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## Ethnic-Racial Minoritized Adolescents' Perceptions of Cyberhate, School Connectedness, Ethnic-Racial Identity, and Life Satisfaction

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Ethnic-Racial Minoritized Adolescents' Perceptions of Cyberhate, School  
Connectedness, Ethnic-Racial Identity, and Life Satisfaction

by

Alexis Taylor

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Educational Specialist in Curriculum and Instruction  
with a concentration in School Psychology  
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## Abstract

Exposure to cyberhate has become an increasing trend across social media, with approximately 64% of adolescents reporting that they have seen hate speech (Common Sense, 2018). While social media is used to connect with others via likes, posts, and shares, it also allows for hateful content to spread quickly. Cyberhate is the intentional aggression or threat towards an individual or group based on their societal group association, such as race, ethnicity, gender, sexual orientation, and religion (Wachs et al., 2020). Ethnic-racial minoritized adolescents who experience cyberhate as racial discrimination may be at increased risk of maladaptive psychosocial adjustment (Sellers et al., 2003 & 2006; Umana-Taylor & Updegraff, 2007). Research indicates that adolescents' ethnic-racial identity development (Yip, 2018) and school connectedness may protect against maladaptive psychosocial adjustment (Karcher, 2003; Osterman, 2000). However, few documented studies analyze how ethnic-racial minoritized adolescents' cyberhate exposure may relate to their ethnic-racial identity, school connectedness, or life satisfaction. This quantitative study investigated cyberhate focusing on online racial discrimination and its associations with ethnic-racial minoritized high school students' ethnic-racial identity development, school connectedness, and life satisfaction. A total of 192 high school students, ages 14 to 19, participated. An ANOVA revealed statistically significant differences of cyberhate exposure between minoritized and non-minoritized participants. Students who identified as African American reported the highest cyberhate exposure ( $M = 2.06$ ,  $p < .001$ ). Multiple regression findings indicated that ethnic-racial groups significantly predicted ethnic-racial identity perceptions  $F(8, 161) = 5.40$ ,  $p < .001$ , with minoritized groups reporting

lower perceptions ethnic-racial identity compared to their non-minoritized peers. Further, increased frequency exposure to cyberhate predicted low school connectedness  $F(8, 154) = 2.85$ ,  $p = .006$  and low life satisfaction  $F(8, 153) = 2.71$ ,  $p = .008$ . The results from this study provide implications for educational professionals, community programs, families, and youth to promote positive ethnic-racial identity development and work together to address cyberhate. Future research directions are provided for a more in-depth evaluation of ethnic-racial identity development in more ethnic-racial groups, protective factors against cyberhate experiences, and cultural approaches to centering minoritized voices.



## **Chapter One: Introduction**

As educational professionals continue to seek ways to support ethnic-racial minoritized student success in schools, they must be aware of and informed about the risk factors that pose a threat to minoritized students' academic, behavioral, and social-emotional progress. With the ever-increasing presence of social media in adolescents' daily lives, new threats are posed to their well-being. Social media has negative associations with adolescents' mental health, life satisfaction, self-esteem, academics, and social relationships, as well as positive associations with addiction and psychopathological disorders (Barry et al., 2017; Błachnio et al., 2016; Boer et al., 2019; Eijnden et al., 2018; Franchina et al., 2018; Rae & Lonborg, 2015; Satici & Uysal, 2015; Spies Shapiro & Margolin, 2013; Vernon et al., 2016). Social media includes applications used on the internet via phone, tablet, or computer that allow people to create and share content they or someone else has created (Boyd & Ellison, 2007). These are inclusive of, but are not limited to, social networking sites such as Facebook, Twitter, Tik Tok, Instagram, and Snapchat.

In the online world, anonymity, social acceptance, and easy access play a role in the prevalence of hate speech and visual content. This can create an unhealthy environment for how youth view themselves, how they are viewed by others, and the groups that youth identify with. In face-to-face situations, conversations and images seen online do not disappear. Rather, they may be ruminated on, discussed, and acted on with peers and other adults. This further perpetuates a troubling environment where targeted youth of cyberhate, such as ethnic-racially minoritized youth, may struggle with their self-esteem and ability to connect with their peers.

For ethnic minoritized adolescents, a risk factor and stressor on social media is the presence of cyberhate. Cyberhate is an extreme form of cyberbullying and virtual hate that is rooted in the aggressive discrimination of one's race, ethnicity, gender, disability, nationality, or religion (Wachs et al., 2020). Experience with any form of cyberhate can lead to increased risks for adolescents' well-being as it is associated with maladaptive psychological adjustment, mental health problems, panic symptoms, and suicidal ideation (Sinclair et al., 2012). Although research has begun to uncover the benefits and risks of adolescents' social media use, there is a call for more study of historically marginalized ethnic-racial adolescents who have been exposed to detrimental content, such as cyberhate, via these platforms (Bauman et al., 2021). Thus, the purpose of this study is to explore cyberhate with a focus on racial discrimination experienced by ethnic-racial minoritized adolescents.

Social media has been used as a way to facilitate harmful messages targeted at historically discriminated ethnic groups (Hawdon et al., 2016). When hate messages are posted on social media, they often spread quickly as people engage with the content by liking, commenting, sharing with others offline, or reposting the message to their feed for others to see. This constant pattern of engagement makes it easy for hateful content posted by one person to reach people across the world. Adolescents who use social media can be subjected to these messages, in which they either are victims, further perpetrators of the message, or bystanders. From an ecological perspective (Bronfenbrenner, 1979; Vélez-Agosto et al., 2017), this combination of events can influence ethnic-racial minoritized adolescents' microsystems, including their school environments.

## **Cyberbullying vs. Cyberhate**

Cyberbullying and cyberhate are critical issues within schools, as administrators attempt to counter these virtual aggressions with initiatives to increase socialization and student mental health. Cyberbullying and cyberhate can be mistaken as the same thing; however, understanding their definitions help differentiate them. Cyberbullying is an aggressive and intentional act by an individual or a group of people over time, via an online or virtual platform, targeted towards an individual who cannot defend themselves easily (Smith et al., 2008). In contrast, cyberhate is an intentional act where an individual or group specifically attacks societal groups or members of those groups based on race, ethnicity, sexual orientation, religion, and gender via online platforms (Hawdon et al., 2016; Quedst & Fisl, 2017; Wachs et al., 2020). Although a similarity between cyberbullying and cyberhate is that the intent to aggress against another person is present, it is important to distinguish how the act is targeted in relation to established social groups.

Previous research has identified a relationship between cyberbullying and cyberhate. The toxic online disinhibition theory states that because online formats allow for anonymity and diminished social cues and responsibility that are typically present in face-to-face contexts, perpetrators of cyberbullying and cyberhate are more likely to feel comfortable continuing their actions (Suler, 2004; Udris, 2014). According to the problem behavior theory (Jessor & Jessor, 1977), once a person commits one form of norm violating behavior, it is likely that they will take part in another. This relates to the escalation from cyberbullying to cyberhate as these two actions are closely related, and the differentiation between the two forms of attacks may not be known to adolescents. Perpetration of cyberbullying is associated with bullying, cyber trolling,

cyberhate, and other forms of aggression (Wachs et al., 2015; Wachs et al., 2019; Yahner et al., 2015; Zezulka & Seigfried-Spellar, 2016).

### ***Victimization of Ethnic-Racial Minoritized Students***

Cyberhate includes racial discrimination that targets members of an ethnic-racial social group. This is inclusive of attacking individuals or social groups for their skin color, cultural characteristics, and/or stereotypes created over historical contexts (Tynes et al., 2012). Racial discrimination can be understood as a stressor to ethnic-racial minoritized groups as it is associated with negative psychological stress responses, hypervigilance, heightened psychological stress, and increased participation in risky and unhealthy behaviors (Himmelstein et al., 2014; Pascoe & Smart Richman, 2009; Sellers et al., 2003). From a socioecological perspective, experiencing racial discrimination can create an expectation of negative social interactions, which may alter how ethnic-racial minoritized groups engage with others and their surroundings (Broudy et al., 2006). In turn, these interactions may also shape how society responds to them.

Furthermore, youth who have been exposed to racial discrimination are more likely to experience fear, loneliness, lower levels of trust, and anger (Näsi et al., 2015; Räsänen et al., 2016), which may lead to mental health concerns such as increased anxiety and depression (Pachter et al., 2017). Previous studies have associated psychological maladjustment of anxiety, depression, and conduct issues with African American and Latine students who have experienced racial discrimination (Gibbons et al., 2007; Green et al., 2006). While research is still forming around the associations of mental health outcomes and cyberhate, it is plausible that the maladaptive outcomes for face-to-face or vicarious racism are also applicable to youth who experience racism online (Reich et al., 2012).

## **Ethnic-Racial Identity Development**

Identity, with respect to ethnic and racial background, broadly refers to the sense of self and one's understanding of and positioning within their social group. It is a psychosocial process, the nesting of self in society, which unfolds over time and across contexts (Rogers et al., 2020). Ethnic-racial minoritized youth can experience their identity development in positive ways through cultural socialization, in which they are in contact with or have relationships with members of their ethnic-racial group. However, minoritized adolescents can also begin this process through the adverse experience of prejudice and/or discrimination (Hughes et al., 2016). Within this socio-cultural context, minoritized youth can either continue to seek out further identity alignment with their ethnic-racial group (Brittian et al., 2015), which may be marginalized by society, or try to be accepted by the majority (Cheryan & Monin, 2005). As a result, these different paths of identity development can influence adolescents' perceptions of their ethnic-racial group and experiences of racial discrimination. Research indicates that youth who highly value their ethnic-racial identity are more likely to notice and report acts of discrimination, while those who have positive outlooks on their ethnic-racial group are likely to not report as many discrimination experiences (Burrow & Ong, 2010).

Negative appraisals of one's identity can develop from social-ecological contexts where adolescents learn how they are treated in society as part of their group. Consequently, these realizations and acts of racial discrimination are associated with negative outcomes for minoritized adolescents' psychological well-being (Priest et al., 2013; Rivas-Drake et al., 2014). As more studies analyze these relationships, a closer investigation of how ethnic-racial identity and other socio-cultural contextual factors should be more thoroughly examined.

### **School Connectedness as a Factor**

School connectedness is a broad concept with a wide range of interpretable definitions. As found by O'Farrel's (2003) literature review, school connectedness can be thought of similarly to belonging, attachment, community, relatedness, acceptance, and membership. However, each of these terms varies by definition. Osterman (2000) proposed that a consensus of school connectedness be considered as the extent to which students feel that they are cared for and are a part of the school. In another review, Karcher and Lee (2002) conceptualized school connectedness into three categories: belongingness, relatedness, and connectedness. Belongingness relates to one's perception of the social support they receive as a whole. Relatedness refers to the perception of support one receives from specific relationships. Connectedness is one's value of and active involvement with the support that they receive. In the current study, school connectedness is defined as one's perception of involvement and engagement, belonging, and relatedness in school (Karcher, 2003; Karcher & Sass, 2010; Townsend & McWhirter, 2005).

### **Life Satisfaction as a Factor**

Life satisfaction is an important construct related to youth's psychosocial adaptation (Proctor & Linley, 2014). Diener et al. (1999) identified life satisfaction as the perception of one's overall subjective well-being. It is composed of positive affect, negative affect, and domain satisfaction. Subjective well-being can range from person to person, meaning that one person's average well-being could be another person's high well-being. Recent studies of positive psychology have promoted adolescents' well-being using life satisfaction as a guiding factor. Results have showed positive associations of protection against negative outcomes, such as substance use and risk-taking (Katherine et al., 2018). However, life satisfaction is bi-directional

in that one can have different levels of life satisfaction and also have their life satisfaction influenced.

Minoritized youth live in a unique context where socio-cultural factors and experiences, like racial discrimination are a persistent part of their lives. Negative social experiences, like racial discrimination, can create perceptions of lack of social support (Seaton & Yip, 2008). As such, life satisfaction may be impacted. As more studies explore the complexity of life satisfaction for different ethnic-racial groups, the contextual experiences that minoritized youth have in relation to the aspects that make up life satisfaction should be considered.

### **Statement of Problem**

Social media use and content exposure can affect adolescents' development and adjustment (Ohnessian, 2009). However, there is a lack of a cultural approach to understanding the potential differences and rates of ethnic-racial minoritized adolescents' engagement with social media. Most studies have investigated differences in social media engagement for different countries in terms of time usage and prevalence (Boer et al., 2020; Tezci & Içen, 2017). However, the diversity of social media experiences among ethnic and racial minoritized youth is understudied; further research has the potential to provide more details regarding the experiences of different ethnic-racial adolescent groups while using social media.

Bioecological systems theory suggests that development is influenced by multiple environmental influences that interaction with one another (Bronfenbrenner, 1979). An ethnic-racial minoritized adolescent's bioecological system is unique and includes the history, laws, politics, media, social interactions, and values that surround and make up their identity (Bronfenbrenner, 1979). A revised version of Bronfenbrenner's bioecological systems theory

model views development as taking place within a cultural context, and that culture infuses all levels of the environment, and not just the macrosystem (Vélez-Agosto et al., 2017).

Minoritized adolescents' ethnic-racial identity development is influenced by multiple cultural contexts, including social media and school. Notably, minoritized youth may experience their identity differently in different contexts. For example, ethnic-racial minoritized adolescents may be exposed to cyberhate when engaging in social media, which may cause harm to their identity development and social-emotional adjustment. Combined experiences of cyberhate and other negative experiences, such as a lack of connection to school, have the potential to increase the risk of psychosocial maladjustment (Bauman et al., 2021; Tynes et al., 2014). Although research has identified negative associations between cyberhate and poor mental health outcomes for ethnic-racial minoritized adolescents (Wachs et al., 2015; Wachs et al., 2019), additional research is needed to examine internal protective factors, such as ethnic-racial identity, school connectedness, and life satisfaction, that can be bolstered by educators in order to aid minoritized adolescents' development and mental health.

### **Purpose of Research**

This research study aimed to examine relations among ethnic-racial minoritized adolescents' exposure to cyberhate on social media, their ethnic-racial identity, their perceived school connectedness, and their life satisfaction. This research study examined the following questions:

1. What is the prevalence of cyberhate exposure for ethnic-racial minoritized adolescent groups, and how does their exposure compare to a non-minoritized ethnic-racial group?



2. What is the relationship between ethnic-racial minoritized adolescent groups' cyberhate exposure and their ethnic-racial identity development?
3. What is the relationship between ethnic-racial minoritized adolescent groups' cyberhate exposure and their school connectedness?
4. What is the relationship between ethnic-racial minoritized adolescent groups' cyberhate exposure and their life satisfaction?

### **Definitions of Key Terms**

Several variables were incorporated throughout this study. Below are the operational definitions of the variables as key terms based on previous research.

#### ***Ethnic-Racial Minoritized Groups***

Ethnic-racial “minorities” is a term used to describe the difference in the quantity of ethnically and racially diverse groups, such as African American, Caribbean, Hispanic, Latine, Asian, Native American, and Pacific Islander, in comparison to the quantity of White or Caucasian people. However, it has been recognized that the term minority overshadows and does not accurately depict the systemic and institutional injustices that are placed upon these groups because of their ethnicity, race, and/or culture; thus, researchers, educators, and clinicians are increasingly using and advocating for the use of the term “minoritized” (Gillborn, 2005; Harper, 2012; Shalabi, 2014). Minority proposes the idea of identity, whereas minoritized acknowledges actions and processes put in place as the disservice and silencing of ethnic-racial groups in different settings. For the purpose of this study, ethnic-racial “minoritized” groups is used to highlight the scope of the social constructs and institutions of underrepresentation in the social context of schools for African American, Caribbean, Hispanic, Latine, Asian, Native American,

and Pacific Islander students. These groups were selected to represent ethnic-racial minoritized groups from the U.S. 2020 Census.

