome (Sue, 2016), silence about race has been found to be the least common E-RS practice among African American parents (Caughey, Nettles, & Lima, 2011). Although there is a dearth of literature on silence about race, we believe that it is important to examine this aspect given the potentially detrimental consequences of the denial of race and racism. Without explicit discussions about race, it becomes difficult to name and process racism (Harries, 2014). Such discouragement may be especially problematic as it may lead to individuals internalizing the impact of racism. Internalized racism, or negative beliefs about one’s own racial/ethnic group, has been found to be associated with greater psychological distress (Choi, Israel, & Maeda, 2017; Mouzon & McLean, 2017).

3. The present study

Despite the growing evidence on the benefits of E-RS, there are no
known studies examining whether E-RS would also sustain its protective roles against online racism and negative mental health outcomes (Keum & Miller, 2017). As E-RS from parents is found to counteract the effects of offline racism, it is possible that E-RS may have similar protective roles against online racism. However, given the mixed findings in the literature and lack of evidence on applicability in the online context, it would be difficult to predict that the protective roles of E-RS would simply transfer to the online context given the differences in how racism is experienced. Primarily, compared to offline racism, online racism features a more pervasive, permanent, and far-reaching presence on the internet (Keum & Miller, 2018a,b). Unlike interpersonal racism that may be experienced at a specific time point and physical place, people are now likely to be exposed to racist contents and interactions much more frequently on the internet. Online racist materials may also sustain permanency and evolve on the internet, often becoming “viralized” and “trending” for the masses to observe. Thus, there may be gaps in the E-RS messages in attending to such forms of racism on the internet. Furthermore, the internet has allowed various racist ideologies and structures to be more illuminated than the pre-internet era. As people take advantage of the online world to express their racist beliefs under a sense of “virtual courage” and guise of online anonymity (Keum & Miller, 2018a,b), people are now more likely to come across their acquaintances, friends, and family members unmasking and revealing their racist ideologies on the internet. As delineated in Keum and Miller’s (2017) study, people are also exposed to online content and information that illuminate the reality and persistence of systemic racism. Decades of research on racial discrimination has focused mostly on interpersonal forms (e.g., verbal abuse, physical violence, micro-aggressions; Priest et al., 2013), reflecting the notion that in offline contexts, the most likely source of discrimination is from other people. Although interpersonal racial discrimination is likely an individual-level reflection of a systemically racist society, it would be rare for victims to delineate and grapple with the implications of systemic racism in their day-to-day lives. On the internet, however, people can be readily and widely exposed to digital content and information that outline these implications and how systemic racism permeates in multiple domains of their lives. Compared to offline in-person experiences of racial discrimination, these aspects likely bring an additional sense of helplessness and fatigue in dealing with the persistence of racism especially since people face the gravity of systemic racism more directly through online exposures.

In conjunction, it is questionable whether E-RS would effectively prepare racial minority individuals to deal with these experiences as there is very little focus on systemic and institutional structures of race in its current operationalization. For example, recent studies have documented the difficulties in Black parents’ provision of E-RS to their children about the systemic realities of police brutality (Thomas & Blackmon, 2015; Whitaker & Snell, 2016). Although there is a lack of quantitative research on parental messages about systemic racism, one study found that parental E-RS messages buffered psychological costs associated with personal racial discrimination but not with institutional forms of racism (Saleem & Lambert, 2016). On the other hand, a more recent study demonstrated that parental E-RS messages predicted Black adolescents’ structural attributions for race achievement gaps, suggesting that these messages can nonetheless increase critical reflection on systemic racial inequality (Banales et al., 2020). Based on this study, there is a possibility that E-RS messages could help racial minority individuals develop consciousness and literacy around systemic racism. In turn, this could help them critically evaluate the impact of their online exposure to digital content and information on systemic racism.