### ***Social Media***

Social media can be defined as applications used on the internet via phone, tablet, or computer that allows people to create and share content they or someone else has created (Boyd & Ellison, 2007). These are inclusive of but are not limited to social networking sites such as Facebook, Twitter, Tik Tok, Instagram, and Snapchat. For this study, social media is defined as platforms that allow users to create profiles and have the intention of allowing users to connect with others.

### ***Cyberhate***

Cyberhate is an extreme form of virtual hate that is rooted in the aggressive discrimination of one's race, ethnicity, gender, disability, nationality, or religion. It aims to incite hostility, negative thoughts, and/or violence toward a social group or representatives of a social group (Wachs et al., 2020). Cyberhate's contents are inclusive of virtual text or speech in the form of comments, text messages, pictures, and videos (Tynes et al., 2015; Wachs & Wright, 2019).

### ***Ethnic-Racial Identity***

Ethnic-racial identity is defined as the combination of one's cultural behaviors and personal attitudes that one attributes to being a part of a group (Neblett et al., 2012).

### ***School Connectedness***

An inclusive definition of school connectedness is one's perception of involvement and engagement, belonging, and relatedness in school (Karcher, 2003; Karcher & Sass, 2010; Townsend & McWhirter, 2005).

## *Life Satisfaction*

Diener et al. (1999) identified life satisfaction as the perception of one's overall quality of life. Subjective well-being is composed of positive affect, negative affect, and domain-specific or global life satisfaction.

## **Chapter Two: Literature Review**

Further exploration of ethnic-racial minoritized adolescents' experiences with cyberhate is warranted. The goal of this study was to uplift their voices and expand upon current research to address how exposure to online racial discrimination relates to participating ethnic-racial groups' ethnic-racial identity development, their overall feelings of being connected to the school, and their perceptions of life satisfaction. To understand these connections, this chapter synthesizes and evaluates the literature regarding the prevalence of online racial discrimination, the development of ethnic-racial identity, the conceptualization of school connectedness, and the perceptions of life satisfaction for ethnic-racial minoritized adolescents in high school.

### **Prevalence of Online Racial Discrimination**

There are various ways that adolescents may encounter racial discrimination on social media. They are either exposed to racial discrimination directly by people creating or showing racist content or vicariously through other means, such as seeing another racial group being discriminated against (Tynes et al., 2008). Research indicates that adolescents may experience an increased prevalence of racial discrimination online and that this has implications for their mental health.

As reported in the 2015 Pew Research study, adolescent engagement with social media has increased, which in turn has increased their exposure to racial discrimination. In Common Sense's 2018 cross-sectional study of teens (ages 13-17) regarding their social media and social life experiences, they collected data on ethnicity, social media usage, and social-emotional well-being using surveys. In addition to these components, the authors examined the prevalence of

cyberbullying and hate speech. Findings suggested that 64% of the teens surveyed had experienced some form of hate speech, whether it was first-hand or as a bystander. Furthermore, the amount of racist, sexist, anti-religion, and homophobic content that teens reported being exposed to had increased from their 2012 study. When examining ethnic differences, African American teens were more likely to report encountering racism than their white counterparts, followed by Hispanic and Latine teens.

Research has also examined ethnic-racial minoritized students' internet usage in relation to perceived racial discrimination and mental health outcomes. In Tynes et al.'s study (2016), racial discrimination was identified as anything disparaging or degrading of "individuals or groups on the basis of race through the use of symbols, voice, video, images, text, and graphic representations" (p. 2). Six hundred twenty-seven ethnic-racial minoritized students from sixth to twelfth grade (ages 11 to 18) participated in a survey. The sample was 53.7% Black, 37.2% Hispanic, and 9.1% Asian. Measures included virtual discrimination, face-to-face discrimination, time on social media, depressive symptoms, anxiety, and externalizing behaviors. It was hypothesized that both virtual and face-to-face discrimination would be associated with symptoms of depression, anxiety, and externalizing behaviors. Time online was hypothesized to moderate experiences of discrimination.

The findings partially supported their hypotheses. Specifically, higher levels of depression and externalizing behaviors were predicted by higher levels of discrimination online and offline. However, higher levels of anxiety were only significantly predicted by higher levels of online discrimination. These findings help to bridge the gap of how online racial discrimination is linked to mental health outcomes like anxiety and depression. Though this study examined negative outcomes for different ethnic-racial minoritized youth groups, future

research can examine positive outcomes, as well as other ethnic-racial groups such as Pacific-Islander or Multiracial that are represented within different schools.

Tynes et al. (2015) conducted two interrelated projects as part of the Teen Life Online and in Schools Project to further examine adolescents' exposure to racial discrimination online and its potential implications for adolescent mental health. Teen Life Online was a three-year longitudinal study conducted to observe the prevalence of online racial discrimination (direct or vicarious), its context, and the descriptive experience of adolescents exposed to it. The sample of 340 students was selected from the larger sample of 1028 who identified as African American, Latino, or Asian (6th through 12th grade). Results from the first part of the study showed that over three years, the prevalence of online direct racial discrimination increased among ethnic-racial minoritized youth experiencing at least one exposure at 42% in the first year and 52% and 58% in the next two years, respectively. A similar trend was observed for vicarious delivery of online discrimination with 64%, 69%, and 68% across the three years.

For the second part of the study, with the same 340 students, the contexts in which online racial discrimination occurred were measured. The participants' responses over the three time points showed an increasing indicator of social media platforms, with 42% exposure at time one, followed by 51% and 48% at times two and three. The most popular social media platforms were Facebook, Twitter, Tumblr, and YouTube. Reports also indicated text messaging were a channel to receive discriminatory messages, but it did not exceed 22% at each time point. Participants were asked an open-ended question about their worst experience with online racial discrimination to specify more about their exposure. This question specifically applied to African American students as they are subject to a virulent form of discrimination, meaning the content that they were exposed to was severe and harmful to them (Tynes et al., 2015). Thematic

analysis revealed the following as major themes of experience: 1) racial epithets, 2) stereotypical and racist statements, 3) racist jokes, 4) hate symbols (e.g., Confederate flag or swastikas), 5) physical harm or death threats, and 6) images or representations of dead Black bodies.

One limitation to Tynes et al.'s (2015) study is that it only included three ethnic-racial groups. Future research is needed to address additional ethnic-racial minoritized groups' experiences with online racial discrimination. There could be diversities among their experiences that could inform educational professionals' and mental health professionals' approaches to supporting ethnic-racial minoritized youth. Nonetheless, this study's results promote our understanding of the frequency that ethnic-racial minoritized adolescents experience cyberhate online. As a continuation of monitoring social media trends for youth, more research should be conducted on the prevalence of the different social media platforms that adolescents are using. The current study included a social media platform demographic to look at the most prevalent platforms adolescents are using and continues monitoring the experience of cyberhate across different ethnic-racial groups.

### **Development of Ethnic-Racial Identity**

According to Erikson's psychosocial development theory (1968), identity development is a key process for adolescents. During adolescence, youth increase their awareness of social groups and have opportunities to make meaning of group memberships as they relate to their identity. Their rapid cognitive development improves their capacity to think and understand their ethnicity, race, and related experiences more abstractly. As such, understanding the interpersonal, institutional, and collective forms of racism and racial discrimination is influenced by a heightened awareness of social groups and their interactions within society (Quintana & McKown, 2008). Previous research has described the process of ethnic-racial identity (ERI)

development as youth taking on the perspectives, values, and cultural practices of a specific group or groups – ethnicity (Markus, 2008; Quintana, 1994) while acknowledging the social implication of the group’s construct - race (Markus, 2008).

In developing their ethnic-racial identity, adolescents have different statuses and can fluctuate between them as they process who they are and what society sees them as in relation to their social group (Marcia, 1980). Adolescents can be described as actively engaging in the process of exploration and commitment (Erikson, 1968; Marcia, 1980). Exploration involves the pursuit of knowledge, information, and experiences regarding one’s ethnic-racial identity. Commitment can be characterized as forging a personal connection, attachment, or investment in a given ethnic-racial group which symbolizes an acceptance or internalization of the ethnic-racial identity (Phinney & Ong, 2007). ERI for minoritized youth may aid in their response to adverse life events and increase psychosocial adjustments such as decreased anxiety, depression, externalizing behaviors, and increased self-esteem (Rivas-Drake et al., 2014).

ERI is measured by minoritized youths’ cognition and affect regarding their ERI. This is inclusive of, but not limited to, minoritized youth’s perceptions of their exploration, resolution, centrality of importance, positive affect, and public regard of their ERI (Phinney, 2003; Phinney & Ong, 2007; Sellers et al., 1998; Umana-Taylor et al., 2004). These constructs can vary across individuals and how they perceive their ERI. For example, some youth may have a positive affect for their identity but have low public regard perceptions and vice versa. In relation to exposure to adverse events, such as cyberhate, the combination of ERI construct perceptions can further expand research to clarify how ethnic-racial minoritized adolescents exhibit resiliency.



### ***Ethnic Racial Identity Constructs***

Adolescence is a developmental stage where youth form their perceptions of the world, where they fit, and what others think about them. It can be a critical time for ethnic-racial identity development. Ethnic-racial identity can be broken down into multiple concrete domains: racial centrality, private regard, and public regard, based on the Multidimensional Model of Racial Identity - MMRI (Seaton, 2009; Sellers et al., 1998). *Racial centrality* encompasses how important one thinks their race is to them. *Private regard* refers to how one feels about their race. *Public regard* evaluates how they think others see their race.

Based on these domains, Sellers et al. (2003) developed groups that adolescents could identify with based on their responses to the MMRI: Buffering/Defensive, Alienated, Idealized, and Low Connectedness/High Affinity. Youth who identify as buffering/defensive perceive themselves as having high racial centrality and private regard but low public regard. Those who identify as alienated have low racial centrality, private regard, and public regard. Idealized youth are those who have high racial centrality, private regard, and public regard. Lastly, youth who identify with low connectedness/high affinity have low racial centrality, high private regard, and low public regard. In experiencing racial discrimination, each of these groups has different protective and risk factors, which Seaton's (2009) study expands upon further.

Seaton (2009) applied Sellers et al.'s (2003) racial developmental groups and determined if the groups moderated African American adolescents' perceptions of individual, cultural, and collective/institutional racial discrimination, and their self-esteem. A total of 322 African American students, ages 13 to 18, participated in a survey consisting of the Multidimensional Inventory of Black Identity-Short (Sellers et al., 1997), the Index of Race Related Stress (Utsey & Ponterotto, 1996), the Rosenberg Self-Esteem scale (Rosenberg, 1989), and the Center for

Epidemiological Studies Depression scale (Radloff, 1977). Results from the cluster analysis yielded that all racial developmental groups were present, except for Low Connectedness/High Affinity. Looking at the moderations of each group, findings showed that youth who identified as Buffering/Defensive or Idealized moderated perceptions of racial discrimination and depression symptoms. To elaborate, while higher individual racism and more depressive symptoms were significantly related to those identified as Alienated, those who were Buffering/Defensive or Idealized had no relation or lesser associations with these symptoms. This could be explained by both groups having high private regard and value for their race, which was also significantly associated with higher self-esteem. It is also possible that due to the Alienated group's low private regard and centrality that they lack the protective factor that Buffering/Defensive and Idealized African Americans have, which puts them more at risk for psychological maladjustment and lower self-esteem (Sellers et al., 2003).

Though this study cannot assume causality due to its cross-sectional design, the findings relay the importance of considering ERI constructs when evaluating differences in the experiences of ethnic-racial minoritized adolescents regarding racial discrimination. Another limitation is a lack of inclusion of other ethnic-racial minoritized groups; this may help to strengthen ERI constructs and establish as protective factors against racial discrimination.

### ***Ethnic Identity as a Protective Factor for Online Racial Victimization***

Although ethnic-racial minoritized adolescents report being victims of racial discrimination or cyberhate, the effects of such exposure can differ depending on how one conceptualizes the content. Risk factors such as racial discrimination are associated with decreased well-being, psychological adjustment, and academic achievement (Tynes et al., 2008; Tynes et al., 2015). However, one's ethnic-racial identity can act as a buffer against the

threatening impact of racial bias and hate (Phinney, 2003; Shelton et al., 2005). By having a firm sense of belonging to one's ethnic group and an understanding of one's identity, individuals may be more likely to be resilient when exposed to discrimination.

Tynes et al. (2012) conducted a study to examine ethnic identity and self-esteem as moderating the relations between African American adolescents' racial discrimination victimization and psychological adjustment (i.e., anxiety and depression). It was hypothesized that students who had higher ethnic identity and self-esteem were more likely to have weaker associations between online racial discrimination and maladaptive psychological adjustment. A total of 125 African American students from a larger sample of 476 White, Latino, Asian, and multicultural students were selected for the study, as the other minoritized ethnic groups did not have enough participants for a reliable sample. Participants were given the four-item Online Racial Discrimination subscale of the Online Victimization Scale (Tynes et al., 2010), a 12 item Multigroup Ethnic Identity Measure (Phinney, 1992), the 10 item Children's Depressive Symptoms Inventory Short Form (Kovacs, 1992), The Profile of Mood States-Adolescents' 4-item Tension-Anxiety subscale (Terry et al., 1999), and the 10-item Rosenberg Self-Esteem Scale (1965). Results partially supported the hypothesis as reports of high self-esteem and ethnic identity were associated with significantly minimized reports of anxiety symptoms, but not depression. African American students who reported having low ethnic identity and self-esteem reported more online racial discrimination experiences, along with higher levels of depression and anxiety. Similar results were found for Latino students, as those who reported high levels of ethnic identity had lower depressive levels than those who reported low ethnic identity in response to online racial discrimination.

Tynes et al.'s study (2012) is limited by having a small sample size and data from a cross-sectional study. However, the findings provoke more thoughts about how ethnic-racial minoritized students are knowingly or unknowingly using their identities as a way to combat the aggressions they experience first-hand and vicariously. It has been posed that having a strong sense of identity can serve as a confidence booster for minoritized youth and reaffirm their convictions regarding their ethnic-racial group. Thus, their identity potentially serves as a proactive source for developing coping strategies like confronting the transgressor (Umaña-Taylor et al., 2008). While identity for ethnic-racial minoritized students may be an internal protective factor against racial discrimination and psychological maladjustment, there are also external factors, such as the youth's environment, that can function as a buffer, such as their school.

### **School Connectedness with Ethnic-Racial Minoritized Adolescents**

The microsystem is inclusive of one's connections to family, peers, home, school, and community (Karcher, 2003; Karcher & Sass, 2010). Youth spend the majority of their developmentally formative years in school. School may influence how students engage with the world and conceptualize their identity through the relationships that they form (Verhoeven et al., 2018). However, not all students have positive school experiences (Yip et al., 2010, 2013). For many ethnic-racial minoritized students, the school experience may include discrimination, distrust, and isolation due to their physical appearance (i.e., skin color) as well as cultural stereotypes. These factors have been reported to have negative associations with psychosocial adjustment (Brody et al., 2006; Umaña-Taylor et al., 2015). Considering the historical and present political connections of why these issues still arise today, it is important to understand ethnic minoritized adolescents' connectedness to school.

The conceptualization of school connectedness varies and takes on different names such as school belongingness (Osterman, 2000). An inclusive definition of school connectedness is one's perception of involvement and engagement, belonging, and relatedness in school (Karcher, 2003; Karcher & Sass, 2010; Townsend & McWhirter, 2005). Students who experience positive relationships and a sense of belonging are more likely to feel a closer connection to their school, which is associated with positive gains in academics, behavior, and well-being (Sass et al., 2011). This may be due to students' perceived support from peers and faculty, and students' ability to engage with the community and have a sense of belonging (Karcher, 2004; Townsend & McWhirter, 2005).