Thus, we examined the moderating role of E-RS in the relationship between online racism and outcome variables of psychological distress and alcohol use. First, we tested our hypothesis that online racism will significantly predict psychological distress and alcohol use; greater perceived online racism would be associated with greater psychological distress and alcohol use. Second, we examined whether the E-RS factors (cultural socialization, promotion of mistrust, preparation for bias, and silence about race) would moderate this relationship. Our hypotheses regarding the moderation were largely exploratory given the lack of any E-RS scholarship related to online racism and the mixed findings on E-RS as protective factors against racism. However, we anticipated that cultural socialization would likely weaken the relationship as studies have generally reported psychological benefits (e.g., Bynum et al., 2007; Grindal, 2017). For preparation for bias and promotion of mistrust, we anticipated that significant moderation may not be detected, or that both aspects may even exacerbate the relationship given the mixed findings in the literature and some studies reporting exacerbated psychological deficits (Grindal, 2017; Sanchez et al., 2018). Although the literature is lacking, we anticipated that silence about race would strengthen the relationship and exacerbate the impact of online racism on psychological distress and alcohol use as silence around race or denial of racial matters have been linked to deleterious race-related outcomes (Harries, 2014; Sue, 2016).

4. Method

4.1. Participants

A total of 380 racial/ethnic minority adults (Mage = 34.25, SD = 11.28) with the majority of participants identifying as female (56.2%). Participants identified as African American (39.7%), Hispanic/Latino (20.8%), East Asian/Asian American (10.3%), Multiracial/Multinational (8.6%), South Asian/Asian American (6.6%), Southeast Asian/Asian American (6.1%), Native American Indian/Alaskan Native (4.7%), Middle Eastern (2.4%), Native Hawaiian/Pacific Islander (0.5%), and other (0.3%). The majority of our participants graduated with a 4-year college degree (38.6%), followed by some college with no degree (21.5%), 2-year college (14.7%), master’s degree (11.8%), high school diploma (8.7%), professional degree (MD/JD/etc.; 3.4%), doctoral degree (0.8%), and less than a high school diploma (0.5%). Our sample included a range of self-reported social classes including middle class (46.5%), working class (39.6%), upper-middle class (7.1%), lower class (6.3%), and upper class (0.5%). On average, participants reported spending 5.82 h (SD = 4.7) on the internet a day. In addition, most of the participants identified as liberal (34.2%) or moderate (38.7%), with a few conservatives (17.6%).

4.2. Procedure

The study was approved by the Institutional Review Board. Participants were invited to participate in an online survey consisting of study variable measures and demographic items hosted by Qualtrics. The survey was advertised through Amazon Mturk and participants were compensated $0.25 to $1.00 for their participation. The inclusion criteria for the study were: (1) 18 years old or older, (2) self-identify as a racial/ethnic minority, and (3) live in the U.S. Informed consent was provided and obtained from all participants. The survey took 15–20 min to complete and included two attention check items (e.g., ‘Please choose always’).

4.3. Measures

**Perceived Online Racism.** The Perceived Online Racism Scale (PORS) was used to assess people’s experiences of racist online interaction and exposure to racist online content and information (Keum & Miller, 2017). Participants rated how often they have experienced the online racism represented by each of the 30 items in the past six months on a five-point Likert-type scale ranging from 1 (Never) to 5 (All the time). The Personal Experience of Racial Cyber-Aggression subscale (PERCA) contains 14 items (scores ranging from 14 to 70) and represents the direct online racial aggression that individuals can face in their online interactions with others (e.g., ‘I have received racist insults regarding..."
my online profile (e.g., profile pictures, user ID”). The Vicarious Exposure to Racial Cyber-Aggression subscale (VERCA) contains five items (scores ranging from five to 25) and represents an observation of racial aggression experienced by other racial/ethnic minority users in their online interactions (e.g., “I have seen other racial/ethnic users being treated like a second-class citizen.”). The Online-Mediated Exposure to Racist Reality subscale (OMERR) contains 11 items (scores ranging from 11 to 55) and characterizes people’s exposure to online content (e.g., racist incidents happening in another location or online information illuminating various systemic racial inequalities) through which they may realize and witness the apparent reality of racism in society (e.g., “I have been informed about a viral/trending racist event happening elsewhere [e.g., in a different location].”). Keum and Miller (2017) established good initial psychometric properties for the PORS with excellent internal consistency estimates (s = .90–.95 across the subscales) and construct validity relationships with racism-related stress, psychological distress, and unjust views of society. The authors also tested the incremental validity of PORS by examining whether the scores of PORS would predict unique variance in mental health outcomes over and above an existing measure of racism. Measurement equivalence of PORS was also demonstrated across four racial/ethnic groups (Black, Asian, Latinx, Multiracial; Keum & Miller, 2017), gender (men, women), and age groups (younger to older adults; Keum & Miller, 2018). The Cronbach’s alphas for the current study were: PERCA = .96, OMERR = .92, VERCA = .89.