### ***School Connectedness as a Protective Factor Against Racial Discrimination***

Additional research is needed to examine ethnic-racial minoritized students' perceptions of school connectedness and how it relates to risk factors that are exclusive to this population, such as racial discrimination. For students of color, racial discrimination is a physical, psychological, and social-emotional stressor that can contribute to maladjustment such as depression, anxiety symptoms, and conduct problems (Greene et al., 2006; Harrell, 2000; Lee & Ahn, 2012). When minoritized students are exposed to racial discrimination, it is not an isolated event. It can become a mental health concern and spread to online and offline contexts.

Youth spend the majority of their time in school and interact with peers who may be victimized or have victimized others. Thus, addressing racial discrimination falls within the school's authority, which can become a call for equity and social justice for all affected students in the school (Hope et al., 2014). Racial discrimination within the school from teachers, administration, and other students can serve as an inhibitor to addressing and decreasing the presence of discrimination. This is because minoritized students who perceive these incidents are

likely to have a decreased sense of school connectedness and have a lack of trust in the adults in school (Fernandez, 2019). In instances where racial discrimination occurs outside of school, knowledge of the transaction may still be known through the school community. Thus, schools are a place to provide reaffirming relationships and belonging for racial-ethnic minoritized students who have experienced these transgressions.

**School Connectedness as a Mediating Factor.** The current study explored the direct relationships between cyberhate, ethnic-racial identity development, and school connectedness. However, it is also important to consider the differences that may be seen among the different ethnic-racial groups based on how current literature has identified school connectedness as a mediator between racial discrimination and their well-being outcomes.

Fernandez et al. (2019) examined school connectedness as mediating associations among ethnic-racial minoritized adolescents' perceived discrimination and adjustment, such as depression and conduct issues. It was hypothesized that there would be an indirect association between racial discrimination and school connectedness by which a positive association for both depression symptoms and conduct issues would be predicted by both higher levels of discrimination and lower reports of school connectedness. One hundred and ninety-two Hispanic adolescents were recruited and administered the Multicultural Events Scale for Adolescents (MESA). Measures included perceived racial discrimination; the School Connectedness subscale from the National Longitudinal Study of Adolescent Health; the Center for Epidemiologic Studies Depression Scale; and the conduct problem subscale from the Strengths and Difficulties Questionnaire. The MESA scale allows students to identify the source (e.g., teachers, peers, friends, parents, and other adults) of where they experienced exclusion and/or accusations due to their race/ethnicity. As a part of the analysis, the researchers controlled for gender, given the

previous findings that girls were more likely to exhibit depressive symptoms while boys reported more conduct problems when experiencing racial discrimination (Brody et al., 2005; Sanders et al., 2014).

Results supported the hypothesis that students who perceived racial discrimination were more likely to report depression symptoms and conduct problems. Specifically, there was a replication of previous research for the differences between gender and adjustment, as girls and boys who reported more racial discrimination had increased symptoms of depression and conduct problems, respectively. Furthermore, mediation was supported in that the perceived discrimination was indirectly associated with lower school connectedness as suggested through higher levels of depression and conduct issues.

McWhirter et al. (2019) addressed a similar association of school connectedness mediating associations among racial discrimination, educational barriers, and Latine students' thoughts of dropping out of high school. A total of 896 Latine students were recruited to complete the 24-item Perceived Education Barriers measure, a 16-item developed perceived discrimination questionnaire, and the six-item School Connectedness subscale (Karcher, 2003). Results indicated that school connectedness partially mediated the relationship between educational barriers and racial discrimination with students' thoughts about dropping out. As a mediator, school connectedness decreased the relationship between racial discrimination and dropout thoughts by 25%. School connectedness also decreased the relationship between educational barriers and dropout thoughts by 41%. While dropping out is not considered psychosocial maladjustment, it is associated with anxiety, depression, and externalizing behaviors (Dupéré et al., 2018; Hjorth et al., 2016). Thus, dropping out is a negative outcome associated with the poor social-ecological environment that racial discrimination and educational

barriers can produce. Although school connectedness had less of an effect on racial discrimination's relationship with thoughts about dropping out, this is still a notable result for making a difference in another adverse outcome for Latine students.

Both Fernandez et al. (2019) and McWhirter et al. (2019) have similar limitations for only having Latine adolescent samples. However, these studies provide a closer look at the perceptions from one ethnic-racial group that could inform schools with high population of Latine students about the barriers that they face. Further research may benefit from expanding the ethnic-racial group recruitment and examining potential group differences in school connectedness, experiences of racial discrimination, and if there is a relationship between their perceptions of school connectedness as a buffer to negative outcomes like thoughts of dropping out. While studies like Fernandez et al. (2019) and McWhirter et al. (2019) expand upon more complex relationships of school connectedness and how it can moderate racial discrimination and school connectedness, more research is needed to break down the direct relationships between school connectedness and variables consistent with ethnic-racial minoritized adolescents' experiences and identity. The current study aimed to address these gaps.

### **Life Satisfaction in Youth**

Diener et al. (1999) identified life satisfaction as the cognitive component of subjective well-being, specifically perceived quality of life. Subjective well-being is composed of positive affect, negative affect, and domain-specific or global life satisfaction. Subjective well-being can range from person to person, meaning that one person's average well-being could be another person's high well-being. There are different contextual (e.g., family and society) and personal characteristics (e.g., emotion regulation and self-efficacy) that can contribute to the development and maintenance of one's subjective well-being (Cummins & Nistico, 2002; Lyubomirsky, 2001). Studies indicate that adolescents who reported lower life satisfaction are more likely to engage in



risk behaviors such as violence, substance abuse, sexual risk, and experience increased peer victimization (Kerr et al., 2010; Macdonald et al., 2005; Zullig et al., 2001).

Youth life satisfaction or subjective well-being has taken the forefront in positive psychology practices to focus not only on pathological symptoms but also include supports and protective factors that contribute to positive life outcomes (Compton & Hoffman, 2019; Lomas et al., 2020). Social support from family, emotion regulation, and resilience has a unique contextual relationship with life satisfaction (Azpiazu Izaguirre et al., 2021). However, more research is needed to identify ethnic-racial identity contexts as a factor in life satisfaction differentiation, which the current study aims to address.

Diener et al. (1999) suggested that demographic factors do not account for a large amount of variance in individuals' different levels of mean subjective well-being. As well, Lyubomirsky (2001) stated that objective circumstances of life events accounted for eight to fifteen percent of the variance in happiness. Although mean levels of life satisfaction have not differed much between ethnic-racial groups, some minoritized groups' life satisfaction may be affected by experiences unique to their culture and identity. This may be due to ethnic-racial minoritized youth's unique lived experiences, as "culture is not separate from the individual; it is a product of human activity" (Vélez-Agosto et al., 2017, p. 900). Ethnic-racial minoritized youth may experience culture in their daily practices, including racial discrimination, when interacting with social media as well as interacting with others in person. Additional factors may influence ethnic-racial minoritized youth's lived experiences and subjective well-being include varying contextual realities in society, perceiving societal divisions, and/or having their life satisfaction measured on Western developmental ideologies (Bradley & Corwyn, 2004; Montemayor, 2000; Phelan et al., 1991).

### *Life Satisfaction and Racial Discrimination in Context*

Ethnic-racial minoritized youth have unique experiences in life when it comes to dealing with the contextual adversity of racism and discrimination. Although context is not a dominant factor in life satisfaction, it is still a consistent and considerable link to understanding minoritized youth's well-being. For example, Seaton and Yip (2008) examined how the context of African American high school students' school and neighborhood diversity influenced the relationship between their experiences of racial discrimination and psychological well-being. Racial discrimination was conceptualized as individual (personal and degrading experiences), cultural (beliefs and practices of the dominant group are regarded as superior), or collective/institutional (racial inequities for opportunities and restriction of basic rights). Psychological well-being was measured using scales for self-esteem, depressive symptoms, and life satisfaction. School and neighborhood context was assessed using archival district and city data. A total of 252 African American students ages 13 to 18 participated in the study.

Findings from the study support that the context of increased school diversity suggested increases in cultural discrimination perspectives. For schools that had low percentages of African Americans, there was an increase in racism against individual African American students. Neighborhood and school context also moderated the relationship between collective racism perceptions and self-esteem, and collective racism perceptions and life satisfaction. For collective racism and self-esteem, across all diversity levels of school and neighborhood, increased reports of racism also showed decreased reports of self-esteem. This may be explained by the increased perception of negative interactions in each respective school or neighborhood context that minoritized youth perceive as collective discrimination. Similar results were found

for the relationship between high collective racism and low life satisfaction, but only for low diversity settings.

Specifically addressing the relationship between life satisfaction and the perceptions of collective racism across different contexts, youth may experience diminished life satisfaction as a result of low or high diversity settings (Seaton & Yip, 2008). In low diversity contexts, youth may perceive little to no resources for help or support. In high diversity settings, there are similar perceptions of little support, but an even more presentation of majority norms that are projected onto their well-being. Considering that life satisfaction includes both personal characteristics and contextual support factors, it is important to consider minoritized youth's perceptions of the transgression and the social circumstances they live in as seen in this study. This study examined the face-to-face perceptions of racial discrimination among African American youth. Additional research is needed to address how life satisfaction could be affected by social media, and to examine life satisfaction among other ethnic-racial minoritized youth. The current study aimed to evaluate the relationship between life satisfaction and cyberhate experienced on social media platforms and identify any ethnic-racial group differences to address this gap in the literature.

### **Buffering Victimization with Increased Social Support**

Youth who report lower levels of life satisfaction are more vulnerable to cyberhate victimization. Görzig et al. (2022) investigated how children and adolescents' perceptions of discrimination and life satisfaction may predict cyberhate victimization. They also assessed whether the support of family, friends, and school would buffer against cyberhate and negative life satisfaction. Participants were a part of the EU Kids Online IV project, conducted by Smahel et al. (2020) for online opportunities and risks for European students. The sample consisted of 3396 children and adolescents from ages 11 to 17. Participants answered questions pertaining to

their experiences with cyberhate victimization, discrimination, life satisfaction, family support, peer support, and school support. The researchers hypothesized: that 1) cyberhate would be positively predicted by discrimination; 2) cyberhate would be negatively predicted by life satisfaction; and 3) family, peer, and school support would moderate the negative associations between cyberhate and discrimination and cyberhate and life satisfaction by weakening or reversing the association.

The results of this study supported hypotheses one and two. As discrimination reports increased for youth, so did their reports of cyberhate. This was explained by the rationale that discrimination and cyberhate are forms of social aggression toward an individual belonging to a social group. As such, those who are targeted by discrimination are also more likely to be targeted by or more vulnerable to cyberhate (Görzig et al., 2022). The same trend was seen for youth who reported low life satisfaction and also reported more instances of cyberhate. Lower life satisfaction may be a social risk indicator that suggests societal disadvantage or difference from the status quo; this may make youth more vulnerable to ridicule or aggression targets. For example, a child who comes from a low socioeconomic status may be more vulnerable to having lower subjective well-being regarding their circumstances and social interactions. As for the moderator variables, reports of high family and peer support reduced the likelihood of cyberhate victimization. Only high reports of peer support moderated life satisfaction. Lastly, school support was not identified as a moderator to either discrimination or life satisfaction.

Having family and peer support are consistent with previous research on the importance of developing protective factors against online and offline aggression (Wachs et al., 2020). However, researchers noted that the findings for school support not moderating the relationships between cyberhate, and life satisfaction are inconsistent with the notion that school climate and

safety perceptions are emphasized to prevent cyberbullying. A limitation regarding this finding is that the measure for school support did not specify peer support in schools; rather, it identified school peers as friends, which could be interpreted as friends outside of the school.

Another limitation of this study is that ethnic-racial groups were not reported. A breakdown of the minoritized groups could give more insight into which groups differ in life satisfaction, the prevalence of discrimination and cyberhate, and their perceptions of social support. Specifically looking at life satisfaction and ways to bolster it with social support is essential to researchers and practitioners looking to understand more ways to improve the lives of minoritized students and the systems that serve them. The current study further analyzed the relationship between cyberhate and life satisfaction, with the inclusion of different ethnic-racial groups.

### **Addressing Gaps in the Literature**

Research has addressed the importance of examining ethnic-racial minoritized adolescents' exposure to cyberhate. These experiences are associated with maladaptive adjustment and have negative implications for adolescents' mental health (Sellers et al., 2006; Umaña-Taylor & Updegraff, 2007). However, not all ethnic-racial minoritized students are equally susceptible to these experiences as they may have protective factors, such as positive perceptions of ethnic-racial identity, school connectedness, or life satisfaction. For example, ethnic-racial minoritized youth who value their ethnic-racial group and perceive this as being central to their identity are often better able to deal with the stressors of racial discrimination through coping strategies or the mental capacity to value their convictions more than others (Seaton, 2009; Tynes et al., 2012).

Another protective factor for ethnic-racial minoritized youth is school connectedness. School connectedness may act as a racial discrimination buffer by establishing relationships and a sense of belonging that minoritized youth can trust and have their identity affirmed in the face of adverse events that happen in and outside of the school setting. Both ethnic-racial identity and school connectedness provide youth with belonging, value, and meaningful relationships that are linked to decreased levels of maladaptive psychosocial adjustment, including anxiety and depression (Fernandez et al., 2019; Moore et al., 2018; Tynes et al., 2012; Tynes et al., 2015; Verhoeven et al., 2018).

Life satisfaction is not a new domain of study, but little research targets understanding life satisfaction in minoritized youth. Perceptions of life satisfaction are- by definition- subjective and depend on the perspectives of the individual. However, additional research can further explore how different life contexts are associated with differences in life satisfaction for social groups who live in and are exposed to unique experiences, such as racism. Ethnic-racial minoritized youth are targets of racial discrimination.

Social media is an extension of youths' community and is intertwined with the experiences they have in real-life settings such as school. To expand upon current research on the racial discrimination component of cyberhate, the inclusion of more ethnic-racial minoritized groups' perceptions, such as Asian Americans and Pacific Islanders, needs to be examined. Examining ethnic-racial identity, school connectedness, and life satisfaction as protective factors can be beneficial for educational professionals to learn more about how to make schools equitable and relatable for their most vulnerable populations. As educators continue to address cultural awareness and equity for all students, online risk factors such as cyberhate cannot be

ignored. Educational professionals must be diligent in knowing and embracing socio-ecological functions and systems that exist to better serve vulnerable populations.

### **Chapter Three: Methods**

The current study had four main goals. The first was to examine the prevalence with which ethnic-racial minoritized adolescents experience cyberhate in the form of online racial discrimination. Applying the cyberhate exposure variable, the second goal was to analyze the relationship between ethnic-racial adolescents' exposure to cyberhate to their ethnic-racial identity. Goal three and four are similar to the second goal but explored cyberhate exposure's relationship to ethnic-racial minoritized adolescents' perceptions of school connectedness and life satisfaction, respectively. To carry out this study, the following research design, recruitment of participants, measures, data collection procedures, plan of analysis, and ethical considerations were made.

The following research questions guided data analysis:

1. What is the prevalence of cyberhate exposure for ethnic-racial minoritized adolescent groups, and how does their exposure compare to a non-minoritized ethnic-racial group?
2. What is the relationship between ethnic-racial minoritized adolescent groups' cyberhate exposure and their ethnic-racial identity development?
3. What is the relationship between ethnic-racial minoritized adolescent groups' cyberhate exposure and their school connectedness?
4. What is the relationship between ethnic-racial minoritized adolescent groups' cyberhate exposure and their life satisfaction?



## **Research Design**

As this study was exploratory in nature, a quantitative, correlational study design was used to examine the phenomena of cyberhate on a broad scale across multiple ethnic-racial groups. The quantitative data allowed a larger sample to be collected for potential generalization to the populations, while correlations were used to examine any relationships that may exist among the variables. Self-report surveys were utilized to break down the experiences and perceptions of ethnic-racial minoritized adolescents regarding the key study variables.

## **Participants**

All high school students between the ages of 14 and 19 years old who speak English were eligible to participate in the proposed study. This study highlights ethnic-racial minoritized adolescent experiences, and non-minoritized (Caucasian/White) adolescent experiences were examined for between-group comparisons. Participants were recruited from community programs that worked with underserved socio-demographics, such as historically marginalized ethnic-racial groups. Participants were also recruited from charter high schools that served sizable numbers of minoritized students. The criteria for selecting the programs and schools to participate in the study was that they had to have at least 40% of their student population as minoritized students. The primary investigator, principals, and community program directors explained the purpose, goals, and procedures of this study to all students. Participants were recruited through an initial consent of their community program director or high school principal. A total of 92 community programs were invited, and six community programs participated. A total of 43 charter and private schools were invited, and two schools participated. The primary investigator completed the USF IRB process. With approval from the USF IRB and permission from the community program and high school directors, parental consent was dispersed virtually

through Qualtrics link surveys by the principal, program directors, and the primary investigator. The IRB approved consent form is provided in Appendix H.

Students whose caregivers consented to their participation in this study received a virtual link or QR code to the survey from the school principal or the program directors. The electronic survey was completed on their phone or laptop during their lunch period at school or during their community program time. The survey took approximately 15 minutes to complete and asked for student assent at the beginning. Students who electronically agreed to be a part of the study (i.e., assented) were directed to a screening question that asked if they speak English. If they answered yes, then they were directed to the survey. If they selected no, then they were directed to a screen that thanked them for their participation ( $N = 7$  youth). After language criteria were met, participants were prompted to respond to demographic (e.g., age, grade, ethnic-racial identity, and school) and social media questions (e.g., time spent on social media and social media platforms used). The ethnic-racial identity question was used to fulfill the ethnic-racial minoritized and non-minoritized student sample size.

A power analysis was conducted for a linear multiple regression using the G Power statistical software to set the minimum for this study's sample. Given an effect size of .15, an error probability of .05, a power of .80, and a total of eight predictors, the total sample size generated for this study is 109 participants. To this extent, and with consideration of attrition, the primary investigator aimed to recruit 300 participants. Due to the nature of this study's inclusion of different ethnic-racial minoritized groups, this study aimed to recruit at least 75 students from each ethnic-racial group, including the non-minoritized group. As well, this study aimed to include sufficient representation from at least three ethnic-racial minoritized groups (i.e., African

American, Hispanic, Latine, Caribbean, Asian, Pacific Islander, Native American, Alaskan Native, or Multiracial) for the comparative purpose of this study.

The recruitment and data collection process took approximately three months to complete after receipt of IRB approval. Community program directors and charter high school principals were contacted for study interest and oriented to the study design and procedures. Directors and high school principals were provided the option to take part in the study to learn more about their students’ social media experiences. Once the program or school consented to be a part of the study, parent consent and legal age participant consent were gathered for seven school days. After consent was collected, students who had permission to be a part of the study were given the online survey via an online link and QR code. Data collection lasted for a week. School and program enrollment in the study was ongoing throughout the three months. The final sample of participants included a total of 192 participants from six community programs and two schools. Table 1 presents this sample’s demographic features, as self-reported by participants on a demographics survey inquiring about age, grade, ethnic-racial identity, and gender.

**Table 1**  
*Summary of Sample Demographic Data (N = 192)*

Demographic Categories	Frequency	Valid Percentage
Student Age <sup>1</sup>		
14	20	10.9
15	42	22.8
16	48	26.1
17	31	16.8
18	41	22.3
19	2	1.1
Missing	8	
Student Grade		
9	45	24.3
10	57	30.8
11	23	12.4
12	60	32.4
Missing	7	

**Table 1 (Continued)**

Student Race/Ethnicity <sup>2</sup>		
Caucasian	48	61.6
African American/Black	50	9.6
Asian	4	9.6
Hispanic/Latinx	37	17.8
Multiracial	41	1.4
Missing	15	
Student Gender <sup>3</sup>		
Female	111	60.3
Male	66	35.9
Non-Binary	4	2.2
Not Listed	3	1.6
Missing	8	
Study Sites <sup>4</sup>		
Program 1	19	10.3
Program 2	11	5.9
Program 3	11	5.9
Program 4	26	14.1
Program 5	1	0.5
Program 6	26	14.1
School 1	38	20.5
School 2	53	28.6
Missing	7	

<sup>1</sup>Only 184 out of the 192 student participants reported their age. Data were missing for eight student participants.

<sup>2</sup>Only 177 out of the 192 student participants reported their race/ethnicity. Data were missing for 15 student participants. <sup>3</sup>Only 184 out of the 192 student participants reported their gender. Data were missing for eight student participants. <sup>4</sup>Only 185 student participants reported their program or school. Data were missing for seven student participants.

## Data Collection and Procedures

Once parental consent was obtained, an online survey was distributed to students via Qualtrics. A link was emailed to participants' school email addresses, which was dispersed to program directors and principals to give to students so that they could access the survey with their phones or computer. Participants were asked to provide assent to participate before proceeding. See Appendix H for the assent form. Considering the potential harmful topics (e.g., negative content exposure components) that may have been covered in the survey, links to resources and contact information for counseling support were provided. The entire data collection process took approximately three months.

## *Measures*

Along with the demographic questions of age, gender, grade, and attending high school, the following self-report measures were used.

**Ethnic-Racial Group.** Ethnic-racial group functioned as an independent variable and was defined as individuals who identify with a group who share the same culture and values (i.e., African American, Hispanic, Latine, Asian, Pacific Islander, Native American, Alaskan Native, and Caucasian). Students who identify with more than one ethnic-racial group were allowed to select all groups that apply to them. This variable was self-reported by participating students within the demographics section of the survey. Ethnic-racial group items for the demographic section can be found in Appendix A.

**Social Media Intake and Platform Prevalence.** This measure was a part of the demographics section of the survey. Participants were prompted to consider their behavior in the last week and approximate how many hours a day they spend on social media during the week and on the weekends. The responses available were “0-1 hours”, “2-3 hours”, “4-5 hours”, and “6 or more hours” per day and overall on the weekend. Participants also identified which social media platforms they currently use by selecting from a list of social media platforms. They were allowed to select as many platforms as they currently used. This list included the following platforms: Facebook, Twitter, Instagram, Snapchat, TikTok, and YouTube. There was also an “Other” option where participants could write in a social media platform that they use that was not listed. An option for no social media usage was also presented, "I do not use any social media". These items can be found in Appendix A.

**Cyberhate Exposure - Online Racial Discrimination.** The racial discrimination component of cyberhate was measured as an independent variable using the Individual Online

Racial Discrimination subscale of the Online Victimization Scale (Tynes et al., 2010) found in Appendix B. This subscale includes four items and targets the experiences of racial discrimination directed at the individual. A sample item is “People have threatened me online with violence because of my race or ethnic group”. This subscale has a reliability of  $\alpha = .66$  and has been successfully administered to adolescents ages 14 to 19 in clinical and educational settings. Participants can report their experiences of racial discrimination on a six-point Likert scale, 0 = “Never happened”, 1 = “Happened once”, 2 = “A few times a year”, 3 = “A few times a month”, 4 = “A few times a week”, or 5 = “On a daily basis”. The maximum score is 24, indicating the experience of online racial discrimination daily.

**Ethnic-Racial Identity.** To evaluate adolescents’ ethnic-racial identity, the Multigroup Ethnic Identity Measure (MEIM) was used (Phinney, 1992). The MEIM has 12 items that prompt responders on their perceptions and values of their ethnic-racial group on a four-point Likert scale. Sample items include, “I have a lot of pride in my ethnic group” and, “I think a lot about how my life will be influenced by my ethnic group membership”. The MEIM has a reliability of  $\alpha = .81$  when tested with high school students. The subscales include “Affirmation and Belonging”, “Ethnic Identity Achievement”, and “Ethnic Behaviors”. This measure and its scoring procedure can be found in Appendix C.

**School Connectedness.** To measure ethnic-racial minoritized adolescents’ school connectedness, the School Connectedness subscale from the Psychological Sense of School Membership Scale (Goodenow, 1993) was used. This is an 18-item questionnaire on a five-point Likert scale, with 1 being “Not at all true” and 5 being “Completely true”. A sample item is “I feel proud of belonging [to my school]”. The reliability of this measure is  $\alpha = .77 - .88$ . This measure can be found in Appendix D.

**Student Life Satisfaction Scale.** To measure the cognitive dimension of subjective well-being, the Student Life Satisfaction Scale (SLSS) was used (Huebner, 1991). The SLSS is a 7-item scale that has been administered to children between the age of 8 and 18. It uses a 6-point Likert response scale from “strongly disagree” to “strongly agree”. A sample item is “My life is just right”. The reliability of this scale is  $\alpha = .70 - .80$ . This measure can be found in Appendix E.

The entire survey was closed-ended, except for when students were given the option to enter other social media platforms outside of the ones provided on the survey that they use.

**Table 2**  
*Summary of Measures Used*

<b>Name</b>	<b>Developer (Year)</b>	<b>Number of Items</b>	<b>Scales</b>
Individual Online Racial Discrimination Subscale (IORDS)	Tynes et al. (2010)	4	Zero ( <i>Never happened</i> ) to Five ( <i>On a daily basis</i> )
Multigroup Ethnic Identity Measure (MEIM)	Phinney (1992)	12	One ( <i>Strongly disagree</i> ) to Four ( <i>Strongly agree</i> )
Psychological Sense of School Membership (PSSM)	Goodenow (1993)	18	One ( <i>Not true at all</i> ) to Five ( <i>Completely true</i> )
Student Life Satisfaction Scale (SLSS)	Huebner (1991)	7	One ( <i>Strongly disagree</i> ) to Six ( <i>Strongly agree</i> )

### ***Overview of Analysis Plan***

**Preliminary Analyses.** Once all data were collected and screened for incompletions and/or random answering, descriptive statistics were used to analyze the total number of participants in each ethnic-racial group as defined by participants’ response to the ethnic-racial group demographic question. Ethnic-racial group sample sizes were projected to be at least 75 to

be included in the primary analyses. However, the collected sample size required group size modification to 30 participants per group. After this screening, groups whose data met the sample size qualifications were included in the following analyses. Descriptive statistics were also conducted to determine means for each group's Online Individual Racial Discrimination score, ethnic-racial identity affiliation (MIEM), life satisfaction (SLSS), and school connectedness scores (PSSM). For each analysis, assumptions were checked for normality, residuals, robustness, linearity, no multicollinearity, and homoscedasticity. A statistical significance level of  $p < .05$  was used.

**Primary Analyses.** To investigate the prevalence of cyberhate exposure for research question one, descriptive statistics (e.g., mean, standard deviation, skew, kurtosis, and range) were analyzed for the entire sample, as well as each qualified ethnic-racial group for their responses on the Online Individual Racial Discrimination Scale (Tynes et al., 2010). This method examined the percentage of participants who experienced online racial discrimination and to what extent they were exposed to online racial discrimination. The alpha for the Online Victimization Scale was calculated from this sample. For research question one, the significant differences between ethnic-racial minoritized and non-minoritized groups' online racial discrimination prevalence was examined by ANOVA with pairwise comparisons.

For research question two, a multiple regression was conducted to analyze the relationship between participants' cyberhate exposure – online racial discrimination and their ethnic-racial identity using the MEIM scores. The sample's ethnic-racial groups were dummy coded to allow for between-group comparisons on their cyberhate exposure scores and their MEIM scores. To enhance the internal validity of this study, age, gender, grade level, and average social media time usage for the weekdays and weekends were examined individually for



each regression in a correlation matrix. The following equation was used for research question two:

$$\text{MEIM Score} = \text{Ethnicity}_1(x) + \text{Ethnicity}_2(x) + \text{Ethnicity}_3(x) + \text{Cyberhate}(x) + \text{Age}(x) + \text{Gender}(x) + \text{Social Media Weekday} + \text{Social Media Weekend}$$

The same multiple regression analysis was conducted for research question three to examine the relationship between participants' cyberhate exposure and their perceptions of school connectedness (Psychological Sense of School Membership). The following multiple regression equation was used for research question three:

$$\text{School Connectedness Score} = \text{Ethnicity}_1(x) + \text{Ethnicity}_2(x) + \text{Ethnicity}_3(x) + \text{Cyberhate}(x) + \text{Age}(x) + \text{Grade}(x) + \text{Social Media Weekday} + \text{Social Media Weekend}$$

The same multiple regression analysis was conducted for research question four to examine the relationship between participants' cyberhate exposure and their perceptions of life satisfaction (Student Life Satisfaction Scale). The following multiple regression equation was used for research question four:

$$\text{Life Satisfaction Score} = \text{Ethnicity}_1(x) + \text{Ethnicity}_2(x) + \text{Ethnicity}_3(x) + \text{Cyberhate}(x) + \text{Age}(x) + \text{Grade}(x) + \text{Social Media Weekday} + \text{Social Media Weekend}$$

The R-coefficient, R-squared, and the p-values were evaluated to determine the respective strength, explanation of variance, and the statistical significance of the relationships in research questions two, three, and four.

### **Ethical Considerations**

This study's research procedures were approved on January 5, 2022 by the University of South Florida's IRB (eIRB Study #3505). All ethical issues pertaining to participants were addressed and monitored. Participation in this study was completely voluntary and data were

collected anonymously. Potential risks and benefits were presented to parents and student participants upon consent and assent. Given the potential risks such as recalling exposure to negative content that may trigger trauma or emotional disturbance, resources were provided for participants to utilize at their discretion. As for further language barrier considerations, the study included English speakers only to increase the likelihood of students understanding the questions that are asked. The researcher's CITI Research Training certificate can be found in Appendix I.

## **Chapter Four: Results**

This chapter provides details on the analyses conducted to answer the study's research questions. Preliminary analyses are discussed to provide insight into data constructions. Descriptive statistics for the primary research variables are provided for sample conceptualizations. Finally, primary analyses including findings from the ANOVA and multiple regressions are presented.

### **Preliminary Analyses**

Participants completed surveys on their demographic features, perspectives of their cyberhate exposure, ethnic-racial identity perception, school connectedness, and life satisfaction. The surveys were checked for incomplete data. A total of 36 participants did not complete the survey, ranging from two questions completed to fifty questions completed out of 52 total questions. The researcher coded the data collected from incomplete surveys to be analyzed if participants completed at least half of the respective scales to retain essential data. Considering an aim of the study was to examine ethnic-racial group differences, it was proposed to have 30 or more participants in a respective ethnic-racial group for statistical comparison. Due to only having three Asian students and four Native American students, Asian and Native American groups were not included in the analyses. The total number of participants included for various scales and measures in this study ranged from 153 to 192.

### **Variable Creation**

Composite variables were created for various scales and measures, such as the IORDS, MEIM, PSSM, and the SLSS. For the SLSS, items 3 and 4 were reverse-scored prior to

calculating an average score. Ethnic-racial identity was coded to represent groups that had 30 or more participants who identified with a respective group. African American students were coded 1, Hispanic/Latine students were coded 2, Multiracial students were coded 3, and Caucasian students were coded 4.