Ethnic-Racial Socialization. Ethnic-racial socialization was assessed using the adapted version of the Hughes and Johnson (2001) scale (Tran & Lee, 2010). The measure includes 5 items for cultural socialization (e.g., “Talked to you about important people or events in your group’s history”), 8 items for preparation for bias (e.g., “Talk to you about others trying to limit you because of race”), 3 items for promotion of mistrust (e.g., “Done or said things to keep you from trusting kids of other races”) and asked participants to rate how frequently they heard these messages throughout their lifetime from 1 (never) to 5 (often). Higher scores indicate that participants heard more racial socialization messages from their parents for each subscale. Internal consistency estimates for the three subscales were excellent (cultural socialization, s = .88; preparation for bias = .93; promotion of mistrust s = .87). Validity has been demonstrated through its correlations with self-esteem, ethnic identity, and racial discrimination (Brown & Ling, 2012; Hughes & Johnson, 2001).

Silence about Race. In addition, although researchers have found that silence about race is a socialization technique that parents use (Hughes et al., 2006), few studies have empirically tested the effects of these messages. We developed 5 items to reflect silence/dismissal about race with items: “How often did your parents dismiss your experience of racial discrimination?”, “How often did your parents discourage conversations about racial discrimination in the United States?”, “How often did your parents discourage you from exploring your racial heritage?”, “How often did your parents avoid discussing their own experience of racial discrimination with you?”, “How often did your parents tell you to avoid talking about race with other people?”. Similar to the Ethnic-Racial Socialization measure, participants were asked to rate how frequently they heard these messages throughout their lifetime from 1 (never) to 5 (often). We conducted an exploratory factor analysis using Mplus to examine the factor structure using Principal Axis Factoring. The internal consistency for the factor was excellent (s = .90). See Table 1 for EFA results.

Alcohol Use Severity. The 10-item Alcohol Use Disorders Identification Test (AUDIT; Saunders, Asland, Babor, De la Fuente, & Grant, 1993) was used to assess participants’ risky or harmful alcohol consumption as well as alcohol-dependence and abuse. The AUDIT items represent alcohol consumption (items 1–3), drinking behavior/dependence (items 4–7), and alcohol-related problems or consequences (items 8–10), and is scored by summing up all of the items. The first eight items are scored on a 5-point Likert scale ranging from 0 to 4, and the last two are scored on 3-point Likert-scale with values of 0, 2, and 4. The total scores range from 0 to 40, with higher scores indicating more severe alcohol problems. The AUDIT cutoff score for harmful use of alcohol is generally recommended as 8 (Babor et al., 2001), although for women a lower cutoff score of 5 or 6 is suggested (Reinert & Allen, 2007). The mean AUDIT score in our sample was 6.66 (SD = 7.96; Range 0–34), with nearly 30% (n = 121) endorsing harmful use of alcohol (score ≥ 8). The total score Cronbach’s alpha for the current study was .93.

Psychological Distress. We used the Kessler-6 (K6) to test for general psychological distress and has been previously used to identify those who are experiencing severe impairment in their lives (Kessler et al., 2003). The measure includes six questions and asks the frequency of psychological distress symptoms such as depression and anxiety in the past 30 days from 0 (none of the time) to 5 (all of the time). Items included how often they felt hopeless, so depressed that nothing could cheer them up, worthless, nervous, restless, or fidgety, and that everything was an effort. Higher scores indicate higher levels of psychological distress symptoms and scores could range from 6 to 30. The reliability estimate was excellent for the sample (α = .91) and the scale has been validated with racial/ethnic minorities (Byrd, 2012).

4.4. Data analysis

Prior to our latent moderation analyses, we conducted a confirmatory factor analysis using Mplus 7.11 to assess the measurement model that includes all of our study variables. The three PORS subscales (personal exposure to racial cyber-aggression (PERCA), vicarious exposure to racial cyber-aggression (VERCA), and online-mediated exposure to racist reality (OMERR)), the three parental ethnic-racial socialization subscales (preparation for bias (PB), cultural socialization (CS), and promotion of mistrust (PM)), the Silence about Race Scale (SRS), psychological distress (KSS6), and alcohol use severity (AUDIT) were all treated as latent variables. We evaluated model fit using the following fit indices (Fabrigar, Wegener, MacCallum, & Strahan, 1999; Hu & Bentler, 1999): (a) comparative fit index (CFI; > .95 for good fit; .92 to .94 for adequate fit), (b) the standardized root mean square residual (SRMR; close to < .08 for acceptable fit), and (c) the root mean square error of approximation (RMSEA; close to < .08 for acceptable fit). All variables in the model were allowed to covary, including the error terms of latent variables.

Before testing the moderators, we conducted latent variable regressions to examine the direct effects of online racism on psychological distress and alcohol use severity. We then conducted latent moderated structural equations (LMS; Klein & Moosbrugger, 2000) to test each parental racial-ethnic socialization subscale and silence about race as moderators (four moderator variables) in the relationship between online racism and (a) psychological distress, and (b) alcohol use severity. Each PORS subscale (personal, vicarious, and online-mediated exposures) was tested as a predictor in a separate model. Hence, we examined four latent moderation models for each of the three PORS subscales predicting psychological distress for a total of 12 models. The process was repeated for alcohol use severity. Thus, we tested a total of 24 latent moderation models. Fit statistics of the LMS models were irrelevant as standardized parameter estimates are not yet available with this approach. A significant interaction would suggest that the parental racial-ethnic socialization measure moderated the relationship between online racism and psychological distress, and between online racism and alcohol use. Significant interactions were then probed with simple slope analyses (Klein & Moosbrugger, 2000).

4.5. Data screening and preparation

A total of 952 participants accessed the survey. Of these, we removed 177 cases as they did not meet the inclusion criteria (hence, brought to the survey end page); 110 cases for failing more than one attention
5. Results

Bivariate correlations, means, and standard deviations for all study variables are displayed in Table 1. Data were generally positively skewed, with 29 indicators symmetrical (skewness = [.03, .48]), 22 moderately skewed (skewness = [.50, .99]), and 18 severely skewed (skewness = [1.09, 2.32]). Three indicators showed a significant violation of normal distribution based on kurtosis values. The omnibus test of multivariate normality (Small, 1980) suggested that the data were moderately skewed (skewness = [1.09, 2.32]). Three indicators showed a significant violation of normal distribution based on kurtosis values. The omnibus test of multivariate normality (Small, 1980) suggested that the data were not normal, $\chi^2(102) = 1986.20, p < .001$. Thus, we employed a maximum likelihood estimation with standard errors and chi-square test statistics that are robust to non-normality in specifying the latent moderated structural (LMS) equations (Yuan & Bentler, 2000).

We considered several relevant demographic variables (age, race, and gender) as covariates that may influence the perception of online racism, experiences of psychological distress, and alcohol use. Race/ethnicity was not significantly correlated with any of the IV and DV variables and hence was not considered as a covariate. Age and gender were correlated at very small to small effect with some of the variables and thus entered as covariates in our latent moderations. Running the models with and without these covariates did not change the significance of the results.