**Descriptive Statistics**

To provide contextual information about participants’ access to social media, information was collected in the demographics survey about the amount of time the student spent on social media each weekday and weekend and the prevalent social media platforms they used. Time on social media was used as a control variable for research questions two, three, and four. It is a relevant variable because the researcher can analyze how high uses or low uses of social media may correspond with higher or lower prevalence of cyberhate. See Table 3 for a summary of responses regarding social media use.

Descriptive statistics were calculated for each variable in the study. Table 4 displays the descriptive statistics for each composite variable with the means of each ethnic-racial group. The mean score for cyberhate exposure was 0.74 (*SD* = 0.82, *n* = 179) on a scale that ranged from 0 to 5 with higher values indicating reports of more experiences with cyberhate. African American youth had the highest reports of cyberhate followed by Hispanic/Latine, Multiracial, and Caucasian students. According to the IORDS scale, students in this sample collectively experienced online racial discrimination at least once in their life.

**Table 3**  
*Summary of Responses to Items about Social Media Use*

Item	Frequency	Valid Percentage
Social Media Weekday <sup>1</sup>		
0-1 hours	19	10.4
2-3 hours	59	32.2
4-5 hours	66	36.1
6+ hours	39	21.3
Missing	9	

**Table 3 (Continued)**

Social Media Weekend <sup>1</sup>		
0-1 hours	14	7.7
2-3 hours	41	22.4
4-5 hours	63	34.4
6+ hours	65	35.5
Missing	9	
Social Media Platforms <sup>2</sup>		
Instagram	151	78.6
Snapchat	133	69.3
Tik Tok	145	75.5
Facebook	47	24.5
Twitter	59	30.7
YouTube	149	77.6
Other <sup>3</sup>	13	6.80
No social media <sup>4</sup>	7	3.64

*Note.*<sup>1</sup>Only 183 out of 192 student participants reported their weekday and weekend social media usage. Data were missing from nine student participants. <sup>2</sup>Social media platforms are frequencies an individual indicated any use out of the total 192 participants. Participants were allowed to select multiple social media platforms, to reflect all social media platforms used. <sup>3</sup> Participants who selected that they used other platforms not listed specified that they used Reddit, Pinterest, Twitch, and Discord as social media platforms. Percentages represent the number of participants who reported using that social media platform out of the entire sample. <sup>4</sup> Participants who reported no social media usage were retained for data analysis because cyberhate can be experienced on other peers' or adults' phones and computers.

The mean score for ethnic-racial identity perception was 1.90 ( $SD = 0.58$ ,  $n = 174$ ) on a scale that ranged from 1 to 4 with higher values indicating more positive perceptions of ethnic-racial identity. This finding suggests that the sample has a low ethnic-racial identity. Caucasian students had the highest reports of strong ethnic-racial identity followed by Multiracial, African American, and Hispanic/Latine students. Previous research has found that ethnic-racial minoritized youth have higher perceptions than non-minoritized youth with means ranging from 3.3 – 3.4 (Worrel, 2007).

The mean for school connectedness perceptions was 3.44 ( $SD = 0.77$ ,  $n = 166$ ) on a scale that ranged from 1 to 5 with higher values indicating more positive perceptions of school connectedness. This result suggests that students in this sample reported a moderate school connectedness on average. All ethnic-racial groups reported approximately the same school

connectedness perceptions. This is higher than previous studies with similar samples that found PSSM mean between 3.09 ( $SD = .61$ ) and 3.11 ( $SD = .70$ ) (Goodenow, 1993).

The mean for student life satisfaction was 3.89 ( $SD = 1.09$ ,  $n = 164$ ) on a scale from 1 to 6 with higher values indicating more positive perceptions of life satisfaction. This can be interpreted as students having moderate life satisfaction on average. This average is lower than previously reported means with samples that include minoritized high school students,  $M = 4.20 - 4.42$  ( $SD = .89$ ) (Huebner et al., 2000). Caucasian students reported the highest average of life satisfaction following Hispanic/Latine, multiracial, and African American students.

The distribution for each variable was checked for normality and outliers greater than three standard deviations. The skew and kurtosis for the IORDS was high, suggesting non-normality of the distribution. This finding was taken into consideration when conducting analyses for the research questions. All other variables had an approximately normal distribution. Residual plots were used to check for outliers for each variable. The plots did not depict outliers. A correlation matrix for all study variables was constructed (see Table 5).

**Table 4**  
*Descriptive Statistics of Key Study Variables by Ethnic-Racial Group*

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>sk</i>	<i>ku</i>
IORDS <sup>1</sup>	179	0.74	0.82	1.62	2.78
African American	48	1.06	.82	1.19	2.21
Hispanic/Latinx	36	0.88	.99	1.57	1.84
Multiracial	42	0.80	.81	1.11	0.81
Caucasian	47	0.37	.49	1.81	3.96
MEIM <sup>2</sup>	174	1.90	0.58	0.61	0.72
African American	46	1.75	0.50	1.62	5.20
Hispanic/Latinx	36	1.69	0.48	-0.02	-1.09
Multiracial	39	1.81	0.56	0.67	-0.03
Caucasian	47	2.31	0.52	0.63	1.99

**Table 4 (Continued)**

PSSM <sup>3</sup>	166	3.44	0.77	-0.34	-0.05
African American	41	3.43	0.81	-0.59	1.43
Hispanic/Latinx	36	3.52	0.71	-0.05	-0.81
Multiracial	38	3.45	0.75	-0.24	-0.57
Caucasian	46	3.34	0.83	-0.23	-0.68
SLSS <sup>4</sup>	164	3.89	1.09	-0.31	-0.23
African American	39	3.73	1.13	-0.27	0.43
Hispanic/Latinx	36	3.86	1.00	-0.21	-0.71
Multiracial	38	3.77	.97	-0.11	-0.44
Caucasian	46	4.14	1.19	-0.62	-0.01

*Note.* <sup>1</sup>Individual Online Racial Discrimination Scale. This scale ranges from 0 (never happened) to 5 (on a daily basis). <sup>2</sup>Multigroup Ethnic Identity Measure. This scale ranges from 1 (strongly disagree) to 4 (strongly agree). <sup>3</sup>Psychological Sense of School Membership. This scale ranges from 1 (not true at all) to 5 (completely true). <sup>4</sup>Students Life Satisfaction Scale. This scale ranges from 1 (strongly disagree) to 6 (strongly agree).

### Reliability of Measures

The reliability for each of the measures was evaluated for the collected sample and compared to previous research findings for consistency. Cronbach's alpha for each of the scales used in the survey are provided in Table 5. For the Individual Online Racial Discrimination Scale, the alpha was .70, suggesting moderate reliability. Previous research reports the reliability of the subscale as .66 with similar demographic features and more participants (Tynes et al., 2010; Tynes et al., 2012). The alpha for the Multigroup Ethnic Identity Measure was .92, which is considered high reliability. The reliability is within range from previous studies finding alphas from .81 to .92 (Ponterotto et al., 2003; Fisher et al., 2020). The Psychological Sense of School Membership Scale also had a high reliability at .90. The original alpha of this measure was .77 - .88 (Goodenow, 2003). The Student Life Satisfaction Scale showed strong reliability with an alpha of .81. This is slightly above the range of previous alphas found for this measure from .70 - .80 (Huebner, 1991). Means for the items for each measure are presented in Table 6.

**Table 5**  
*Correlation Between the Variables*

	Age	Grade	IORDS <sup>2</sup>	MEIM <sup>3</sup>	PSSM <sup>4</sup>	SLSS <sup>5</sup>	SWeekday <sup>6</sup>	SWeekend <sup>7</sup>	Gender
Age	1								
Grade	.88**	1							
IORDS <sup>2</sup>	.22**	.18*	1						
MEIM <sup>3</sup>	-.19*	-.17*	-.04	1					
PSSM <sup>4</sup>	-.04	0	-.31**	-.21**	1				
SLSS <sup>5</sup>	-.03	0	-.30**	-.08	.54*	1			
SWeekday <sup>6</sup>	-.03	.02	.08	-.16*	-.12	-.18*	1		
SWeekend <sup>7</sup>	-.11	-.91	.08	-.16*	-.08	-.15	.58**	1	
Gender	.04	-.002	.07	.11	-.07	-.06	-.06	.02	1

*Note.* <sup>1</sup>ERI = Ethnic-Racial Identity, <sup>2</sup>IORDS = Individual Online Racial Discrimination Scale, <sup>3</sup>MEIM = Multigroup Ethnic Identity Measure, <sup>4</sup>PSSM = Psychological Sense of School Membership, <sup>5</sup>Student Life Satisfaction Scale, <sup>6</sup>Social Media Usage on Weekdays, <sup>7</sup>Social Media Usage on Weekends. *N* = 153-192.

\* *p* < .05, \*\* *p* < .01



**Table 6**  
*Cronbach's Alpha and Mean Scores for Survey Measures*

Measure	Cronbach's Alpha	<i>M</i>	<i>SD</i>	<i>n</i>
IORDS	0.7			
Question 1		0.93	1.3	179
Question 2		0.35	0.91	179
Question 3		0.35	0.84	179
Question 4		1.53	1.45	179
MEIM	0.92			
Question 1		1.94	0.82	174
Question 2		2.33	0.81	174
Question 3		1.97	0.79	174
Question 4		2.19	0.92	174
Question 5		1.55	0.67	174
Question 6		1.82	0.8	174
Question 7		1.83	0.78	174
Question 8		2.02	0.83	174
Question 9		1.71	0.75	174
Question 10		1.9	0.79	174
Question 11		1.89	0.81	174
Question 12		1.67	0.71	174
PSSM	0.9			
Question 1		3.2	1.22	166
Question 2		3.31	1.31	166
Question 3		3.9	1.28	166
Question 4		3.04	1.17	166
Question 5		3.17	1.15	166
Question 6		3.4	1.38	166
Question 7		3.72	1.4	166
Question 8		3.76	1.13	166
Question 9		4.12	1.11	166
Question 10		3.23	1.34	166
Question 11		3.54	1.19	166
Question 12		3.24	1.32	166
Question 13		3.12	1.29	166
Question 14		3.67	1.17	166
Question 15		3.67	1.2	166
Question 16		3.27	1.45	166
Question 17		3.01	1.19	166
Question 18		3.54	1.17	166
SLSS	0.81			
Question 1		4.2	1.53	164
Question 2		3.74	1.62	164
Question 3		2.91	1.66	164
Question 4		3.73	1.77	164
Question 5		4.52	1.45	164
Question 6		3.83	1.56	164
Question 7		4.3	1.5	164

*Note.* IORDSS = Individual Online Racial Discrimination Scale, MEIM = Multigroup Ethnic Identity Measure, PSSM = Psychological Sense of School Membership, SLSS = Students Life Satisfaction Scale. Scales ranges can be found in Table 2.

## Primary Research Findings

Question one examined the levels and differences between ethnic-racial groups' exposure to cyberhate using a one-way ANOVA. African American, Hispanic/Latine, Multiracial, and Caucasian groups were compared for overall mean differences. The F-test suggested a statistically significant difference between ethnic-racial groups' cyberhate exposure,  $F(3, 172) = 6.41, p < .001$ ). A follow-up Tukey test provided multiple comparisons between groups. Table 7 shows the results of the multiple comparisons. Results from the follow-up test show a statistically significant difference in cyberhate exposure between African American and Caucasian students and Hispanic/Latine and Caucasian students. African American students reported the highest mean of cyberhate exposure ( $M = 1.06, SD = .82$ ), followed by the mean scores for Hispanic/Latine students ( $M = 0.88, SD = .99$ ), and Multiracial students ( $M = 0.80, SD = .81$ ); scores for Caucasian students were the lowest ( $M = 0.37, SD = .49$ ). See Appendix F for a frequency distribution for each of the items for the IORDS. No statistically significant differences were found between groups of ethnic-racial minoritized students.

**Table 7**  
*Post-Hoc Analyses of Ethnic-Racial Group Cyberhate Exposure*

Ethnic-Racial Group	Mean	Mean Difference	S.E.	Sig.
African American	1.06			
Hispanic/Latinx	0.88	.18	.17	.72
Multiracial	0.80	.26	.17	.40
Caucasian	0.37	.69*	.16	<.001
Hispanic/Latinx				
Multiracial		-.08	.18	.97
Caucasian		.50*	.17	.02
Multiracial				
Caucasian		.43	.06	.06

Note. \*  $p < .05$

Question two explored how ethnic-racial groups and cyberhate exposure may predict students' ethnic-racial identity perceptions. Controlling for age and gender, a multiple regression

was conducted with African American, Hispanic/Latine, and Multiracial student groups, and IORDS scores as predictors for MEIM outcomes. The Caucasian student group was used as a constant comparison for each ethnic-racial group. A significance level of .05 was used. Table 8 shows a summary of the results of the multiple regression predicting multigroup ethnic identity perceptions.

Two models were generated from the regression. The first model used African-American, Hispanic/Latine, and Multiracial student groups as predictors and included gender and student age as control variables. Grade was not included in the multiple regression equation due to high correlation with age. This model showed that the ethnic-racial student groups were significant predictors of ethnic identity perceptions. However, gender and age were not significant predictors. The coefficients for each ethnic group show that African-American, Hispanic/Latine, and Multiracial student groups perceive lower levels of affiliation towards their ethnic-racial identity than Caucasian students. The ethnic-racial groups together along with student gender, age, and social media usage on the weekdays and weekends explained 21% ( $R^2 = .21$ ) of the variance in MEIM,  $F(7, 161) = 5.92$ ,  $p < .001$ . In the second model, the IORDS variable was added to model one, which included ethnic-racial groups, gender, and age to predict MEIM outcomes. For this model, the ethnic-racial groups significantly predicted the students' ethnic identity perceptions  $F(8, 161) = 5.40$ ,  $p < .001$ . When IORDS was added as a predictor, it did not significantly predict variability in student perceptions of their ethnic identity ( $B = .10$ ,  $p = .21$ ). Similar to the first model, gender and age as control variables did not significantly predict ethnic identity perceptions. Assumptions for the multiple regression analysis (e.g., normality and homoscedasticity of the residuals) were checked using residual scatterplots and histograms. No violations were detected.

**Table 8**  
*Multiple Regression of Multigroup Ethnic Identity Predictors*

Variable	Model 1			Model 2			<i>r</i>
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	
African American <sup>1</sup>	-0.48	0.12	-0.37**	-0.51	0.12	-0.40**	-0.15
Hispanic/Latinx <sup>1</sup>	-0.59	0.13	-0.43**	-0.62	0.13	-0.44**	-0.20
Multiracial <sup>1</sup>	-0.48	0.12	-0.35**	-0.50	0.12	-0.370**	-0.09
Female	-0.11	0.09	-0.09	-0.11	0.09	-0.09	-0.07
Age	-0.02	0.03	-0.05	-0.03	0.03	-0.07	-0.19
Social Weekday	-0.03	0.06	-0.05	-0.03	0.06	-0.05	-0.16
Social Weekend	-0.05	0.05	-0.09	-0.06	0.05	-0.10	-0.16
Cyberhate				0.07	0.05	0.10	-0.05
<i>R</i> <sup>2</sup>		0.21			0.22		
<i>F</i>		5.92**			5.39**		

Note. *N* = 161. Caucasian students were used as the reference variable.<sup>1</sup> Cyberhate= Individual Online Racial Discrimination Scale. *r* corresponds to the Pearson correlation for the predictor variables of ethnic-racial identity perceptions outcome. \**p* < .05, \*\* *p* < .01

Question three explored how ethnic-racial groups and cyberhate exposure may predict students' school connectedness. Controlling for age and gender, a multiple regression was conducted with African American, Hispanic/Latine, and Multiracial student groups, and IORDS scores as predictors for PSSM outcomes. The Caucasian student group was used as a constant comparison for each ethnic-racial group. A significance level of .05 was used. Table 9 shows a summary of the results of the multiple regression predicting school connectedness perceptions.