5.1. Factor structure of the silence about race scale (SRS)

We conducted an exploratory factor analysis (EFA) with the 5 items of the unidimensional SRS we developed as part of this study. Items were hypothesized to load onto a single factor. Bartlett’s test of sphericity was $\chi^2(10) = 1233.64, p < .001$, and the Kaiser-Meyer-Olkin measure of sampling adequacy was .88, indicating that the data were sufficiently factorable. Results from the EFA suggested that the one-factor model had an adequate fit with RMSEA = .088 [.050, .13], SRMR = .046, factor loadings ranging from .79 to .90, factor determinacy value of .97, and communality values ranging from .63 to .72. Silence about race accounted for 67% of the variance and was significantly correlated with preparation for bias ($r = .46, p < .001$), cultural socialization ($r = .41, p < .001$), and promotion of mistrust ($r = .69, p < .001$).

5.2. Measurement model

Prior to specifying the LMS, we conducted a confirmatory factor analysis to assess the fit of the measurement model including all of our study variables. The measurement model had an acceptable to adequate fit, CFI = .902, RMSEA = .045 [.042, .047], SRMR = .058.

5.3. Direct effect of online racism on psychological distress and alcohol use

We conducted latent variable regressions to examine the direct effects of the three PORS factors (personal, vicarious, and online-mediated exposures to online racism) on psychological distress (KSS6) and alcohol use (AUDIT). Personal exposure to cyber-aggression was significantly and positively associated with psychological distress ($\beta = .48, SE = .05, p < .001$) and alcohol use ($\beta = .55, SE = .06, p < .001$). Online-mediated exposure to racist reality was significantly and positively associated with psychological distress ($\beta = .28, SE = .05, p < .001$) and alcohol use ($\beta = .24, SE = .05, p < .001$). Vicarious exposure to racial cyber-aggression was significantly and positively associated with psychological distress ($\beta = .28, SE = .06, p < .001$) and alcohol use ($\beta = .25, SE = .06, p < .001$).

5.4. Latent moderations

Significant interaction results are described below. All of the significant interactions were probed by examining the simple slopes at $+1$ SD above and $-1$ SD below the means of the moderating variables. Cultural socialization was not a significant moderator in any of the relationships between online racism and psychological distress, and between online racism and alcohol use severity.

Preparation for bias. Among the models tested, only the interaction between preparation for bias and online-mediated exposure to racist reality significantly predicted psychological distress, ($\beta = -.09, SE = .05, p = .049$). Simple slopes are displayed in Fig. 1. At 1 SD below the mean (low preparation), slopes were positive and significant, ($\beta = .19, SE = .05, p < .001$). At the mean level of preparation, slopes were positive and significant, ($\beta = .14, SE = .04, p = .001$). At 1 SD above the mean (high preparation), slopes were not significant, ($\beta = .08, SE = .05, p = .077$).

Promotion of mistrust. We found two significant moderation results with promotion of mistrust. First, the interaction between mistrust and personal exposure to racial cyber-aggression significantly predicted alcohol use severity, ($\beta = .06, SE = .03, p = .029$). Simple slopes are displayed in Fig. 2. At 1 SD below the mean (low mistrust), slopes were positive and significant, ($\beta = .18, SE = .05, p < .001$). At the mean level of mistrust, slopes were positive and significant, ($\beta = .24, SE = .04, p < .001$). At 1 SD above the mean (high mistrust), slopes were positive and significant.

Note. CS = Cultural Socialization; PB = Preparation for Bias; PM = Promotion of Mistrust; SRS = Silence about Race Scale; PERCA = Personal Experience of Racial Cyber-Aggression; OMERR = Online-Mediated Exposure to Racist Reality; VERCA = Vicarious Exposure to Racial Cyber-Aggression; KSS6 = Psychological Distress; AUDIT = Alcohol Use Severity. *p < .05, **p < .01.

Table 1 Bivariate correlations, descriptive statistics, and Cronbach’s alphas for study variables.

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5.
significant, ($\beta = .29, SE = .03, p < .001$).

Second, the interaction between mistrust and online-mediated exposure to racist reality significantly predicted psychological distress, ($\beta = -.09, SE = .05, p = .047$). Simple slopes are displayed in Fig. 3. At 1 SD below the mean (low mistrust), slopes were positive and significant, ($\beta = .13, SE = .04, p = .002$). At the mean level of mistrust, slopes were
positive and significant, ($\beta = .08, SE = .04, p = .031$). At 1 SD above the mean (high mistrust), slopes were not significant, ($\beta = .05, SE = .05, p = .696$).