Two models were generated from the regression. The first model used African-American, Hispanic/Latine, and Multiracial student groups as predictors and included gender, student age, and social media weekday and weekend usage as control variables. This model showed that no demographic or social media usage variables were significant predictors of school connectedness  $F(7, 154) = .61, p = .75$ . In the second model, the IORDS variable was added to model one, which included ethnic-racial groups, gender, and age to predict PSSM outcomes. For this model, IORDS significantly predicted the students' school connectedness perceptions ( $B = -.35, p <$

.001),  $F(8, 154) = 2.85$ ,  $p = .006$ . Specifically, students who experienced higher levels of cyberhate exposure reported lower levels of school connectedness, as measured by the PSSM. IORD accounted for 13.6% of the variance in PSSM ( $R^2 = .136$ ). Ethnic-racial groups did not significantly predict PSSM scores. Similar to the first model, gender and age also did not significantly predict school connectedness perceptions. Assumptions for multiple regression (e.g., normality and homoscedasticity of the residuals) were checked using residual scatterplots and histograms. No violations were detected.

**Table 9**  
*Multiple Regression of School Connectedness Predictors*

Variable	Model 1			Model 2			
	<i>B</i>	<i>SE B</i>	$\beta$	<i>B</i>	<i>SE B</i>	$\beta$	<i>r</i>
African American <sup>1</sup>	0.17	0.19	0.10	0.34	0.18	0.19	-0.01
Hispanic/Latinx <sup>1</sup>	0.21	0.19	0.11	0.34	0.19	0.18	0.04
Multiracial <sup>1</sup>	0.12	0.18	0.07	0.22	0.17	0.12	0.01
Female	-0.01	0.13	0.00	-0.03	0.13	-0.02	-0.01
Social Weekday	-0.10	0.09	-0.11	-0.10	0.08	-0.12	-0.13
Social Weekend	-0.03	0.08	-0.04	-0.01	0.08	-0.01	-0.09
Age	-0.05	0.05	-0.09	-0.02	0.05	-0.04	-0.06
Cyberhate				-0.33	0.08	-0.35**	-0.32
<i>R</i> <sup>2</sup>		0.03			.14*		
<i>F</i>		0.61			2.05*		

*Note.*  $N = 154$ . Caucasian students were used as the reference variable.<sup>1</sup> Cyberhate = Individual Online Racial Discrimination Scale. *r* corresponds to the Pearson correlation for the predictor variables of school connectedness outcome. \* $p < .05$  \*\*  $p < .01$

Question four explored how ethnic-racial groups and cyberhate exposure may predict students' life satisfaction. Controlling for age and gender, a multiple regression was run with African American, Hispanic/Latine, and Multiracial student groups, and IORDS scores as predictors for SLSS outcomes. The Caucasian student group was used as a constant comparison for each ethnic-racial group. A significance level of .05 was used. Table 10 shows a summary of the results of the multiple regression predicting life satisfaction perceptions.

Two models were generated from the regression. The first model used African-American, Hispanic/Latine, and Multiracial student groups as predictors and included gender, student age, social media weekday and weekend usage as control variables. This model showed that none of the demographic variables were significant predictors of life satisfaction  $F(7, 153) = 1.54, p = .16$ . In the second model, the IORDS variable was added to model one, which included ethnic-racial groups, gender, and age to predict SLSS outcomes. For this model, IORDS significantly predicted students' life satisfaction perceptions ( $B = -.26, p = .002$ ),  $F(8, 153) = 2.71, p = .008$ . This can be interpreted as students reported more cyberhate experiences, they also reported lower life satisfaction. IORDS predicted 13.1% of the variance in SLSS ( $R^2 = .131$ ). Ethnic-racial groups did not significantly predict SLSS. Similar to the first model, gender and age did not significantly predict life satisfaction perceptions. Assumptions for multiple regression (e.g., normality and homoscedasticity of the residuals) were checked using residual scatterplots and histograms. No violations were detected.

**Table 10**  
*Multiple Regression of Life Satisfaction Predictors*

Variable	Model 1			Model 2			
	<i>B</i>	SE <i>B</i>	$\beta$	<i>B</i>	SE <i>B</i>	$\beta$	<i>r</i>
African American <sup>1</sup>	-0.42	0.26	-0.17	-0.24	0.26	-0.10	-0.10
Hispanic/Latinx <sup>1</sup>	-0.37	0.27	-0.14	-0.24	0.26	-0.09	-0.02
Multiracial <sup>1</sup>	-0.52	0.25	-0.20	-0.41	0.24	-0.16	-0.09
Female	0.01	0.18	0.01	-0.01	0.18	0.00	-0.01
Social Weekday	-0.20	0.12	-0.17	-0.20	0.11	-0.17	-0.19
Social Weekend	-0.02	0.11	-0.02	0.01	0.11	0.01	-0.13
Age	0.03	0.07	0.03	0.05	0.07	0.07	-0.04
Cyberhate				-0.35	0.11	-0.26**	-0.29
R <sup>2</sup>		0.07			.13**		
F		1.54			2.71**		

*Note.*  $N = 153$ . Caucasian students were used as the reference variable.<sup>1</sup> Cyberhate = Individual Online Racial Discrimination Scale. *R* corresponds with the Pearson correlation for the predictor variables of student life satisfaction outcome. \* $p < .05$  \*\*  $p < .01$

## **Chapter Five: Discussion**

This study aimed to examine ethnic-racial minoritized adolescents' experience with cyberhate in relation to their perceptions of their identity, school connectedness, and life satisfaction. The sample consisted of 192 high school students from ages 14 to 19, with sizeable numbers of participants from three minoritized groups (Black/African American, Hispanic/Latine, and Multiracial) and one non-minoritized group (Caucasian). This chapter begins with examining the findings for research question one regarding the frequency of cyberhate experienced by different ethnic-racial groups. Next, interpretations and considerations around ethnic-racial identity perceptions and cyberhate, school connectedness and cyberhate, and life satisfaction and cyberhate are discussed. Limitations of the study and a positionality statement are provided for further context of the research process. Lastly, implications for educational professionals and future research directions are provided.

### **Frequency of Cyberhate Experienced by Different Ethnic-Racial Groups**

Descriptive statistics indicated that Black/African American, Hispanic/Latine, and Multiracial minoritized students in the sample experienced more cyberhate (as indicated by responses to the IORDS) on average than their White/Caucasian non-minoritized peers, respectively. The groups' means for cyberhate exposure ranged from .37 to 1.06. The IORDS ranges from 0 (never happened) to 5 (happens on a daily basis), meaning that an average participant's experience with cyberhate based on their ethnic-racial identity ranged from never in their life to least once in their life.

Results from the ANOVA indicated significant group differences in cyberhate experiences between minoritized and non-minoritized groups. Specifically, Black/African American students and Hispanic/Latine students experienced significantly more cyberhate discrimination than White/Caucasian students. These results are consistent with previous cyberhate victimization research that analyzed the differences between minoritized groups of adolescents (Common Sense, 2018; Tynes et al., 2015). Recent literature supports that Black/African American students are more frequently targeted online due to their racial identity compared to their Latine and White peers (Common Sense, 2018; Vogels, 2021).

Findings from the current study align with the findings specific to comparisons between Black/African American and White students, but do not support significant differences between Black/African American and Latine students. The multiracial student group did not have any significant differences in cyberhate exposure compared to their minoritized and non-minoritized peers. This finding may be due to the different stages or perceptions of the ethnic-racial identity of youth who identify with and experience other social group identities (Phinney, 1989). For example, given that all youth engage with their identity differently, some may find themselves in stages of exploring what their ethnic-racial identity means, and others may have a firm sense or commitment to their identity. Some adolescents may not be engaged with the process, which is described as identity diffusion, either because they may not value it, or they may not be aware of their ethnic-racial identity as it relates to society. As such, varying levels of engagement have been suggested to relate to how minoritized youth perceive discrimination. Thus, more research with minoritized adolescents' identity perceptions is warranted.



## **Ethnic-Racial Identity Perceptions and Cyberhate**

Regarding ethnic-racial groups' cyberhate experience predicting ethnic-racial identity (ERI) perceptions, the multiple regression results indicated that only students' ethnic-racial group identity significantly predicted their identity perceptions. White students reported having higher affiliation perceptions of ethnic-racial identity than African American, Hispanic/Latine, and Multiracial students. This result is similar to the descriptive statistics in the current study that described the differences in cyberhate experiences. Essentially, ethnic-racial minoritized students perceived less ethnic-racial identity affiliation than their non-minoritized peers. A previous study of middle school and high school students, averaging 14.8 years of age, found opposite reports that ethnic-racial minoritized students (e.g., African American, Hispanic, and Asian) report stronger ERI than White students (Worrell, 2007). This contradiction may be influenced by the lapse of time between the studies and the difference in study samples. Another explanation for this difference may be age differences. As youth get older, they are more likely to develop commitment to their ethnic-racial identity, whereas when they are younger, they are more likely to be in the exploration stage of ethnic-racial identity development (Phinney & Ong, 2007).

The difference in levels of ethnic-racial identity between the minoritized and non-minoritized groups is interesting when considering the constructs of ERI that are at play. ERI can be measured by one's perceptions of their racial centrality, positive regard, and public regard (Seaton, 2009; Sellers et al., 1998). For African American, Hispanic/Latine, and Multiracial students to have lower ERI, especially looking at their average response on the MEIM, this suggests that they may negatively perceive how important their race is to them, how they feel about their race, and/or how they think others feel about their race. Why youth may have negative perceptions of racial centrality, private regard, or public regard is subjective to their experience.

However, low perceptions of ERI are risk factors for psychological maladjustment, racial discrimination perceptions, and lower self-esteem (Sellers et al., 2003; Tynes et al., 2008)

Although cyberhate did not significantly predict students' ERI perceptions, literature suggests that youth's reaction or internalization of experiencing cyberhate may be buffered by their perception of their identity (Seaton, 2009; Sellers et al., 2003). If they have elements of positive regard, centrality, or experience positive public regard around their ethnic-racial group, they may be less likely to be at risk for the adverse effects of cyberhate (Seaton, 2009).

Cyberhate should not be dismissed as a negative social experience that can frame public regard for one's ethnic-racial group. Future research should incorporate more detailed accounts of ERI constructs and how they relate to perceptions of cyberhate experiences.

### **School Connectedness Perceptions and Cyberhate**

Findings from the current study support the notion that cyberhate is inversely associated with school connectedness perceptions. Students who reported more exposure to cyberhate also reported lower school connectedness. School connectedness measures belongingness, involvement, engagement, and relatedness in school (Karcher, 2003; Karcher & Sass, 2010; Townsend & McWhirter, 2005). It can also be seen as an indicator of social support considering the social dynamics of peer and teacher interactions. Thus, students who experience cyberhate may perceive less social support and belonging at school. Considering that cyberhate is a virtual phenomenon, the results from the present study suggest a connection to the offline and online modality of minoritized adolescents' experiences with victimization (Reich et al., 2012).

Recent studies have found that students who experience victimization in person are also more likely to experience it online (Baldry et al., 2017; Waasdorp & Bradshaw, 2015). However, these findings do not suggest that cyberhate *causes* low school connectedness. Instead, one might

consider that cyberhate exposure and school connectedness may have a bi-directional relationship, meaning that poor social relationships at school could predict or increase the risk of victimization. As schools continue to promote healthy school climates, it would be beneficial for educational professionals to understand the different circumstances and modalities of victimized students. Especially for students of minoritized backgrounds, more insight would be beneficial to know what extent this relates to their perceptions of school connectedness.

Ethnic-racial groups did not predict differences in school connectedness perceptions. This may be due to the numerous factors that make up school connectedness that can be salient among any group of students. Another factor could be the limitation of sample size for each ethnic-racial group. However, research suggests that ethnic-racial minoritized youth may be more vulnerable to victimization like cyberhate and a lack of social support, and that this in turn impacts interactions in schools. Additional studies are needed to identify explicit connections between cyberhate and school connectedness in regard to ethnic-racial minoritized groups.

### **Life Satisfaction and Cyberhate**

The final analysis for this study examined how ethnic-racial groups and cyberhate may predict student life satisfaction. Student life satisfaction was significantly predicted by cyberhate exposure but not by ethnic-racial group identification or control variables. The results indicate that as students reported more experiences of cyberhate, they also perceived less life satisfaction. This is consistent with Görzig et al.'s study (2022), which looked at the relationship between cyberhate and life satisfaction, and found that as life satisfaction increased, cyberhate experiences decreased. Given that life satisfaction is a key indicator of positive mental health, cyberhate may represent a risk factor for diminished life satisfaction.

Diener et al. (1999) suggested that demographic factors do not account for a large variance in subjective well-being. Mean life satisfaction levels did not vary significantly across ethnic-racial groups to contribute to significant predictions of life satisfaction. However, other findings in this study demonstrate that minoritized youth experience more cyberhate exposure. This suggests that some groups of minoritized youth may have an increased chance of experiencing diminished life satisfaction. This may be explained by the social function of “otherness”, in that different ethnic-racial groups and those with lower life satisfaction are perceived as “other” by the dominant social group (Kowalski & Limber, 2013). These experiences may be interpreted as negative to a victim of cyberhate and indicate a negative perception of life without social support and even create a negative public regard around their identity (Phinney, 2003). Although demographic factors are not proposed to be a large factor in life satisfaction, contextual aspects of experiencing cyberhate and personal characteristics of dealing with cyberhate may play into overall perceptions of life satisfaction (Seaton & Yip, 2008).

Although moderators were not examined in this study, it is important to understand the social context that minoritized youth live in physically and engage with virtually. Research has posed that social context may help explain the extent that cyberhate experiences are associated with decreased life satisfaction (Seaton & Yip, 2008). For example, youth who have more social supports – a key component in life satisfaction – may be more likely to have higher life satisfaction (Görzig et al., 2022). However, for those who perceive themselves in an environment or context that does not support them, the experience of cyberhate may be more salient. Thus, it may not just be the event of cyberhate that decreases well-being, rather how one interacts with and responds to the socio-cultural context may also play a role. Bi-directionality or a cyclical

process is considered for the relationship between subjective well-being and cyberhate (Keipi et al., 2017). More social support implementation with peers, school, and family may provide youth who have victimization risk factors with social protective factors to mitigate the negative cycle of increased cyberhate and low perceptions of life satisfaction (Chen et al., 2017; Frison et al., 2016; Görzig et al., 2022).

### **Limitations**

The current study has several limitations. Online self-report measures were used, and may be limited by social desirability, response inattention, and misinterpretation of questions. Though self-reporting can be subject to error, this method was selected because it was deemed the most appropriate way to capture ethnic-racial minoritized adolescents' exposure to cyberhate, perceptions of ethnic-racial identity, school connectedness, and life satisfaction. Future studies could benefit from applying mixed methods incorporating quantitative and qualitative data collection with surveys and interviews to examine minoritized youth's experiences with discrimination and racism. It is possible that using the survey method limited the interpretability of participants' cyberhate experience. Interviews could have bolstered the findings with more in-depth descriptions of youths' experiences and their personal anecdotes.

Another limitation of this study was the sample size. Despite having a total of 192 participants, the number of participants representing each ethnic-racial group was limited to only 37 to 50 participants per group. Thus, generalizability cannot be assumed for the population. Within the sample, several groups were removed due to having a small sample. These groups were non-binary and "other" for gender, and Asian and Native American for ethnic-racial group. While participants from these groups were included in the descriptive statistics and correlation matrices for maximum sample size retainment, they were not represented in the multiple

regressions which accessed only participants with retained values on all variables in the equation. Therefore, this study's demographic representation is limited.

Furthermore, the data collected is nested due to students being recruited from multiple schools and community programs. However, the nested nature of the data structure was not taken into consideration for the analysis of the data. Also, no causation can be inferred due to a correlational research design. The data collected were cross-sectional, limiting the participants' experiences to one time-point. Longitudinal study methods would allow researchers to infer causality about the relationship between the observed variables.

### **Positionality Statement**

As an African American, this researcher's aim for this study was to further understand the context in which minoritized youth engage in online practices. The researcher participates in social media activities and has been a victim of vicarious and direct accounts of cyberhate at different points in their development. The researcher is aware of and has experienced the thought processes and feelings that can be generated by cyberhate. The researcher educated participants on the realities of cyberhate before they took the survey and provided definitions of cyberhate within the survey. During the consent and assent process, participants were given a digital copy of resources to use in the event that they felt discomfort during or after taking the survey. The researcher indirectly administered the survey for data collection by emailing the survey links to the program directors and school principals. Direct administration of the surveys was also conducted by the researcher giving students with consent the link and QR code to the survey.

### **Implications for Practice**

Most teenagers engage in social media use during the weekdays and weekends. Many teens experience cyberhate at some point, with ethnic-racial minoritized students having an

increased risk for more frequent experiences of cyberhate than their non-minoritized peers. Cyberhate is associated with maladaptive adjustments such as diminished school connectedness and life satisfaction. Speech or images posted online can also be discussed and become increasingly salient in social communities like schools. It is important for educational professionals, families, and youth to be aware of these interactions and to become change agents in reducing and preventing cyberhate.

### ***Educators and Community Support***

The findings from this study connecting online-racial discrimination to lower school connectedness prompts more urgency to understand why students have less school connection and life satisfaction when they report more cyberhate experiences. As educators continue to address cultural awareness and equity for all students, online risk factors such as cyberhate cannot be ignored. Educational professionals must be diligent in knowing and embracing the bioecological functions and systems that already exist to better serve their students, especially those from vulnerable populations (Vélez-Agosto et al., 2017). Researchers and practitioners could benefit from evaluating the social climate of schools, and how this may relate to students' online and offline activities as well as their well-being. Furthermore, creating more positive interactions between and among ethnic-racial groups at school and in the community may provide more support to vulnerable youth who experience racial discrimination. Establishing a support system to uplift ethnic-racial identities and create a positive social community and belongingness for minoritized populations may help to deter instances of local cyberhate perpetration and victimization.

Cyberhate is a public health issue that research indicates affects youth well-being and identity development. As such, a community effort is needed to combat it. Schools and

community programs may promote supervised affinity groups that allow youth to share and discuss their culture and identity. This may allow groups and individuals within them to become more aware of each other's experiences and values, which may foster acceptance and support. Another approach would be for schools and communities to utilize evidence-based programs or curriculums that uplift ethnic-racial group's identity and culture. For instance, the Identity Project is a formal curriculum that promotes positive perceptions and connections to ethnic-racial identity, while supporting their academic and mental well-being, which may be used with youth (Umaña-Taylor et al., 2018). The Anti-Defamation League also offers a lesson on "Countering Cyberhate with Counterspeech", in which high school students are able to develop a better understanding of cyberhate and how to combat it (Anti-Defamation League, 2014).

### ***Family Support***

Families are also a crucial part of adolescents' support system. It is important that the parents or guardians of youth who are vulnerable to victimization be empowered to support their children. School and home collaboration should be fostered as a cohesive connection of understanding the negative effects of cyberhate, addressing it, and also providing positive environments for ethnic-racial identity development. The Anti-Defamation League urges parents to have discussions with their youth about the cyberhate that they see in the media (Anti-Defamation League, 2014b). Doing so promotes open conversation and reactions, opportunities to address negative perceptions, and a basis for future safety plans when encountering cyberhate.

### ***Youth Agency***

As adolescents continue to use social media, they are more likely to encounter cyberhate, whether it be targeted at their identity or other's. As such, a developed understanding of what cyberhate means and how it may affect them is encouraged. The findings of this study are the



reports of their peers who have experienced cyberhate in some form. Sharing the findings of this study with youth may provide a better conceptualization for other youth who may have the same experiences but may not have realized how exposure to cyberhate could be related to their well-being. Thus, they may feel more empowered to share with others about their cyberhate experiences. Allowing youth to express their experience re-centers their voice and needs, which could be beneficial for providing them with the resources that they may need for their identity development, well-being, advocacy, and protection.

Other forms of youth agency include self-monitoring and knowing how to respond to cyberhate. Although the user is not always in control of social media content, youth may be advised to use healthy habits regarding social media, such as social media time usage. Correlations in the current study suggested an inverse association between life satisfaction and weekday social media usage. Advising youth to reduce time on social media may be beneficial. Another healthy habit to consider is unfollowing or blocking accounts that post hateful messages. Spreading awareness of cyberhate events and holding perpetrators accountable for the content by reporting it to appropriate authorities may also be a healthy practice that empowers youth to feel in control of what they see online.

### **Future Research Directions**

Cyberhate in the form of online racial discrimination is an ongoing phenomenon that affects minoritized and marginalized youth. Findings from this study indicate there is a difference between Black/African American and Hispanic/Latine (minoritized) and White/Caucasian (non-minoritized) ethnic-racial groups' experience with cyberhate. However, this study did not support Multiracial students and White/ Caucasian students having different experiences of cyberhate. Additional research is needed to explore cyberhate exposure in other

ethnic-racial groups such as Asian, Pacific Islander, Arabic, and Caribbean adolescents. Research could also benefit from analyzing the intersectionality of ethnic-racial identity for youth who identify as more than one ethnicity-race, as their social group experiences and perceptions may differ (Phinney, 1989).

This study provides insight into how researchers may consider youth development alongside their social engagement. Ethnic-racial identity is a critical part of identity development for most youth; and its development can become complex living in different realities of society for minoritized youth. The Multigroup Ethnic Identity Measure (MEIM; Phinney, 1992) was used to measure a component of ethnic-racial identity by interpreting their perceived affiliation to their ethnic-racial group. However, this measure aligns with how they are engaging with their group(s). Future studies would benefit from a more cognitive conceptualization of ethnic-racial identity perceptions that look closer at their private regard, public regard, and racial centrality to further understand how adolescents may process their identity personally. A measure like the Multidimensional Measure of Racial Identity (Sellers et al., 1998) might be used in future studies on the perceptions of ethnic-racial identity.

Although students' ethnic-racial identity significantly predicted their ethnic-racial identity perceptions, experiencing cyberhate did not. This finding is common in the current literature. Studies have identified youth resilience and social supports as protective factors against perceptions of adverse situations like cyberhate (Görzig et al., 2022; Seaton, 2009). It may be that the sample of youth in the present study perceive themselves to have more social support which may help negate the harmful effects of cyberhate. However, more research would be beneficial to analyze how protective factors work to combat online and offline racial

discrimination. This may add to the literature for researchers and practitioners to consider bolstering these factors for minoritized students.

Given that cyberhate significantly predicted life satisfaction, future practitioners and researchers may benefit from investigating specific types of negative experiences, such as online and offline racial discrimination and victimization, that influence aspects of life satisfaction. Future studies could interview or survey ethnic-racial minoritized adolescents on their perceptions of negative life events, like cyberhate, and how they impact their mental health, social well-being, and social interactions. Similar studies could bring forth more understanding about the various ways cyberhate extends beyond a moment in a minoritized youth's life.

Finally, as adolescents continue to gather information from society and their cultural groups about the meanings of ethnicity and race and develop their sense of identity, it is essential that systems and those who support youth to consider the transition of online social interactions into face-to-face interactions. More studies are needed to understand ethnic-racial identity development among minoritized youth and how to meet their unique needs within the systems that already exist. As well, there is a call for increased social and community building to foster positive interactions among youth of diverse backgrounds and to provide safe spaces for their development and growth.

For future researchers looking to understand more about cyberhates' implications for ethnic-racial minoritized youth, it is important to take a cultural approach that centers their voice. A safe space should be created for them to express their experiences and feelings around cyberhate or any discrimination. Within these spaces, ethnic-racial minoritized youths' experiences should be respected and not invalidated. Youth who come to these spaces may feel vulnerable, thus invalidation counters the purpose of a space that is meant to build understanding

and trust. Along with hearing the voices of the youth, researchers would benefit from allowing their perspectives and experiences guide the future directions for addressing their needs. For example, asking ethnic-racial minoritized youth what they believe will aid in processing cyberhate and navigating their development in society may have better social validity and promising outcomes. There is no one correct cultural approach, but it should consist of respecting and centering the voices and experiences of those that are being served.

## **Chapter Six: Conclusion**

Cyberhate is an extreme form of cyberbullying and virtual hate that is rooted in the aggressive discrimination of one's race, ethnicity, gender, disability, nationality, or religion (Wachs et al., 2020). For ethnic minoritized adolescents, a risk factor and stressor on social media is the presence of cyberhate. From a bioecological perspective (Bronfenbrenner, 1979; Vélez-Agosto et al., 2017), cyberhate can influence ethnic-racial minoritized adolescents' microsystems and have implications for their development. Experiencing cyberhate has been associated with negative life outcomes and perceptions. This study explored the perceptions of ethnic-racial minoritized youth regarding their ethnic-racial identity, school connectedness, and life satisfaction. The findings demonstrate that African-American and Hispanic/Latine high school students reported more frequent experiences of cyberhate than their White peers. Teenagers from each minoritized group (i.e., African-American and Hispanic/Latine) examined reported less affiliation perceptions with their ethnic-racial identity as compared to their White peers. Further, experiences of cyberhate appeared detrimental for all participants, as indicated by inverse associations with school connectedness and life satisfaction. As researchers, educators, and practitioners continue to develop and provide services for minoritized youth, acknowledgement of and action to combat racism in online and offline forms is warranted. Although low levels of ethnic-racial identity affiliation, school connectedness, and life satisfaction are associated with higher risk for cyberhate, they can also be protective factors that can reinforce minoritized adolescents' development and mental health.

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### Appendix A: Demographic Form

1. I Speak English:      Yes    No
2. I am in:                9<sup>th</sup> Grade      10<sup>th</sup> Grade      11<sup>th</sup> Grade      12<sup>th</sup> Grade
3. I am a part of \_\_\_\_\_ program.
4. My age is:             14 15 16 17 18 19 20 21 22 23 24 25
5. My gender is:        Female            Male            Non-Binary                    Other\_\_\_\_\_

5. My ethnic-racial group(s) that identify with is: (*select all that apply*)

- a. African American/Black
- b. Hispanic/Latinx
- c. Asian
- d. American Indian
- e. Alaska Native
- f. Pacific Islander
- g. Caucasian/White
- h. Not listed (*specify*):\_\_\_\_\_

6. I use the following social media platforms: (*select all that apply*)

- a) Instagram
- b) TikTok
- c) Twitter
- d) Facebook
- e) YouTube
- f) Snapchat
- g) Other (*specify*):\_\_\_\_\_
- h) None; I do not use any social media.

7. Last week, during the **weekdays**, I used social media on average:

- a) 0-1 hours a day
- b) 2-3 hours a day
- c) 4-5 hours a day
- d) 6+ hours a day

8. Last week, during the **weekend**, I used social media on average:

- a) 0-1 hours a day
- b) 2-3 hours a day
- c) 4-5 hours a day
- d) 6+ hours a day

## Appendix B: Online Racial Discrimination Scale

**Cyberhate** is an extreme form of hate in online settings, such as social media. Cyberhate can be a post on social media, a video that comes in forms of aggressive discrimination that targets one's race, ethnicity, gender, disability, nationality, or religion. It aims to create hostility, negative thoughts, or violence toward a social group or representatives of a social group.

**Racial Discrimination** is the unjust treatment of, or against, any individual on the basis of their skin color, or racial or ethnic origin.

We would like to know more about your experiences on social media. Please answer the following questions.

1. People have said mean or rude things about me because of my race or ethnic group on social media.
  - Never happened
  - Happened once
  - A few times a year
  - A few times a month
  - A few times a week
  - On a daily basis
2. People have excluded me from a site because of my race or ethnic group on social media.
  - Never happened
  - Happened once
  - A few times a year
  - A few times a month
  - A few times a week
  - On a daily basis
3. People have threatened me on social media with violence because of my race or ethnic group.
  - Never happened
  - Happened once
  - A few times a year
  - A few times a month
  - A few times a week
  - On a daily basis
4. People have shown me a racist image on social media.
  - Never happened
  - Happened once
  - A few times a year
  - A few times a month
  - A few times a week
  - On a daily basis

### Appendix C: Multigroup Ethnic Identity Measure

In this country, people come from many different countries and cultures, and there are many different words to describe the different backgrounds or ethnic groups that people come from. Some examples of the names of ethnic groups are Hispanic or Latino, Black or African American, Asian American, Chinese, Filipino, American Indian, Mexican American, Caucasian or White, Italian American, and many others. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it. Please answer the following questions.

1. I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs.  
Strongly agree   Agree   Disagree   Strongly disagree
2. I am active in organizations or social groups that include mostly members of my own ethnic group.  
Strongly agree   Agree   Disagree   Strongly disagree
3. I have a clear sense of my ethnic background and what it means for me.  
Strongly agree   Agree   Disagree   Strongly disagree
4. I think a lot about how my life will be affected by my ethnic group membership.  
Strongly agree   Agree   Disagree   Strongly disagree
5. I am happy that I am a member of the group I belong to.  
Strongly agree   Agree   Disagree   Strongly disagree
6. I have a strong sense of belonging to my own ethnic group.  
Strongly agree   Agree   Disagree   Strongly disagree
7. I understand pretty well what my ethnic group membership means to me.  
Strongly agree   Agree   Disagree   Strongly disagree
8. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.  
Strongly agree   Agree   Disagree   Strongly disagree
9. I have a lot of pride in my ethnic group.  
Strongly agree   Agree   Disagree   Strongly disagree
10. I participate in cultural practices of my own group, such as special food, music, or customs.  
Strongly agree   Agree   Disagree   Strongly disagree
11. I feel a strong attachment towards my own ethnic group.  
Strongly agree   Agree   Disagree   Strongly disagree
12. I feel good about my cultural or ethnic background.  
Strongly agree   Agree   Disagree   Strongly disagree

### Appendix D: Psychological Sense of School Membership

We would like to know about your feelings towards the high school that you attend. Please read each statement and indicate the extent to which the statement is true for you. Select a number from 1 to 5, where 1 means the statement is “Not at all true” and 5 means the statement is “Completely true.”