**Silence about race.** We found two significant moderation results with silence about race. First, the interaction between silence and personal exposure to racial cyber-aggression significantly predicted alcohol use severity, ($\beta = .09, SE = .04, p = .014$). Simple slopes are displayed in Fig. 4. At 1 SD below the mean (low silence), slopes were positive and significant, ($\beta = 0.11, SE = .05, p = .043$). At the mean level of silence, slopes were positive and significant, ($\beta = .20, SE = .04, p < .001$). At 1 SD above the mean (high silence), slopes were positive and significant, ($\beta = .28, SE = .04, p < .001$).
Second, the interaction between silence about race and vicarious exposure to racial cyber-aggression significantly predicted alcohol use severity, ($\beta = .09, SE = .04, p = .025$). Simple slopes are displayed in Fig. 5. At 1 SD below the mean (low silence), slopes were not significant, ($\beta = -.06, SE = .09, p = .557$). At the mean level of silence, slopes were not significant, ($\beta = .17, SE = .08, p = .058$). At 1 SD above the mean (high silence), slopes were positive and significant, ($\beta = .39, SE = .13, p = .003$).

6. Discussion

This is the first study to test the protective roles of ethnic-racial socialization (E-RS) messages against the psychological impact of online racism. As expected, the psychological costs of online racism were evident in our study as online racism was related to greater psychological distress and alcohol use severity. This is consistent with previous research examining the negative psychological impact of online racism (Keum & Miller, 2017; Tynes et al., 2008), and extends the literature as this is the first known study to examine the link with risky behaviors such as alcohol use. Contrary to our hypotheses, however, we found little to no evidence of E-RS as a buffer against the costs of online racism in our sample. As we had anticipated, it is possible that there are gaps in the current operationalization and understanding of E-RS in its applicability to racial experiences on the internet. It is also possible that E-RS may not be salient in helping individuals dealing with pervasive, explicit, and far-reaching forms of online racism that also illuminate the persistent realities of systemic racism. Online racism may have an overarching impact that brings about hopelessness, helplessness, and internalized anger that is different than dealing with racism in offline settings where one might feel more equipped, in control, and aware to deal with the perpetrator in an isolated context with appropriate social cues (Keum & Miller, 2017, 2018). Furthermore, we found that silence about race, as a form of E-RS, exacerbated the link between online racism and alcohol use. Given that silence about race has received very little attention in the literature, our study contributes some important initial evidence on the detrimental implications of silence about race in the practice of E-RS.

Surprisingly, we did not find any convincing evidence of E-RS as a protective function regarding the impact of online racism on psychological distress and alcohol use. This is an important and concerning distinction compared to the benefits afforded by E-RS in previous studies where racism has been mostly defined with offline interpersonal contexts. Notably, cultural socialization, which is an aspect of E-RS that is found to have evidence as the most likely buffer among the E-RS factors (e.g., Atkin et al., 2019; Grindal, 2017), did not yield any significant moderations. It is possible that individuals socialized with cultural and racial pride may not be able to sustain protective benefits when they are bombarded by racist contents and interactions on the internet that dehumanizes their racial/ethnic identities at a persistent and consistent basis. Additionally, on the internet, these individuals are far more likely to come across groups and entities with racist beliefs (e.g., social media groups) rather than dealing with a particular racist individual in the offline context (Daniels, 2009; Keum & Miller, 2018a,b). An individual foundation of cultural and racial pride may not be adequate enough to deal with observing and interacting with the magnitude of polarized racist beliefs on the internet.