1) I feel like a part of my school.	Not at all true 1	2	3	4	Completely true 5
2) People at my school notice when I am good at something.	Not at all true 1	2	3	4	Completely true 5
3) It is hard for people like me to be accepted at my school.	Not at all true 1	2	3	4	Completely true 5
4) Other students in my school take my opinions seriously.	Not at all true 1	2	3	4	Completely true 5
5) Most teachers at my school are interested in me.	Not at all true 1	2	3	4	Completely true 5
6) Sometimes I feel as if I don't belong in my school.	Not at all true 1	2	3	4	Completely true 5
7) There is at least one teacher or adult I can talk to in my school if I have a problem.	Not at all true 1	2	3	4	Completely true 5
8) People at my school are friendly to me.	Not at all true 1	2	3	4	Completely true 5
9) Teachers here are not interested in people like me.	Not at all true 1	2	3	4	Completely true 5
10) I am included in lots of activities at my school.	Not at all true 1	2	3	4	Completely true 5
11) I am treated with as much respect as other students in my school.	Not at all true 1	2	3	4	Completely true 5
12) I feel very different from most other students at my school.	Not at all true 1	2	3	4	Completely true 5
13) I can really be myself at my school.	Not at all true 1	2	3	4	Completely true 5
14) Teachers at my school respect me.	Not at all true 1	2	3	4	Completely true 5
15) People at my school know that I can do good work.	Not at all true 1	2	3	4	Completely true 5
16) I wish I were in a different school.	Not at all true 1	2	3	4	Completely true 5
17) I feel proud to belong to my school.	Not at all true 1	2	3	4	Completely true 5
18) Other students at my school like me the way that I am.	Not at all true 1	2	3	4	Completely true 5

### **Appendix E: Student Life Satisfaction Scale**

We would like to know what thoughts about life you have had during the past several weeks. Think about how you spend each day and night and then think about how your life has been during most of this time. Please answer these questions to indicate your satisfaction with your overall life.

1. My life is going well.
  - Strongly disagree
  - Moderately disagree
  - Mildly disagree
  - Mildly agree
  - Moderately agree
  - Strongly agree
2. My life is just right.
  - Strongly disagree
  - Moderately disagree
  - Mildly disagree
  - Mildly agree
  - Moderately agree
  - Strongly agree
3. I would like to change many things in my life.
  - Strongly disagree
  - Moderately disagree
  - Mildly disagree
  - Mildly agree
  - Moderately agree
  - Strongly agree
4. I wish I had a different kind of life.
  - Strongly disagree
  - Moderately disagree
  - Mildly disagree
  - Mildly agree
  - Moderately agree
  - Strongly agree
5. I have a good life.
  - Strongly disagree
  - Moderately disagree
  - Mildly disagree
  - Mildly agree
  - Moderately agree
  - Strongly agree
6. I have what I want in life.

- Strongly disagree
- Moderately disagree
- Mildly disagree
- Mildly agree
- Moderately agree
- Strongly agree

7. My life is better than most kids.

- Strongly disagree
- Moderately disagree
- Mildly disagree
- Mildly agree
- Moderately agree
- Strongly agree

**Appendix F: Frequency Distribution of IORDS Items**

**Table 11A**

*Frequency Distribution of IORDS Items*

	Question 1	Question 2	Question 3	Question 4
Never happened	101	148	144	63
Happened once	25	13	18	28
A few times a year	34	10	11	47
A few times a month	9	4	4	20
A few times a week	4	2	0	14
On a daily basis	6	2	2	7

*Note.* IORDS = Individual Online Racial Discrimination Scale. The scale ranged on a scale from 0 (Never happened) to 5 (On a daily basis). The sample size for the frequency distribution was 192 participants.

## **Appendix G: Parent Consent Form**

**USF Study ID: STUDY003505 Date Effective: 12/17/2021**

### **Dear Parent or Guardian:**

This letter tells you about a study on “High School Students’ Perceptions of Social Media and Their Development” (BullsIRB 3505). We are doing this study to explore high school students’ trends in social media use. We want to learn how social media use relates to their feelings about their personal identify, their attachment to school, and their personal happiness. The following information is shared to help you and your child decide whether you would like them to be part of the research study.

### **Who We Are:**

This study is led by Alexis Taylor, a doctoral student in school psychology at the University of South Florida. Her research is guided by Drs. Shannon Suldo and Sarah Kiefer. We are doing the study in cooperation with community agency leaders to ensure the study provides information that will be helpful to students, community supports, educators, and families.

### **Why We are Requesting Your Child’s Participation:**

We are doing this study to explore high school students’ social media usage and their exposure to negative messages online, called cyberhate. This study will explore typical levels of online experiences for different ethnic-racial minority groups. This study will also examine how students’ experiences with cyberhate relate to how they feel about their ethnic-racial identity, their school community, and their life satisfaction. Findings from the study will help educators know more about high school students’ experiences on social media and how these experiences may affect aspects of their life. We are requesting your child’s participation because they are currently enrolled in high school. Students’ ages are allowed to range from 14 to 25.

### **What Your Child’s Participation Requires:**

Children with permission to participate will take part in an anonymous online survey. Your child will receive a link or QR code that they can use to access the survey through their phone or computer. After your child has access to the survey, they will be asked to decide whether they would like to be a part of the study. If they choose not to participate, they will be guided to a survey completion screen with no penalty. If they choose to participate, they will be guided to begin the survey. It will take about 15 minutes to complete the survey, on one occasion. Once all questions are answered and submitted at the end of the survey, your child’s participation in the study will be complete.



**Why Your Child is Being Asked to Participate:**

Cyberhate is increasing across social media platforms. Many teenagers are frequent users of social media. Therefore, they are at higher risk of exposure to negative content like racial discrimination (e.g., stereotyping, hate speech, receiving threats because of one's race). Research is needed to understand how cyberhate affects one's feelings about their ethnic-racial identity, school connectedness, and life satisfaction. Research such as this study on teenagers' social media usage may inform guidelines for healthy and harmful social media use. Also, this study may help educators create more supportive school environments that address cyberhate and take positive actions on behalf of targeted students to advocate for and affirm their identities.

**Please Note:** Your child's participation is voluntary. You are free to allow your child to participate in this research study or to withdraw them at any time. Your child has the right to withdraw their assent or discontinue participation at any time without penalty. Any decision to participate, not participate, or withdraw participation at any point during the study will in no way affect your child's student status, grades, or your relationship with your child's community program, school, USF, or any other party.

***Your child does not have to participate in any part of this research.*** You or your child have the right to inspect the survey instruments before they are administered, if a request is made within a reasonable amount of time. The surveys and directions for administering them will be available upon contacting Alexis Taylor prior to the survey administration.

**Anonymity of Responses and Study Risks:**

This study is anonymous. Your child's name will not be linked in any way to their responses. We will not collect any information allowing us to identify which student completed which survey. Completed parent permission forms and any other documents listing the names of students with permission to complete surveys will be stored in password-protected files within a secure electronic storage folder maintained through the USF College of Education, Department of Educational and Psychological Studies. Any permission forms and documents received in hard copy will be stored within a locked file cabinet at in the USF College of Education, Department of Educational and Psychological Studies. This research is considered minimal risk. Minimal risk means that study risks are the same as the risks you face in daily life. There are no known additional risks to those who take part in this study. Your child will receive no guaranteed benefits by participating in this research study. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, the USF Institutional Review Board and its staff, and other individuals acting on behalf of USF may inspect the

records from this research project. However, your child's individual responses will not be shared with community program personnel or anyone else. All records from the study will be destroyed five years after the study is completed. The de-identified electronic dataset could be used for secondary analyses in future research studies conducted by USF and by other investigators, without additional consent from you.

**Confidentiality will be maintained to the degree permitted by the technology used.** No guarantees can be made regarding the interception of information sent via the Internet. However, your child's participation in this study using electronic methods involves risks similar to a person's everyday use of the Internet. This study will be conducted virtually, thus there is minimal risk for health safety in consideration to COVID-19. However, in the event of face-to-face interaction, study staff will adhere to all national health and safety measures for individuals interacting with your child, such as use of facial coverings and social distancing. Despite taking precautions to protect health, we cannot guarantee that your child will not be exposed to the virus through face-to-face interactions.

#### **What We'll Do with Your Child's Responses:**

Study findings will inform educators about high school students' social media usage, and how experiences on social media may relate to their identity development, their school connectedness, and their overall life satisfaction. Results from data collected during this study may be published. However, the data obtained from your child will be combined with data from other students in the publication. We expect a total of about 600 high school students will take part in this study. The published results will not include your name, your child's name, or any other information that would in any way personally identify you or your child.

#### **Questions?**

If you have questions about this study, contact Alexis Taylor at [adtaylor@usf.edu](mailto:adtaylor@usf.edu). If you have questions about your rights as a person who is taking part in a research study, contact a member of the USF Division of Research Integrity and Compliance at (813) 974-5638 or contact the IRB by email at [RSCHIRB@usf.edu](mailto:RSCHIRB@usf.edu). Refer to Study #3505.

#### **Want Your Child to Participate?**

To permit your child to take part in this study, complete the electronic consent form below.

Sincerely,

Alexis Taylor, M.A. (Graduate Student)  
School Psychology Program  
College of Education University of South Florida

Shannon Suldo, Ph.D. and Sarah Kiefer, Ph.D. (Professors)  
Department of Educational and Psychological Studies  
College of Education  
University of South Florida

Please type your name.

Please type your child's name.

This name identification will not be used in any other research protocol other than to help distribute the survey to students who have parent consent.

What program is your child a part of?

Please select one of the options below:

- I freely give my consent to let my child take part in this study. I understand that by selecting this option, I am agreeing to let my child take part in research. I have received a copy of this form for my records (*downloadable copy available on the next webpage after you click the green arrow at the bottom of this page*).
- I DO NOT freely give my consent to let my child take part in this study. I understand that by selecting this option, I am not agreeing to let my child take part in research. I have received a copy of this form for my records (*downloadable copy available on the next webpage after you click the green arrow at the bottom of this page*).

## **Appendix H: Participant Consent Form**

**USF Study ID: STUDY003505 Date Effective: 12/17/2021**

### **Dear Participant:**

This form tells you about a study on “High School Students’ Perceptions of Social Media and Their Development” (BullsIRB 3505). We are doing this study to explore high school students’ trends in social media use. We want to learn how social media use relates to students’ feelings about their personal identify, their attachment to school, and their personal happiness. The following information is shared to help you decide whether you would like to be part of the research study.

### **Who We Are:**

This study is being led by Alexis Taylor, a doctoral student in school psychology at the University of South Florida. Her research is guided by Drs. Shannon Suldo and Sarah Kiefer. We are doing the study in cooperation with community agency leaders to ensure the study provides information that will be helpful to students, community supports, educators, and families.

**Why We are Requesting Your Participation:** We are doing this study to explore high school students’ social media usage and their exposure to negative messages online, called cyberhate. This study will explore typical levels of online experiences for different ethnic-racial minority groups. This study will also examine how students’ experiences with cyberhate relate to how they feel about their ethnic-racial identity, their school community, and their life satisfaction. Findings from the study will help educators know more about high school students’ experiences on social media and how these experiences may affect aspects of their life. We are requesting your participation because you are currently enrolled in high school and are between the approximate ages of 14 and 25.

### **What Your Participation Requires:**

With your consent to take part in this study, you will take part in an anonymous online survey. You will receive a link or QR code to use to access the survey through your phone or computer. After you have access to the survey, you will be asked to decide whether you would like to be a part of the study. It will take about 15 minutes to complete the survey, on one occasion. Once all questions are answered and submitted at the end of the survey, your participation in the study will be complete.

### **Reasons For You to Participate:**

Cyberhate is increasing across social media platforms. Many teenagers are frequent users of social media. Therefore, they are at higher risk of exposure to negative content like racial discrimination (e.g., stereotyping, hate speech, receiving threats because of one's race). Research is needed to understand how cyberhate affects one's feelings about their ethnic-racial identity, school connectedness, and life satisfaction. Research such as this study on teenagers' social media usage may inform guidelines for healthy and harmful social media use. Also, this study may help educators create more supportive school environments that address cyberhate and take positive actions on behalf of targeted students to advocate for and affirm their identities.

**Please Note:**

Your participation is voluntary. You are free to participate in this research study or to withdraw at any time without penalty. Any decision to participate, not participate, or withdraw participation at any point during the study will in no way affect your student status, grades, or your relationship with your community program, school, USF, or any other party. You do not have to participate in any part of this research. You have the right to inspect the survey instruments before they are administered, if a request is made within a reasonable amount of time. The surveys and directions for administering them will be available upon contacting Alexis Taylor prior to the survey administration.

**Anonymity of Responses and Study Risks:**

This study is anonymous. Your name will not be linked in any way to your responses. We will not collect any information allowing us to identify which student completed which survey. Completed permission forms and any other documents listing the names of students with permission to complete surveys will be stored in password-protected files within a secure electronic storage folder maintained through the USF College of Education, Department of Educational and Psychological Studies. Any permission forms and documents received in hard copy will be stored in a locked file cabinet at USF College of Education, Department of Educational and Psychological Studies.

This research is considered minimal risk. Minimal risk means that study risks are the same as the risks you face in daily life. There are no known additional risks to those who take part in this study. You will receive no guaranteed benefits by participating in this research study. Your privacy and research records will be kept confidential to the extent of the law. However, your individual responses will not be shared with community program personnel or anyone else. All records from the study will be destroyed five years after the study is completed. The de-identified electronic dataset could be used for secondary analyses in future research studies

conducted by USF and by other investigators. Confidentiality will be maintained to the degree permitted by the technology used. No guarantees can be made regarding the interception of information sent via the Internet.

However, your participation in this study using electronic methods involves risks similar to a person's everyday use of the Internet. This study will be conducted virtually, thus there is minimal risk for health safety in consideration to COVID-19. However, in the unlikely event of face-to-face interaction, study staff will adhere to all national health and safety measures for individuals interacting with you, such as use of facial coverings and social distancing. Despite taking precautions to protect health, we cannot guarantee that you will not be exposed to the virus through face-to-face interactions.

### **What We'll Do with Your Responses:**

Study findings will inform educators about high school students' social media usage, and how experiences on social media may relate to their identity development, their school connectedness, and their overall life satisfaction. Results from data collected during this study may be published. However, the data obtained from you will be combined with data from other students in the publication. We expect a total of about 600 high school students will take part in this study. The published results will not include your name or any other information that would in any way personally identify you.

### **Questions?**

If you have questions about this study, contact Alexis Taylor at [adtaylor@usf.edu](mailto:adtaylor@usf.edu). If you have questions about your rights as a person who is taking part in a research study, contact a member of the USF Division of Research Integrity and Compliance at (813) 974-5638 or contact the IRB by email at [RSCHIRB@usf.edu](mailto:RSCHIRB@usf.edu). Refer to Study #3505.

### **Want to Participate?**

To take part in this study, complete the electronic consent form below.

Sincerely,

Alexis Taylor, M.A. (Graduate Student)  
School Psychology Program  
College of Education

University of South Florida

Shannon Suldo, Ph.D. and Sarah Kiefer, Ph.D. (Professors)

Department of Educational and Psychological Studies

College of Education

University of South Florida

Please type your name.

This name identification will not be used in any other research protocol other than to help distribute the survey to students who give consent to be a part of the study.

I am a part of \_\_\_\_\_ program.

Please select one of the options below:

- I freely give my consent to take part in this study. I understand that by selecting this option that I am agreeing to take part in research. I have received a copy of this form for my records (*downloadable copy available on the next webpage after you click the green arrow at the bottom of this page*).
- I DO NOT freely give my consent to take part in this study. I understand that by selecting this option that I am not agreeing to take part in research. I have received a copy of this form for my records (*downloadable copy available on the next webpage after you click the green arrow at the bottom of this page*).

## Appendix I: Citi Research Training Certificate



Completion Date 28-Sep-2019  
Expiration Date 27-Sep-2022  
Record ID 33526953

This is to certify that:

**Alexis Taylor**

Has completed the following CITI Program course:

**Human Research** (Curriculum Group)  
**Social / Behavioral Investigators and Key Personnel** (Course Learner Group)  
**2 - Refresher Course** (Stage)

Under requirements set by:

**University of South Florida**



Verify at [www.citiprogram.org/verify/?w4a907baf-dc06-4ff4-ad5c-293c63a83a76-33526953](http://www.citiprogram.org/verify/?w4a907baf-dc06-4ff4-ad5c-293c63a83a76-33526953)