Interestingly, despite mixed findings in the literature, we did find what appears to be some evidence that preparation for bias and promotion of mistrust may be buffers in dealing with online racism. Specifically, we found that both messages significantly moderated the link between online-mediated exposure to racist reality and psychological distress. This relationship was not significant for individuals with high levels of preparation for bias and promotion of mistrust, and the magnitude of the significance decreased between low to mean levels. At an initial glance, one might assume beneficial implications. However, as seen in figures one and three, those with high levels of preparation for bias and promotion of mistrust reported experiencing consistently higher levels of psychological distress compared to those with mean and low levels. Such complexity has been noted in the literature, as preparation for bias and promotion of mistrust are often found to have self-

![Fig. 5.](image-url) Silence about race moderating the relationship between vicarious exposure to racial cyber-aggression and alcohol use.
inflicting consequences for individuals socialized in these ways to deal with racism (Grindal, 2017; Sanchez et al., 2018). As reactive forms of E-RS, greater employment of these strategies may be a result of an existing or ongoing racial trauma that function as a chronic stressor (Carter, 2007; Neblett, Rivas-Drake, & Umana-Taylor, 2012. Constantly navigating your surroundings with mistrust of others and being vigilant and anticipating racist encounters are likely to induce stress and anxiety (Utsey et al., 2013). Although some preparation for bias and promotion of mistrust may be helpful for individuals in dealing with online exposure to the reality of a systemically racist society, such an approach likely involves psychological costs. In particular, the costs seem especially salient with promotion of mistrust, as we also found that promotion of mistrust significantly exacerbated alcohol use linked to encountering racism in online interactions. It is possible that those who exercise high levels of promotion of mistrust to manage their encounters with racist online interactions may resort to greater alcohol use to cope with the resulting distress and anxiety from endorsing a mistrusting outlook of others (Grindal, 2017). Overall, the findings portray a complex picture of whether preparation for bias and promotion of mistrust are viable strategies to dealing with online racism. Given the limited empirical evidence of silence about race, we operationalized and examined whether silence about race would buffer or exacerbate the link between online racism and mental health outcomes. We hypothesized that it would be costly to be silenced about race in dealing with racism given that not talking about race implies a denial in experiences and the reality of racism (Harries, 2014). Given that recent theory indicates that having the necessary E-RS skills are useful to feel more self-efficacious in coping with racism (Anderson & Stevenson, 2019), we posited that silence about race would not give individuals the proper tools to believe that they can cope with racism. As expected, silence about race exacerbated the positive link between racism in personal online interactions and alcohol use. When dealing with the pervasive and frequent nature of online racism, having had parents that promoted silence around race is likely to introduce confusion and disorientation for the young adults in our sample when they are personally victimized on the internet. Additionally, silence about race in the household may imply an avoidance of difficult but necessary conversations on race. These individuals may use more avoidant coping strategies such as alcohol use due to difficulties with identifying and validating their own feelings and emotional states due to racist events (Coriale et al., 2012).

Similarly, we found that for those who reported high levels of silence about race, vicarious exposure to online racism was associated with an increase in alcohol use. This demonstrates that even non-personal racist attacks on the internet may be linked to increased deficits for those who have parents or caregivers emphasizing silence about race. For example, after the shooting of Trayvon Martin in 2012, the incident aroused fear for African American parents about their children’s safety and a reminder of systemic racial profiling in the U.S.; consequently, many parents then discussed strategies to deal with racism to their children (Thomas & Blackmon, 2015). Such discussion is crucial as individuals exposed to racist events on the internet may be triggered by their own racial stress, trauma, and concerns of safety. However, for those socialized to be silenced about race, coping with these difficulties seem to involve maladaptive strategies such as alcohol use. Conversely, we found that there were no significant links between vicarious exposure to online racism and alcohol use for those who received low to mean levels of silence about race messages. Although lower silence does not reflect greater discussion about race, these individuals may have been less refrained from talking about race, which in turn, may have led to engaging in helpful discussions to process and resolve their emotional distress stemming from online racism rather than resorting to alcohol use.

6.1. Limitations/future directions

Although the present study is the first to examine E-RS as a moderator between online racism and (a) psychological distress and (b) alcohol use, there are a number of limitations. First, the data is self-report, retrospective, self-selected, and cross-sectional. Although the data illuminates how messages individuals heard growing up impact emerging adults’ health outcomes, longitudinal data collected at various time periods during childhood (e.g., early childhood, adolescence) may more accurately depict parental messages about race and allow examination of causality. The retrospective report may also account for some of our unexplained findings. In addition, self-selection bias may have also affected our results, as about 49% of the eligible participants who accessed the survey ended up not completing it. Although such response rate is in line with online convenience sampling trends (Casler, Bickel, & Hackett, 2013), some participants may have been more likely to participate based on their lived experiences and beliefs than others. Thus, it would be imperative for future studies to replicate our findings using a larger, more representative, and longitudinal sample.

Second, although all racial/ethnic minorities experience online racial discrimination alike (Keum & Miller, 2017), given the unique sociopolitical factors for each racial/ethnic group, their online racism experiences may also differ. For example, on the internet, American Indians have experiences related to denying their control over their culture through the pervasiveness of mascots (Steinfeldt et al., 2010). On the other hand, African American parents worry about their children after violent shootings (Thomas & Blackmon, 2015). For Latinx individuals, there is a strong focus on anti-immigrant and xenophobic narrative (Chávez & French, 2007) in the online space. Furthermore, as we did not assess for race experiences across the lifespan in our participants, it is possible that ongoing or pre-existing racial trauma intersects with the way E-RS messages moderate the impact of online racism. For instance, those who are suffering from ongoing racial trauma may struggle to employ adaptive coping skills and gravitate toward internalizing approaches (Carter, 2007) such as mistrusting others and being silent about racism issues. Thus, the types of online discriminatory experiences and pre-existing exposure to racial trauma need to be further examined specifically with each racial/ethnic minority group.

Third, other major relevant demographic factors, such as gender and age, should also be examined in future studies as they have been found to differentiate online racism experiences (Keum & Miller, 2018a,b). For instance, women of color may face both sexism and racism in the online space and report being victimized at higher rates than men (Felmlee, Rodis, & Zhang, 2020; Keum & Miller, 2018a,b). Within the framework of intersectionality (Crenshaw, 1989), other identities such as sexual orientation, disability, and socioeconomic status may further compound the oppression that individuals may experience online based on their background. Thus, future studies would need to be specific to these lived experiences rather than employing a general perspective.

Lastly, the psychometric properties of our measures may be strengthened. For E-RS, we relied on participants’ retrospective accounts and assessed socialization from early childhood and adolescent time periods. Although longitudinal studies with adolescents can help replicate our findings more accurately, future studies should also focus on racial minority emerging and young adults. E-RS is posited to continue beyond adolescence and outside of parental contexts as emerging and young adults develop their sense of identity and ways to deal with racism in the society (Aldana & Byrd, 2015; Daga & Raval, 2018). Thus, it would be important to understand how other relevant messages in communities (e.g., media, colleges, workplaces) continue to affect racial minority individuals’ transition to adulthood and beyond. In doing so, it would be important to examine E-RS to messages that concern systemic forms of racism. Finally, although we conducted an EFA and found promising psychometric properties for the silence about race scale we developed, future studies would need to further validate its psychometric properties.
Our findings suggest that we need to expand the conceptualization of E-RS messages given how race relations and racism has been impacted by the current sociologic digital landscape. It may be possible that due to generational differences, parents may not have the language to discuss the implications of online racism. It may be useful to develop prevention and intervention strategies that teach families tools to support their children who may be encountering online racism. In addition, given that children, youths, and emerging adults spend significant time in schools, teachers and school administrators may also provide strategies and spaces to process online racism experiences and develop advocacy initiatives to counter the negative impact. Furthermore, the operationalization of E-RS needs to be more nuanced than how it is currently studied. A measure that examines shared conversations with parents and children that emphasizes coping with online racism in digitally-relevant approaches may be imperative.

CRediT author statement

Brian Taehyuk Keum: Conceptualization, Methodology, Formal analysis, Investigation, Resources, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration, Lydia HaRim Ahn: Writing – original draft, Writing – review & editing.

Declaration of competing interest

None.

References


